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Ministry of Agriculture, Animal Industry and Fisheries

Agriculture Sector Strategic Plan

2015/16-2019/20

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Acronyms and Abbreviations

AASPs	Agricultural Advisory Service Providers
AEZ	Agricultural Ecological Zones
AIT	Artificial Insemination Technicians
AOP	Annual Operational Plan
ARM	Agriculture Risk Management
ARSP	Agricultural Rural Service Providers
ASCS	Agricultural Sector Communication Strategy
ASSP	Agriculture Sector Strategic Plan
ASWG	Agriculture Sector Working Group
ATAAS	Agricultural Technology And Agribusiness Advisory Services
ATI	Agricultural Training Institutions
AU	African Union
AWM	Agricultural Water Management
BAC	Bukalasa Agricultural College
BBW	Banana Bacterial Wilt
BDS	Business Development Services
BFP	Budget Framework Paper
CAADP	Comprehensive Africa Agriculture Development Programme
CBMS	Community Based Management System
CCI	Cross Cutting Issues
CDO	Cotton Development Organization
COCTU	Coordinating Office For Control Of Trypanosomiasis In Uganda
COMESA	Common Market For Eastern And Southern Africa
CoPS	Code Of Practices
CRGS	Competitive Research Grants Scheme
CSA	Climate Smart Agriculture
CSOs	Civil Society Organisation
CWD	Coffee Wilt Disease
DAP	Draft Animal Power
DARST	District Adaptive Research Support Teams
DATICS	District Agriculture Training And Information Centres
DDA	Dairy Development Authority
DLG	District Local Governments
DoAES	Directorate of Agricultural Extension Services
DOC	Day Old Chicks
DoCIC	Department Of Crop Inspection And Certification
DP	Development Partners
DSIP	Agriculture Sector Development Strategy And Investment Plan
DUS	Distinctness, Uniformity, Stability
EAC	East African Community
EU	European Union
FFSA	Farmer Field School Approach
FID	Farmer Institutional Development

FIP	Framework Implementation Plan
FMDC	Fertiliser Market Development Council
FRM	Fisheries Resources Management
FTI	Fisheries Training Institute
FY	Financial Year
GAPs	Good Agricultural Practices
GDP	Gross Domestic Product
GMO	Genetically Modified Organisms
GoU	Government Of Uganda
Ha	Hectare
HAACP	Hazard Analysis And Critical Control Points
HIV/ AIDS	Human Immuno Virus/ Acquired Immuno Deficiency Syndrome
HQ	Head Quarters
ICT	Information, Communications And Technology
IGF	Internally Generated Funds
ISTA	International Seed Testing Association
JASAR	Joint Agricultural Sector Assessment Review
KCCA	Kampala Capital City Authority
Km	Kilometres
LG	Local Governments
M&E	Monitoring & Evaluation
MAAIF	Ministry Of Agriculture, Animal Industry And Fisheries
MDA	Ministries, Departments And Agencies
MDGs	Millennium Development Goals
MoFPED	Ministry Of Finance, Planning And Economic Development
MoLG	Ministry Of Local Government
MoLHUD	Ministry Of Lands, Housing And Urban Development
MoTIC	Ministry Of Trade, Industry And Cooperatives
MoU	Memorandum Of Understanding
MoWE	Ministry Of Water And Environment
MPS	Ministerial Policy Statement
MSIP	Multi-Stakeholder Innovation Platforms
mt	Metric Tonne
MTEF	Medium Term Expenditure Framework
NAADS	National Agricultural Advisory Services
NaCORI	National Coffee Research Institute
NAGRC&DB	National Genetic Resource Centre And Data Bank
NAP	National Agriculture Policy
NARI	National Agricultural Research Institutes
NARO	National Agricultural Research Organization
NARS	National Agricultural Research System
NDP II	National Development Plan II
NEC	National Enterprise Corporation
NEMA	National Environment Management Authority
NEPAD	New Partnership For African Development
NEWS	National Early Warning System

NFAS	National Food and Agricultural Statistics
NFLC	National Farmer’s Leadership Centre
NGOs	Non-Governmental Organisations
NM&E	National Monitoring And Evaluation
NPA	National Planning Authority
OECD	Organization For Economic Cooperation And Development
OPM	Office Of The Prime Minister
OWC	Operation Wealth Creation
PARIs	Public Agriculture Research Institution
PFMA	Public Financial Management Act
PPDA	Public Procurement And Disposal Act
PPP	Public Private Partnerships
PQS	Phytosanitary And Quarantine Service
PSR	Poverty Status Report
PVP	Plant And Varieties Protection
QDS	Quality Declared Seeds
RMF	Risk Management Fund
SDGs	Sustainable Development Goals
SLM	Sustainable Land Management
SME	Small And Medium Enterprises
SMS	Short Message Service
SOP	Standard Operating Procedures
SPDG	Sector Plan Development Guidelines
SPS	Sanitary And Phytosanitary
SSC	Sector Statistics Committee
TIMPS	Agricultural Technologies, Innovations And Management Practices
TPM	Top Policy Management
TTA	Technology Transfer Agents
UBOS	Uganda Bureau Of Statistics
UCDA	Uganda Coffee Development Authority
UGX	Ugandan Shilling
UNADA	Uganda National Agro-Inputs Dealers’ Association
UNFFE	Uganda National Farmers Federation
UNHS	Uganda National Household Survey
URA	Uganda Revenue Authority
US\$	United States Dollars
UVB	Uganda Veterinary Board
VCU	Value For Cultivation And Use
VODP	Vegetable Oil Development Project
VTI	Vocational Training Institutions
WfAP	Water For Agricultural Production
WRS	Warehouse Receipt System
WTO	World Trade Organization
WUA	Water User Associations
ZARDI	Zonal Agricultural Research And Development Institute

Executive Summary

1. Introduction

The Agriculture Sector Strategic Plan (ASSP) for the period 2015/16 to 2019/20 was developed following a comprehensive review of the Agriculture Sector Development Strategy and Investment Plan (DSIP) for the period 2010/11 to 2014/15 that was conducted in 2015. The review identified some implementation challenges, lessons learnt, opportunities, emerging issues and generated key recommendations to guide future action. The ASSP also takes into account the development priorities in the National Development Plan (NDP) II and is structured in six chapters as follows: the background to the agriculture sector; situational analysis; the strategic interventions of the sector during the plan period; institutional arrangements for implementation of the ASSP; the financing strategy; and monitoring and evaluation (M&E) arrangements.

2. Performance of agriculture sector during the DSIP period

During the DSIP period, the agricultural sector average annual growth rate was 2.2%. The growth in agricultural sector declined from 2.6% in 2010 to -0.2% in 2012, before recovering to 3.6% in 2013 and 2.9% in 2014. It was lower than the average annual GDP growth rate of 5.2% and the average annual population growth rate of 3% over the same period. The contribution of the agricultural sector to GDP declined from 25.4% in 2010 to 23% in 2014. Of the agricultural sub-sectors GDP, the average contribution for the different sub-sectors was 1.7% of GDP for cash crops, 12.7% of GDP for food crops, 4.2% of GDP for livestock, 0.03% of GDP for Agriculture Support Services, 4.0% of GDP for Forestry and 1.2% of GDP for fisheries.

2.1 DSIP Programme 1: Production and productivity

Gains were made in production and productivity which saw an increase in the production of five major commodities (coffee, tea, cotton, cocoa and milk) during the review period; in research where the Competitive Research Grants Scheme (CRGS) was established and supported over 180 projects; in control of pests, vectors and diseases where standard operating procedures (SOPs) were reviewed, updated and disseminated amongst extension workers and continuous countrywide forecasting of crop pest and diseases was undertaken; in water for agriculture production (WfAP) where eight schemes were supported (i.e. three schemes were rehabilitated, one scheme is still undergoing rehabilitation while five schemes have had a pre-feasibility study conducted and 17 feasibility studies were carried out on community based irrigations schemes): and in aquaculture where three commercial aquaculture sites, 17 fishponds, two aquaculture parks and eight landing sites were established, constructed or developed. There was also an increase in the use of labour saving technologies because of tractor donations by GoU to identified model farmer groups and for neighbourhood contracting.

Over the DSIP period 2010-2014, all food crops registered an increase in the area planted except bananas that registered a 0.41% decline in area planted. The average increase in area planted was 8.5% for cereals (millet, maize, sorghum, rice and wheat), 6.12% for root crops (sweet potatoes, Irish potatoes, and cassava), 4.34% for pulses (beans, field peas, cow peas and pigeon peas), and 8.25% for oil seeds (ground nuts, soya beans, sesame seeds and sunflower). On the other hand, bananas and root crops production declined by 2.47% and 2.3% respectively, while production of cereals, pulses and oil crops increase on average by 0.81%, 3.72% and 10.3% respectively of over the same period. Considering 16 food crops analysed, only five crops registered any increase in yields during the five-

year period. These were maize (13.03%), Irish potatoes (0.05%), beans (0.05%), cow peas (4%) and sesame seeds (16.55%). Overall, decline in yields over the five years was 2.07% for bananas, 7.26% for cereals, 8% for root crops and 0.61% for pulses while only oil crops registered a 3.85% increase in yields.

The main cash crops registered increase in production except Tobacco that registered a 6.2% decline. Coffee production expanded by 26.9%, while tea, cotton and Cocoa production is estimated to have increased by 24.8%, 3.7% and 56.1% respectively. Uganda has experienced a steady increase in the number of livestock for all the main animals over the period 2010-2014. The number of cattle increased by 12.5% from 12.1m to 13.6m herd of cattle, of which about 93.6% of Uganda's cattle herds are indigenous whereas 0.8% are beef exotic/cross breeds and 5.6% are dairy exotic/cross breeds. The number of goats increased from 13.2m to 14m representing a 6.1% increase. Equally, the number of sheep and pigs increased by 6.1% from 3.6m to 3.8m sheep, and 3.4m to 3.5m pigs respectively. Fish catch increased by 16.6% over the five years, 2010-2014 indicating recovery of fish stocks. The biggest increase in fish catch was recorded on Lake Victoria (50.4%) but three lakes (Albert, Kyoga and Wamala) reported declines in fish catch.

2.2 DSIP Programme 2: Markets and value addition achievements

The Agricultural sector exports have grown progressively over the years, from \$868.1m in 2010 peaking at \$1.32b in 2013 before reducing to \$1.29b in 2014. Over the period, the agricultural exports increased by 49%, which was better than the 29.1% growth registered for the non-agricultural exports, while the total exports increased by 39.7%. Accordingly, the agricultural exports share in total exports has increased from 53.6% in 2010 to 57.2% in 2014. Considering the 2014 agricultural exports, top five export commodities were: Coffee (\$410.1m), fish and fish products (\$134.8), vegetable oils (\$102.3m), tea (\$84.7m) and hides and skins (\$73.7m). In order to enhance private sector participation in value addition activities and investment, information material for enterprise selection and markets was generated and disseminated and farmer groups and fora were strengthened to enhance farmer participation in market development activities.

2.3 DSIP Programme 3: Enabling environment achievements

There was improved public education and communication on agriculture and natural resource issues during the period under review. For instance, annual agricultural trade shows, World Food Day celebrations, BBW sensitisation, pre-JASAR visits, national agro awards and regional agro-trade fairs were conducted. Intra and inter sector coordination was strengthened. A number of sector surveys were undertaken in connection with the development of a national food and agricultural statistics system and a national agricultural statistics bank was initiated in the Department of Planning while a National Early Warning System (NEWS) Unit was also established.

2.4 DSIP Programme 4: Institutional strengthening achievements

MAAIF was restructured with new departments being established (namely Department of Crop Inspection and Certification; Department of Entomology; Fisheries Resources Management and Development; Department of fisheries Regulation, Department of Aquaculture, the Agribusiness Department and the Statistics Division. recruitment for the 45 priority positions was conducted including Commissioners, Assistant Commissioners, Principal Officers, Senior Officers; and Statisticians. There was also an improvement in linkages and collaboration between MAAIF and local governments (LGs). A comprehensive capacity building needs assessment was undertaken for

MAAIF HQ and a sector capacity building programme was also developed. However, the local government level is still constrained with human resources. At the district local government level, the approved structure provides for a minimum of six personnel in each district, equivalent to a total of 672 staff for the 112 districts. In 2015, only 77 out of the 672 positions were filled (11.5%). At sub-county level, the approved structure provides for a staff establishment of 7,248 personnel, of which only 1000 were filled as of June 2015 (13.8%). A total of 3236 critical positions are required at sub-county level for implementation of single spine extension system, of which only 389 positions are filled (12%).

3. Challenges

The review noted that there were some inconsistencies in the designs of DSIP, ATAAS and non-ATAAS components. For instance, ATAAS only addressed the first two components under Programme Area 1 on production and productivity. The targets set in the DSIP for the national priority commodities were not the same as those in ATAAS and FIPs. There was also lack of coherence between the DSIP and the FIPs. There was also a mismatch in resource allocations between DSIP, ATAAS and non-ATAAS.

3.1 Crop related challenges

The identified challenges included poor agronomic practices that affected production; poor markets and marketing infrastructure for many crop enterprises; funding constraints resulting in many FIPs not to be implemented; limited access to credit facilities; climate change; poor regulatory framework and weak enforcement; inadequate engagement of women and youth; limited extension services due to very low extension staff to farmer ratio; and weak monitoring and evaluation framework and vague indicators.

3.2 Livestock and fisheries related challenges

The identified challenges included weak policy and regulatory framework; production constraints e.g. limited availability of quality feeds; land tenure and water rights issues affected water for agricultural production; weak M&E System and statistics e.g. data management. Others included poor post-harvest handling and processing constraints; poor stakeholder coordination – including PPP; human resource challenges including inadequate staff, lack of training and poor equipment; poor markets and marketing infrastructure; and, funding constraints.

4. Lessons learnt and opportunities from the DSIP review

Among the lessons learnt was the importance of involving community based seed producers in planting material and seed production in promoting ownership and access to improved seeds and planting materials; the need for commitment, good will and support from national and grassroots political leaders in promotion of technology uptake; that development of physical infrastructure is frequently easier than the development of effective farmer-led management structures; and that establishment of national and district level platforms enhance commodity promotion.

The opportunities and emerging issues identified included increasing use of urban agricultural residues/ waste and up-coming residues/ by-products from the oil industry, as opposed to fertiliser production; increasing availability of processing plants, local and international markets; elevation of statistics unit to Division level and the establishment of the single spine extension system that will create a pool of staff to facilitate data collection in the local governments.

5. Rationale for development of the ASSP

Agriculture is the backbone of Uganda's economy and will be critical to the achievement of the National Development Plan II goal of propelling the country towards middle-income status with a per capita income of US\$1,033 by 2020. The sector is expected to contribute to wealth creation and employment through implementation of actions for the value chain development of twelve priority and four strategic commodities. The ASSP describes the priorities, strategies and interventions required to achieve these results.

6. Strategic direction of the agriculture sector

Sector investment over the medium term will be channelled to the specified priority and strategic commodities across their entire value chains focusing on: research; extension; pest, vector and disease control; provision of inputs; promoting sustainable land use and soil management; post-harvest handling; improving markets access and value addition. The investment strategy will target to achieve four objectives namely:

- i. Increasing agricultural production and productivity;
- ii. Increasing access to critical farm inputs;
- iii. Improving agricultural markets and value addition; and
- iv. Improving service delivery through strengthening the institutional capacity of MAAIF and its agencies.

These interventions will mainly be focused on 12 priority commodities, namely: bananas, beans, maize, rice, cassava, tea, coffee, fruits and vegetables, dairy, fish, livestock (meat), and four strategic commodities, namely, cocoa, cotton, oil seeds, and oil palm. The interventions to be implemented for each of these commodities are summarised below.

Banana

Banana production in 2014 amounted to 4,6 million mt, of which 3,070 mt were exported. Banana exports generated US\$587,000 for the country in 2014. The sector targets to produce 13 million mt by 2020. To achieve these targets, the sector intends to increase production and productivity of bananas through: control of pests and diseases especially the Banana Bacterial Wilt (BBW) disease; generation and distribution of clean planting materials to farmers for example tissue culture; promoting the use of organic and inorganic fertilisers and soil moisture conservation techniques; strengthening extension services and training in good agricultural practices (GAPs); and support to value addition through PPPs. The funds required to implement these interventions are UGX109,2 billion.

Beans

Beans production in 2014 amounted to 1,011 million mt, of which 31,796 mt were exported. This generated US\$26,19 million for the country. The sector targets to produce 10 million mt by 2020. Annual exports are projected to increase to US\$63 million. In order to achieve the above targets, the sector intends to increase production and productivity of beans through: increasing access to high quality seed inputs like Rhizobia; support to pest & disease control; strengthening mechanisation and extension services. The total funds required to implement these interventions are UGX171,05 billion.

Maize

Maize production in 2014 amounted to 2,9 million mt, of which 134,903 mt were exported. This generated US\$43.567 million for the country. The sector targets to annually produce 10 million mt by 2020. Exports are projected to increase to US\$105 million annually. To achieve these targets, the sector intends to increase production and productivity of maize through: producing and distributing 60 mt of improved maize seed; multiplication and distribution of foundation seed, improving access and use of fertilisers; increasing pest and disease control measures; promoting mechanisation; improving extension services; supporting post-harvest handling through training traders and farmers on quality standards and post-harvest handling technologies; supporting processing and value addition including household cottage industries; The total funds required to achieve these interventions is UGX381,83 billion.

Rice

Rice production in 2014 amounted to 237,000 mt, of which 57,053 mt were exported. This generated US\$28,7 million for the country. The sector targets to produce 680,000 mt by 2020 and generate at least US\$73 million worth of exports. This will be achieved through: multiplication and distribution of improved foundation seed; mechanisation of rice production; investment in irrigation infrastructure starting with Eastern Uganda; and provision of extension services. In order to reduce post harvest losses in rice, the sector intends to promote and distribute appropriate post-harvest technologies, increase access to credit by rice farmers, traders and processors and promote marketing of rice by promotion of collective marketing for high quality rice. The funds required to implement these interventions are UGX49,84 billion.

Cassava

Cassava production in 2014 amounted to 2,8million mt. The sector targets to increase production of Cassava to 3,5 million mt by 2020. Cassava is also a strong agent for import substitution and is targeted to contribute about US\$30 million per year in import-substitution during the plan period. The following interventions will be undertaken: establish production and distribution of clean planting material resistant to crop pests and diseases; develop monitoring and diagnosis systems for pest and diseases; provide established support for marketing and establishment of adequate storage utilities for fresh cassava roots; support cassava farmers and SMEs to engage in processing of quality flour and chips, as well as agribusiness enterprises. The total funds required to achieve these interventions are UGX135,12 billion.

Irish Potatoes;

The demand for Irish potatoes is estimated to be over 850,000 mt per annum with urban demand outpacing rural demand. With the increasing urbanization, changing eating habits by the majority youth and high population growth, chips consumption is set to rise by 50% over the plan period offering the potato industry huge opportunities for enterprise development and economic growth. The Irish potatoes development interventions aims at: i) supporting production and distribution of seed potato of improved varieties with preferred end user characteristics; ii) supporting production and marketing of ware potato for rural and urban consumption; iii) supporting farmers and Small and medium enterprises to engage in organized production, marketing and processing of potato; and iv) providing an enabling policy framework for a competitive and profitable commercial potato industry.

Tea

Tea production in 2014 amounted to 61,376 mt, of which 60,504 mt were exported. This generated US\$84.7 million for the country. The sector targets to produce 112,000 mt by 2020, with exports valued at approximately US\$155 million. The following actions and activities will be pursued to increase tea production: formulation of a tea policy favourable to investors and other actors in the industry; mobilisation of small holder tea growers into independent legal farmer groups/associations with a critical mass of shareholders owning processing facilities through Government loan guarantees; increased funding for tea research; providing extension services for tea; production and distribution of 34,965 million quality tea plantlets per annum; and building tea factories (at least 25 single line in Kisoro, Kabale, Kanungu, Zombo and Mityana) with a capacity to produce 800,000-1,000,000 mt of tea per annum. These interventions will be carried out with the support of the Uganda Tea Association and Uganda National Farmers Federation. The total amount of funds required to achieve these interventions is UGX532,42 billion.

Coffee

Coffee is the principal export for Uganda and production in 2014 amounted to 211,872 mt, of which 206,831 mt were exported. This generated US\$410,06 million for the country. The sector targets to produce 595,890 mt valued at approximately US\$1,153 billion by 2020. Activities to boost the coffee sub sector will include: promoting improved varieties (seven elite varieties resistant to wilt) through increased financing to coffee research; support for the production and distribution of 100 million coffee seedlings per annum in order to expand area under production by 5% in traditional areas and 25% in new areas; carrying out demonstrations and training farmers on good agricultural practices; controlling pests and diseases in coffee; promoting fertiliser use through support to demonstrations and training farmers on soil and water conservation; promoting and supporting value addition and marketing of coffee; providing technical extension, demonstrations, enforcement of compliance with coffee regulations: improving standards and capacity through PPPs and supporting production and certification schemes for sustainable fine and specialty coffee; and supporting acquisition and use of mechanisation and irrigation technologies through PPPs. The total amount of funds required to achieve these interventions is UGX402,87 billion.

Fruits and vegetables

Planned interventions to boost production and exports of fruits and vegetables will include: provision of quality seedlings; improving grading standards, packaging and handling of fruits and vegetables; registration of exporters; support to quality assurance; plant quarantine restrictions; pests and disease control; and support to processing of fresh fruits through PPP arrangements. The funds required to achieve these interventions are UGX417,18 billion.

Dairy

Total milk production amounted to 1,55 billion litres in 2014. Exports from milk and its products earned Uganda US\$28,684 million in 2014. Thirty three per cent (33%) of the marketed milk in Uganda is processed whereas sixty seven per cent (67%) is marketed raw. The processing capacity of milk was 1,304 million litres in 2014. The sector targets to produce 3.35 billion litres annually by 2020, and targets annual exports from milk and related products worth approximately US\$92 million. To achieve these targets, the following interventions are planned: implementation of the Presidential directive to provide one heifer per household; support to dairy extension services; establishment of a dairy herd information system; support to increased dairy regulation and inspection; establishment of mobile and regional laboratories; building capacity in conserved feed production, marketing, on-farm

water harvesting infrastructure and pasture and rangeland improvement in the national milk sheds establishment; and increased efforts to improve dairy market access and value addition. The total value of funds required to achieve these interventions is UGX199,72 billion.

Fish

Total fish production in 2014 amounted to 461,726 mt, of which 17,597 mt were exported. This generated US\$134,791 million for the country in 2014. The sector targets to increase annual fish production to 674,028 mt by 2020. Earnings from annual fish exports are projected to increase to US\$ 238,80 million. In order to achieve the set targets, the following activities will be undertaken: increased support to aquaculture through construction of fish ponds; support to restocking of major water bodies; undertaking research in area fish breeding and production technologies for fast growing and early maturing fish species; control of water weeds; increased regulation, inspection and certification; increased value addition to fisheries. The total funds required to implement these interventions are UGX 292,95 billion.

Meat and other livestock products

The sector has set the following production targets for 2020 for the main livestock products: beef production, 360,000 (valued at US\$ 1.636 billion); pork, 139,185 mt (valued at US\$421 million); mutton and goat meat, 39,775 mt (valued at US\$421 million); poultry, 63,647. There are also plans to increase production of honey and silk to increase exports of hides and skins. In order to achieve the targets, the following activities will be undertaken: control of vectors and diseases through vaccinations, disease surveillance and construction of infrastructure for disease control; pasture development; provision of adequate water for livestock production through the construction of valley dams; provision of high genetic materials; promotion of labour saving technologies; creating a buffer stock/animal handling grounds to support beef processing. The total funds required to achieve these interventions are UGX793.82 billion.

Cocoa

Production and export earnings from of cocoa have steadily increased from 16,478 mt worth US\$35,1 million in 2010 to 25,720 mt worth US\$59,4 million in 2014. Increased production and productivity will be enhanced through strengthening cocoa research and technology development, improving cocoa extension services delivery, provision of cocoa seedlings, and increased marketing and value addition. The total amount of funds required to achieve these interventions are UGX40,48 billion.

Cotton

Cotton lint production in 2014/15 amounted to 17,275 mt, of which 12,674 mt were exported. This generated US\$21,918million for the country. The sector targets to produce 64,750 mt by 2020. In order to achieve these targets, the following activities need to be undertaken: completion of the seed processing plant in Pader district; provision of cotton inputs to farmers; support to value addition through implementation of the revolving lint buffer stock fund to ensure all year round supply of lint; strengthening cotton research; strengthening cotton farmers support programmes through extension and training in good agronomic practices; support to mechanisation in cotton. The total amount of funds required to implement these interventions are UGX95,82 billion.

Oil seeds

Oil seeds production in 2014 was 758,500 mt and this is projected to more than double to 2,027

million mt by 2020. Exports from vegetable oils are projected to increase from US\$ 102million registered in 2014 to US\$281 million by 2020. Increased production and productivity of oilseeds is aimed at increasing household food and nutrition security and income and the specific interventions to be undertaken will include: improved distribution and access to improved quality seed, fertilisers and mechanisation; strengthening and increasing access to extension services by oil seed farmers; building and strengthening farmer organisations to sustainably provide services to their members, and strengthening the oilseeds sub-sector platform to oversee and coordinate relevant policies in the oilseeds sub-sector.

Oil palm

Nucleus estates currently dominate production of oil palm, however there is significant potential for improvement of house hold incomes by integrating smallholders into the schemes. This will require capacity building of farmers' groups in order to facilitate knowledge building, skills transfer, input distribution and bulking of produce. Investments to promote better productivity and production improvement will include identifying additional land for both nucleus estate and integration of smallholders targeting large-scale production in Buvuma and potential new districts (Masaka, Kalungu, Lwengo, Mukono, Buikwe, Mayuge, West Nile region and Middle North region). The existing Vegetable Oil Development Project (VODP) is also in the process of identifying suitable land for additional trials.

Agricultural extension

The sector will carry out the following activities to strengthen extension services in the country: filling vacant staff positions in MAAIF and DLGs - district and sub county levels; farmer group formation into co-operatives, associations and federations, with support from the Uganda National Farmers Federation (UNFFE); carrying out farmer training needs assessment in the areas of agricultural production, business, agro-processing, post harvest handling, value chain upgrading and nutrition; conducting residential and non-residential farmer training to address identified needs; profiling farmers according to farm sizes and enterprises; development of a curriculum for a professional certificate course in extension skills for extension service providers; initiatives to increase youth participation in agriculture; development and implementation of the extension policy and other statutory instruments; developing PPP projects such as investments in silos, warehousing, storage and bulking centres; operationalisation of the commercialisation challenge fund; establishment of demonstration and incubation centres; and implementing the sector communication strategy. The total amount of funds required to achieve these interventions are UGX887.99 billion.

Agricultural research

To accelerate production and productivity at national and household level, the ASSP will focus on generating and up scaling the use of sound agricultural research and climate change resilient technologies across the priority and strategic commodities. The function of the National Agricultural Research System will be strengthened through identification and building of key human resource capacity; a policy and regulatory framework for biotechnology will be developed and implemented; and technologies and protocols for value addition will be developed and promoted. The total amount of funds required to achieve these interventions are UGX327,65 billion.

Water for agricultural production

Farmers have continued to grapple under the effects of climate change due to over reliance on rain-

fed agricultural though there is great potential to harness the available water in order to increase agricultural production and productivity. The following activities will be undertaken to increase water for agricultural production: purchase of five sets of additional equipment to increase water coverage; recruitment and training of operators; assessment of designs and construction of 250 valley tanks and valley dams; review guidelines and create awareness on the use of equipment; construction and rehabilitation of irrigation schemes; and training of farmers through irrigation and water harvesting demonstrations sites. The total funds required to implement these interventions are UGX 387,85 billion.

Agricultural mechanisation

The level of agricultural mechanisation in the country is still minimal, compared to other sub-Saharan African countries. The following activities will be undertaken to redress this imbalance: develop incentive schemes for acquisition and maintenance of mechanisation equipment; purchase of 450 tractors; rehabilitation and refurbishment of the Namalere Agricultural Mechanisation Resource Centre; building capacity for technical training operators, mechanics, technicians and farmers; collaboration with the National Bureau of Standards to eliminate importation and trade of substandard agricultural mechanisation equipment; and completion of the national agricultural mechanisation policy and implementation framework. The total amount of funds required to achieve these interventions are UGX159,84 billion.

Administrative infrastructure development

MAAIF is currently located in Entebbe, whereas its partner MDAs and other sector stakeholders are situated in Kampala. This strategy will focus on constructing new MAAIF headquarters in Kampala, to increase sector efficiency through improving linkages between MAAIF and its partner MDAs located in Kampala. It will also involve the construction of administrative infrastructure for a selected number of district production offices with inadequate and poor office buildings. The total amount of funds required to achieve these interventions are UGX100,70 billion.

Human resource development, training and capacity building

This intervention will focus on addressing the current shortage of personnel in MAAIF by developing and implementing an integrated and phased recruitment process. It will also involve: developing a comprehensive sector capacity building programme that will capture not only the knowledge and skills gaps but also career development needs; identifying the institutions in the sector with the most urgent capacity building needs; identifying partners (service providers) to assist with the capacity building; and implementing the capacity building plans including periodic reviews of achievement. The total amount of funds required to implement these interventions are UGX11 billion.

Agriculture sector training institutes and centres

This intervention aims at transforming Bukalasa Agricultural College (BAC), Fisheries Training Institute (FTI), the National Farmers Leadership Centre (NFLC) and District Agricultural Training and Information Centres (DATICs), into institutions that are responsive to knowledge and skill needs of the market in extension services. This will be attained through curriculum review, human resources strengthening and infrastructural rehabilitation/ development. In the case of the NFLC, it is further planned to acquire additional land for farming operations as well as put in place a reviewed legal regime to replace the Memorandum of Understanding that the centre is currently operating under. The total amount of funds required to achieve these interventions are UGX43,56 billion.

Agriculture sector policy and planning

This intervention aims at providing support to sector policy and planning in the implementation of the ASSP. It will focus on producing bankable project proposals to support ASSP implementation; undertaking budget execution assessment exercises; linking ASSP implementation with regional agriculture policy undertakings (in the EAC, COMESA, CAADP, etc.); and coordinating the production of agriculture sector mandatory policy/planning/budget papers. The total amount of funds required to achieve these interventions are UGX14,5 billion.

Agricultural statistics, ICT and risk management

The Agriculture sector is characterized by a weak agricultural statistical system. The objective of this intervention is to establish an efficient National Food and Agricultural Statistics (NFAS) system to provide data that will underpin major government policy programmes. In addition, farm risk management will be improved through: establishing awareness of the holistic approach of Agriculture Risk Management (ARM) across all thematic areas; developing a national coordination mechanism for ARM to advise relevant MDAs; identifying and prioritising agricultural risks through a participatory approach involving local, national, and international stakeholders; developing, analysing and implementing innovative and integrated tools to manage the identified agriculture risks; prioritising ARM processes and tools and integrating them into the strategic investment plans; increasing investments and initiatives on ARM led by the GoU and partners at national and regional level; identifying and mainstreaming ARM data and its timely collection, analysis, management and integration within the agricultural statistics system. The total funds required for these interventions are UGX19,43 billion.

Agricultural monitoring and evaluation systems

Agricultural Sector MDAs will strengthen agricultural Sector M&E systems through the production of quality monitoring and evaluation data and information on ASSP implementation and through strengthening institutional and organisational capacity for M&E development and dissemination of standardized tools, guidelines and formats for collation and reporting by key stakeholders involved in M&E of ASSP implementation. Support will also be provided for revamping routine monitoring, support supervision and data quality audits within MDAs and LGs. A joint annual sector review will be held bringing together development partners, private sector, CSOs and other MDAs. The total amount of funds required for these interventions are UGX16,92 billion.

Cross-cutting issues

The Agricultural sector has identified five cross cutting issues in the population that impact on its performance and these. These are: gender, youth, environment and climate change, HIV/AIDS as well as food and nutrition security. During the plan period, it is intended to ensure that these issues are adequately mainstreamed in all activities implemented in the sector. The total funds required for these interventions are UGX11 billion.

7. ASSP institutional, budget and M&E frameworks

The ASSP shall be implemented through a multi-sector wide approach involving GoU, MDAs, district local governments (DLGs), development partners (DPs), civil society organisations (CSOs) and the private sector. MAAIF shall spearhead the implementation, coordination, monitoring, evaluation and review of the ASSP including publicizing and putting in place and periodically

reviewing enabling frameworks for its implementation. To address implementation bottlenecks, existing institutional arrangements will be strengthened and a dedicated framework developed and operationalised. Implementation will also be guided by the commodity-zoning concept adopted in FY 2010/11.

The required ASSP budget has been computed at UGX 6.969 trillion over the 5-year period. Interventions will be funded through prudent resource allocation utilising approaches that will ensure appropriate provision of financial resources and agricultural inputs for each commodity. However, the ASSP also provides for a constrained budget, in line with the agriculture sector public costing provided for under the National Development Plan II. This constrained budget amounts to UGX4.626 trillion. Sources of funding for the ASSP will include direct Government and development partner funding to the ministry and its agencies, programmes and projects, while the private sector will provide the necessary investments and funding for interventions of a commercial nature mainly through public private partnerships.

MAAIF departments and agencies will adapt the national M&E policy in order to align them with the higher level M&E framework and to facilitate national level monitoring of the agriculture component of the NDP II.

1 INTRODUCTION

1.1 Background

The Agriculture Sector Strategic Plan (ASSP) for the period 2015/16 to 2019/20 is a successor of the agriculture sector Development Strategy and Investment Plan (DSIP) for the period 2010/11 to 2014/15. It was consultatively developed following a comprehensive review of the DSIP that was conducted in 2015. The review involved analysis of identified implementation challenges, lessons learnt, opportunities and emerging issues leading to a set of key recommendations on future development actions for the Uganda's agricultural sector. The ASSP defines the priorities and interventions that will guide its implementation over the 5-year period. It articulates the national agricultural development priorities documented in the National Development Plan (NDP) II and the National Agriculture Policy (NAP) 2013.

1.2 Structure of the agriculture sector

The agriculture sector is composed of three sub-sectors which are constituted as directorates, namely crop, animal and fisheries resources. An additional Directorate for Agriculture Extension was established in the Financial Year (FY) 2014/15. These core directorates are supported by the Policy Planning and Support Services Department and other units falling directly under the Permanent Secretary which include: Finance and Administration; Procurement and Disposal Unit; and Internal Audit.

The Ministry of Agriculture, Animal Industry and Fisheries (MAAIF) also has semi-autonomous agencies that implement specialised and intensive technical and advisory aspects of its broad mandate under her line of supervision. The composition of the agricultural sector is illustrated in Figure 1 and highlights the fact that there are different actors in the sector who play complementary roles along the agricultural value chain.

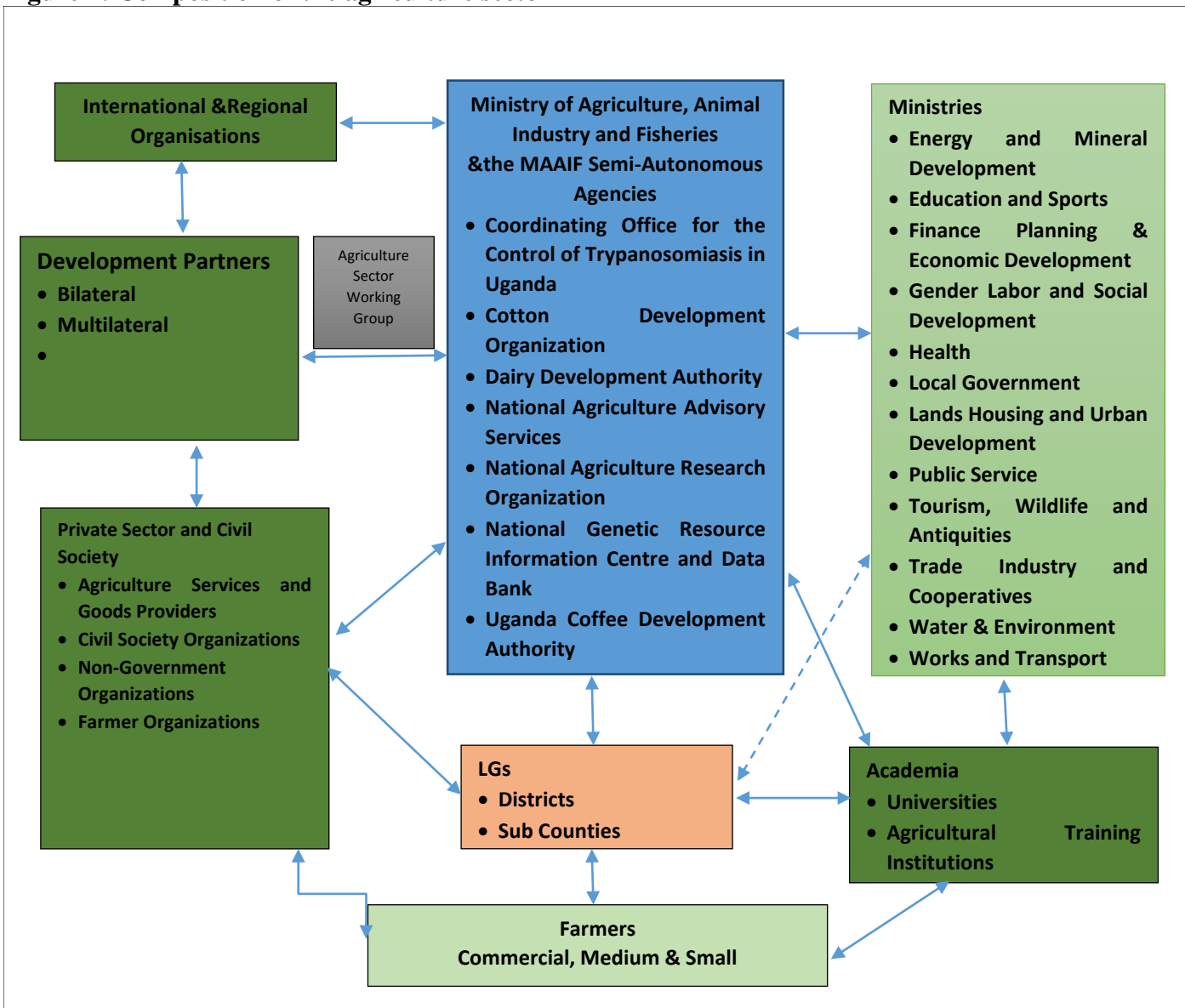
Government, through MAAIF, is responsible for policy formulation, regulation and quality control; private sector and farmers engage in farm production, agro-processing and marketing of agricultural output; the civil society organisations (CSOs) complement Government in delivering of agricultural services to farmers; the academia and research institutions undertake research and disseminate information that may guide policy formulation, promotion of innovation, product development and technology advancement for commercialisation of agriculture; financial institutions provide finance and credit to the farmers, cooperatives and agro-processors; while the development partners provide financial and technical assistance.

1.3 Purpose of the ASSP

The development of the agriculture sector is expected to contribute to national wealth creation and increased employment along the agricultural value chains in a sustainable manner. This will enhance poverty reduction while supporting economic growth and transformation of the country to a middle-income status. The rationale underpinning the ASSP is that there is need for a guidance framework for identifying sector investments that will target increased production and productivity in selected priority commodities. Implementation of the ASSP will spur growth in the agriculture sector through the establishment of effective linkages to and exploitation of existing and potential local, regional and international markets. In the background, the plan implementation will improve the institutional and policy environment for overall guidance of the agriculture sector in line with national and

relevant regional and international laws, policies, protocols and standards. Lastly and as a successor to the DSIP, the ASSP implementation is also expected to build on the achievements and lessons learnt over the last five years, while addressing or mitigating identified shortcomings.

Figure 1: Composition of the agriculture sector



1.4 Context of the ASSP

The ASSP is inspired by and aligned to a number of international, regional and national conventions, objectives and policies as described hereunder.

1.4.1 United Nations’ Sustainable Development Goals

The ASSP will build on Uganda’s success in achieving, well ahead of the 2015 deadline, the Millennium Development Goals (MDGs) target to halve the proportion of people whose income is

less than US\$ 1.25 dollars a day. The country has also progressed well towards meeting another key MDG target of halving the proportion of people suffering from hunger with significant progress achieved in improving nutrition, particularly among children in whom nourishment is critical during early childhood. The ASSP will support Uganda's efforts to attain the following Sustainable Development Goals (SDG) (which have succeeded the MDGs):

- Goal 1- End poverty in all its forms everywhere;
- Goal 2- End hunger, achieve food security and improved nutrition, and promote sustainable agriculture;
- Goal 6- Ensure availability and sustainable management of water and sanitation for all; and
- Goal 12- Ensure sustainable consumption and production patterns
- Goal 13- Take urgent action to combat climate change and its impacts.

1.4.2 Comprehensive Africa Agriculture Development Programme

The ASSP is Uganda's principle instrument for implementing the Comprehensive Africa Agriculture Development Programme (CAADP), a growth oriented agricultural development agenda of the African Union (AU) and the New Partnership for African Development (NEPAD). It is aimed at increasing agriculture growth rates to 6% per year to create the wealth needed for rural communities and households in Africa to prosper. CAADP focuses on four key pillars to achieve measurable outcomes, namely:

1. Extending the area under sustainable land management and reliable water control systems;
2. Improving rural infrastructure and trade related capacities for market access;
3. Increasing food supply, reducing hunger, improving responses to food emergency crises; and
4. Improving agriculture research, technology dissemination and adoption.

All the four pillars of CAADP are key components of this strategic plan. CAADP Pillars 1 and 3 on the extension of area under sustainable land management and food supply and security will be addressed in the context of increasing production and productivity and through various interventions under sustainable land management and increasing water for production. Pillar 2 on improving market access will be addressed through prioritisation of specified value chains including value addition. To address Pillar 4, the ASSP prioritises agricultural research and technology dissemination and adoption.

1.4.3 Uganda Vision 2040

The ASSP is inspired by Uganda's Vision 2040 that aims at transforming Uganda from a predominantly peasant and low-income country to a competitive upper middle-income country by 2040. As shown in Table 1, the Vision 2040 policy identifies agriculture as: (a) a major contributor to gross domestic product (GDP); (b) a key source of employment for the labour force in the country; and (c) as a sector whose labour productivity will have to increase. Agriculture is also among the strategic opportunities that need to be strengthened to accelerate the growth of the economy.

The ASSP articulates how investments in agriculture will be guided in order to support efforts towards the national goal of transformation, including the development of major irrigation schemes in the country; continued investment in technology improvement through research for improved seeds, breeds and stocking materials; operationalisation of the extension system reform in the country to improve information access as well as knowledge, skills and technology transfer to the farmers; and intensifying environmental control measures to halt the decline in soil fertility.

Table 1: Baseline Status and Vision Targets for Selected Indicators in Vision 2040

Indicators	Baseline Status: 2010	Target 2040
Per capita income (US\$)	506	9,500
Percentage of population below the poverty line	24.5	5
Sectoral composition of GDP (%)	Agriculture	10.4
	Industry	31.4
	Services	58.2
Labour force distribution in line with sectoral contribution (%)	Agriculture	31
	Industry	2.6
	Services	43
Labour Productivity (GDP per Worker - US\$)	Agriculture	6,790
	Industry	24,820
	Services	25,513
	TOTAL	19,770
Life expectancy at birth (years)	51.5	85
Child stunting as a % of under 5s	33	0

Source: Vision 2040 Document

1.4.4 National Development Plan II

The National Development Plan (NDP) II 2015/16 - 2019/20 is the successor to the NDP I. Its goal is to attain middle-income status by 2020. This is to be realized through strengthening the country's competitiveness for sustainable wealth creation, employment and inclusive growth by pursuing a private sector-led, export oriented and quasi-market approach. The plan has four objectives, namely:

- a) Increasing sustainable production, productivity and value addition in key growth opportunities;
- b) Increasing the stock and quality of strategic infrastructure to accelerate the country's competitiveness;
- c) Enhancing human capital development; and
- d) Strengthening mechanisms for quality, effective and efficient service delivery

Over the NDP-II period the Government of Uganda (GoU) is targeting to increase agricultural exports to US\$4 billion by 2020 from the current USD1.3 billion and halving the labour force

engaged in subsistence production from six to three million. In the ASSP, the key focus areas include: increasing production and productivity; addressing challenges in the selected thematic technical areas including access to critical farm inputs, increased and more efficient mechanisation and increased access to and availability of water for agricultural production; improving agricultural markets and value addition in the 12 prioritised commodities and institutional strengthening for agricultural development. Table 2 summarises the key development results and targets during NDP II implementation.

Table 2: NDP-II Key Development Results and Targets

NDPII Goal and Objectives	Development Indicator	Baseline	Targets		
		2012/13	2019/20	V2040	
Overall Goal: Achieve middle income status by 2020	Income per Capita (US\$)	743	1,033	9,500	
	Average economic growth rate*	5.2	6.3	8.2	
	Percentage of people living on less than US\$ 1 a day	19.7	14.2	5.0	
	Percentage of national labour force employed	75.4	79	94	
Objective 1: Increase sustainable production, productivity and value addition in key growth opportunities	Manufactured exports as a percentage of total exports	5.8	19.0	50	
	Labour Productivity (GDP per Worker - US\$)	Agriculture	581	977.77	6,790
		Industry	5,106	7,871.35	24,820
		Services	2,441	5,217.65	25,513
	Nominal GDP (UGX Billions)	55,602	132,249	1,451,250	
	Real GDP (UGX Billions)	25,203	40,760	128,200	
Forest Cover (per cent Land Area)	14	18	24		
Objective 2: Increase the stock and quality of strategic infrastructure to accelerate the country's competitiveness	Gross capital formation as a percentage of GDP	25.5	27.7	30	
	Total national paved road network (Km)	3,795	5,295	119,840	
	Percentage of cargo freight on rail to total freight	12	25.5	80	
	Percentage of the population with access to electricity	14	30	80	
	Consumption of electricity (Kwh Per capita)	80	578	3,668	
Objective 3: Enhance human capital development	Life Expectancy at birth	54.5	60	85	
	Infant mortality rate per 1,000 live births	54	44	4	
	Maternal mortality rate per 100,000 live births	438	320	15	
	Child Stunting as a per cent of under-5s	31	25	0	
	Total Fertility Rate	6.2	4.5	3.0	
	Primary to secondary school transition rate	73	80		
	Net Secondary completion rates	35.5	50		
	Average years of schooling	4.7	11		
	Safe water coverage	Rural	65	79	100
Urban		77	100	100	

NDPII Goal and Objectives	Development Indicator	Baseline	Targets	
		2012/13	2019/20	V2040
Objective 4: Strengthen mechanisms for quality, effective and efficient service delivery	Government Effectiveness Index (2.5 weak; 2.5 strong)	-0.57	0.01	
	Public Resources Allocated to Local Governments Level (per cent)	19	30	
	Corruption Perception Index (CPI)	2.9	3.7	7.1

Note: *This is an average for the Plan period ending that year

1.4.5 Operation Wealth Creation

The GoU and stakeholders all acknowledge that agriculture has, for a long time, been a core sector of the economy providing the basis for growth in other sectors and significantly contributing to GDP and employment. Under Operation Wealth Creation (OWC), it is the objective of GoU that national policies, interventions and programmes aim at transforming agriculture from subsistence to commercial agriculture with a target of raising household incomes to a minimum UGX20 million per household per year. Significant attention will be given to generating and disseminating improved research through the National Agriculture Research Organisation (NARO) and the revamped National Agriculture Advisory Services (NAADS) that is now responsible for procurement and distribution of improved agro inputs and technologies. This strategic plan will therefore provide the platform for the OWC initiative that will complement efforts to achieve the NDP II and ASSP objectives.

1.4.6 The National Agriculture Policy

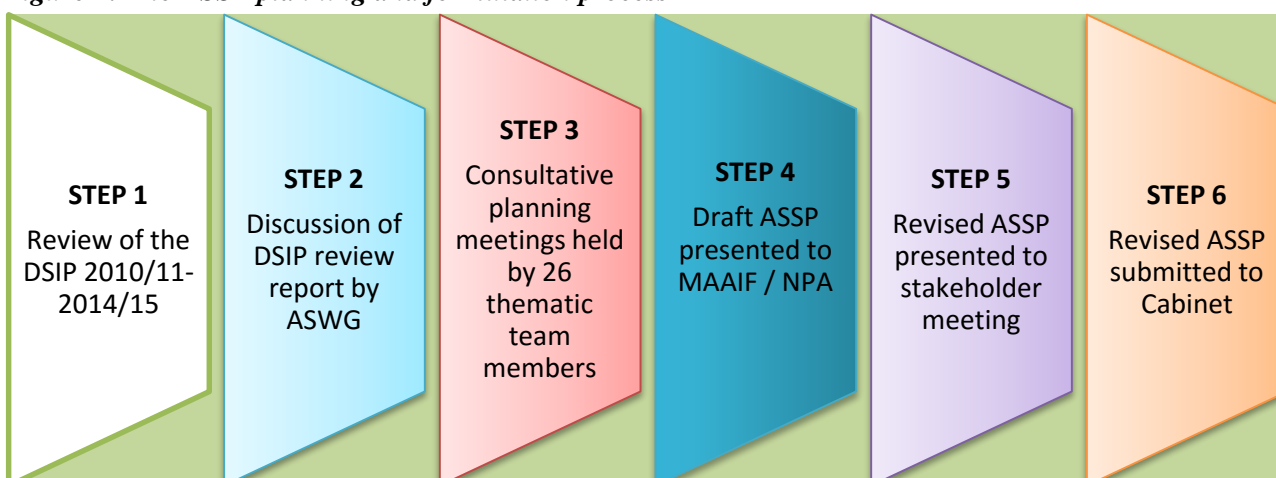
The ASSP operationalises the National Agriculture Policy (NAP). The overall objective of the agriculture policy is to achieve food and nutrition security and improve household incomes through coordinated interventions that focus on enhancing sustainable agricultural productivity and value addition; providing employment opportunities, and promoting domestic and international trade. The NAP is pursued through six inter-related strategic objectives as follows:

1. Ensure household and national food and nutrition security for all Ugandans;
2. Increase incomes of farming households from crops, livestock, fisheries and all other agricultural related activities;
3. Promote specialisation in strategic, profitable and viable enterprises and value addition through agro-zoning;
4. Promote domestic, regional and international trade in agricultural products;
5. Ensure sustainable use and management of agricultural resources; and
6. Develop human resources for agricultural development.

1.5 Process of developing the ASSP

A consultative approach, conducted in two phases, was adopted in preparation of this ASSP. Phase 1 entailed a review of the predecessor plan, the DSIP. This culminated in the production of the DSIP review report that was discussed in the sector wide consultative workshop i.e. special Agriculture Sector Working Group (ASWG) meeting. Phase 2 entailed the development of the Agriculture Sector Strategic Plan, informed by the findings, conclusions and recommendations arising from the review and the medium term priorities provided by the national development-planning framework. These processes were informed by a comprehensive review of literature at global, continental, regional, national and sector levels and consultative engagement of key stakeholders.

Figure 2: The ASSP planning and formulation process



To facilitate the process, 26 thematic teams were constituted each of which conducted several consultative meetings. The membership of each team was drawn from MAAIF and its agencies, private sector producers and processors representatives where applicable; relevant MDAs; academia representatives; researchers; development partners; local governments representatives; and subject matter specialists. These stakeholders' expectations, views and aspirations were collated and used to inform the preparation of the ASSP in line with the Sector Plan Development Guidelines (SPDG) provided by the National Planning Authority (NPA).

Underpinning the design of the ASSP are detailed working papers and framework implementation plans (FIPs). The thematic teams developed 26 FIPs. These provide detailed calculations of production projections and targets and clarifications of the implementation modalities of the ASSP through its 5-year duration. These FIPs will provide detailed guidance for the ASSP operationalisation by respective programme and project managers.

1.6 Principles underpinning the ASSP

A number of guiding principles have been adopted to guide the ASSP development process. These include:

1. Drawing guidance on agriculture sector delivery priorities of the medium term from the National Development Plan II;
2. Building on past achievements, learning lessons and drawing experiences from the implementation of the preceding plan, the DSIP 2010/11-2014/15;
3. Relating the architecture, implementation modalities and performance indicators of the MAAIF's priority strategic actions with the sector planning guidelines and the monitoring and evaluation framework of the NDP II;
4. Fostering implementation synergies and linkages among various priority and strategic commodities development actions, the agriculture technical and advisory services action, the critical farm inputs actions and the institutional and enabling environment strengthening interventions;
5. Building interfacing actions and modalities in the ASSP with the development plans of other sectors for example; local government; works and transport; trade, industry and cooperatives; and plans of other private, civil society and development partner actors;

6. Rolling over un-completed actions from the DSIP to the ASSP;
7. Taking into account emerging priority sector issues in the development of priority actions for medium term.

1.7 Structure of the ASSP

The ASSP is presented in 6 chapters with additional information in annexes to the main document as follows:

Chapter 1 presents the background of the ASSP and highlights of the agriculture sector. It also presents the rationale for development of the ASSP, the process adopted for the preparation and the structure of the plan.

Chapter 2 presents a situational analysis. It presents the agriculture sector trends and progression towards the National Development Plan-II indicators, the performance and the institutional capacity status of the agriculture sector.

Chapter 3 outlines the strategic direction of the agriculture sector for the medium term. The vision, mission, outcome indicators and objectives are provided as part of this chapter. It also provides an alignment of the ASSP to the NDP-II and other national and international commitments and priorities that cut across all sectors. An analysis of sector priorities, strategies and interventions is also presented.

Chapter 4 presents the institutional arrangements for the implementation of the plan. Under this chapter, the implementation framework and actions to be conducted to effectively implement the plan, the actors, their roles and responsibilities and proposed institutional coordination arrangements for implementing the ASSP are outlined.

Chapter 5 provides the ASSP financing strategy that defines MAAIF's indicative financial plan and presents estimates of required resources to implement the planned activities. The guiding principles and strategies underlying the ASSP revenue and cost estimation and the strategic financial resource indicative budget are also provided.

Chapter 6 presents the monitoring and evaluation framework which include a logical framework defining the key programme-specific inputs, outputs, outcome and impact indicators as well as the monitoring and evaluation activities to be undertaken at the various supervisory levels of the sector in general and the MAAIF in particular.

2 SECTOR SITUATIONAL ANALYSIS

2.1 Agricultural sector contribution to the national economy

2.1.1 Growth and contribution to GDP

The growth of the agricultural sector for the period 2010 to 2014 was sluggish but there has been some indication of recovery since 2013. The agricultural sector growth declined from 2,6% in 2010 to -0,2% in 2012, before recovering to 3,6% in 2013 and 2,9% in 2014. As shown in table 3, the agricultural sector average annual growth rate was 2,2%, which is lower than the average annual GDP growth rate of 5,2% and the average annual population growth rate of 3% over the same period. This implies that per capita agricultural GDP has been declining. It is also far short of the 6% growth target for the agricultural sector set by African governments under CAADP, as well as the 5,2% targeted for the period 2012-2015 under the Vision 2040.

Table 3: Agricultural sector growth rates 2010-2014

	2010	2011	2012	2013	2014	Average
Agriculture, forestry and fishing	2.6	2.0	-0.2	3.6	2.9	2.2
Cash crops	-10.7	11.7	-5.0	10.5	-0.9	1.1
Food crops	3.1	0.0	-2.5	2.0	3.0	1.1
Livestock	2.3	2.4	2.3	2.6	2.8	2.5
Agriculture Support Services	4.2	0.0	-7.7	0.0	0.0	-0.7
Forestry	8.9	5.0	6.1	9.7	3.5	6.6
Fisheries	2.1	0.5	3.7	-6.7	5.1	0.9

The cash crop and food crop sub-sectors registered average annual growth rates of 1,1%, compared to 2,5% for the livestock sub-sector, -0,7% for agricultural support services, 6,6% for forestry and 0,9% for fisheries. It is only the livestock and forestry sub-sectors that registered a consistently positive growth rates over the period 2010-2014 and this may be an indication of systematic challenges across the sector.

The Agricultural sector GDP at the 2009 constant prices increased from 10,932 billion shillings in 2010 to 11,862 billion shillings representing an 8.5% increase, which is lower than the 19,8% increase in the total GDP over the same period. As shown in Table 4, the contribution of the agricultural sector to GDP declined from 25,4% in 2010 to 23% in 2014. Of the agricultural sub-sectors GDP, the average contribution for the different sub-sectors was 1,7% of GDP for cash crops, 12,7% for food crops, 4,2% for livestock, 0,03% for Agriculture Support Services, 4,0% for Forestry and 1,2% for fisheries.

Table 4: Agriculture sector contribution to GDP 2010-2014

	2010	2011	2012	2013	2014	Average
GDP at market prices (Bil. UGX)	43,085	46,024	47,233	49,305	51,632	
Agriculture, forestry and fishing (Bil. UGX)	10,932	11,153	11,135	11,532	11,862	
%age share of GDP	25.4	24.2	23.6	23.4	23.0	23.9
Cash crops	1.7	1.8	1.7	1.8	1.7	1.7
Food crops	14.0	13.1	12.4	12.2	12.0	12.7
Livestock	4.4	4.2	4.2	4.1	4.0	4.2
Agriculture Support Services	0.03	0.03	0.03	0.02	0.02	0.03
Forestry	3.9	3.8	4.0	4.2	4.1	4.0
Fisheries	1.4	1.3	1.3	1.2	1.2	1.2

Source: UBOS Statistical abstract 2015

2.1.2 Contribution towards poverty reduction

Uganda has continued to reduce the number of people living in absolute poverty. The national household surveys 2012 revealed that the national poverty rate fell to 19.7% in 2012/13, from 24.5% in 2009/10. Although agriculture has grown significantly slower than the economy as a whole, the sector continues to employ the majority of the workforce with 72% of the workforce and 87% of the working poor being primarily engaged in agricultural activities. Therefore, increasing the productivity and commercialisation of the sector are critical drivers of poverty reduction.

The Poverty Status Report (PSR) 2014 revealed that between 2009/10 and 2012/13, rural areas registered larger reductions in both the incidence and intensity of poverty. The population depending on agricultural income (subsistence and commercial) experienced the largest reduction in multidimensional poverty. Multidimensional headcount ratio among those engaged in subsistence agriculture declined from 75.7% in 2009/10 to 61.9% in 2012/13, (-13.8 percentage points), while those engaged in commercial agriculture declined from 61.0% in 2009/10 to 41.6% in 2012/13 (-19.5 percentage points). The report also revealed that unreliable rainfall had large negative effects in rural areas with household consumption reducing by around 14% if the main rainy season begins a month or more later or earlier than usual. This results in lower rural incomes, and increases in rural poverty. This signifies the need to increase access to water for production as dependence on rain fed agriculture by most smallholder farmers increases their vulnerability to poverty.

According to the PSR, the considerable reduction in poverty over the years is attributed to Uganda's better-integrated agricultural value chains, which have been particularly important in ensuring agricultural households share the benefits of economic growth. The report notes that growth without improvements for the poorest households will be self-limiting, mainly due to the smaller domestic market. On the other hand, broad-based growth driven by the agricultural sector allows for a larger pool of domestic savings to finance an expansion in private investment, while stronger domestic demand and relatively cheap agricultural commodities ensure high investment returns and strong employment growth. Therefore, productivity growth and improved market integration in the agricultural sector are critical for both poverty reduction and structural transformation of the

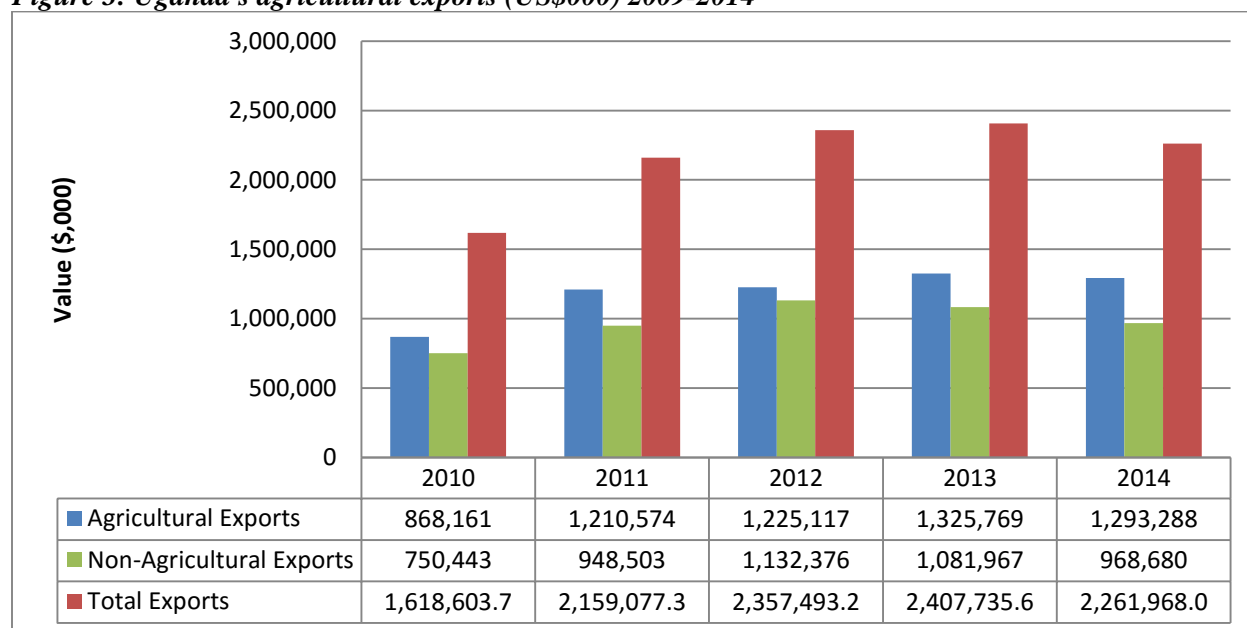
economy.

One of the main barriers to agricultural productivity growth at the smallholder level remains limited use of intermediate inputs, such as improved seeds and fertilisers. The majority of smallholder farmers remain subsistence-orientated, using few intermediary inputs and rudimentary technology to produce low-value crops. Government plans to strengthen farmer organisations and increase its partnerships with private actors to promote the integration of smallholder farmers into larger value chains and thereby achieve agricultural transformation.

2.1.3 Contribution to exports

The Agricultural sector exports have grown progressively over the years, from US\$868.1m in 2010 peaking at US\$1.32b in 2013 before reducing to US\$1.29b in 2014. Over the period, the agricultural exports increased by 49%, which was better than the 29.1% growth registered for the non-agricultural exports, while the total exports increased by 39.7%. Accordingly, the agricultural exports share in total exports has increased from 53.6% in 2010 to 57.2% in 2014 as summarized in figure 3 below.

Figure 3: Uganda's agricultural exports (US\$000) 2009-2014



Source: Statistical abstract 2015

Considering the 2014 agricultural exports, Coffee is the main agricultural export commodity for Uganda that generated \$410,1m (31,7%) of the agricultural export revenues. The second biggest agricultural export commodity is fish and fish products that generated \$134,8 (10,4%) of the agricultural export revenue during the period. Table 5 below summarizes Uganda's agricultural exports during the period 2010-2014.

Table 5: Uganda's agricultural exports 2010-2014 (US\$,000)

Commodity	2010	2011	2012	2013	2014	%age Change	%age share
Coffee	283,891	466,659	372,166	425,407	410,064	44.4	31.7
Fish & Fish Products	127,651	136,218	128,322	126,727	134,791	5.6	10.4
Animal/Veg Fats & Oils	55,181	101,111	110,427	100,050	102,321	85.4	7.9
Tea	68,263	72,126	73,902	85,589	84,739	24.1	6.6
Hides and Skins	17,061	33,067	41,632	64,352	73,758	332.3	5.7
Sugar & Sugar Confectionary	60,169	81,872	122,672	85,304	68,937	14.6	5.3
Tobacco	68,662	53,981	69,746	120,201	66,018	-3.9	5.1
Cocoa Beans	35,121	44,546	38,434	54,833	59,429	69.2	4.6
Sesame Seeds	12,882	17,318	11,714	28,468	55,165	328.2	4.3
Maize	38,206	26,752	56,916	42,254	43,567	14	3.4
Sorghum	1,404	346	3,793	25,565	35,165	2404.6	2.7
Dairy products & bird's eggs	16,266	18,191	20,719	25,685	29,528	81.5	2.3
Flowers	22,474	21,457	26,802	28,725	28,732	27.8	2.2
Rice	16,456	18,442	38,886	36,966	28,688	74.3	2.2
Beans & Other Legumes	10,200	20,428	14,237	20,577	26,191	156.8	2.0
Cotton	19,919	86,011	74,898	31,686	21,918	10	1.7
Vegetables	4,290	3,484	8,306	11,730	14,655	241.6	1.1
Vanilla	4,352	2,957	2,362	2,731	2,651	-39.1	0.2
Fruits	722	1,443	1,190	1,502	2,077	187.7	0.2
Live Animals	3,985	1,654	1,748	2,797	2,006	-49.7	0.2
Soya beans	294	875	1,230	887	912	210.2	0.1
Ground-nuts	88	163	2,496	1,750	816	827.3	0.1
Bananas	128	255	466	239	587	358.6	0.0
Pepper	496	1,218	2,053	1,744	573	15.5	0.0
Total	868,161	1,210,574	1,225,117	1,325,769	1,293,288		

Source: Statistical abstract 2015

Over that same period, five agricultural export commodities suffered declines in exported quantities and these were fish and fish products (24.7%), tobacco (21.4%), maize (18.9%), vanilla (80.4%) and fruits (14.5%). Tobacco and vanilla also experienced declines in export revenues of 3.1% and 39.1% respectively.

Uganda's agricultural exports are mainly destined to the European Union (EU) and the regional markets, especially the neighbouring countries. Several major issues undermine the agricultural export performance and they are as follows:

- 1) Inadequate capacity by both the public and private sector to regulate/ enforce and comply with sanitary and phytosanitary standards (SPS) that guarantees the health and safety of consumers, especially for commodities destined to the EU market. The capacity of the private sector to meet market quality standards and public sectors to effectively regulate and

enforce quality standards is also limited. For example, most of Ugandan cereals on the market do not meet the agreed EAC grain quality standards, which make it difficult to exploit the regional market yet most of the neighbouring countries like Kenya are net grain importers.

- 2) The production and productivity of major exports is constrained by supply side constraints including reliance on rain-fed agriculture that hinders the ability of producers and exporters to meet large and regular orders from major importers in key export markets.
- 3) There is still limited value addition and the country continues to export most of the agricultural commodities in their raw form.
- 4) Most production is by smallholder farmers who have limited ability to comply with basic quality standards and who are unable to cope with inefficiencies along the supply chain.

2.1.4 Budget allocations to the sector

Despite its prominent contribution to national economic development and poverty reduction, financial resources to the sector remain constrained. During the period of 2012/13 and 2015/16, there has been a consistent increase in allocation of resources to the agriculture sector from Uganda shillings (UGX) 378.88 billion in the 2012/13 approved budget (out of the national budget of UGX10.90 trillion) to 484.68 billion (out of the national budget of UGX17.95 trillion). However, this represents a decline in the percentage allocation to the sector from 3.4% of the national budget in 2012/13 to 2.7% in 2015/16.

Table 6: Budgetary allocation to the agriculture sector, 2012/13-2015/16

MTEF allocations	2012/13	2013/14	2014/15	2015/16
Agriculture Sector	378.88b	382.56b	473.84b	484.68b
National Budget	10.90t	12.90t	14.86t	17.95t
Percentage	3.4%	3.0%	3.2%	2.7%
Projected Allocation (CAADP)	1.09t	1.29t	1.49t	1.80t
Gap between MTEF and CAADP allocations	711.12b	907.44b	1.02t	1.32t

Source: Ministerial Policy Statements for FY 2013/14, 2014/15 and 2015/16.

It is clear from the above table that in all the years, the percentage allocation has been short of the Maputo / CAADP declaration of at least a 10% allocation of the national budget to the agriculture sector and the Kyankwanzi October 2011 NRM retreat which adopted a resolution to raise MAAIF funding from the then 4.8% to 7% during FY 2012/13 and thereafter to 10% in accordance with the Maputo declaration. This amounts to a rise in the shortfall against the CAADP target from UGX711 billion in 2012/13 to UGX1.32 trillion in 2015/16. These shortfalls have tended to constrain the sector from achieving its objectives due to limitation of funds.

2.2 Agricultural sector performance under DSIP

The performance of the sector over the previous plan period is detailed in various sector review reports and, more pointedly, in the DSIP review report of 2015. The extensive review was conducted by 26 thematic teams focusing on the DSIP strategic areas of intervention covering the technical input areas, strategic commodities, priority commodities and institutional strengthening and capacity development. Reports were developed on the findings by each team and consolidated in one overall DSIP review report. This section incorporates some of the key findings and conclusions on achievements, challenges and lessons learnt during implementation of the DSIP period.

2.2.1 Production and productivity

2.2.1.1 Agriculture research and extension

Regarding research, NARO and NAADS developed joint priority setting guidelines to ensure the facilitation and development of closer linkages and collaboration between key players in determining the research and advisory agenda and a Competitive Research Grants (CRG) Scheme for research was established and supported over 180 projects. In order to promote functional partnership between research and other stakeholders, District Adaptive Research Support Teams (DARST) were established in each district with the level of DARST functionality increasing from 74% to 100% by 2012. Multi-stakeholder Innovation Platforms (MSIPs) were also established as the main drivers of knowledge sharing, learning, joint demand-driven needs assessments and implementation. NARO supported staff for long-term training, short-term training, professional courses, workshops, seminars and conferences. NARO also re-configured the PARIs from research and/ or commodity units or centres into programmes and carried out major and minor infrastructure development activities at various zonal and national institutes.

There was also increased farmer access to information, knowledge and technology. Farmer Group Development Training Manual and Farmer Fora Development Reference Manual were developed, printed and disseminated for use by the FID implementers at the district and sub county levels. By 2012/13 a total of 3,499,193 beneficiaries directly (and 2,471,968 indirectly) benefited from agricultural extension advisory services provided under ATAAS.

2.2.1.2 Pests and disease control

Considerable progress has been made in developing policies on pests and disease control resulting in improved control of pests, vectors and diseases. Animal sub-sector outbreak communication standard operating procedures (SOPs) were reviewed, updated and popularised amongst extension workers; continuous countrywide forecasting of crop pest and diseases was undertaken; capacity of the MAAIF laboratory technicians was strengthened for diagnosis of pests and diseases; a robust post-entry quarantine regime to handle dangerous pests, diseases and weeds was established at various border posts; tsetse and tick-borne diseases were controlled using various methods including acaricides/ insecticides, pyramidal tsetse traps and live bait. A statutory instrument for identification and traceability as well as identification and traceability guidelines have been drafted pending the approval process.

2.2.1.3 Water for production

Regarding water for production, a total of eight schemes were developed, i.e. three schemes were rehabilitated, one scheme is still undergoing rehabilitation while five schemes have had a pre-feasibility study conducted and 17 feasibility studies were carried out on community based irrigations schemes. In addition, district-based demonstrations on small-scale irrigation technologies and rainwater harvesting and management were established in 23 districts. Furthermore, various interventions were carried out on rehabilitation/ expansion of existing valley tanks/ dams; construction of new valley tanks/ dams; and increasing water storage through surface water reservoirs, gravity flow or ground water exploitation watershed management. With respect to aquaculture, three new commercial aquaculture sites were established; 17 fishponds were established; two aquaculture parks were established; eight landing sites were constructed/ developed; and, four regional fish hatcheries were constructed.

2.2.1.4 Mechanisation

There was also an increased use of labour saving technologies. NEC has spearheaded an in-house financing scheme while tractor donations by GoU to identified model farmer groups and for neighbourhood contracting has been initiated; MAAIF also provided some tractors to farmers. Through PPP, 30 heavy equipment and tractor operators and local suppliers/dealers were trained in machinery operations. Various achievements were also attained in the promotion of mechanisation for increased rice production. MAAIF also approved the positions of agricultural and mechanical engineers while MoPS has also approved the positions of agricultural engineers in the local governments.

2.2.1.5 Production and productivity of food crops

Area Planted: Over the period 2010-2014, all food crops registered an increase in the area planted except banana that registered a small and insignificant decline of 0.41%. The average increase in area planted over the five-year period was 8.5% for cereals (millet, maize, sorghum, rice and wheat), 6.12% for root crops (sweet potatoes, Irish potatoes, and cassava), 4.34% for pulses (beans, field peas, cow peas and pigeon peas), and 8.25% for oil seeds (ground nuts, soya beans, sesame seeds and sunflower).

Production: Over the same period, bananas registered a decline of 2.47% in the quantity produced. Cereals production was static registering an insignificant average increase in production of 0.81% (with millet and sorghum experiencing a decrease while maize, rice and wheat increased). The average percentage decrease in production of root crops of 2.3% (with only Irish potatoes experiencing an increase) and 3.72% for pulses were also significantly small. It is only oil crops that registered a significant average percentage increase of 10.3% over the same period.

Yields: Of the 16 food crops analysed, only five crops registered any increase in yields during the five-year period. Of the five crops, only maize (13.03%) and sesame seeds (16.55%) registered significant increases, while the increases for the other three were either small or insignificant and these are Irish potatoes (0.05%), beans (0.05%) and cow peas (4%). Overall, decline in yields over the five years was significant for cereals (7.26%) and root crops (8%) but insignificant for bananas (2.07%) pulses (0.61%) while oil crops registered a small increase of 3.85%. On a related note, the yields of almost all the food crops are significantly below the on research station yields. For example, the yield of maize was 2.6mt/ha compared to 5-8mt/ha. The yields for beans were estimated at 1.5mt/ha compared to the 2-4mt/ha. The table 6 summarizes food crops productions.

Table 7: Percentage change in area planted, production and yields of main food crops

Commodity	Percentage change		
	Area planted	Production	Yields
Plantain Bananas	-0.41	-2.47	-2.07
Cereals	8.52	0.81	-7.26
Root Crops	6.12	-2.30	-8.00
Pulses	4.34	3.72	-0.61
Oil crops	8.25	10.43	3.85

Source: Computed based on statistics in the statistical abstract 2015

Whereas area planted for most of the food crops has increased, the production has not increased at the same rate and yields have, in most cases, declined. This suggests that any increases in production/ outputs of food crops are a result of increase in areas planted rather than increase in productivity (yields). The poor yields may be due to limited access to water for agricultural production (WfAP); limited use of fertilisers amidst declining soil fertility; limited use of certified seeds; limited mechanisation; inadequate access to appropriate agricultural technologies; and inadequate access to extension services leading to limited knowledge and adoption of good agronomy practices.

2.2.1.6 Cash crops

Over the five years (2010 – 2014), the main cash crops registered increase in production except tobacco that registered a 6.2% decline. Coffee production expanded by 26.9%, while tea, cotton and cocoa production is estimated to have increased by 24.8%, 3.7% and 56.1% respectively. As shown in table 7, cotton production registered a positive trend, peaking in 2012 before starting a down ward trend, while tobacco production has fluctuated on a downward trend. Cocoa production increase is the highest although it started at a lower base. Increased production is attributed to increased investment into some of the respective cash crops over the five years during the five years, as briefly presented below.

Table 8: Production of main cash crops (000 tonnes)

Commodity	2010	2011	2012	2013	2014	%age Change
Coffee	166,968	191,379	186,126	232,561	211,872	26.9
Tea	49,182	54,178	57,939	59,934	61,376	24.8
Cotton	12,223	25,586	43,258	18,671	12,674	3.7
Tobacco	27,138	28,444	20,993	33,719	25,461	-6.2
Cocoa	16,478	17,936	19,664	26,352	25,720	56.1

Source: Statistical Abstract 2015

Coffee: 5% of coffee is produced by plantations, 10% by commercial farmers and 85% by smallholder producers. Between 2010 and 2014, a total of 116,333,572 coffee seedlings were planted benefiting over 570,000 households. The use of improved and certified inputs has been promoted increasing Robusta coffee productivity from 600kg/ha in 2010/11 to 700kg/ha in 2013/14, while Arabica coffee productivity has increased from 500kg/ha to 600kg/ha in 2013/14. UCDA registers and licenses industrial players at post-harvest level, sets quality control standards under which coffee is sold to the various markets, and inspects, certifies and documents all coffee exports. Currently UCDA has 38 extension workers serving all the coffee growing districts with a ratio of 1:45,000 extension worker to farmers, compared to 1:50,000 in 2010. Coffee pests and diseases surveillance has improved with 90% of pest and disease incidences being reported. A total of 1,000 stockists have been trained across the coffee growing districts compared to only 250 in 2010, and 4,197 million shade trees were distributed and planted by farmers mainly in Northern Uganda. A total of 200,000 coffee farmers have been trained in business management and development skills at coffee production and marketing levels.

The National Coffee Research Institute (NaCORI) was launched in 2014 with the mandate to manage and carry out basic and applied research of a strategic nature and national importance in all fields pertaining to coffee. UCDA has established the National Coffee Steering Committee and 30 district coffee platforms to strengthen linkages in coffee research, development and extension. In

addition, three centres of excellence have been established in Kampala, Iganga and Bushenyi fully equipped with laboratories and staff and 25 micro centres.

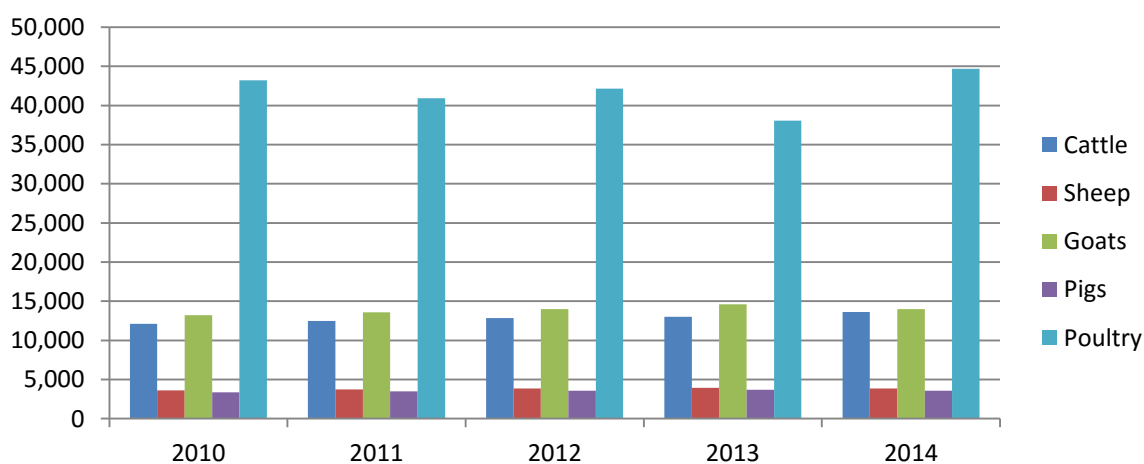
Tea: A total of 146,629,506 plantlets were distributed in the last 5 years giving acreage of 13,210ha. This has increased acreage under tea to 41,210ha. However, the sector is constrained with inadequate sources of planting materials; limited number of tea factories especially in areas especially in new tea areas like Zombo and Nebbi; inadequate extension services; and inadequate funding for tea research.

Cocoa: The number of districts where cocoa was growing in 2010/11 was 17 and the area under cocoa was 17,380 hectares, grown by 10,200 farmers. During the period 2010-2014, 7.62 million cocoa seedlings were procured and distributed to the farmers for planting bringing the total area under the crop to 25,000 hectares grown by 13,000 farmers in 22 districts. However, none of the cocoa growing districts has extension staff that are dedicated to cocoa production. Currently, there are seven cocoa warehouses in the country used for sorting, bagging, storage, fumigation and preparation of the cocoa beans for export. This includes validation of the quality of the beans, before export, through inspection by MAAIF officials.

2.2.1.7 Livestock

Uganda experienced a steady increase in the number of livestock for all the main animals over the period 2010-2014. The number of cattle increased by 12.5% from 12.1m to 13.6m animals, of which about 93.6% of are indigenous breeds whereas 0.8% are beef exotic/ cross breeds and 5.6% are dairy exotic/ cross breeds. The number of goats increased from 13.2m to 14m representing a 6.1% increase. The number of sheep and pigs increased by 6.1% from 3.6m to 3.8m sheep, and 3.4m to 3.5m pigs respectively as summarized in the 4 below.

Figure 4: Livestock numbers (000 animals) 2010-2014



In line with the increases in the number of livestock, meat production has also increased over the five years. The amount of beef produced increased from 180,300mt in 2010 to 202,929mt in 2014, representing a 12.6% increase. Goat/ mutton produced increased from 33,619mt to 37,838mt equivalent to a 12.5% increase, while the amount of pork produced increased from 19,669mt to 22,138mt equivalent to 12.6%. Similarly, milk production has increased from 1.38billion litres in 2010 to 1.55billion litres in 2014, representing a 12.6% increase over the period. The number of

poultry registered a 3.5% increase from 43.2m birds in 2010 to 44.7m birds in 2014. The poultry sub-sector generated an estimated 856m eggs in 2014 compared to 761m eggs in 2010.

Despite the large livestock numbers, the output per animal in terms of meat production is very low. The livestock sub-sector is challenged with inadequate supply of quality pastures; unavailability of water for livestock, inadequate sources of high yielding breeding stock; weak capacity to provide effective veterinary services and to control livestock diseases; inadequate capacity for sanitary and phytosanitary control measures; and lack of appropriate meat marketing infrastructure.

2.2.1.8 Fisheries

Fisheries continue to be an important sub-sector contributing 1.2% to national GDP and 5% to agricultural GDP of Uganda. It employs up to 1.3 million people. In 2014, fish and fish products accounted for 10% of agricultural export value, second only to coffee.

Over the period 2010-2014, Government directed efforts towards promoting recovery of depleted stocks of the large commercial fishes. Catch assessment surveys carried out revealed that in Lake Victoria, the catches of Nile perch increased from 85,000mt in 2010 to 91,000MTs in 2014 and tilapia increased from 17,000mt to 42,000mt in the same period. In Lake Albert, Nile perch decreased from 8,600mt in 2012 to 3,800mt in 2014. Overall, fish catch increased by 16.6% over the five years, 2010-2014 indicating recovery of fish stocks. The biggest increase in fish catch was recorded on Lake Victoria (50.4%) but three lakes reported declines in fish catch. Table 8 presents the distribution of fish catch by lake.

Table 9: Distribution of fish catches by lake (thousand tonnes)-2010-2014

Water Body	2010	2011	2012	2013	2014	%age change
Lake Victoria	162,929	175,817	185,000	193,000	245,000	50.4
Lake Albert	155,811	163,949	152,560	160,000	152,000	-2.4
Lake Kyoga	51,707	61,586	44,049	40,000	38,000	-26.5
Lake Edward, George & Kazinga Channel	4,500	5,300	5,208	6,248	6,246	38.8
Albert Nile	5,200	5,000	5,043	5,500	5,390	3.7
Lake Wamala	5,600	75,112	5,712	4,500	4,590	-18.0
Other Waters	10,300	7,075	9,547	10,000	10,500	1.9
Fish catch	396,047	493,839	407,119	419,248	461,726	16.6

Source: Uganda Bureau of Statistics

In an effort to control illegal fishing, 14% of the boats were licensed in 2011 but reduced to 6.3% in 2014. In addition, over 60,000 nets were impounded and destroyed and over 100 trucks with immature fish impounded, 150 boats were destroyed; over 2,000 suspects were arrested and prosecuted. By 2014, compliance level by factories had increased with a reduction of undersized fish processed by 90% mainly through self-policing schemes. Regular monitoring and enforcing fish quality and safety standards has been implemented and to-date all fish export consignments from the three main lakes are issued with fish health certificates.

In an effort to develop the fishery of Small Pelagic Fishes, suitable fishing crafts, gears and methods including catamaran boats, fishing equipment, large scale mechanized fishing rigs were adopted and promoted resulting in the number of bigger motorized boats targeting small pelagic fishes to increase on all water bodies. In addition to this, 106 mukene fishing grounds were mapped in three districts on Lake Victoria and 40 community demonstration mukene handling infrastructure (drying racks) at lading sites in nine local government districts riparian to Lakes Kyoga, Albert and Victoria were established. Other achievements include promotion of suitable packaging methods; promotion of five new mukene products (sweet mukene, powder mukene, sesame seeds mukene, chilled mukene and chips mukene) to artisan women processors; standards were developed for the two products namely ground or powdered and sundried mukene products. As a result of the above, during the period under review, the number of products in local supermarkets and in the regional fish trade has increased from three in 2009 to now over 10 and there has also been an increase in percentages of mukene going for human and animal consumption to 15% and 85% respectively now compared to 10% and 90% in 2010.

In an effort to promote commercial aquaculture, an aquaculture parks investment policy was developed and a national task force was constituted to develop a comprehensive aquaculture policy for creating an enabling environment to spur commercial aquaculture investments. In order to improve operation of aquaculture production systems, processes and input supplies, guidelines for cage fish establishments were developed and cage enterprises have increased from 50 in 2009 to 1,300 cages on L. Victoria by 2014. One land-based and one water-based aqua parks in Apac and Kalangala districts were mapped. On the other hand, to support small scale production to commercial aquaculture, enhance production and supply of quality seed and to promote production of improved feeds, (a) three dams in Rubirizi, Sembabule and Kole districts were stocked with a total of 78,000 fingerlings of Chinese carp (b) four regional fry centres were constructed at Kajjansi, Mbale, Gulu and Bushenyi and (c) one feed mill was established in Kibuku district by government and a private major feed mill established in Jinja district.

2.2.2 Markets and value addition

MAAIF has tracked the outcome of improved markets and increase in value addition by monitoring the export values of four major commodities (coffee, tea, cotton and cocoa) as well as GDP growth, growth of commercial agriculture and the share of agriculture in the total GDP. Thus, between 2010 and 2013, there has been an increase in earnings of 9%, 31% and 7% from the export of coffee, tea and cocoa respectively between 2010 and 2013. However, for cotton, there has been a decline of 74% over the same period. Regarding the contribution of agriculture to the economy, the share of the sector to GDP growth and share of monetary contribution increased by 0.1% and 0.8% respectively between 2010 and 2013. There was however, a decline in the share of agriculture in the GDP from 22.7% to 22.5% in the same period of time.

Regarding improvement of policy and regulatory environment, MAAIF continued to prepare and/or pursue approval of several policies and bills and the regulatory framework for input businesses was strengthened. A Department of CIC was created to regulate seed, planting materials and agro-chemicals. Accordingly, farmers were supported to access high quality inputs, planting and stocking materials.

In order to enhance private sector participation in value addition activities and investment, various profitability information for enterprise selection and market information materials were generated and disseminated. On the other hand, regarding capacity of farmer organisations in management, entrepreneurship and group dynamics, (a) guidelines for farmer institutional capacity development were produced and farmer groups and fora were strengthened. Farmer groups were accordingly mobilised for delivery of advisory services while higher-level farmer organisations were strengthened to enhance farmer participation in market development activities.

2.2.3 Enabling environment

Regarding policy analysis, implementation and monitoring, a joint agriculture sector review workshop is held every year and projects that are developed are presented to the Agriculture Sector Working Group and the Development Committee of MFPED for clearance. The target for percentage agriculture to total (domestic) budget was projected to increase from 4.7% in 2011/12 to 5.2% in 2013/14. However, the target was not achieved as, instead, the percentage decreased from 5.1% to 3.3% between the same period implying a widening gap between the NDP MTEF and approved share for agriculture.

There was also improved public education and communication on agriculture and natural resource issues during the period under review. For instance, annual agricultural trade shows, World Food Day celebrations, BBW sensitisation, pre-JASAR visits, national agro awards and regional agro-trade fairs were conducted. In addition, intra and inter sector coordination was strengthened. Furthermore, a National Statistics Technical Committee (NASTC) and the Sector Statistics Committee (SSC) were established. Regarding development of a national food and agricultural statistics system, a number of sector surveys have been undertaken in many areas. A national agricultural statistics bank is also being created in the Department of Planning while a National Early Warning System (NEWS) Unit has been established.

2.2.4 Institutional strengthening

2.2.4.1 Institutional reforms and human resources capacity

MAAIF is implementing its new structure in accordance with the restructuring report of 2010. New departments have been established and these are the Department of Crop Inspection and Certification (CIC); Department of Entomology; Department of Fisheries Resources Management (FRM) and Development; Department of Fisheries Regulation; Department of Aquaculture; Department of Agribusiness; and the Statistical Division. In 2010, MAAIF had 411 staff out of the approved 641 staff. Since 2012, clearance was granted to fill 239 vacant posts on the revised MAAIF structure, while clearance for an additional 175 staff is pending as per the Recruitment Plan. 156 posts have been filled through new appointments and promotions. Recruitment for the 45 priority positions was conducted and the following personnel appointed: three commissioners for FRM, CIC and entomology; 10 assistant commissioners; 14 principal officers; six senior officers; and 12 statisticians. There has also been an improvement in linkages and collaboration between MAAIF and district local governments (DLGs).

At the DLG level, the approved structure provides for a minimum of six personnel in each district, equivalent to a total of 672 staff for the 112 districts. In 2015, only 77 out of the 672 positions were filled (11.5%). At sub-county level, the approved structure provides for a staff establishment of 7,248 personnel, of which only 1000 (13.8%) were filled as of June 2015. A total of 3236 critical

positions are required at sub-county level for implementation of single spine extension system, of which only 389 positions are filled (12%). Over the ASSP implementation period, the sector will prioritise recruitment of staff especially at the district and sub-county level to support the implementation of the single spine extension system.

In addition, the zonal and district sub structures have been established at MAAIF HQ and at zonal/district levels and veterinary inspectors and fisheries inspectors recruited and deployed to staff the positions. However, the expanded structures of agricultural training institutions (ATIs) have not been integrated into the MAAIF HQ structure. Staff capacity development plan was formulated and is in place for the ATIs following approval by the MAAIF Training Committee. However, recruitment of 105 critical positions to enable the proper operation of the expanded college structure is still outstanding. The curricula of ATIs are yet to be reviewed and the teaching and physical infrastructure remains in poor state. While student enrolment has increased, the credibility of the ATIs has remained poor.

2.2.4.2 Construction of MAAIF HQ and district agricultural offices

MAAIF commenced activities that will lead to construction of new office space following the restructuring of the Ministry. The Ministry plans to develop permanent premises to relocate the MAAIF Headquarters from Entebbe to Kampala. The proposed offices are expected to be constructed in Bugolobi Suburb. So far architectural and structural designs have been developed and approved by Kampala Capital City Authority (KCCA). NEMA has also given a clearance (no objection) to the proposed construction. The works and services will be procured as provided for in the public private partnership (PPP) model to be adopted. On a related note, whereas support has been extended to district local governments to enhance their capacity to deliver services, a number of districts lack appropriate office and basic facilities. Over the ASSP implementation period, structured support will continue to be extended to district local governments to deliver the sector mandate at the grassroots.

2.2.4.3 National agricultural statistics

The Agricultural Sector Statistics Committee was established and the terms of reference to guide its operations were also developed. This structure has been active throughout the five years of the DSIP implementation, providing timely and appropriate agricultural statistics service to sector stakeholders. Additionally, subsector working groups (livestock, fisheries, crop and environment) were established to guide the technical implementation of the sector activities. Besides, the Statistics unit was elevated to a department level and staff increased from 2 to 15 staff currently. Statisticians have also been attached to different subsectors that include crop, livestock (where dairy lies) and fisheries.

A statistical methodology for estimating production was established through the inclusion of an agriculture module in the National Population and Housing Census 2014 for construction of a master frame. Secondly, the crop cutting method, a proposed methodology for estimating production was piloted in 2015 in eastern Uganda on maize and rice production. Results will be used to determine its appropriateness for use in estimating production. Furthermore, the statistics division has adopted the use of global positioning system in its data collection activities. Three statisticians have been trained in use of geographical information system software and use of ICT systems in statistics. Additionally, an ICT unit has been formed within the statistics division headed by a senior statistician. A national agricultural statistic databank has been established. Tools for collecting data for the system have been developed and a database established. To-date, the agricultural reporting system is functional and

administrative data is collected from at least 26 districts every quarter to estimate production figures for the country and any other related statistical information.

Overall, the agricultural statistical capacity has been strengthened with the setting up of the statistics division from a unit of two staff to now 18 staff team headed by an assistant commissioner. The statistics division has also been equipped with machinery and equipment including two vehicles to facilitate their work. Training of the statisticians in various areas has been conducted namely; geographical information system (3 statisticians), industrial statistics (11 statisticians), data processing (4 statisticians), food balance sheet development (4 statisticians) and producer price index calculation (3 statisticians).

2.2.4.3 Monitoring and evaluation

The sector has progressed in operationalising the M&E framework. The M&E division was created and is currently staffed with three permanent staff, which is still inadequate for effective implementation of the M&E mandate. The sector M&E technical working group has been formed and constitutes M&E focal points from the entire sector MDAs. The M&E Division together with the technical working group produces annual M&E reports on the activities implemented by the sector agencies, departments and projects and organises annual sector reviews. However, there are inadequacies in the harmonisation of roles and activities undertaken by the M&E units of agencies such as NARO and NAADS with those of the main M&E division in the MAAIF Planning Department. Equally, the sector was not able to prepare a timely comprehensive baseline, mid-term and final evaluation of the DSIP implementation to inform decision-making.

2.3 Challenges faced during the DSIP period

There were some mismatches between designs of DSIP, ATAAS and non-ATAAS components. For instance, ATAAS only addressed the first two components under Programme Area 1 on production and productivity. The targets set in the DSIP for the national priority commodities were not the same as those in ATAAS and FIPs. There was also lack of coherence between the DSIP and the FIPs. While the FIPs were developed as an implementation guide to the DSIP, they were developed two years into the implementation of the DSIP. Similarly, there was also a mismatch in resource allocations between DSIP, ATAAS and non-ATAAS.

2.3.1 Crop related challenges

Many of the challenges identified under the DSIP continued to manifest in the sector. These included poor agronomic practices that affected production; poor markets and marketing infrastructure for many crop enterprises; funding constraints resulting in many FIPs not being implemented; limited access to credit facilities hence many farmers were unable to acquire the necessary inputs; poor standards, weak regulatory framework and poor enforcement due to limited capacity; limited extension services due to very low extension staff to farmer ratio, laying-off of NAADS staff and AASPs.

Other challenges were climate change effects resulting in unreliable weather affected many crops; poor coordination among various stakeholders e.g. weak coordination among MAAIF, NAADS, the districts and NGOs; human resource constraints with limited personnel to run all the strategic DSIP activities; value addition constraints as knowledge on post harvest handling and value addition was limited; food insecurity issues e.g. competition between the priority crops and other crops for food security. There was also in-adequate engagement of women and youth; research and development

issues e.g. production of foundation seed; weak monitoring and evaluation framework; and high prevalence of pests and diseases e.g. CWD, banana xanthomonas wilt disease, cassava brown streak virus disease, fruit flies and citrus canker.

2.3.2 Livestock and fisheries related challenges

These included weak policy and regulatory framework; production constraints e.g. limited availability of quality feeds; land tenure and water rights issues affected water for agricultural production; weak M&E System and statistics. Others included poor post-harvest handling and processing constraints; poor stakeholder coordination – including PPP; human resource challenges including number of staff, lack of training and poorly equipped staff; poor markets and marketing infrastructure; and, funding constraints.

2.3.3 Lessons learnt and opportunities from DSIP

The DSIP review documented a number of lessons learnt that will inform the implementation of the ASSP. These included:

- a) Involvement of community based seed producers in planting material and seed production of quality declared seeds (QDS) expedites multiplication, ownership and access to improved seeds and planting materials;
- b) Commitment, good will and support from national and grassroots political leaders are critical in promotion of technology uptake;
- c) Market availability can trigger enormous supplier response;
- d) Smallholder farmers can utilise bank facilities for agricultural development and with technical support and appropriate loan product, they have the capacity to repay their loans.
- e) Another lesson has been that while the development of physical infrastructure is challenging, it is frequently easier than the development of effective farmer lead management structures;
- f) Establishment of national and district level platforms enhances commodity promotion; motivation of staff in the agricultural sector is critical in enhancing their work;
- g) Proactive engagement with key stakeholders is important in resolving issues of concern in implementation; and,
- h) Use of appropriate agricultural mechanisation technologies is greatly hindered by poor extension services, lack of financial capacity, inadequate skills development and poor marketing system.

The opportunities and emerging issues identified included:

- a) Increasing use of urban agricultural residues/ waste and up-coming residues/ by-products from the oil industry, as opposed to fertiliser production;
- b) Increasing availability of processing plants on local and international markets;
- c) Elevation of statistics unit to division level and the establishment of the single spine extension system will create a pool of staff to facilitate data collection in the local governments;
- d) Current government's good will and commitment of providing infrastructure for development.
- e) There are also positive attitude change towards irrigation, conservation agriculture and use of production enhancing inputs such as fertilisers resulting in increased demand for irrigation services and WfAP infrastructure;
- f) Good relationships with development partners, which is an important instrument for facilitating sourcing and provision of significant support;

- g) New pests and diseases that are emerging as serious impediments to crop and livestock production;
- h) High population pressure on land for residential use as opposed to food production;
- i) Declining soil fertility and water stress issues due to climatic change; and,
- j) Declining agricultural labour force and rapid land fragmentation affecting mechanisation.

3 THE STRATEGIC DIRECTION OF THE SECTOR

3.1 ASSP's vision, mission, objectives and outcome indicators

Under the ASSP, the sector's vision is: 'A competitive, profitable and sustainable sector'. Its mission is: 'Transforming the sector from subsistence farming to commercial agriculture'. The envisaged transformation will help create employment opportunities, especially for the young and for women, and increase household incomes, while ensuring household food security along the entire commodity value chain.

The overall goal of the sector is: 'To achieve an average growth rate of 6% per year over the next 5 years'. The overall development and growth of the sector is anchored on four strategic objectives or priorities:

1. To increase production and productivity of agricultural commodities and enterprises;
2. To increase access to critical farm inputs;
3. To improve access to markets and value addition and strengthen the quality of agricultural commodities; and
4. To strengthen the agricultural services institutions and the enabling environment.

Attainment of these objectives will require critical inputs and support from enabling sectors and factors such as a conducive macro-economic environment, security, infrastructure, education and social development. To deliver the vision of the agricultural sector, institutional reforms and better coordination within sector institutions and enabling sectors will be critical.

Assuming a conducive external environment and support from enabling sectors, the agricultural sector has set the following key outcome targets to be achieved over the plan period:

1. Increase productivity by farmers to at least 50% of the yields at research stations for the 12 priority commodities;
2. Transform subsistence farmers (growing for consumption) into enterprise farmers (growing for consumption and responding to market needs) and transforming smallholders farmers into commercial farmers;
3. Increase food security and food availability in all parts of the country;
4. Increase agriculture exports to at least \$4 billion per year;
5. Reform and strengthen agricultural service institutions such as research, extension and regulatory bodies to make them effective and efficient.

3.2 Sector growth priorities and interventions

The ASSP identifies four priorities for enhancing the Agricultural sectors growth and contribution to Uganda's economic growth, poverty reduction, wealth creation, employment generation and export growth. These strategic priorities and the interventions for delivering them are described below. The strategies are presented at two levels: first, at a general level outlining the four strategic priorities and detailed interventions and activities that will be implemented for and across all the identified priority and strategic commodities; and, second, at the commodity level detailing the specific or tailored interventions to be implemented for each priority and strategic commodity.

3.2.1 Priority 1: Increasing agricultural production and productivity

3.2.1.1 Strategy rationale and outline

Under section 2.2, it was shown that increases in production had resulted from increase in acreage as productivity of commodities continued to decline over the last five years. This is attributed to farmers' slow uptake of technological innovations, use of poor agronomic practices and high prevalence of pests and diseases. In order to realise increased agricultural production and productivity in the next five years, agriculture sector investments will be directed at strengthening:

1. Generation and adoption of research technologies;
2. Provision of extension services: enhancing access to extension services through operationalisation of the single spine agricultural extension system;
3. Control of pests, diseases and vectors among crops and animals by strengthening the institutional and regulatory framework; strengthening the capacity of laboratories and disease control infrastructure; and conducting market surveillance to rid the market of counterfeit agro-chemicals.

3.2.1.2 Strategic interventions

3.2.1.2.1 Strengthening ecologically sound agricultural research and climate change resilient technologies and practices

In spite of the fact that the National Agricultural Research System (NARS) has generated a significant number of technologies under its 10-year Strategic Plan (2008-2018), the majority of the smallholder farmers have not accessed or adopted these technologies. This situation is manifested in significantly wide yield gaps between the on-station and on-farm outputs. In addition, farmers continue to grapple with the effects of climate change, characterized by erratic weather patterns, which impact on agricultural production and productivity.

To accelerate production and productivity at national and household level, the ASSP will focus on generation and up-scaling use of ecologically sound agricultural research and climate change resilient technologies and practices across the identified priority and strategic commodities. The specific undertakings that will be pursued under generation of technologies are:

1. ***Generating appropriate, safe, climatic change resilient and cost-effective agricultural technologies, innovations and management practices (TIMPS)***, including nutrient dense crops and innovative farming systems for improved household food security and nutrition. MAAIF through NARO will undertake adaptive and strategic research interventions to:
 - a) Breed climate smart nutrient enriched farmer preferred varieties and breeds;
 - b) Develop improved high yielding crop varieties and livestock breeds;
 - c) Develop nutrient fortified and transgenic crops (bananas, maize, Irish potatoes);
 - d) Characterise plant and animal disease strains and agents;
 - e) Develop and release disease, pest and drought resistant varieties/ breeds;
 - f) Develop non-conventional animal feeds;
 - g) Conduct on-station and multi-location evaluation of generated lines;
 - h) Conduct on-farm trials and national variety evaluation trials for Value for Cultivation and Use (VCU) and Distinctness, Uniformity, Stability (DUS).

2. ***Strengthening the functioning of the NARS by identifying and building key human resource capacity to support the sector.*** The specific interventions to be undertaken under this strategy are:
 - a) Conduct routine capacity needs assessments and implement soft-skills capacity building to change the mind-set of all actors;
 - b) Develop and implement a staff recruitment and retention strategy with incentives for high performance and commitment;
 - c) Develop and implement a mentoring programme for junior scientists;
 - d) Conduct short and long term training on adaptive research support teams for technical staff under the NARS
 - e) Establish an effective staff performance appraisal system;
 - f) Provide logistical support to NARO scientists

3. ***Developing and implementing a policy and regulatory framework for biotechnology in agriculture.*** The activities under this intervention are:
 - a) Fast track the laws and standards of genetically modified organisms (GMOs) production and utilisation;
 - b) Develop and enhance capacity for implementing research guidelines and procedures on biotechnology use and bio-safety.

4. ***Developing and promoting technologies and protocols for value addition in agriculture and agro processing to agricultural produce to increase value to producers and shelf life of produce.*** The activities under this intervention are:
 - a) Conduct product development and end user marketability tests to enhance utilisation options for a range of strategic and priority commodities;
 - b) Develop and validate technologies and protocols for agro-processing including protocols for enhancing shelf life, uniform ripening and stability;
 - c) Test and ascertain thresholds on a range of parameters for food safety, quality assurance and validate capacity for compliance;
 - d) Develop processing/packaging tools and equipment appropriate for local conditions.

5. ***Up-scaling uptake of existing and new TIMPS.*** Delivery and uptake of suitable TIMPS has always been met by a range of barriers including: low purchasing power; limited physical access to the inputs of intensification; inappropriate land tenure systems; limited derived demand for the increased output; limited access to production inputs; and limited information, knowledge and skills. This intervention will address the barriers through the following interventions:
 - a) Undertake technology promotion (production and agro-processing) and enhance farmer access to information/ knowledge about existing and new technologies; and
 - b) Provide technology uptake grants for farmers, farmer groups and agro-processors.

3.2.1.2.2 Implement a single spine agricultural extension system while promoting gendered innovation in agricultural research centres and extension services

Access to advisory services is a key determinant of technology adoption and uptake by farmers and other stakeholders. The single spine extension service delivery system includes the following reforms: i) Mainstreaming the NAADS programme into DLG structures and eliminate the existing parallel extension systems, ii) Establishing a Directorate of Agricultural Extension Services

(DoAES) in MAAIF to coordinate extension service delivery countrywide both in public and private sectors and, iii) Supporting establishment of an independent input distribution system so that the extension system deals with inputs for demonstration only. The specific activities to be implemented under this strategy are described below.

1. ***Recruitment of extension workers at the district and sub-county levels.*** The DoAES will be responsible for guiding recruitment by DLGs of extension workers at the district and sub county levels. Recruitment will be carried out in a phased manner over the ASSP period, and prioritised to districts with high production potential of the 12 priority and 4 strategic commodities. MAAIF will also periodically review the single spine agriculture extension system with a view to enhancing extension service provision and strengthening the linkages between DLG extension service and MAAIF, as well as its Agencies.
2. ***Farmer education and refresher trainings of extension staff.*** This will involve equipping extension staff with the basic knowledge and skills needed to provide extension services. The knowledge and skills to be provided will include; basics of agronomy, livestock management, poultry, soil management, nutrition and agribusiness among others. The DoAES will develop and institutionalise a professional certificate course aimed at equipping extension workers (both public and private) with requisite knowledge and practical skills for effective extension services delivery in Uganda. This intervention will also involve transfer of knowledge using a package of information materials and cost effective mass media communication channels to educate farmers and disseminate the information.
3. ***Institutional strengthening of extension systems.*** The DoAES will develop an agricultural extension policy and legal framework as well as strategic plans to guide and regulate public and private sector extension services provision. Ethics and standards for agricultural extension delivery will be developed and a framework for supervision and enforcement of the standards will be established. An advisory committee consisting of eminent experienced stakeholders will be established to advise the directorate on strategy and other matters.
4. ***Promote strategic partnership between research, technology development and extension services at all levels.*** Under this intervention, MAAIF will establish functional multi-stakeholder innovation platforms (MSIPs) to carry out joint implementation of adaptive research activities and strengthen linkages between agricultural research, extension services, M&E and data systems.
5. ***Provide farmers with timely quality extension services using available technologies and modern agronomic practices.*** The intervention will include the following actions; review and strengthen current dissemination pathways including MSIPs, District ARSTs, mass, print and online media; plant clinics, demonstration sites, trade shows and exhibitions; and the farmer Field School Approach (FSA). The intervention will also strengthen linkages and technology/information exchange between ZARDIs and the DARSTs and between providers of agricultural advisory services and those providing research services in each zone.
6. ***Farmer institutional development (FID):*** MAAIF will develop and rollout business oriented

FID approach/model that will involve training and dissemination of guidelines to local government extension staff on how to use the FID model. Inventory and capacity assessment of existing farmer organisations will be conducted in each district to identify needs, gaps and opportunities. MAAIF will facilitate DLG extension staff to conduct FID to address gaps and opportunities identified in the FID capacity assessments.

7. ***Agribusiness development services and market linkages:*** This intervention aims at developing agribusiness skills of extension workers and high level/downstream value chain development actors using a market-oriented approach. This intervention will facilitate establishment of business oriented multipurpose self-reliant sustainable farmer institutions; farmer capacity development; market and agribusiness linkages; information and advisory services all aimed at increasing incomes and food security. The specific actions under this intervention include:
 - a) Recruiting sufficient specialised service providers/ subject matter specialists to support the priority and strategic commodity value chains;
 - b) Conducting inventory and profiling of agribusiness development service providers;
 - c) Linking farmers to agribusiness development service providers and other actors in the value chains (e.g. through innovation platforms);
 - d) Developing capacity of farmers and farmer institutions in agribusiness, collective marketing, negotiating contracts and engaging with other actors in value chains
 - e) Conducting regular market surveys and develop farmer capacity to benefit from identified markets that are comparatively more profitable;
 - f) Conducting value chain mapping and analysis for priority and strategic commodities.
8. ***Establish and support at least ten commodity platforms for periodic information sharing and discussion of issues pertaining to particular commodity value chains.*** The commodity platforms will provide a forum for sharing of information and engagement among stakeholders for identifying and addressing challenges along the value chain of the specific commodities.

3.2.1.2.3 Control diseases, pests and vectors

The control of diseases, pests and vectors interventions are aimed at reducing the prevalence of production and trade sensitive diseases, creating orderly livestock, crop and fisheries marketing protocols and improving the public sanitary and phytosanitary control systems to ensure that value-added products do not transmit pests and diseases. The strategy will be guided by the following actions.

1. ***Control of crops and livestock pests and diseases.*** This action will encompass the following interventions.
 - a) Crop and livestock pests and disease control regulatory strengthening through formulating, reviewing and operationalisation of supportive policies, legislation, standards and guidelines for pests, vectors and disease control including data collection for informed policy analysis and planning. This will be complemented with creation of awareness among the public on the new regulations to enhance control and compliance. The target audience will include crop and livestock farmers, traders, transporters, abattoir managers, law enforcement agencies, security personnel, DLG officials, Uganda Revenue Authority (URA) personnel, consumers and the general public.
 - b) Conducting early detection of crop and livestock pests, vectors, weeds and diseases outbreaks and timely reporting of crop pests, weeds and disease outbreaks is essential for rapid field

investigations, laboratory confirmation and prompt interventions to control them. Investments will target the establishment of a functioning early warning and detection system for all outbreaks. This will involve upgrading the surveillance systems using communities and modern technology, timely reporting of diseases, vectors and pest outbreaks and conducting routine surveillance in addition to procurement of appropriate agro-chemicals and equipment to address the outbreaks;

- c) Establishing and maintaining functional crop and livestock pests and disease control infrastructure through investments that will target establishment of functioning regulatory infrastructure needed for effective pests and disease surveillance and control. This will include laboratories, as well as other appropriate infrastructure for enforcement e.g. that required at border posts;
- d) Controlling crop and livestock pests, diseases and vectors to ensure that communicable diseases are effectively managed in order to promote crop and livestock health as a means to higher production, productivity and market penetration. Over the plan period, surveillance, prevention and control measures will be implemented for each of the priority commodities and for the seven major livestock diseases, namely: tsetse and Trypanosomiasis; east coast fever; foot and mouth disease; rift valley fever; African swine fever; rabies; and animal brucellosis.

3.2.1.2.4 Other production and productivity enhancing measures

1. Promoting Sustainable Land Management (SLM) and adaptation of climate change resilient agricultural production systems, technologies and practices. MAAIF undertakes to promote adaptation of climate change resilient agricultural production systems, technologies and practices especially in areas of increasing climate change stress. The activities to be implemented under this intervention include: targeting and implementing specific climate-smart adaptation actions that include promotion and bulking of drought tolerant varieties; water harvesting; index-based weather insurance; conservation agriculture; agro-forestry; and integrated soil fertility management; set up climate smart villages for demonstrating CSA options in areas whose agriculture is more susceptible to climate change using vulnerability indicators, such as access to water, markets or gender equity in economic activities;
2. Increasing access to agricultural finance services by designing and implementing agricultural commodity based development credit facilities with specific focus on the 12 priority and four strategic commodities;
3. Promoting commercialisation of agriculture particularly amongst smallholder farmers. MAAIF will establish and operationalise a commercialisation fund through which support will be extended to smallholder farmers with potential to commercialise by helping them to overcome binding constraints that will be identified on a case by case basis;
4. Promoting time and labour saving technologies targeting women farmers;
5. Strengthen linkages between farmers and production support services (including financial services, capacity development and marketing) in partnership with the MoFPED and other stakeholders.

3.2.2 Priority 2: Increasing access to critical farm inputs

3.2.2.1 Strategy rationale and outline

Uganda's agriculture is predominantly small-scale farming mainly in the high-potential areas. In Uganda, farmers that are categorised as subsistence are estimated to deliver between 75–80% of the total agricultural output and marketed agricultural produce. Smallholder enterprises deliver 12–15% of marketed agricultural produce, being farmers having between 2–200 acres or greater (managing it as business). Commercial farmers (comprised of 0.5% of farmers) account for 2–3% of agricultural produce running large tea, sugarcane, coffee, rice and other estate farms. However, use of certified inputs such as hybrid seed, concentrate feeds, fertilizer, safe use of pesticides and machinery by subsistence and small-scale farmers is very low. There is huge potential for increasing productivity for these farmers with increased access to inputs.

To realise increased access to critical farm inputs, sector investments over the next five years will focus on four broad categories of farm inputs: agricultural machinery; quality seeds and planting materials; water for agricultural production (WfAP); and fertilisers.

To promote access to agricultural machinery, investments will target: increased affordability of agricultural machinery; acquisition and utilisation of agricultural mechanisation technologies through public private partnerships (PPPs); supporting sustainable local manufacturing and maintenance of suitable agricultural machinery for farm production and postharvest processing; and, establishing appropriate incentive frameworks for the acquisition and financing of labour saving technologies among others.

To improve access to high quality seeds and planting materials, the sector will invest in: formulation and reviewing policies, laws and regulations for agricultural inputs including seeds and planting materials supply and use; strengthen the national certification and regulation system and regulatory institutions to guarantee the quality of seeds and planting materials on the market; enhancing the capacity of the private sector seed industry to test and produce pre-basic seed; up-scaling use of improved seeds and planting material by extending the inputs dealer network and supporting seed companies to promote new varieties and cultivars; improving farmer knowledge of new varieties and cultivars; and increasing availability and access to quality seeds/planting materials for priority commodities by supporting their distribution to farmers for all the twelve priority and four strategic commodities.

To promote access to WfAP, public investments will be directed towards increasing farmers' access to water for crop irrigation, livestock and aquaculture. Interventions will focus on: strengthening the legal and institutional framework and enhancing sector capacity for developing water for agricultural production; investing in modern irrigation technologies through construction of large as well as promotion of small scale irrigation technologies in line with the zoning strategy; development of large and medium water reservoirs and promoting rainwater harvesting and storage technologies for agriculture at household and farm levels.

To enhance access and use of fertilisers by all categories of farmers, investments will target the creation of an enabling environment for: fertiliser production, importation and distribution; strengthening soil fertility knowledge management; increasing fertiliser awareness in the farming

community; supporting development of physical infrastructure like warehouses for fertiliser production, importation and distribution; and increasing availability of fertilisers for priority commodities by supporting distribution to relevant farmers.

3.2.2.2 Strategic interventions

3.2.2.2.1 Promote agriculture mechanisation

Mechanized agriculture in primary production and postharvest handling is still low mainly because of the limited awareness, costs of mechanisation in rural areas and limited awareness of the scope of mechanized agriculture among the rural populations. An estimated 10% of the farmers employ some form of mechanisation with about 8% using draft animal power (DAP) and another 2% using tractors. This is a major factor contributing to low levels of production, productivity, commercialisation and value addition. Along with other inputs and support to improve agricultural production and productivity, agricultural mechanisation has proven to have the potential to:

- a) Enhance labour use and efficiency;
- b) Provide greater precision in farm operations;
- c) Reduce agricultural losses; and
- d) Contribute to value addition to products through processing and packaging.

The interventions proposed in this five-year plan, target increment of the existing pool by 3,500 additional tractors that are fully equipped with requisite accessories for primary and secondary tillage. Farmers will acquire 15,000 ox-ploughs with accessories for use with DAP. Additionally, specialised equipment will be acquired for postharvest and mechanised value addition of strategic cereals, legumes, roots and tuber crops. These interventions will contribute to a steady increase in the total annual acreage cultivated with projections of extra 116,000 acres cultivated in Year 1, rising to an extra 164,000 acres by Year 5. In total, mechanisation is projected to add a potential 710,000 acres of cultivated land over the five-year period. Mechanisation for both the dairy and beef sub-sectors including increased access to milking machines, coolers, refrigerated trucks, milk cans, meat power saws, will be promoted and supported.

The planned investments include providing infrastructure for development and responding to the increasing demand for agricultural machinery operators and mechanics. This offers an opportunity for promoting mechanisation at various levels including training, infrastructure development and utilisation of machinery for improved quality of agriculture products, which will translate into creation of employment opportunities for the youth. The specific interventions to be prioritised under this strategy are described below.

1. Promoting acquisition and utilisation of agricultural mechanisation technologies. Using a series of PPP mechanisms, this intervention will stimulate the ownership and use of agricultural machinery; thus motivating farmers to venture into mechanised agriculture for productivity improvement and processing. The interventions will include:

- a) Developing a framework to facilitate the operationalisation of the developed PPP models;
- b) Supporting the developed linkages/partnerships that encourage and promote access, use and uptake of appropriate agricultural mechanisation packages for increased farm productivity at various levels including agro-processing. These actions will target; in-house financing spearheaded by NEC, tractor hire service by MAAIF and OPM, commodity-based tractor hire service and mechanisation input donations by GoU;

- c) Facilitating access to financial products including credit, leasing and hire services through PPPs to adopt new labour saving and product quality improvement ideas and agricultural mechanisation technologies;
- d) Building and strengthening the capacity of public and private extension workers to provide quality extension services in agricultural mechanisation.

2. Promote sustainable local manufacture and maintenance of suitable agricultural machinery for farm production and postharvest processing. This intervention will be implemented through the following priority actions in the different strategic commodities; establish a comprehensive agricultural mechanisation policy and strategy with special consideration for taxation and consumer protection; support skills development for manufacturers, artisans, technicians and mechanics; access to credit under PPP models; identify mechanisation technologies through the entire value-chain, that can be locally manufactured for different farming, postharvest and other agricultural needs; identify local private engineering fabrication enterprises/ artisan groups with adequate capacity and skills to handle fabrication of selected equipment prototypes; through appropriate PPP type arrangements, provide support and encouragement to successful local manufacturers and artisan groups to enable them popularise their products through demonstrations, field and open-days, participation in shows/ exhibitions; train a critical mass of rural youth in fabrication, operation and maintenance of agricultural machinery and tools.

3. Formulate and implement incentive frameworks for acquisition and financing of labour saving technologies. This intervention will be implemented through: increased access to labour saving technologies for land opening, planting, weeding, harvesting and threshing; develop incentive packages to aid farmers boost production of agricultural commodities with mechanisation technologies; sensitise and train farmers and agro-processors on strategies to access mechanisation loan funds and address challenges of collateral; link relevant ministries, institutions and farmer organisations to ensure implementation of the selected incentive packages for agricultural mechanisation; identify key intervention areas for GoU input to catalyse mechanisation uptake.

4. Strengthening capacity for technical information acquisition, equipment evaluation and sustainable operation of agricultural machinery. The breakdown or failure of agricultural machinery is a common challenge to ensuring continuous routine farm operations. Part of the challenge is limited capacity of farmers and service providers to use, maintain and manage agricultural machinery. The intervention will involve; developing, packaging and disseminating easy to use manuals for agricultural machinery and tools; conducting skills acquisition training and demonstration events on use and maintenance of agricultural machinery and tools for farmer groups and service providers. To achieve these interventions investments will target; provision of technical guidance to MDAs, carrying out proficiency tests on new makes of tractors, equipment and implements imported in the country and recruiting staff to maintain the heavy equipment at MAAIF.

5. Establish an agricultural mechanisation resource centre for training machinery operators, generating technical information and provision of referral workshop services for testing/evaluating agricultural machinery. MAAIF will achieve the objectives of this intervention through; refurbishing the agricultural mechanisation resource centre in Namalere for training machinery operators, generating technical information and provision of referral workshop services for testing and evaluating agricultural machinery; developing and publicising in user-friendly formats, guidelines to enable farmers draw up mechanisation strategies; providing information and guidelines for farmers wishing to select machinery for specific tasks and reviewing these with the farmers wishing to acquire machinery.

6. Strengthen the capacity of technical and vocational institutions for training agricultural mechanics and technicians. It is intended to achieve the objectives of this intervention through: assessing and reviewing existing facilities at Vocational Training Institutions (VTI); assessing existing capacity of staff and curriculum to train operators, mechanics and others; selecting suitable vocational training schools for upgrading of facilities and human resources to undertake practical machinery training; training to upgrade staff skills in training machinery operators, mechanics and farmers; initiating means for review, evaluation of training programmes within vocational training institutions; forming linkages with commercial farms and dealers where trainees can gain practical real life experience.

7. Strengthen collaboration with the national bureau of standards to eliminate importation and trade of substandard agricultural mechanisation equipment. The primary objective of this intervention is to establish a code of practice that deters importers and dealers from importation and trade of substandard agricultural mechanisation equipment. The main action under this intervention is to develop and enforce standards for agricultural machinery and equipment.

3.2.2.2.2 Improve access to high quality seeds and planting materials

About 15% of crop area in Uganda was planted with improved seed in 2014 and it is proposed to target an additional 20% of planted area by 2019/20 which should contribute an estimated 4% increment in crop production. MAAIF intends to promote seed industry growth and development by building capacity in all aspects of the seed value chain from production through processing to seed marketing, distribution, strengthening accreditation and licensing of seed certification by private seed companies. Focus will be placed on the following actions:

1. Strengthening and rationalising the department of regulation and certification for seed services through: firming up controls at entry points, reinforcing the PQS scientific capacity to identify all relevant pests and diseases and to participate in international research on relevant issues, improving data and other information on the seed industry, improve seed quality assurance by maintaining standards and practices for certified seed, training seed company staff, DLG extension staff and accrediting extension staff. The interventions will include the following specific actions:

- a) Improve phytosanitary control at entry points;
- b) Strengthen Namalere laboratory;
- c) Improve data and other information on the seed industry to support better policy and programme plans, both by government and by the private sector;
- d) Promote seed quality insurance across the country by conducting regular market surveillance to rid the market of substandard/ counterfeit seeds;
- e) Achieve ISTA accreditation and maintaining OECD Seed Schemes accreditation;

f) Implementing PVP.

2. Enhancing the capacity of the private seed industry by: building up of a critical mass of plant breeders and seed specialists who are trained and available for the industry; conducting training of seed companies and local seed businesses in certified/ foundation seed production, variety/ breeders seed maintenance, testing, marketing and quality control; providing support to private sector led promotion of varieties through technology parks for demonstrations and independent evaluations and seed variety fairs/ farmer field days at adaptation zone level; training and certifying rural agro-dealers and seed stockists and enhancing access to buy-back financing. The outcomes will include strengthened capacity of NARI institutes involved in input supply, enhanced breeder/foundation seed production and supply as well as establishing and/ or strengthening agribusiness incubation service centres.

3. Strengthen policies, laws and regulations for agricultural inputs including seeds and planting materials supply and use by: setting standards and benchmarks for the private sector as well as punitive measures for non-compliant market actors. MAAIF will undertake the following actions:-

- a) Operationalise the plant and varieties protection (PVP) Act;
- b) Establish a national seed sector database;
- c) Conduct regular market surveillance of input dealers (wholesale and retails);
- d) Engage input dealers to establish self-regulation standards among a network of professional dealers and stockists as well as designing and implementing training courses for input dealers.

4. Up-scaling use of improved and climate change resilient seeds and planting materials by: establishing climate smart villages in climate change vulnerability hotspots and mobilise farmers into farmer groups to foster collective action; establish PPPs with seed companies, local seed businesses and rural agro-dealer networks to bulk and market climate change resilient seeds and planting materials; strengthen the climate change resilient seeds and planting materials marketing and distributing system through training and awareness/ promotional activities for actors; establish MSIPs to link farmers to climate change experts and business service providers, agricultural rural service providers (ARSP) and agricultural advisory service providers (AASP)s; set up demonstration sites to promote the CSA technologies; enhancing the enabling environment for scaling up climate smart options. The above interventions will result in extended dealer network, through support to UNADA; improvement in farmer knowledge of new varieties; and increased seed companies' capacities to test and promote new varieties and cultivars.

5. Strengthen the national certification and regulation system to guarantee the quality of seeds and other agro-inputs. This intervention aims at improving the capacity of certification and regulation systems and linking them to international certification institutions. This will ensure standards are enforced and regular inspection of seeds and agro-chemicals undertaken at all stages of the marketing chain by officials of MAAIF with the objective of guaranteeing quality of seeds and agrochemicals on the market.

6. Increase availability and access to quality seeds/ planting materials for priority commodities by: raising farmers' awareness of the value of adopting high quality and climate change resilient inputs, technologies and agricultural practices. Training courses for farmers will be designed and implemented, materials will be disseminated and demonstration plots established for promoting

improved inputs. GoU commits to procure and distribute adequate high quality seeds and planting materials for all the priority and strategic commodities.

3.2.2.2.3 Increase access to water for agricultural production

Research and various studies have highlighted the existence of significant potential in Uganda to harness available water for increased agricultural production and productivity. For instance, only 40% of the irrigable area and 1/3 of the 66 km of total renewable water resources in Uganda is utilised. In addition, the aggregate WfAP storage capacity meets only 2.32% of the total demand (499 million m³) for livestock, irrigation, fish farming and rural industry. Therefore, this strategic action is set to: promote positive attitudinal change towards irrigation and conservation agriculture; increase demand for irrigation services and WfAP infrastructure such as water reservoirs; put in place improved policy environment following development of the National Irrigation Policy; develop and implement strategies to increase access to available natural water resources; and support increased access to available water use improvement projects running in different parts of the country. The following actions will be prioritised under this strategy.

1. Strengthen the legal and institutional framework and capacity for developing WfAP to create an enabling environment for WfAP through policy support. The actions will involve:-

- a) Developing an irrigation master plan, guidelines, action plans, framework and principles for dissemination;
- b) Preparing guidelines for appraisal and design of small-scale farmer-based irrigation schemes;
- c) Developing of appropriate mechanisms for cost sharing and funding of WfAP-based interventions;
- d) Developing guidelines for a community based management system (CBMS) for operation and maintenance of WfAP facilities and for water user associations (WUA);
- e) Establishing and institutionalising Water User Associations (WUAs), cooperative societies and other farmer groups in regulation and management of irrigated agriculture;
- f) Establishing technical support units in LGs for agricultural water management (AWM); and
- g) Promoting the uptake and use of the adapted small-scale irrigation technologies/options.

2. Investing in modern irrigation technologies through construction and promotion of large and small-scale irrigation technologies respectively and development of large and medium water reservoirs in line with the agricultural zoning strategy. Investments in modern irrigation technologies will target the following actions:

- a) Evaluation and rehabilitation of five existing public irrigation schemes of Atera, Kiige, Labori, Ongom, Olweny and Odina;
- b) Construction of Rhino Camp in Arua District, Labwor in Moroto District, Katete in Kanungu District, Biiso in Bullisa District, Pabbo in Amuru District, Namalu, Kibimba-Gomba, Musamya, Torchi in Oyam District among others;
- c) Conducting feasibility studies and designing of three additional irrigation schemes covering an area of 6,900ha namely Acomai irrigation Scheme, Atari Irrigation scheme and Namatala Irrigation Scheme;
- d) Establishing 11,000ha of community-based/strategic medium to large scale schemes at Naigomwa in Iganga District and Igogero in Bugiri District;
- e) Promoting small scale irrigation technologies by establishing at least a demonstration unit per district per year across the country;

- f) Adapting and making affordable, small-scale irrigation technologies/ options including garden hose, drip systems, travelling gun systems and hand line systems to meet smallholder farmers' needs.

3. Promote rainwater harvesting and storage at household and farm levels for agriculture

The main objective of this action is to support equitable and sustainable water harvesting for crop, livestock and aquaculture production and productivity. MAAIF will promote sustainable multipurpose development and use of water resources including:-

- a) Rehabilitating/expanding 102 public valley dams;
- b) Rehabilitating/expanding 195 valley tanks;
- c) Constructing 1,200 new valley tanks;
- d) Establishing four commercial aquaculture sites of minimum 10 ponds;
- e) Establishing two aquaculture parks in Mpologoma catchment and Olweny catchment;
- f) Establishing three fish farms with four ponds in each of the districts of Mbarara, Gulu and Sironko;
- g) Developing two landing sites in Kaliro and Amolatar districts;
- h) Developing and promoting rainwater harvesting technologies and disseminating best practices for smallholder farmers.

3.2.2.2.4 Increase access to and use of fertilisers by all categories of farmers

In addition to limited farmers' capacity to derive full benefits from a competitive fertiliser market, access to and availability of fertilisers for smallholder farmers is still a major challenge. For instance, average fertiliser use is estimated at 1 kg ha⁻¹ yr⁻¹ of applied nutrients compared to estimated nutrient depletion of over 80 kg ha⁻¹ yr⁻¹. Also, fertiliser demand and use in Uganda is negatively influenced by knowledge gaps. These include: erroneous perceptions about the 'fertility' of soils; limited information on soil fertility management and the potential yield increment from fertilisers use on crop production; out-dated and "blanket fertiliser recommendations that do not correspond to changes in soil fertility; inadequate information about fertiliser types and their use and access to soil analysis tools by farmers and agro-dealers. The following actions will be prioritised under this strategy.

- 1. Create an enabling environment for fertiliser production, importation and distribution.** This intervention will be implemented through the following actions of the Fertiliser Market Development Project (2015-2020):
 - a) Providing support to the Fertiliser Market Development Council (FMDC) operations including; strengthening coordination of fertiliser sector activities, collection and dissemination of fertiliser information, promotion of public-private sector linkages, development and strengthening input-output market linkages;
 - b) Reviewing the National Fertiliser Policy and implementing regulations;
 - c) Encouraging investments in the production and marketing of soil fertility remedies such as: fertilisers and bio-fertilisers in the strategic commodities.
 - d) Facilitating access to credit support for bulk purchasing as well as establishing and operationalising the Risk Management Fund (RMF). This intervention targets increasing access to finance for importers and agro-dealers, strengthening business linkages to promote suppliers' credit, piloting use of warehouse collaterals at import and retail levels by banks, sensitizing bankers on risk management and collateral warehousing for fertiliser importers and dealers, conducting training of trainers for AASPs, agro-dealers, stockists and organised

farmer groups on fertiliser use and benefits; supporting private sector operators to gain capacity to produce fertilisers and bio-fertilisers at competitive costs.

2. Strengthen soil fertility knowledge management and awareness creation. This intervention will involve:

- a) Updating soil fertility management and fertiliser use recommendations;
- b) Developing soil fertility management and fertiliser use extension materials;
- c) Increasing number of agro-dealers trained about fertiliser and with enhanced business skills;
- d) Increasing number of Technology Transfer Agents (TTA) and farmers with fertiliser knowledge and matching inputs.

3. Capacity building and physical infrastructure for fertilisers

- a) **Crop production risk management.** This will involve piloting weather index insurance to mitigate crop production risks and promote use of indigenous knowledge and soil and water conservation technologies to mitigate crop production risks;
- b) **Capacity building project.** This will involve strengthening quality assurance infrastructure and establishing a distribution network for wholesalers as well as stockists and establishing a pool of adequately trained personnel to manage a vibrant fertiliser subsector to achieve sustainable use of fertilisers in the country;
- c) **Support physical infrastructure.** This will involve strengthening the physical infrastructure for transportation, distribution, storage and handling (fertiliser and produce) needed to achieve sustainable use of fertilisers in the right quantities and quality, right time and at affordable prices;
- d) **Development of domestic resources for soil productivity enhancement.** This will be done in partnership with the private sector and will involve facilitating resettlement of households in areas with mineral deposits to pave way for exploitation of lime, phosphates and vermiculite deposits in Tororo and Hima/Kasese.

3.2.3 Priority 3: Improving access to agricultural markets and value addition

3.2.3.1 Strategy rationale and outline

One of the ASSP aspirations is transforming subsistence farmers into enterprise farmers, and enterprise farmers into commercial farmers. This requires ready market for the agricultural commodities if this transformation is to succeed. Over the ASSP implementation period, investments will target the improvement of agricultural markets and marketing using a four-pronged approach. Firstly, interventions will promote private sector investment in physical agricultural markets, improvement in the stock and quality of commodity storage facilities including cold chain storage facilities, and commodity quality preserving transport systems along the value chains through PPP.

Secondly, the sector will build capacities of farmers, traders and processors in ensuring compliance to quality standards and market requirements of the priority commodities. This will be realised through; strengthening higher level farmer organisations for collective marketing; bulking; quality and standards improvement; promoting appropriate technologies and practices for minimizing postharvest losses along the entire commodity value chain; promoting commodity/farm based storage and agro processing, and supporting measures to enhance access to formal domestic and regional markets including intensifying enforcement of standards to ensure high quality of local agricultural produce and improved market information flow.

Thirdly, to increase value addition to agricultural products, the Government will focus on: promoting contract farming or out-grower schemes for high-value produce in order to enhance large scale agro-processing and ensure a steady supply of quality produce. In addition, government will promote and support private investment in agro-processing of the prioritised agricultural products; support farmer associations including women and youth associations to engage in agro-processing; facilitate equal access to appropriate agro-processing machinery and equipment through favourable credit facilities.

Lastly, the Commercialisation Fund will be operationalised targeting priority commodities and will involve the extension of support to all farmer categories. These will include small holder farmers who will be encouraged to transition from subsistence farmers to enterprise farmers, while market oriented farmers will be supported to become commercial farmers.

3.2.3.2 Strategic interventions

To enhance the sector's contribution to wealth/ job creation and exports, the sector undertakes to promote value addition and increased access to markets for agricultural produce, with a focus on the specified priority and strategic commodities. The following interventions will be implemented.

3.2.3.2.1 Promote private sector investment in value addition through PPP

The ASSP emphasises the PPP approach as the preferred modality for interventions to promote value addition. For all priority commodities, value addition investment proposals will be prepared and shared with the Uganda Investment Authority and will include identified projects for promotion, the required level of investment, land and other requirements necessary for realization of the commercial ventures and will also identify areas where the Government can support private investors.

3.2.3.2.2 Build capacities of farmers, traders and processors in quality standards and market requirements of the priority commodities

1. Strengthen higher level farmer organisations for collective marketing, bulking, quality and standards improvement

The farmer groups' model has been found to be an efficient methodology for driving agro-enterprise development and will be utilised to promote value addition as well as increase and strengthen linkages to functional markets for the prioritised commodities. Interventions will be designed to support farmer groups in formulating and implementing technical, managerial and marketing strategies as well as developing feasibility and business plans for new investments and financing opportunities.

In addition, whereas the capacity of existing farmer groups and cooperative societies will be strengthened, more farmers will be mobilized to join or form new cooperative societies in order to enjoy benefits of collective marketing. Similarly, farmers' or their organisations' will be mobilised and supported to participate in the Warehouse Receipt System (WRS) to access assembling, cleaning, grading and storage facilities. To facilitate trade, MAAIF, MoTIC, Development Partners (DP) and private market information service providers will provide market information to farmers and traders under PPP type arrangements. Farmers will be trained by MAAIF in collaboration with other organisations and entities on cooperatives and agribusiness, quality standards and improved postharvest handling practices and technologies, such as triple bagging for dry beans. Overall, the following interventions will be undertaken:

This strategy will be implemented through strengthening high-level farmer organisations to enhance participation in market development activities. This intervention will focus on the following activities;

- a) Enhancing awareness and capacity for implementing quality standards.
 - b) Promoting collective marketing at all levels of the value chain of all the priority commodities;
 - c) Promoting use of contract farming between processors/big buyers and farmers;
 - d) Strengthening agro-based organisations to provide market information to farmers;
 - e) Supporting farmer groups and entrepreneurs to acquire value addition/processing facilities in all the main production areas for each product;
 - f) Strengthen producer-buyer/ aggregator contractual relationships for the strategic/ priority commodities;
 - g) Identifying and strengthen producer groups involved in adding value to agricultural commodities through training and exposure to technologies befitting their activities;
 - h) Promoting structured trading systems by linking organized collective marketing farmer groups to large buyers and storage handlers/warehouse operators.
 - i) Conducting market intelligence studies to ease market penetration and inform public sector led efforts to link private sector to lucrative markets;
2. **Promote appropriate technologies and practices for minimizing postharvest losses along the entire commodity value chain.** This intervention will be implemented through the following actions:
- a) Developing and adapting appropriate technologies and practices for postharvest handling along the value chain of all priority commodities;
 - b) Building capacity of value chain actors on best postharvest handling practices for each priority commodity;
 - c) Developing and improving food handling, marketing and distribution systems and linkages to local and export markets.
3. **Promote commodity/ farm based storage and agro processing, as a means to increasing access to domestic and regional market, through demonstrations and PPPs.** This intervention will be implemented through the following actions:-
- a) Innovating and adapting affordable on-farm storage solutions for the priority and strategic commodities;
 - b) Facilitating private sector uptake, development, marketing and distribution of on farm storage solutions to smallholder farmers including developing a cost effective sales distribution system
 - c) Enhancing efficiency (higher output at reduced cost) at all value chain nodes through trainings; and demonstration sites of appropriate improved TIMPS;
 - d) Developing products to meet end-user market requirements e.g. quality and safety standards, traceability, packaging, certification for niche markets, bar coding for supermarket outlets, etc.;
 - e) Developing and transferring knowledge and skills to enhance capacity for engaging in high quality export markets e.g. for horticulture;

- f) Promoting cottage processing industries through incubation of new processing technologies for both food and non-food products.

3.2.3.2.3 Marketing and value addition for specific priority and strategic commodities

Over the plan period, investments will include support to implementation of commodity specific marketing and value addition initiatives for increased production and productivity by developing various mechanisms for facilitating the delivery of produce to target markets. Commodity value chains for which specific marketing and value addition strategies will be implemented as part of the commodity approach are:

- a) Develop national and regional markets for Ugandan bananas and banana products;
- b) Support beans marketing;
- c) Support maize marketing and value addition;
- d) Support rice marketing and value addition;
- e) Support cocoa value addition and marketing;
- f) Support cassava farmers and SME to engage in profitable processing and marketing of quality cassava flour and chips as an agribusiness enterprise;
- g) Establish new tea processing facilities for value addition and undertaking initiatives to better market Uganda tea including exploring establishment of a tea auction market in Kampala in partnership with the Ministry of Trade, Industry and Cooperatives (MoTIC);
- h) Support coffee value addition and generic promotion;
- i) Support marketing of adequate quantities of fresh citrus fruits, pineapples and apples for local and regional markets and support fruit processors to engage in the product development of fresh juice from the three fruits as a product for local market;
- j) Promote local consumption and export of milk and dairy products,
- k) Rehabilitate existing and developing new milk cold chain and processing infrastructure;
- l) Creating a buffer stock / animal handling grounds to support beef processing / abattoirs.
- m) Promote domestic value addition to lint;
- n) Facilitate domestic, regional and international trade in vegetable oil products.

3.4.3.2.4 Operationalise the commercialisation fund for value addition and agro-processing

A major objective of the ASSP is to integrate smallholder farmers into the value chain, however, most lack the financial capacity, equipment, processing facilities and technical skills to effectively add value to the commodities they produce. Over the plan period, a commercialisation fund will be established to enable individual farmers or farmer groups to acquire necessary equipment/facilities and technical skills on a competitive basis. Enterprises to be supported will have to be commercially viable with potential to attract private funding with the provision that the support/ grant shall be refundable over a specified period. The enterprises that will be supported will include those that catalyse technology up scaling, promote institutional development for joint marketing (the priority for this shall be on increasing the effectiveness of farmers' organisations) and enhance the development of market infrastructure and agro-processing. Detailed guidelines will be developed to operationalise the fund on a sustainable basis.

3.4.3.2.5 Ensure the development, maintenance and improvement of physical agricultural marketing infrastructure

The sector investments over the plan period include construction of key physical marketing infrastructures in selected areas with high production potential for priority commodities in

partnership with the private sector. This is intended to address challenges of access to proper storage facilities. With better postharvest handling, it is expected that farmer groups or associations will bulk, clean, grade and store their produce more effectively and benefit from higher prices. In addition, specific interventions to address the challenge of the significant losses that farmers and traders of perishable commodities experience because of the absence of cold storage facilities that prolong shelf life and limit opportunities for value addition opportunities will include constructing: 10 cold chain storage facilities in selected districts; 10 physical agricultural commodity markets in selected districts; and 28 community based grain storage facilities in selected districts.

3.2.4 Priority 4: Institutional and enabling environment strengthening

3.2.4.1 Strategy rationale and outline

To effectively supervise, coordinate and implement the sector interventions, the institutional capacity of MAAIF and public agricultural agencies will be strengthened. The interventions for institutional strengthening will include; construction of MAAIF headquarters building; construction of administrative infrastructure for selected district production departments, human resource development through training/ capacity building; strengthening institutional linkages and networking and improving access to working facilities; procuring tools and equipment for MAAIF, its agencies and DLGs.

Two agricultural training institutions (ATI), Bukalasa Agricultural College and the Fisheries Training Institute, will be transformed into entities that are effectively responsive to agricultural knowledge and skills demanded by the labour market through interventions that include reviewing the curriculum, strengthening human resources, procuring modern equipment as well as tools and rehabilitating both teaching and physical infrastructure. The third ATI, the National Farmer's Leadership Centre (NFLC) will be supported to provide training, in addition to construction and rehabilitation of infrastructure, acquisition of additional land and reviewing its legal and regulatory status currently resident in a Memorandum of Understanding (MoU) to facilitate its operations. In addition, support will be provided to the District Agriculture Training and Information Centres (DATICS) in the area of curriculum review and development as well as rehabilitation or construction of training infrastructure.

To ensure effective implementation of the ASSP, support will be provided towards capacity building for MAAIF staff responsible for agriculture sector policy and planning. This is intended to ensure existing capacity for: the production of bankable project proposals to support ASSP implementation; undertaking budget execution assessment exercises; linking ASSP implementation with regional agriculture policy undertakings (EAC, COMESA, CAADP, etc.) and coordinating the timely production of agricultural sector mandatory policy, planning and budget papers.

Over the ASSP implementation period, the MAAIF will develop and implement an efficient Food Agricultural Statistics (FAS) system that will provide statistics to inform development of key government policy initiatives targeting poverty eradication. This will involve; strengthening the coordination and management of the agriculture sector statistical system; risk management and ICT; improving usability and dissemination of agriculture statistics; mainstreaming quality assurance in agriculture statistical production. Concurrent efforts will also be directed towards strengthening and improving the agricultural sector M&E systems by reviewing, refining or developing effective mechanisms for the production of quality monitoring and evaluation data and information on ASSP implementation. These interventions will be complimented by strengthening institutional and organisational capacity for M&E. The Government will also implement the Agricultural Sector Communication Strategy (ASCS). Government efforts will also be directed towards improving the capacity for quality assurance, regulation, food and safety standards for outputs and products across crops, livestock and fisheries sub-sectors.

3.2.4.2 Strategic interventions

3.2.4.2.1 Strengthen institutional capacity of MAAIF, Agencies and local government production departments

This strategy is intended to achieve an optimally configured MAAIF and DLG production departments that provide a conducive and enabling environment to meet ASSP objectives and is envisaged to achieve four objectives; i) a fully staffed, functioning and responsive MAAIF HQ, reviewed agencies, DLG production departments and ATIs; ii) improved organisational performance through enhanced human resource capacities and iii) strengthened agricultural sector institutional intra and inter linkages and networking capacity. It is planned to implement this strategy under the following interventions.

1. Construction of MAAIF headquarters and administrative infrastructure for selected district production departments. MAAIF plans to construct new headquarters in Kampala over the plan period. In addition, it is also planned to undertake the construction of administrative infrastructure for a selected number of district production offices with inadequate and poor office buildings.

2. Human resource development and management/ training/ capacity building

Intervention 1: Human resource management

This intervention will focus on addressing the current shortage of personnel in MAAIF by developing and implementing an integrated and phased recruitment process.

Intervention 2: Human resource development/ capacity building of sector personnel

Key activities will include:

- a) Developing a comprehensive sector capacity building programme that will capture not only the knowledge and skills gaps but also career development needs;
- b) Identifying the institutions in the sector with the most urgent capacity building needs;
- c) Identifying partners (service providers) to assist with the capacity building; and
- d) Implementing the capacity building plans including periodic reviews of achievement.

3. Strengthening institutional linkages and networking capacity

The main rationale for operationalisation of this plan is to establish synergies among MAAIF

institutions, sector agencies and other non-state actors. It is expected that these synergies will improve efficiency in utilisation of available resources by avoiding overlap and duplication.

This intervention will help to ensure that MAAIF institutional linkages and its networking capacity are strengthened. In this regard, a strategy will be developed and implemented for rationalising the utilisation of resources, creating synergies as well as collaboration and partnership in implementation, information and knowledge management (especially in performing the functions of regulation and inspection) with local governments, MAAIF agencies, farmer organisations, NGOs; CSOs; and the private sector.

4. Retooling MAAIF and district offices aimed at improving access to working facilities, tools and equipment for MAAIF, its agencies and local governments. The thrust of this intervention is to enable the staff to fulfil their functions. Activities will include:

- a) Preparing a comprehensive inventory of existing sector assets, at the centre including, infrastructure, tools and equipment;
- b) Undertaking a comprehensive and harmonized assessment of sector requirements, paying particular attention to the proposed new institutional structures;
- c) Preparing a systematic plan for retooling while taking into account the financial implications and MAAIF's annual plans for procurement and disposal of assets;
- d) Implementing the retooling plan; and
- e) Undertaking periodic re-assessments of sector needs.

3.2.4.2.2 Support to agricultural training institutions (ATIs)

This intervention aims at transforming ATIs (BAC, FTI and NFLC), into institutions that are responsive to knowledge and skill market in the extension service. This will be attained through:

- a) Intervention 1: Curriculum review: The aim of this intervention is to develop demand driven curricula for various stakeholders. This intervention will include review of existing curricula for short courses, certificate and diplomas, regular, in-service and long distances courses and where necessary develop new ones. This process will take into account labour market requirements and will be done with various stakeholders who demand specific types of training to improve agricultural production and productivity. The curriculum review or development will be demand driven so as to respond to public/ private labour market requirements for adequately skilled agricultural technicians for agricultural production.
- b) Intervention 2: Human resources strengthening: This aims at building a vibrant human resource capacity with competency based knowledge and skills. The programme plan is to cater for retooling, hiring of new staff and development of long-term training leading to higher degrees to meet new type of staff to handle new courses/ programmes that will be aligned with the ASSP objectives. The increased demand in enrolment is likely to trigger a proportional increase in the numbers of teaching staff and technicians.
- c) Intervention 3: Infrastructural rehabilitation/ development: Most of the ATI infrastructure is dilapidated and some of the buildings and laboratories lack equipment and requisite inputs and teaching materials. Achievement of ASSP objectives will require tailored infrastructure and support systems to handle new training needs including properly equipped labs or even building with new infrastructure such as green houses, aquariums, and cages for fishing. Rehabilitation

of the training infrastructure and facilities is expected to result in better quality graduates.

- d) Intervention 4: In the case of the NFLC, it is planned to acquire additional land for farming operations as well as put in place a reviewed legal regime to replace the Memorandum of Understanding that the centre is currently operating under.

3.2.4.2.3 Support to district agriculture training and information centres (DATICS)

The DATICS provide crucial training and information to the farmers and other stakeholders at the grassroots where production takes place. There is need to strengthen their capacity in order to accelerate the implementation and attainment of ASSP objectives as most of the interventions will be at the district level. Support to DATICS will focus on two areas, namely:

- a) Intervention 1: Review and development of curriculum. The aim of this intervention is to produce demand driven curricula for various stakeholders. This intervention will handle a number of activities including review of existing curricula and will be done with various stakeholders who demand the specific types of training for improved agricultural production and productivity. The curriculum review or development will be demand driven so as to respond to public/ private requirements for adequately skilled agricultural technicians for increased agricultural production.
- b) Intervention 2: Infrastructural Rehabilitation/ Development: This intervention will involve provision of physical infrastructure like classrooms as well as teaching infrastructure like labs and equipment. Most of the infrastructure is dilapidated and some of the buildings and labs lack equipment and requisite inputs and materials like chemicals. Achievement of ASSP will require tailored infrastructure and support systems to handle new training needs and these will require equipping the labs or even building new teaching infrastructure.

3.2.4.2.4 Support to agriculture sector policy and planning

The activities under this strategy will include:

- a) Capacity building for MAAIF staff in the area of policy and planning;
- b) Producing bankable project proposals to support ASSP implementation;
- c) Undertaking budget execution assessment exercises;
- d) Linking ASSP implementation with regional agriculture policy undertakings (in the EAC, COMESA, CAADP, etc.);
- e) Coordinating production of agricultural sector mandatory policy/planning/budget papers.

3.2.4.2.5 Agriculture statistics

Available agricultural statistics in the country is mostly data from the past surveys and censuses and from agricultural sector agencies like UCDA and CDO among others that collect specific data for their own needs. As such, data gaps in the sector include the very basic current data on crops, livestock and fisheries. Present data are also mainly department based, not often harmonized and collection systems are scattered among various institutions. In addition, the sector statistical system suffers from weaknesses in organisational development and management, limited human resource capacity as well as inadequate statistical production and dissemination of standards in the institutions producing this statistics. The estimation of agricultural production continues to be a challenge since it is difficult to get accurate production estimates of smallholder agriculture given the absence of a culture of farm-record keeping as well as the complexity of cropping systems.

Over the plan period, specific interventions for statistics will be implemented. The objective is to establish an efficient food agricultural statistics system to provide data that will underpin major government policy initiatives, poverty eradication, transformation, modernization and climate change adaptation. Interventions of the statistical framework will include improved data management; conducting an agriculture census; annual agriculture surveys; other household surveys; reinstating the agriculture reporting service; a functional national early warning system; and fisheries statistics (aquaculture census and surveys) among others. The Agriculture Sector Strategic Plan implementation will focus on five areas, namely:

- 1) Strengthening the coordination and management of agriculture sector statistical system;
- 2) Improving usability and dissemination of agriculture statistics;
- 3) Mainstreaming quality assurance in agriculture statistical production;
- 4) Strengthening human resource and management;
- 5) Strengthening production and management of agriculture statistics.

Activities will include:

- a) Maintain functionality of the National Agricultural Statistics Coordination Committee;
- b) Review structure and operations of the Sector Statistics Committee (SSC);
- c) Establish a statistical methodology for estimating production, especially for perennial, continuously planted/ harvested and mixed crops;
- d) Developing an agricultural sector data management system;
- e) Developing a MAAIF ICT strategy that can exploit the use of ICT for improvement of extension service delivery and data capture, processing and dissemination on new husbandry and farm practices and agronomic technologies, input and farm out prices, climate change, soil and water management and;
- f) Establishing an administrative system for collecting data on crop production and productivity, utilisation on the farm and sales, livestock trade and slaughter, aquaculture, apiary production and pest and disease outbreaks.
- g) Developing capacity for enhanced data collection, analysis and dissemination.
- h) Developing an agricultural statistics dissemination strategy.

3.2.4.2.6 Agriculture risk management

During this plan period, ICT and agricultural risk management (ARM) were identified as critical areas for creating an enabling environment for increased sector production and productivity. With regard to risk management, interventions will include:-

- a) Establishing awareness of the holistic approach of ARM across all thematic areas;
- b) Developing a national coordination mechanism for ARM to advise relevant MDAs;
- c) Identifying and prioritising agricultural risks through a participatory approach involving local, national, and international stakeholders;
- d) Developing, analysing and implementing innovative and integrated tools to manage the identified agriculture risks;
- e) Prioritising ARM processes and tools and integrated them into the strategic investment plans;
- f) Increasing investments and initiatives on ARM led by the GoU and partners at national and regional level;
- g) Identifying and mainstreaming ARM data and its timely collection, analysis, management and integration within the agricultural statistics system.

3.2.4.2.7 Strengthening and improving the agricultural sector M&E systems

Within the national monitoring and evaluation (NM&E) policy framework, MAAIF has two important roles in relation to monitoring and evaluation (M&E) in the agriculture sector. These are (a) the establishment of sustainable systems to collect, process, maintain and disseminate agricultural statistics and information (b) monitoring, inspecting, evaluating and harmonizing the activities in the agricultural sector including local governments. Like the parent ministry, each of the seven MAAIF agencies has the responsibility to establish a sustainable system to collect, process, maintain and disseminate agricultural statistics. To fulfil these mandates over the plan period, the Agricultural Sector M&E systems will be strengthened by implementing measures in two action areas, namely:

- a) ***Production of quality monitoring and evaluation data and information on ASSP implementation.*** This will involve development and dissemination of standardized tools, guidelines and formats for quality data collection, collation and reporting by key stakeholders involved in M&E of ASSP implementation. Support will also be provided for revamping routine monitoring, support supervision and data quality audits within MDAs and LGs. All departments and Agencies in the sector will be required to undertake and report on M&E activities in their respective areas of operation. This will ease consolidation and coordination of sector M&E interventions. To disseminate findings and inform decision making, Agricultural sector performance reviews will be held twice a year, involving all MDAs in the sector and at the end of each year. Furthermore, a joint annual sector review will be held bringing together development partners, private sector, CSOs and other MDAs.
- b) ***Strengthening institutional and organisational capacity for M&E by agricultural sector MDAs.*** This intervention aims at: (i) improving the enabling environment for M&E of ASSP; ii) strengthening partnership in M&E of ASSP, iii) managing and enhancing data and information use for decision making, iv) ensuring that the necessary human resources are available for M&E, and v) promoting the use of ICT in M&E of ASSP.

3.2.4.2.8 Implementing the agricultural sector communication strategy

The overall objective of the communications programme is to create an effective and efficient communications system that facilitates harmonised and regular information flow within the sector and its stakeholders. Specific objectives and interventions over the plan period include:

- a) ***Establishing a national agricultural information and communication system***
This intervention is aimed at introducing an effective and efficient mechanism, for gathering, processing, disseminating and archiving agricultural information across the institutions in the country. It will also provide regularized and harmonized channels through which agricultural information is shared between MAAIF, its agencies, NLGs and other institutions and players, to enable them get more empowered, more enlightened on better practices, more knowledgeable of and about farming as a business, so that they improve production and engage in value-addition to the priority commodities. This intervention will be linked to M&E and knowledge management so that the sector is able to communicate effectively.

b) *Strengthening the ASCS framework*

MAAIF has an agricultural resource centre and other information units within the agencies that are responsible for enhancing access to agricultural information, research and dissemination for the sector and communicating results to the different stakeholders. Currently these units are providing library services, producing limited types and numbers of publications and providing press releases to mass media. However, they have limited numbers of staff, require training, have inadequate facilities and yet they are required to meet increasing information needs of agricultural stakeholders and various beneficiaries. Implementation will thus include the appointment of communications focal persons in all MAAIF agencies and departments to ensure regular flow of information from those entities to the Agriculture Information and Communication Unit that is responsible for dissemination. A capacity building programme will also be developed and implemented for these officers to ensure quality of information and sustainability of the programme. These activities are intended to ensure that there are specific communication responsibility centres in each and every institution in the sector that in turn will ease coordination and enable smooth flow of information within and outside the sector.

c) *Create an effective and efficient platform for information and knowledge management*

This strategy is intended to introduce an effective and efficient mechanism, through which agricultural information across the value chain is gathered, processed, disseminated, shared, used and archived. In addition it will also provide regularised and harmonised channels through which agricultural information is delivered by MAAIF to other institutions and key stakeholders like smallholder farmers, to enable them get more empowered, more enlightened about better practices so as to appreciate farming as a business. Timely flow of critical information will enable the sector to achieve its objectives of ASSP 2015/16-19/20.

A knowledge and information hub will be created under the MAAIF agricultural resource centre. This hub will hold a repository of all publications and information packages about the sector. The hub will also create linkages between MAAIF and its agencies, the latter will be required to catalogue information and knowledge products that cannot be physically shared or moved to the hub. This will ensure that all stakeholders' access information required about the sector regardless of where it's physically located. The creation of the hub will involve acquisition and deployment of modern technologies as well as capacity building to ensure sustainability and maintenance of the facility.

d) *Creating an enabling environment for communication*

The Government made a decision that requires all media houses to avail free airtime during a day's programme to Government officials for them to inform the public on activities being implemented in the various sectors. However, this opportunity has not been fully utilised as yet. With stronger management commitment towards communication, this strategy intends to create an environment where the sector's top management avail themselves and participate in these discussions.

This strategy also seeks to identify the gaps existing in policy and legal instruments within the communications area. This is mainly to ensure that there is proper coordination between the different communications and technical functions of the sector; elimination of the many sources of agricultural information to the public and avoiding contradictory information passed on to the

public. The implementation of this intervention will include finding ways of bridging the identified gaps and acting accordingly.

e) *Support innovation in agro-communication across the agro value chain*

The main objective of this intervention is to exercise innovation in agricultural message packaging and delivery so as to widen the range of information products and delivery mechanisms used in the sector. This is mainly to ensure that the entire spectrum of end users and consumers of agricultural information are provided with the right information and knowledge using the appropriate technologies. This will include use of music, dance, drama and ICTs platforms (including social networks) to communicate sector policies, strategies, and agricultural extension information.

The intervention will particularly target the youth with innovative approaches, to attract and interest them in agricultural value-chains (production, processing, value-addition and marketing) via social media platforms like Facebook; Twitter, blogs on the internet; short message services (SMS) on mobile phones and any other technology related channels.

The intervention also targets developing institutional support for AICU staff in MAAIF and its agencies through training in ICT-based agro-communication systems/platforms and in modern digital-based film unit operations, television and radio documentary/feature productions and dissemination.

3.2.4.2.9 Improve the capacity for quality assurance, regulation, food and safety standards for outputs and products across crops, livestock and fisheries sub-sectors.

- 1) ***Enact new laws and or review existing laws, regulations and policies*** to be consistent with changes in technology, regional integration commitments and other global/regional commitments in the crops, livestock and fisheries sub-sectors.

International customers' requirements increasingly determine export standards for agricultural, livestock and fish products, so these same standards influence and impact on domestic standards. The international rules are becoming tougher all the time especially as regards chemical and pharmaceutical residues but also on quality, appearance and packaging: e.g. hazard analysis and critical control points (HAACP), East African Standards etc. MAAIF needs to clarify and simplify the policy and regulatory environment to make it more agri-business friendly. The ministry will therefore undertake the following activities under this investment area:

- a) Reviewing and harmonizing all obsolete laws, rules and legislation to cover, *inter alia* seed, phytosanitary issues, agricultural chemicals, diagnostics and control of epidemics, veterinary public health, animal movement control, animal trade, veterinary professional ethics, animal welfare services, codes of practice for artisanal fishing, trans-boundary fishing among others;
- b) Defining clear roles among public institutions involved in quality assurance, laying out clearly who does what and at what stage;
- c) Providing technical backup and support to LGs to formulate and implement bye-laws;
- d) Play its mandated role in the international dialogue around the policy issues, bringing specialist agricultural knowledge into the discussions. MAAIF will also assist with the preparation and adoption of appropriate domestic food safety legislation and standards

consistent with local conditions and preferences, with World Trade Organisation (WTO) rules and other trade obligations;

- e) Pursue the enactment of pending legislation and the revision of secondary legislation to provide a solid legal foundation for enforcement actions. In addition activities will include the promotion of good hygienic practices among street vendors, HACCP for food processing and general public awareness campaigns to assist reduction of the incidence of food-borne illness.
- 2) ***Undertake market surveillance and strengthen enforcement capacity*** for all existing laws, regulations, standards and guidelines along the value chains. Activities in respect of this intervention shall be developed and implemented in a number of sub-sectors. Standards will be set and operationalised with respect to quality of inputs (seeds and planting materials, fertilisers, agricultural machinery, agro-chemicals, etc.) in addition to compliance with Sanitary and Phytosanitary (SPS) requirements (for fresh food on the market).
 - 3) ***Create awareness among farmers, traders, processors and agro exporters*** about food safety, quality standards and market requirements. Most of the tradable agriculture products have set minimum quality standards and SPS requirements that have to be observed to guarantee the health and safety of consumers. This includes maximum levels of chemical residuals in agricultural produce and contamination of produce due to poor postharvest handling among others. Equally, quality issues for cereals and grains involve grading and sorting that require prior action at the farmer's level. Over the plan period, MAAIF and its agencies undertake to promote awareness creation about quality, standards and SPS requirements to all stakeholders along the value chains with a focus on the priority as well as strategic commodities and especially the export led value chains. The causes and consequences of producing and trading in poor quality and unsafe food products will be explained to the masses with the aim of increasing compliance to food safety requirements in both the local and export markets.
 - 4) ***Train and increase awareness of food inspectors on legislation, policy, modern inspection systems and quality management systems***. MAAIF will develop awareness and training materials on quality assurance and food safety standards for actors along the value chains with specific emphasis on outputs and products across crops, livestock and fisheries sub-sectors in general and commodity value chains of meat, dairy and Fisheries in particular. Accordingly, food inspectors at district and national level will be trained to conduct regular market surveillance and guide producers/traders on basic food safety requirements and quality standards.
 - 5) ***Strengthen national quality assurance and safety standards infrastructure***. This will involve establishment and renovation of laboratory infrastructure to support health and food safety inspections. Specifically, the capacity of SPS laboratories will be enhanced to ensure that health and SPS certificates issued guarantees adequate safety of the traded goods. This intervention will also provide for capacity building of the staff and acquisition of all basic facilities necessary for strengthening the food safety quality assurance system in Uganda.

3.3 Strategic interventions for priority and strategic commodities

The Government has prioritized 12 commodities and four strategic commodities based on their contribution to household income and food security among others. The priority commodities are: bananas, beans, maize, rice, cassava, Irish potatoes, tea, coffee, fruits and vegetables, dairy, fish, livestock (meat), and four strategic commodities, namely, cocoa, cotton, oil seeds, and oil palm. Sector investment over the medium term will focus on: research; extension; pest, vector and disease control; provision of quality inputs; post-harvest handling; improving markets access and value addition. Annex A presents a summary of minimum value chain activities for the priority strategic commodities.

To accelerate the development and commercialisation of the prioritized agricultural commodities, the interventions below will be implemented to increase production and productivity:

3.3.1 Commodity 1: Bananas

Banana production in 2014 amounted to 4.6 million mt, of which 3,070 mt were exported. Banana exports generated US\$ 587,000 for the country in 2014. The sector targets to produce 13 million mt by 2020. The key activity will be addressing the productivity of the three major banana types (cooking, juice and dessert bananas). Banana production challenges in Uganda include declining soil fertility, pressure from pests and moisture stress. Interventions to address these challenges will include:

1. Promoting the use of organic and inorganic fertilisers and soil-moisture conservation techniques,
2. Disseminating knowledge and information on improved agronomic practices such as soil fertility and moisture conservation, supplementary irrigation, tissue culture and traceability;
3. Enforcing good agricultural practice, product quality and food safety standards.
4. Strengthen efforts to control the banana wilt and other pests and diseases
5. Promote adoption of high yielding and drought resistant banana varieties released by the NARO.

3.3.2 Commodity 2: Beans

Beans are widely grown in Uganda on a subsistence level, with limited use of certified inputs. Beans are a cheaper source of protein, making it highly demanded and important to dietary regimes of the poor. As a legume, it also contributes to improving and sustaining soil fertility through atmospheric nitrogen fixation.

Beans production in 2014 amounted to 1.011 million mt, of which 31,796 mt were exported. This generated US\$ 26.19 million for the country. The sector targets to produce 10 million mt by 2020. Annual exports are projected to increase to US\$ 63 million.

In order to achieve the above set targets, the sector intends to increase production and productivity of beans through: increasing access to high quality seed inputs like Rhizobia; support to pest & disease control; strengthening mechanisation and extension services.

3.3.3 Commodity 3: Maize

Small-scale farmers all over Uganda grow maize for household, food and income security. It has also become an increasingly important non-traditional export crop. It is also an industrial crop for the animal feeds industry and it has high potential for value addition to support the agro-processing industry.

Maize production in 2014 amounted to 2.9 million mt, of which 134,903 mt were exported. This generated US\$ 43.567 million for the country. The sector targets to annually produce 10 million mt by 2020. Exports are projected to increase to US\$ 105 million annually.

The main challenges in the maize sub sector are the generally low yields (2.2-2.5 mt/ha, compared to the potential of 5 mt/ha) and high post harvest losses (up to 15%), which often lead to low farm gate prices due to poor quality. The prevalence of pests and diseases has also affected production in maize.

In order to achieve the above set targets, the sector intends to increase production and productivity of maize through: producing and distributing 60 mt of improved maize seed (30 mt hybrid, 30 mt OPV); multiplication and distribution of foundation seed, improving access and use of fertilisers; increasing pest and disease control measures; promoting mechanisation; improving extension services; support to post-harvest handling through training traders and farmers on quality standards and post-harvest handling technologies practices; support to processing and value addition including the use of household cottage industries;

3.3.4 Commodity 4: Rice

In Uganda rice has become important in the last one and a half decades, as a strategic cereal staple and cash crop. It is mainly grown by small-scale farmers with about two hectares in most parts of the country. Since the introduction of upland rice in 2002, the number of farmers deriving their livelihood from rice increased from 4,000 to over 96,000 farmers. Increased rice production has a big potential for creating wealth in many Ugandan households.

Rice production in 2014 amounted to 237,000 mt, of which 57,053 mt were exported. This generated USD28.7 million for the country. The sector targets to produce 680,000 mt by 2020 and generate at least USD73 million worth of exports.

In order to achieve this target, the sector intends to increase production and productivity of rice through: multiplication and distribution of improved foundation seed, mechanisation of rice production, investment in irrigation infrastructure starting with Eastern Uganda and provision of extension services. In order to reduce post harvest losses in rice, the sector intends to promote and distribute appropriate post-harvest technologies, increase access to credit by rice farmers, traders and processors and promote marketing of rice by promotion of collective marketing for high quality rice.

3.3.5 Commodity 5: Cassava

Cassava is recognised as a major crop for poverty alleviation, increasing food and nutrition security, animal feed manufacturing and bio-fuel ethanol industries. Cassava production in 2014 amounted to 2.813million mt. The sector targets to increase production of Cassava to 3.5 million mt by 2020. The interventions will involve:

- 1) Developing and implementing a sustainable system for production and distribution of disease free cassava planting material;
- 2) Promoting integrated management of pests and diseases;
- 3) Strengthening institutional support to extension services;
- 4) Establishing monitoring and diagnosis systems for pest and diseases;
- 5) Identifying, disseminating and promoting the adoption of labour saving technologies for planting, weeding and harvesting;
- 6) Supporting cassava farmers and SMEs to engage in processing of quality flour and chips, as well as agribusiness enterprises.

3.3.6 Commodity 6: Irish Potatoes

The demand for Irish potatoes is estimated to be over 850,000 mt per annum with urban demand outpacing rural demand. With the increasing urbanization, changing eating habits by the majority youth and high population growth, chips consumption is set to rise by 50% over the plan period offering the potato industry huge opportunities for enterprise development and economic growth. The Irish potatoes development interventions aims at:

- i). Supporting production and distribution of seed potato of improved varieties with preferred end user characteristics;
- ii). Supporting production and marketing of ware potato for rural and urban consumption;
- iii). Supporting farmers and Small and Medium Enterprises (SMEs) to engage in organized production, marketing and processing of potato; and
- iv). Providing an enabling policy framework for a competitive and profitable commercial potato industry.

3.3.7 Commodity 7: Tea

The tea industry has made tremendous progress in the last 10 years in increasing production and productivity through attracting inflow of foreign direct investment in the sub sector. Tea production in 2014 amounted to 61,376 mt, of which 60,504 mt were exported. This generated US\$ 84.7 million for the country. The sector targets to produce 112,000 mt by 2020, with exports valued at approximately US\$ 155 million. The interventions will involve:

1. *Tea Research and Extension services.* MAAIF through NARO will support development of new tea clones that are high yielding, disease and drought resistant leading to superior quality tea planting materials. This will be attained by establishing a fully fledged tea research activity under ZARDIs, establishing nurseries in all tea growing areas and allowing both small farmers and the private sector to multiply and distribute foundation/basic planting materials on a commercial scale. Tea research will include an examination of the impact of the use of fertilisers, herbicides and the effect of mechanical harvesting on tea bushes. MAAIF will also provide special training to extension workers in tea growing areas to provide appropriate extension support to the tea farming community.
2. *Tea Farmer Associations and Credit Cooperatives.* Promoting the establishment of strong tea

farmers associations and cooperatives will be complimented by provision of support for capacity building for modern and effective management of tea processing facilities. Government will also promote increased access to credit by tea farmers given that it takes over 32 months or slightly over one and a half years from planting to first harvest. The length of the period requires farmers to have adequate capital to meet costs for labour and agro inputs.

3. *Expanding the area under tea and gap filling in existing tea plantations.* About 35 million tea plantlets will be provided each year for expansion of the area under tea by opening new fields as well as gap filling in the existing tea plantations. Accordingly, Government will establish tea mother gardens as sources of tea cuttings and tea nurseries as a source of tea plantlets in all the targeted tea-growing districts.
4. Establishment of at least 25 single line tea factories in Kisoro, Kabale, Kanungu, Zombo and Mityana with a capacity to produce 800,000 - 1,000,000 mt of tea per annum.

3.3.8 Commodity 8: Coffee

Coffee is the principal export for Uganda and its production in 2014 amounted to 211,872 mt, of which 206,831 mt were exported. This generated US\$410.064 million for the country. The sector targets to produce 595,890 mt by 2020, valued at approximately US\$1.153 billion. This will be achieved through the following:

1. *Promoting and supporting adoption of good agronomic practice and use of good genetic materials at farm level.* This will involve providing advice and demonstrations to farmer households on best agronomic practices including; water management, proper spacing, pruning, and mulching, intercropping, use of shade trees, fertiliser, manure, improved seeds, pesticides and herbicides. Extension advice and demonstrations will be provided to farmer households on the benefits of reaching the optimum tree density with existing varieties and rejuvenating older trees through stumping and pruning and complementing this with the application of chemical fertiliser and manure, aimed at the rejuvenation of older trees;
2. *Promoting coffee growing in new areas and expansion in traditional coffee growing areas.* This will be achieved by supporting the production and distribution of 100 million coffee seedlings per annum, to expand area under production by 5% in traditional areas and 25% in new areas. Also, improved varieties that can be planted more densely in intercropped systems will be promoted; feasibility and needs assessments will be undertaken in northern Uganda and traditional coffee growing districts to determine the potential for and means of expansion; characterisation of coffee in new areas will be carried out so as to improve on knowledge and dissemination of relevant technologies; national soil testing and leaf analysis will be conducted to map nutrient deficiencies and provide location specific recommendations for appropriate fertiliser use for different zones;
3. *Coffee agro extensions and business development services.* This will involve building capacity for coffee extension services along the value chain by training and supporting extension staff at the sub-county level to deliver coffee specific advice, establish demonstration plots and engaging with lead farmers; developing guidelines and standards for coffee extension service delivery; and identifying location specific extension methodologies for application in various settings and which may include; demonstration plots, farmer field schools, lead farmers, farmer led extension systems, dissemination of technologies among others;
4. *Promoting of coffee farming as a business.* Developing and disseminating a farmers' guide/

manual that will include information on entrepreneurship skills, product standards, financial services access as well as markets and value addition will achieve this. It will also involve identifying and promoting farmer groups to engage in commercial production and providing incentives to farmers engaged in medium and large scale production.

5. ***Supporting and strengthening farmer organisations.*** This will involve supporting farmers and farmers' organisations institutional development, especially in the area of promotion and support to bulking, processing, marketing and export grading among farmers and farmers' organisations.

3.3.9 Commodity 9: Fruits and vegetables

1. *Citrus fruits*

On the basis of an assessment of the citrus growing sub-regions, 10 districts have been selected for strategic interventions in the citrus sector as follows: Teso sub region; Soroti, Kumi, Bukedea, Amuria, Katakwi, Serere and Kaberamaido and in Busoga region; Kamuli, Kaliro and Iganga.

The intervention will promote production and distribution of quality citrus seedlings tolerant to pests and diseases and with desirable fresh and processing characteristics. This will involve selection of suitable citrus materials with both fresh and industrial characteristics from the present materials at the research stations in the country. The materials selected will undergo virus indexing to produce disease-free tissue culture plantlets of tolerant varieties. The target for this programme is to raise 6,000,000 virus free plantlets so as to establish at least 60,000 acres of citrus fields.

2. *Pineapples*

The overall objective of the intervention is to commercialise the pineapple sector by supporting increased production through the distribution of quality clean pineapple seedlings that are tolerant to pests and diseases. This will involve selection of suitable pineapple materials with both fresh and processing characteristics from the present materials and importation of MD2 pineapple plantlets. The target for this intervention is to raise 120 million virus free plantlets so as to establish at least 10,000 acres of pineapple fields. The plantlets will undergo several tissue culture stages until they are transferred to private greenhouse operators for weaning.

These nurseries will be located in each of the 10 pilot districts that have been selected for strategic interventions in the pineapple sector, based on an assessment of the pineapple growing sub-regions. The districts are Kayunga, Luwero, Masaka, Bushenyi, Ntungamo, Kasese, Iganga, Nebbi, Lira and Gulu. In addition, technical assistance will be provided to pineapple farmers, business development service providers (BDS) and partners. The preferred approach and principle to guide investments will be establishment of PPPs with the GoU providing institutional and technical support and the private sector supporting and involved in production and value addition. The use of organized groups is expected to increase farmers' access to service providers such as agro-input dealers and financial institutions for goods, services and credit.

3. *Apple*

The overall objective of this intervention is to commercialise apple production involving

provision of support to the production and distribution of quality clean, grafted pest and disease tolerant apple seedlings. This will involve multiplication of suitable apple varieties with fresh market characteristics. The target for this programme is to raise 82,500 virus free plantlets to establish at least 250 acres of apple fields. Based on agro-climatic conditions suitable for apple production, the project will initially target production in five districts namely; Kabale, Kisoro, Bushenyi, Kabarole and Kapchorwa.

3.3.10 Commodity 10: Dairy

Total milk production amounted to 1.55 billion litres in 2014. Exports from milk and its products earned Uganda US\$ 28.684 million in 2014. Thirty three per cent (33%) of the marketed milk in Uganda is processed whereas sixty seven per cent (67%) is marketed raw. The processing capacity of milk was 1.304 million litres in 2014. The sector targets to produce 3.35 billion litres annually by 2020, and targets annual exports from milk and related products worth approximately US\$ 92 million.

This production and productivity increase will be achieved through improved feeding, breeding and selection for genetics improvement, improved access to veterinary services and management capacity of farmers to prevent exposure to diseases and pests. The specific interventions to be implemented over the ASSP implementation period are:

1. Building local capacity in conserved feed production, marketing and on-farm water harvesting infrastructure; and establishing a national animal feed quality analysis laboratory.
2. Developing capacity for pasture and rangeland improvement in the national milk sheds. This will be attained through: capacity building and support of Artificial Insemination Technicians (AITs), enhancing capacity in breeding technologies; Implement restocking with high quality dairy breeds; capacity building of dairy breeders and expanding the national capacity for production and multiplication of quality dairy genetics;
3. Developing the National Dairy Herd Information Management System. This will involve registering all dairy farmers, breeders and associations, establishing a dairy herd recording system, mobilizing dairy breeders to form associations and establishing dairy farmer resource centres.
4. Provision of heifers

Expected outcomes or impact is adequate milk supply for improved nutrition and increased household income. This programme incorporates strong PPP arrangements. The targets are to: 1) increase mean herd size to five improved cow breeds per household 2) increase the national average milk production per day from current 5 litres to 8 litres per cow over the plan period and; 3) increase in the proportion of households keeping exotic/ crossed dairy breeds from the current 1% to 10% in Northern Uganda and from 10% to 15% in Eastern Uganda over the plan period.

3.3.11 Commodity 11: Fish

Total fish production in 2014 amounted to 461,726 mt, of which 17,597 mt were exported. This generated US\$ 134,791 million for the country in 2014. The sector targets to increase annual production to 674,028 mt by 2020. Earnings from annual fish exports are projected to increase to US\$ 238.80 million. The interventions will involve:

1. Promoting recovery of depleted stocks of the large commercial fishes;

2. Developing the fishery of small pelagic (*mukene*) fishes;
3. Promoting commercial aquaculture;
4. Developing infrastructure along the value chain;
5. Strengthening monitoring on all water bodies;
6. Controlling the new breed of weed and water hyacinth.

3.3.12 Commodity 12: Meat and animal/ insect based products

1. ***Provision of an enabling environment for the meat sector.*** The objective is to create an enabling environment for the meat sector to facilitate private sector investments, increased production and productivity and streamline meat marketing. The specific actions are:
 - a) Reviewing out-dated legislation including the Animal Diseases Control Act (2000), Hides and Skins Act (2000) and the Cattle Traders' Act (2000);
 - b) Fast tracking enactment of outstanding draft Bills. They include: Draft Meat Industry Development Bill, Draft National Animal Feeds Bill, Draft Animal Grazing Bill, Draft Animal Diseases Bill, Draft Animal Trade Bill, The Animals (Prevention of Cruelty) Bill, Draft Animals (Straying) Bill, Draft Hide, Skin & Leather Trade Bill, Draft Rabies Bill and Draft Veterinary and Para-veterinary Bill;
 - c) Fast tracking approval of draft Standards and guidelines. These include Draft Sausage – specification DUS 739:2012, Draft Dressed Poultry – Specification DUS 917:2012, Draft Minced Meat – Specification DUS 931:2012 and Draft Bovine (beef) Carcass and Cuts – Specification DUS 932:2012. The draft guidelines include Guidelines for prequalifying sources of Day Old Chicks, Guidelines for hatchery management and inspection, Pastoral code for Rangeland Management and Monitoring guidelines;
 - d) Fast tracking approval of draft policies which include: Draft Pastoralism and Rangeland Development and Management Policy¹, Draft National Policy on the Control of Ticks and Tick-borne Diseases, Draft Policy on Control of Tsetse Flies and Trypanosomiasis and Draft Hides, Skins and Leather Development Policy;
 - e) Operationalising the Meat Policy 2003 and the Animal Feeds Policy; and
 - f) Popularising laws and standards and enforce their use.
2. ***Animal feeds, forage and water security enhancement.*** This will involve increasing the quantity and quality of pastures and improving the availability of water and as well as their utilisation in 56 selected districts, through activities including:
 - a) Promoting appropriate technologies in feeds and feeding planning and utilisation;
 - b) Pasture and water resources development and improved management;
 - c) Strengthening supply systems for pasture/ fodder seeds, animal feeds (including conserved feeds) and inputs in 56 district local governments;
 - d) Popularising appropriate technology and modern husbandry practices; and
 - e) Developing appropriate feedlot systems for the respective agro-ecological zones
3. ***Animal feeds production and quality assurance enhancement.*** This aims at addressing animal feed development options along the meat value chain so as to contribute to enhanced productivity and therefore, increased incomes of value chain players as well as improved food and nutritional

¹ To cater for the dairy and meat sectors

security in 46 selected districts, through activities including:

- a) Enhancing animal feeds production and quality assurance frameworks in the area of planning, management and utilisation along the value chain for poultry and commercial meat industry;
- b) Supporting farm and district level capacity strengthening to plan and budget for animal feeds and feeding in intensive and semi-intensive production systems including capacity building for farmers in ration feed formulation, budgeting, feed handling and animal nutrition;
- c) Supporting the development and modernisation of the commercial animal feed industry;
- d) Supporting animal feeds regulatory systems development ;
- e) Strategic stratifying and intensifying of poultry and ruminant production system, including piloting and promotion of beef feedlots; and
- f) Developing and establishing stakeholder groups and platform for the animal feed value chain.

4. ***National beef genetics resource development*** Beef production in 2014 stood at 202,929 mt and is projected to increase to 360,000 mt in 2020, valued at US\$ 1.636 billion. The sector will carry out the following to achieve the projections:

- a) Implementing a national beef cattle breeding programme;
- b) Promoting countrywide crossbreeding programmes through the use of artificial insemination (beef and dual purpose cattle semen) and improved beef bulls; and
- c) Establishing a national beef cattle improvement scheme to enhance production and multiplication of quality beef breeds using the open nucleus-breeding scheme;
- d) Re-establishing Lusenke Stock Farm as a national cattle-testing centre for pedigree beef bulls.

5. ***Goat breed improvement schemes*** Mutton and goat production in 2014 stood at 34,289 mt and is projected to increase to 39,775 mt in 2020, valued at US\$ 421 million. The sector will carry out the following to achieve the projections:

- a) Selectively screening local breeds (Mubende, Savannah and Small East African) for large body size and multiple births and develop an elite performing indigenous breed for increased meat production;
- b) Importing improved Boer and Savannah goats for cross breeding with indigenous Small East African goats and supply the products to goat farmers; and
- c) Developing nucleus breeding schemes cooperatives to generate superior bucks for distribution to farmers on a sustainable basis.

6. ***Support investments in the poultry sector*** Poultry production in 2014 stood at 54,868 mt and is projected to increase to 63,647 mt in 2020. The sector will carry out the following to increase the production and productivity of commercial poultry establishments:

- a) Establishing of exotic layer and broiler grandparent stock farms and provide seed stock to increase local availability of good quality layer and broiler parent stock for commercial hatchery operators;
- b) Conducting commercial layer and broiler breeding;
- c) Improving capacity utilisation of the local commercial hatcheries to produce and increase availability of day-old-chicks (DOC) through provision of seed stock;

- d) Providing technical support, training, monitoring and supervision to hatchery operators of exotic layer and broiler grandparent and parent stock and commercial producers of layers and broilers; and
 - e) Initiating the establishment of modern poultry slaughtering infrastructures and processing facilities to improve the safety and confidence of consumers.
7. ***Kuroiler and indigenous chicken resource development.*** This is aimed at ensuring indigenous chicken genetics conservation, development, multiplication and utilisation through:
- a) Supporting the sustainable rearing of quality and healthy Kuroiler and indigenous chicken parent stock on the government poultry breeding farms for production of hatching eggs, to achieve increased availability of Kuroiler and indigenous chicken through improved production capacity of government and private sector farmers;
 - b) Supporting the establishment and strengthening of functional poultry breeding societies and associations;
 - c) Establishing and equipping national poultry registry centres with herd recording hardware and software; and
8. ***Develop the sericulture and silk production value chain.*** Silk production in 2014 stood at a meagre 3.2 mt. This intervention is aimed at strengthening the institutional sericulture extension service delivery system, various farmer organisations/ associations and each segment of the value chain in the context of improving silk production and productivity both qualitatively and quantitatively in 20 selected districts. The specific interventions to be implemented are:
- a) Increasing production of mulberry forage;
 - b) Enhancing production and productivity of silk worms;
 - c) Developing national processing capacity of silk and silk products;
 - d) Supporting the export of Uganda silk to regional and international markets.
9. ***Support to apiculture*** Honey production in 2014 stood at 24,000 mt. In order to boost production of honey, the following will be undertaken:
- a) Supporting formation and strengthening of beekeeper's groups;
 - b) Establish demonstration centres for honey and beeswax production;
 - c) Translating the National Beekeeping Training Manual into seven major local languages;
 - d) Training staff in improved apiculture practices and honey inspection;
 - e) Reviewing, printing and disseminating standard operating procedures (SOPs) and code of practices (CoPs) for apiary management and beehive products processing;
 - f) Equipping Namalere honey analytical laboratory and refurbish Nakasongola Apiculture Training Centre.
 - g) Establishing and supporting bee-reserves;
 - h) Identifying and supporting mother bee colonies;
 - i) Establishing and supporting honey collection and value addition centres;
 - j) Establishing sites bee forage and watering.

Strategic commodities

3.3.13 Commodity S1: Cocoa

Cocoa is ranked among the high value export commodities that offer great economic opportunities for increasing farmers' incomes and foreign exchange earnings for the country. Statistics show that

production of cocoa and export earnings from the commodity have steadily increased from 16,478 mt worth US\$ 35,121 million in 2010 to 25,720 mt worth US\$59,429 million in 2014; making cocoa Uganda's fourth highest foreign exchange earner after coffee, fish and tea. Production and productivity of cocoa will be enhanced through:

1. ***Strengthening cocoa research and technology development:*** The funding of cocoa research activities has been ad hoc making it difficult to undertake effective research for improving the cocoa industry. Over the plan period, Government will commit adequate human and financial resources for cocoa research with a focus on: 1) developing high yielding cocoa varieties, 2) raising awareness on good cocoa husbandry practices for various agro-ecological zones of Uganda and 3) developing appropriate technologies to address existing and emerging pests and diseases which reduce the yields of the cocoa crop and the quality of the cocoa beans.
2. ***Enhance cocoa extension services delivery:*** The major objective is to improve delivery of extension services to cocoa growers in order to enhance uptake of improved technologies. This will be realised through: developing the capacity of extension staff to advise cocoa growers; supporting effective delivery of extension services to cocoa farmers; and, promoting technologies for enhancing cocoa production, productivity and quality.

3.3.14 Commodity S2: Cotton

Cotton lint production in 2014/15 amounted to 17,275 mt, of which 12,674 mt were exported. This generated US\$21.918 million for the country. The sector targets to produce 64,750 mt by 2020. The interventions carried out will include:

1. ***Strengthening cotton research in collaboration with NARO.*** This is to strengthen cotton research and refocusing research priorities for provision of specialised facilities and production technology in order to achieve high productivity and incomes at farm levels. This intervention will be implemented by NARO.
2. ***Formation of farmer's associations and capacity building.*** This intervention is intended to increase bargaining and lobbying power of farmers for production input and output prices, credit facilities and specialised extension services. CDO will pilot the formation of cotton farmers' associations in 2-3 districts per production zone for three years. The programme will operate at the sub-county level, embracing informal groups operating at the grass-roots level.

3.3.15 Commodity S3: Oil seeds

Increased production and productivity of oilseeds is aimed at increasing household food and nutrition security and income. Oil seeds production in 2014 was 758,500 mt and this is projected to more than double to 2,027,800 mt by 2020. Exports from vegetable oils are projected to increase from US\$102 million registered in 2014 to US\$281 million by 2020. The specific interventions to be undertaken are:

1. Increasing oilseeds productivity and production through improved distribution and access to improved quality seed, fertilisers, mechanisation and extension services;
2. Strengthening and increasing access to extension services by oil seed farmers;
3. Building and strengthening farmer organisations to sustainably provide services to their

members.

4. Increasing access to credit by farmers and processors through the provision of agricultural finance;
5. Reducing oilseed post-harvest losses by promotion, capacity building and distribution of appropriate post-harvest technologies;
6. Enhancing the marketing of oilseed by promotion of collective marketing of high quality oilseeds;
7. Strengthening the oilseeds sub-sector platform to oversee and coordinate relevant policies in the oilseeds sub-sector.

3.3.16 Commodity S4: Oil palm

Production of oil palm requires economies of scale and is currently dominated by nucleus estates, however due to the interest shown by the smallholder farmers; there is significant potential for improvement of household incomes by integrating smallholders into the scheme. However, to achieve increased production through reliance on smallholders will require capacity building of farmers' groups in order to facilitate knowledge building, skills transfer, input distribution and bulking of produce. Despite its considerable potential, oil palm production faces production, productivity processing and marketing challenges. Interventions are therefore required to encourage both production and productivity strengthening. Investments to promote better productivity and production improvement will cover the following.

1. ***Land identification and acquisition:*** Over the coming five years the process of identifying additional land for both nucleus estate and integration of smallholders will continue. This will target large scale production in Buvuma and study the potential in the new districts (Masaka, Kalungu, Lwengo, Mukono, Buikwe, Mayuge, West Nile region and Middle North region,) where trial plots will continue to be monitored to confirm the suitability of these areas for oil palm plantation development. The existing VODP Project is also in the process of identifying suitable land for 4 new trials in Western Uganda (2 trials) and Northern Uganda (2 trials).
2. ***Plantation establishment and development:*** a total of 40,000 ha of land is targeted for identification in the 14 trial districts and for possible plantation establishment and development. The approach to be undertaken will include identifying owners of large tracts of land that are willing to enter into partnerships with private players such as OPUL. Government will assure the partners (private investing companies, implementing agencies and small holder farmers) of the availability of required infrastructure (water, electricity, roads, ferries, storage facilities and milling facilities) through policy interventions in the industry.
3. ***Strengthen research and technological innovation:*** Recently, oil palm research has placed emphasis on the identification of areas for suitability of growing the oil palms in Uganda. While awaiting definitive inference, research findings suggest that a number of areas are suitable for the oil palm plantation establishment. Accordingly, among the key elements of research interests in the next five years will be the following:
 - a) Breeding resistant varieties suitable for Uganda conditions;
 - b) Pests and Diseases surveillances given the mono-cropping nature of oil palm plantation practices;
 - c) Improved agronomic practices based on optimal use of fertilisers (types and quantities, soil mapping).

4. ***Extension services:*** The oil palm industry requires a structured approach in the provision of extension services to farmers, farmer groups and institutions engaged in oil palm plantation establishment and development. Due to the fact that oil palm is relatively new in Uganda, farmers need to access the latest information on all aspects of plantation establishment and maintenance while taking into account the environmental considerations and concerns in order to maximise yields and make profit. It is estimated that at least fourteen districts in Uganda will introduce oil palm growing in addition to existing value chain implying need to recruit at least 14 additional extension workers within the mainstream extension service delivery system. For the agricultural officers to be able to deliver to their mandate, they will need to have trained in oil palm agronomy and commercial plantation development in a higher institution of learning. This calls for development of a curriculum tailor made for the industry.
5. ***Institutional strengthening:*** This intervention will cover capacity building for sector actors together with development of sector policy to guide consolidation and expansion in the country. The development of this policy will be championed by the existing sectoral platform. In addition it is important to create accessible information base/ repository on oil palm agronomy and other value chain practices

3.4 Cross-cutting issues

3.4.1 Rationale and outline of the strategy

Agriculture sector investments over the ASSP implementation period will also include mainstreaming five cross cutting issues (CCI) namely gender, youth, HIV/AIDS, environment and climate change and food and nutritional security into the sector programmes and projects. The use of gender analysis and gender-based budgeting in all community-based development programmes will be promoted. Equally, youth engagement in agriculture and adaptation of agricultural technologies and practices to climate change will be mainstreamed in all sector programmes.

The Government also commits to mainstreaming implementation of HIV/AIDS policies, plans and strategies in the agriculture sector including DLGs and farming communities with the aim of reducing and mitigating the impact on sector production and productivity. Sector investments will target enhancement of consumption of varied diets at household level including promoting increased awareness on food availability across the 10 agricultural zones. Others will focus on developing and implementing early warning systems to prevent and mitigate shocks affecting nutrition and food security and promoting awareness of and access to nutrient bio-fortified food varieties across the priority commodities. This is aimed at improving food and nutrition security among households.

3.4.2 Strategic interventions

3.4.2.1. Gender

Although women provide over 70% of the labour force that is engaged in agricultural production, they control less than 20% of the outputs. The women continue to experience challenges in accessing the factors of production (land, credit and extension services) and produce 17% less per acre on average than plots managed by men or jointly by other family members. Over the plan period, it is intended to identify and institute the necessary affirmative actions that will ensure that women, men,

girls and boys participate and benefit equally from development initiatives across all sub-sectors. MAAIF, agencies and DLG production departments will mainstream gender analysis and gender-based budgeting in all community-based development programmes. The activities will include:

- 1) Facilitating training in joint decision making and planning of the household agro-enterprise(s); promoting gender equity in ownership, access and control over production resources such as: land, livestock, agricultural equipment, labour and capital/credit;
- 2) Encouraging women to take up leadership positions in farmer groups and cooperatives formed under agriculture sector initiatives or participating in sector activities,
- 3) Developing appropriate labour saving technologies to reduce drudgery and free women's time for other productive community roles.
- 4) Furthermore, the sector will support institutionalisation of gender mainstreaming in all interventions of the agriculture sector, building the sector staff's capacity in gender analysis and gender responsive budgeting and supporting the district Local Governments on gender mainstreaming in their planning, budgeting and implementation.
- 5) Promoting utilisation of the women fund and other funds targeting women by profiling and supporting women undertake agricultural enterprises. MAAIF and her agencies will offer technical support to interested persons in preparing agricultural sector projects to benefit from these funds.

3.4.2.2. Youth in agriculture

Uganda has the world's youngest population with over 78% of its people being below the age of 30² and about half are below 24 years of age³. The participation of youth in the agricultural sector is minimal and is partially attributed to the migration of youth from rural to urban areas, to engage in small urban based income generating activities like riding 'bodaboda' (motorcycles for hire), petty trade and service sector work. The youth prefer to participate in activities that offer quick and regular income with less risk and yet opportunities for them to cause change in rural communities with their increased involvement exist especially if they can perceive agriculture as a business while adopting commercially viable practices.

During this plan period, MAAIF aims at contributing towards changing the attitudes among rural youth and communities in general so that they perceive agriculture as a business and adopt practices that will make chosen enterprises commercially viable. MAAIF will develop and implement, in collaboration with the private sector, a strategy on 'Decent Employment for Youth in Agriculture' to promote youth inclusion in on-going agriculture activities, creation of job opportunities and improvement of youth working conditions in the sector. Specific activities under this strategy will include:

- 1) Training youth in agro-enterprise development;
- 2) Identifying youth champions and targeting them to serve as role models;
- 3) Training youth in farming as a business and identifying linkages to agribusiness incubators and financing; and
- 4) Promoting youth participation in small-scale value addition processing.
- 5) Promoting utilisation of the youth livelihood fund and other funds targeting youth by profiling and supporting the youth to develop agricultural enterprises. MAAIF and her

²IYF, 2011 Youth Map Uganda. *Navigating Challenges, Charting Hope. A Cross-sector Situation Analysis on Youth in Uganda*

³MoFPED, 2011 *Uganda's Population Stabilisation Report*. Population Secretariat

agencies will offer technical support to interested persons in preparing agricultural sector projects to benefit from these funds.

Furthermore, other actions targeting increased youth involvement in agriculture will include advocating and supporting the development and review of curriculum at the ATIs (BAC, FTI and NFLC) that offer opportunities for youth to become technical specialists in food processing, agricultural machinery maintenance and management and other areas that require practical agricultural technical expertise.

3.4.2.3 Environment and climate change adaptation

The sector's productivity is negatively affected by increasing frequency of drought, low water levels in the lakes, silting of dams, flooding, increased pollution from chemicals, declining biodiversity, reduction in soil fertility and soil erosion. To address these challenges environment and climate change adaptation and mitigation will be mainstreamed in all technologies and practices across all the Agricultural Ecological Zones. MAAIF has an established Climate Change Unit that will work very closely with Ministry of Water and Environment (MWE) in implementing the activities within the Uganda Climate Smart Agriculture (CSA) initiative. CSA has six core activities, namely,

- 1) Increasing agricultural productivity through climate smart agriculture practices and approaches that consider gender
- 2) Increasing the resilience of agricultural landscapes and communities to the impacts of climate change
- 3) Increasing the contribution of the agricultural sector to low carbon development pathways through transformation of agricultural practices
- 4) Strengthening the enabling environment⁴ for efficient and effective scaling up of climate smart agriculture and
- 5) Increase partnerships and resource mobilization initiatives to support implementation of climate smart agriculture through collaborations with available initiatives including funds targeting the promotion of climate conservation activities..
- 6) Provide technical support to farmers and other stakeholders including civil society organisations designing and or implementing climate related interventions at all levels in the agriculture sector.

3.4.2.4 HIV/AIDS

The impact of HIV/AIDS epidemic on Uganda's agricultural sector has been manifested in; forced selling of produce and stock before the most opportune time to meet medical costs; diverted household expenditure towards medical bills; and reduced labour availability and household income due to falling productivity. In response, MAAIF developed an Agricultural Sector HIV/AIDS Policy and Guidelines for Mainstreaming HIV/AIDS in Sector Programmes. During this plan period, MAAIF will strengthen the implementation of the HIV/AIDS policy and guidelines including in local governments and farming communities partly through the integration of preventive measures and partly by advising on and promoting agricultural practices, techniques and technologies that mitigate against the wider impact of the HIV/AIDS epidemic.

⁴Institutional, policy, legal frameworks

3.4.2.5 Food and nutrition security

Food insecurity and malnourishment are common in Uganda's rural areas and are a significant challenge to human welfare and economic growth in the country. An estimated 66% of households in Uganda are net buyers of food and rely on the market for more than 25% of the value of the food they consume. MAAIF aims at improving food and nutrition security by enhancing consumption of diverse diets at household level. The policies and actions under this strategy will be critical to enabling individuals and households achieve better food and nutrition security. During this plan period, interventions will include:

- a) Operationalising and implementing the MAAIF intervention(s) under the National Food and Nutrition Strategy and enhance collaboration with other stakeholders to address the food and nutrition security challenge in Uganda;
- b) Promoting appropriate agricultural technologies and crops that provide significant nutritional advantages with a focus on food stressed areas. This might include, for example, promoting the production and consumption of nutrient-dense foods including bio-fortified crops; encouraging dietary diversity and; promoting household-level food processing technologies.
- c) Promoting awareness on food availability across agricultural zones by providing timely early warning broadcasts and information on food shortages and surpluses. This would include (i) preparing and disseminating, at the beginning of every rainy season, rainfall forecasts and messages advising farmers on the appropriate activities to undertake during the season; (ii) monitoring crop and livestock performance in order to assess the likely food security situation and to help determine the availability of water and pasture for livestock and project the outputs of livestock and livestock products; (iii) carrying out a postharvest assessment to identify areas of food surplus and deficit;
- d) Developing and utilising early warning systems to prevent and/or mitigate shocks affecting nutrition and food security;
- e) Preparing and disseminating bi-annual early warning bulletins on the food and nutrition security status in the country;
- f) Assisting LGs to prioritise food and nutrition security in their district development plans and budgets.
- g) Improving food storage, value addition, marketing and distribution by the private sector so as to facilitate access to food during times of scarcity.

4 INSTITUTIONAL ARRANGEMENTS FOR IMPLEMENTING ASSP

4.1 The role and mandate of MAAIF

The ASSP will be implemented under the aegis and supervision of the MAAIF whose mandate is, *‘To promote and support sustainable and market oriented agricultural production, food security and household incomes’*. Implementation of this mandate is guided by the sector vision that is *‘A competitive, profitable and sustainable agricultural sector’* while the sector mission is: *‘To transform subsistence farming to commercial agriculture’*. The detailed functions underlying the mandate are outlined in Textbox 1 below.

Textbox 1: Functions of MAAIF

- a) Formulate, review and implement national policies, plans, strategies, regulations and standards and enforce laws, regulations and standards along the value chain of crops, livestock and fisheries;
- b) Control and manage epidemics and disasters and support the control of sporadic and endemic diseases, pests and vectors;
- c) Regulate the use of agricultural chemicals, veterinary drugs, biological, planting and stocking materials as well as other inputs;
- d) Support the development of infrastructure and use of water for agricultural production along livestock, crop and fisheries value chains;
- e) Establish sustainable systems to collect, process, maintain and disseminate agricultural statistics and information;
- f) Support provision of planting and stocking materials and other inputs to increase production and commercialisation of agriculture for food security and household income;
- g) Develop public infrastructure to support production, quality / safety assurance and value-addition along the livestock, crop and fisheries commodity chains;
- h) Monitor, inspect, evaluate and harmonize activities in the agricultural sector including local governments;
- i) Strengthen human and institutional capacity and mobilize financial and technical resources for delivery of agricultural services;
- j) Develop and promote collaborative mechanisms nationally, regionally and internationally on issues pertaining to the sector.

4.1.1 Top Policy Management

MAAIF will act as the lead institution with the Top Policy Management (TPM) providing the overall oversight role with respect to the implementation of the ASSP while the Agriculture Sector Working Group (ASWG) will be a platform for planning, coordinating, monitoring and reviewing the performance of MAAIF. Information on planning and performance of the sector will be shared among members both on the internet and during periodic meetings to reinforce resource allocation efficiency, foster complementarity of efforts and avoid duplication of resource allocation and efforts.

4.2 Implementation institutional arrangements

4.2.1 Direct implementation

MAAIF will directly implement the following aspects and components of the ASSP: formulation, review and implementation of national policies, plans, strategies, regulations and standards and enforcement of laws, regulations and standards along the crops, livestock and fisheries value chains. Policy formulation, supervision, regulation and enforcement of standards will be undertaken directly by the Ministry while intensive technical and advisory services will be provided through its seven semi-autonomous agencies. DLG Production Departments will be responsible for implementation of national programs at the grassroots level through provision of extension, regulatory as well as enforcement services.

4.2.3 Collaboration with MDAs

MAAIF will work in liaison with other Government MDAs to ensure implementations of complementary interventions necessary for achieving impact on the core mandates of MAAIF. For examples, it will work with (a) Ministry of Finance, Planning and Economic Development (MoFPED) with respect to access to financial resources; (b) Ministry of Local Government (MoLG) with respect to development of agriculture market infrastructure; (c) Ministry of Water and Environment (MoWE) with respect to adaptation of agriculture to climate change and water for production; (d) Ministry of Lands, Housing and Urban Development (MoLHUD) with respect to land policy and land management issues; and (e) Office of the Prime Minister (OPM) with respect to specific agricultural development initiatives focusing on special areas such as the role of other actors in ASSP. Table 10 below summarizes the roles of the key actors in the implementation of the ASSP.

4.2.4 Sector wide approach framework

In addition, MAAIF will adopt sector wide approaches (SWAP) in implementing the ASSP by periodically bringing together development partners, private sector, academia and civil society organisations to plan and review the implementation of interventions in the sector in a consultative and participatory manner. In specific instances, it will collaborate with the private sector to implement interventions through PPPs. This involvement of various sector institutions will be critical to effective implementation of the ASSP.

Table 10: Matrix of sector player and their roles

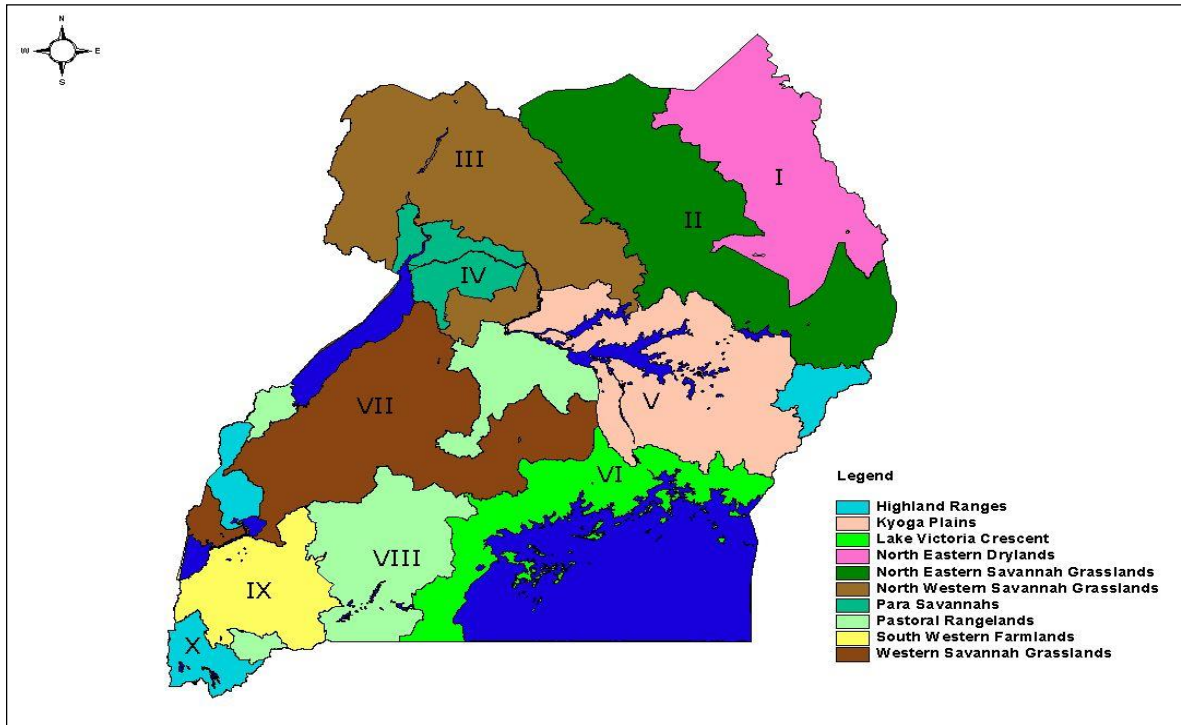
Institutions	Responsibilities
MAAIF	<ul style="list-style-type: none">a) Act as the lead agency in the implementation of the ASSP.b) Policy formulation, regulation and quality control;c) Establish the structure for coordinating, monitoring and evaluating ASSP;d) Develop and disseminate guidelines to operationalise the ASSP;e) Build the capacity and collaborate with other stakeholders to ensure mainstreaming of ASSP interventions in their respective programmes and plans;f) Strengthen collaboration and networking with the stakeholders to promote mutual appreciation/ understanding, guidance, involvement and community support for ASSP interventions;g) Develop the ASSP operational plans;h) Reviewing and strengthening linkages between MAAIF HQ, Agencies, ATIs and DLG production departments;

Institutions	Responsibilities
	<ul style="list-style-type: none"> i) Periodically review and restructure MAAIF to ensure adequate alignment with the implementation requirements of the ASSP j) Provide for the establishment of requisite approved structures and employment of personnel and ensure their effectiveness by equipping them as required
Sector Agencies	a) Strengthen the structures of the sector Agencies to enable them carry out their mandate to extend to services in line with increasing agricultural production and commercialisation.
Sector Ministries	<ul style="list-style-type: none"> a) Translate the ASSP into sector-specific strategies and activities; b) Collaborate with the MAAIF on matters of mainstreaming ASSP priority concerns in their respective sector interventions.
Local Governments (Production Departments)	<ul style="list-style-type: none"> a) Ensure that the local government development programmes are in line with objectives of increasing production and commercialisation of agriculture; b) Strengthen the structures of the LGs to enable them to effectively execute country-wide mandate to extend quality service delivery in the agricultural sector; c) Delivery of field-level agricultural services to the population. d) Monitor mainstreaming of ASSP interventions in local governments to ensure services benefit them; e) Collaborate with MAAIF on matters of increasing production and commercialisation of agriculture;
Development Partners	<ul style="list-style-type: none"> a) Support the implementation of the ASSP; b) Ensure consideration and alignment of ASSP priorities in development of cooperation partnerships; c) Establish appropriate institutional/ donor coordination mechanisms for ensuring responsiveness of development cooperation towards the achievement of the ASSP objectives;
Civil Society and private sector	<ul style="list-style-type: none"> a) Participate in Sector Working Groups and local government planning and budgeting processes to advance farm productivity b) Develop and implement programmes that address key ASSP intervention areas; c) Farm production, agro-processing and marketing of agricultural output; d) Collaborate with MAAIF and other appropriate institutions on matters of mainstreaming of increasing production and commercialisation of agriculture; e) Complement Government in delivering of agricultural services to farmers; f) Strengthen good agricultural practices (GAPs), agribusiness and market development services and governance g) Establish PPP initiatives aimed at increasing production and commercialisation of agriculture;
Academia	<ul style="list-style-type: none"> a) Establish collaborative partnerships with MAAIF, agencies and LGs b) Contribute to agricultural research c) Review curricula to respond to labour market needs d) Provide high quality relevant practical training
Private Sector	<ul style="list-style-type: none"> a) Jointly form PPPs b) Provide complimentary interventions for ASSP implementation
Farmers	<ul style="list-style-type: none"> a) Form farmer groups and other institutions b) Implement production and productivity enhancing interventions c) Define and articulate needs

4.3 Agricultural ecological zones in ASSP implementation

In order to realise the vision and mission of the ASSP, it will be necessary to attain the requisite production volumes and values for each of the priority and strategic commodities set out in this plan. In this regard, the country has been divided into 10 Agricultural Ecological Zones⁵, namely, North Eastern Dry lands (I), North Eastern Savannah Grasslands (II), North Western Savannah Grasslands (III), Para Savannahs (IV), Kyoga Plains (V), Lake Victoria Crescent (VI), Western Savannah Grasslands (VII), Pastoral Rangelands (VIII), South Western Farmlands (IX) and Highland Ranges (X) shown in the map below.

Figure 5: Map showing agricultural production zones of Uganda



The commodities that were designated to each production zone and mapped out in the DSIP have been adopted as shown in Table 11. Within each zone, it is expected that the responsibility for operationalising the ASSP will rest with the respective the districts and MDAs. In this regard, the various MDAs and districts within a given zone will develop an Annual Operational Plan (AOP). The AOP will articulate, unpack and prioritize the interventions covered under each strategic action in the ASSP for implementation by the respective key partners or stakeholders for each of the strategic actions, clearly defining the outputs and medium term outcomes as well as the timeframe for implementation. The national AOP will take into consideration the sector’s production and export targets so as to meet national food security and commodity exports requirements for this plan period. Details are included in Annexes B and C.

⁵Ministry of Agriculture, Animal Industries and Fisheries (2004). Increasing Incomes through Exports. A Plan for Zonal Agricultural Production, Agro-processing and Marketing. Kampala

The development of the AOP will be guided by (a) the comparative advantage of each location as articulated by the individual districts in the agricultural zones, (b) overall and disaggregated output targets in the ASSP and (c) the commodity Framework Implementation Plan⁶ (FIP) that was used in developing this ASSP. To the extent possible, the cascading of planning will flow from national/ sector/ MDA level to zones, district and sub-county levels. Resource allocation will also be done up-front based on the output expected from each level of planning and implementation. This performance based planning mechanism will be reviewed at the annual sector performance review meetings. In this way, the iteration of planning, resource allocation and implementation will be conducted annually in order to ensure that the country is constantly assessing its potential of achieving the goals envisaged in the ASSP.

Table 11: Mapping of priority and strategic commodities in Uganda's agricultural zones

Commodity	Agricultural Zones									
	I	II	III	IV	V	VI	VII	VIII	IX	X
Banana									√	
Beans			√							
Cassava	√	√		√						
Cocoa										
Coffee			√	√		√	√		√	√
Cotton										
Irish Potatoes*									√	√
Sweet Potatoes*		√	√		√		√			
Fruits & Veg.	Apples									√
	Citrus					√				
	Mango									
	Pineapples					√		√		
	Vegetables			√		√	√	√	√	√
Maize					√		√			
Rice										
Sorghum*	√	√			√			√	√	
Tea							√		√	√
Beef Cattle	√						√	√		
Dairy Cattle						√		√		√
Fish	Aquaculture				√	√				
	Capture									
Goats	√	√						√		
Poultry		√	√	√	√	√				
Piggery*			√		√	√	√		√	√
Oil Palm						√				
Oil Seeds		√	√	√	√		√			

* Commodities that were not chosen among the priority strategic commodities but are very important for food and nutrition security of the population.

In addition to the above, FIPs were developed for each of the non-commodity areas that included: (a) Strategic intervention such as; (a) research, extension and pests and disease control; (b) transformative areas: monitoring and evaluation, institutional strengthening and communication; and, (c) technical input areas; seeds, fertiliser, agricultural mechanisation and water for agricultural

⁶There framework implementation plans include those for Cash crops (Coffee, Cotton, Tea and Cocoa); grain staples (Maize, Rice, Beans); non-grain staples (Cassava, Irish potatoes); banana and fruits (Citrus, Pineapples, Apples, Banana and Vegetables); meat (Beef Cattle, Poultry and Goats); dairy; fisheries (Capture and Aquaculture) and oil crops (Oil Seeds and Oil Palm).

production. The respective MDAs responsible for these together with the LGs will also develop their AOPs that will be integrated into the National Agricultural Annual Operational Plan. The various AOPs will be aligned/ harmonised to facilitate the delivery of all the requisite technical, physical and financial inputs to those areas to ensure the attainment of the outputs defined against each of the strategic and priority commodities.

4.4 Sector coordination

During ASSP implementation, MAAIF will seek to strengthen both intra-sectoral and multi-sectoral coordination and linkages through the use of existing coordination mechanisms and platforms and other institutional innovations. Given the centrality of the sector in the achievement of national development objectives, functional and collaborative linkages between the sector agencies and with other government MDAs, LGs and other stakeholder institutions (such as the civil society, private sector and development partners) will be strengthened.

The approach to be taken will be guided by the important principle and understanding that many of the outcomes and successes of the ASSP implementation will lie outside the agricultural sector itself and, hence, the policies and strategies of other sectors and institutions will need to be taken into account in the implementation process. In this regard, the provisions of the NDP II will provide the overall strategic framework within which the ASSP will be implemented.

In practical terms, MAAIF will continue to take a SWAP approach to the sector development working, mostly, through the Agriculture Sector Working Group (AgSWG), a multi-stakeholder platform, which will meet at least once every quarter to transact, among other matters, the following:

- Coordinate and harmonize ASSP implementation to ensure that it is in line with the NDP II goals and objectives;
- Ensure ASSP investment programmes are aligned with sector priorities;
- Pursue solutions to structural, institutional and other constraints to effective ASSP implementation at national, zonal, and local levels;
- Review mechanisms for enhancing stakeholder participation in implementing the ASSP;
- Review the Agriculture BFP as a basis on which the annual budget for the sector is compiled;
- Provide the main forum for the sector-wide approach to planning and budgeting for the agriculture sector; and
- Identify, on the basis of sector expenditure and investment plans and the BFP, policy issues for consideration and action by the TPM;
- Provide information for the Joint GoU/DP Reviews; and
- Monitor budget implementation vis-a-vis the aims and objectives set out in the BFP.

The AgSWG is composed of MAAIF TPM and includes heads of all MAAIF sector agencies, AgDPs, MOFPED, and representation from private sector, NGOs, civil society, ULGA and the Agricultural Council of Uganda. In addition, the sector will have fully-established and robust coordination mechanisms at central, zonal, district and sub-county levels. These will include:

- **At national/ multi-sector level:** Parliamentary Committee on Agriculture; AgSWG; Conditional Grant Utilisation Agreement – Joint Technical Committee; Joint Annual Review on Decentralisation; Joint Sector Annual Review; and National Farmers’ Forum;
- **At Sector management level:** TPM – Technical Committee; Planning and Budgeting

- Committee; ATAAS; and strategic partnership framework agreements (agency to agency); Inter-Agency Coordination Committee; and
- ***At Local level:*** District Farmers Forum; Regional/ Zonal Coordination Committees; Sub-County Farmers' Fora; ZARDIS; Cooperatives; Production and Marketing Committees; Technical Planning Committees; and Parish Coordination Committees.

5 ASSP COST AND FINANCIAL PLAN

5.1 Context of financial plan

The provision of adequate financial resources will be absolutely crucial for the success of the programmes set out in this ASSP. The financial plan of the ASSP must, first and foremost, be considered within the context of GoU's 2003 commitment to the Maputo Declaration for Comprehensive Africa Agriculture Development Programme (CAADP) and, more specifically, to the undertaking to allocate 10% of the national budget to the agricultural sector. During the implementation of the DSIP, resource allocation by GoU registered an increase in allocation of resources to the agriculture sector from the UGX378.88 billion in the 2012/13 approved budget (out of the national budget of UGX10.90 trillion) to 484.68 billion (out of the national budget of UGX17.95 trillion). However, in terms of share to the national budget, the allocation declined from 3.4% to 3.2% between 2012/13 and 2014/15 respectively (see Section 2.3.3 and Table 7).

This means that there is scope to significantly scale up funding to the sector and this financial plan proposes two funding scenarios. The first links the sector and individual agencies' annual action plans to the NDP II Cost Implementation Matrix as well as MFPED MTEFs. This gave rise to the constrained budget shown in **Annex D**. The second the unconstrained budget that links the sector and individual agencies' annual action plans and costs to the sector undertakings in the NDP II. The unconstrained budget is shown in **Annex E**. The unconstrained budget has further been disaggregated to produce a commodity and thematic budget that is shown in **Annex F**.

5.2 Budgeting approach and methodology

In developing the budgets of the ASSP, consideration has been given to the need to remain within reasonable limits for funding paying particular regard to the financial ceiling set by the MTEF. It is also necessary to take into account the equitable distribution of the budgets among the various priorities and commodities so that allocation to one will not be at the expense of other priorities. The budget also takes into account the need for efficiency, effectiveness and transparency in the use and allocation of resources and the need for the cooperation of all stakeholders to achieve this.

Activity based budgeting was adopted in developing the estimates which were guided by indicative costs of implementing the necessary strategic actions under each thematic area. In totality, this constituted the four thematic categories to be interactively implemented to achieve the desired outcomes from the ASSP.

5.3 Provisions of the constrained budget

The budget estimates in Table 12 (for details, refer to Annex D), presents a summary of the selected priorities and strategies described in previous sections, attendant individual budgets and the totality of all the budgets. The total cost of the five-year constrained ASSP budget, as provided in the NDPII, is estimated at UGX4,626.4 billion. First year costs start at UGX479.9 billion, increasing to UGX782.5 billion in the second year, UGX875.7 billion in the third year, UGX1,080.1 billion in the fourth year and UGX1,408.3 billion in the fifth year. The bulk of the funds of UGX2,062.4 billion (44.6%) will be allocated towards the first priority targeting to increase agricultural production and productivity. This is followed by UGX1,639.1 billion (35.4%) targeting to increase access to critical farm inputs, UGX589.7 billion (12.7%) targeting to improve agricultural markets and value addition and UGX335.3 billion (7.2%) targeting to improve service delivery through strengthening the sector's institutional and enabling environment.

Table 12: Constrained ASSP budget 2015/16-2019/20

ASSP Priorities and Strategies	Yr. 1	Yr. 2	Yr. 3	Yr. 4	Yr. 5	Total	%
Priority 1: Increase Agricultural Production And Productivity	231.7	392.1	394.0	472.7	571.8	2,062.4	44.6
Strategy 1: <i>Strengthening ecologically sound agricultural research and climate change resilient technologies and practices</i>	86.7	103.8	109.4	116.9	128.7	545.5	11.8
Strategy 2: <i>Implement a single spine agricultural extension system while promoting gendered innovation in agricultural research centres and extension services.</i>	32.4	100.0	105.0	115.0	141.2	493.5	10.7
Strategy 3: <i>Strengthen farmer group formation and cohesion including commodity associations, platforms, federations and co-operatives</i>	2.5	6.5	6.5	9.0	12.6	37.0	0.8
Strategy 4: <i>Accelerate the development and commercialisation of the prioritised agricultural commodities</i>	56.3	79.3	72.6	112.0	136.9	457.2	9.9
Strategy 5: <i>Control pests, vectors and diseases</i>	51.5	76.1	74.1	78.8	100.8	381.4	8.2
Strategy 6: <i>Other production and productivity enhancing measures</i>	2.3	26.4	26.4	41.0	51.6	147.7	3.2
Priority 2: Increase access to critical farm inputs:	195.9	265.1	306.1	350.5	521.5	1639.1	35.4
Strategy 1: <i>Promote agriculture mechanisation</i>	7.8	30.1	37.1	38.8	46.1	159.8	3.5
Strategy 2: <i>Improve access to high quality seeds, planting and stocking materials</i>	171.4	180.5	181.9	184.6	207.5	159.4	3.4
Strategy 3: <i>Increase access to water for agricultural production (irrigation, water for livestock, aquaculture).</i>	6.1	40.3	69.5	85.2	159.1	360.3	7.8
Strategy 4: <i>Enhance access and use of fertilisers by all categories of farmers.</i>	10.6	14.3	17.6	41.9	108.8	193.1	4.2
Priority 3: Improve agricultural markets and value addition for the 12 prioritised commodities	24.7	77.4	110.8	178.4	198.3	589.7	12.7
Strategy 1: <i>Promote private sector investment in value addition of the 12 prioritised commodities through PPP</i>	1.0	5.0	10.0	15.0	15.0	46.0	1.0
Strategy 2: <i>Build capacities of farmers, traders and processors in quality standards and market requirements of the 12 priority commodities</i>	19.5	35.4	60.8	78.4	98.3	292.5	6.3
Strategy 3: <i>Operationalise the commercialisation fund</i>	3.0	7.0	10.0	10.0	10.0	40.0	0.9
Strategy 4: <i>Ensure the development, maintenance and improvement of physical agricultural marketing infrastructure</i>	1.2	30.0	30.0	75.0	75.0	211.2	4.6
Priority 4: Institutional and Enabling Environment Strengthening	27.6	47.8	64.8	78.5	116.6	335.3	7.2
Strategy 1: <i>Strengthen institutional capacity of MAAIF and public agricultural agencies</i>	16.2	31.4	43.3	52.3	79.2	222.4	4.8
Strategy 2: <i>Improve the capacity for quality assurance, regulation, food and safety standards for outputs and products across crops, livestock and fisheries sub-sectors.</i>	5.2	6.9	8.5	14.32	20.1	55.02	1.2
Strategy 3: <i>Mainstream cross-cutting issues of gender, youth, HIV/AIDS, environment and climate change, food and nutritional security</i>	6.2	9.5	13.0	11.9	17.3	57.9	1.3

ASSP Priorities and Strategies	Yr. 1	Yr. 2	Yr. 3	Yr. 4	Yr. 5	Total	%
Total budget for the ASSP	479.9	782.5	875.6	1,080.1	1,408.3	4,626.4	

5.4 Provisions of unconstrained budget

Table 13 presents a summary of the priorities and strategies in the ideal case scenario, whose allocation trend is different from that in the constrained budget. The ideal budget for the ASSP is estimated at UGX 6,969 billion. First year costs start at UGX488.9 billion, increasing to UGX1,284.2 billion in the second year, UGX1,479.9 billion in the third year, UGX1,693.1 billion in the fourth year and UGX2,022.9 billion in the fifth year. The bulk of the funds amounting to UGX2,712.7 billion (38.93%) are allocated towards increasing access to critical farm inputs. This is closely followed by UGX2,707.3 billion (38.85%) targeting to increase agricultural production and productivity, UGX1,012.9 billion (14.53%) targeting to improve agricultural markets and value addition and UGX536.1 billion (7.69%) targeting to improve service delivery through strengthening the sector's institutional and enabling environment.

Table 13: Unconstrained (or Ideal) ASSP budget 2015/16-2019/20

Outcomes and Strategies	Y1	Y2	Y3	Y4	Y5	Total	%
Outcome 1: Increase agricultural production and productivity	239.0	496.6	560.3	654.0	757.5	2707.3	38.85
Strategy 1: Strengthening ecologically sound agricultural research and climate change resilient technologies and practices	75.5	106.6	112.2	119.7	131.5	545.5	7.83
Strategy 2: Implement a Single Spine Agricultural Extension system while promoting gendered innovation in agricultural research centres and extension services.	31.4	101.0	166.0	195.0	228.8	722.2	10.36
Strategy 3: Strengthen Farmer Group formation and cohesion including commodity associations, platforms, federations and co-operatives	1.0	11.5	11.5	13.5	15.9	53.4	0.77
Strategy 4: Accelerate the development and commercialisation of the prioritised agricultural commodities	67.6	136.5	131.8	166.8	188.6	691.3	9.92
Strategy 5: Control Pests, Vectors and Diseases	61.2	114.5	112.4	118.0	141.1	547.2	7.85
Strategy 6: Other production and productivity enhancing measures	2.3	26.4	26.4	41.0	51.6	147.7	2.12
Outcome 2: Increase access to critical farm inputs:	194.9	494.0	589.4	631.7	802.8	2712.7	38.93
Strategy 1: Promote Agriculture mechanisation	7.8	30.1	37.1	38.8	46.1	159.8	2.29
Strategy 2: Improve access to high quality seeds, planting and stocking materials	173.6	384.9	468.3	469.0	491.9	1987.6	28.52
Strategy 3: Increase access to water for agricultural production (irrigation, water for livestock, aquaculture).	6.1	67.9	69.5	85.2	159.1	387.9	5.57
Strategy 4: Enhance access and use of fertilizers by all categories of farmers.	7.4	11.1	14.5	38.8	105.6	177.4	2.55
Outcome 3: Improve agricultural markets and value addition for the 12 prioritised commodities	25.9	192.9	217.2	279.9	297.0	1012.9	14.53
Strategy 1: Promote private sector investment in value addition of the 12 prioritised commodities through PPP	1.0	5.0	10.0	15.0	15.0	46.0	0.66

Outcomes and Strategies	Y1	Y2	Y3	Y4	Y5	Total	%
Strategy 2: Build capacities of farmers, traders and processors in quality standards and market requirements of the 12 priority commodities	20.7	150.9	167.2	179.9	197.0	715.7	10.27
Strategy 3: Operationalize the commercialisation fund	3.0	7.0	10.0	10.0	10.0	40.0	0.57
Strategy 4: Ensure the development, maintenance and improvement of physical agricultural marketing infrastructure	1.2	30.0	30.0	75.0	75.0	211.2	3.03
Outcome 4: Institutional and enabling environment strengthening	29.1	100.8	113.1	127.4	165.6	536.1	7.69
Strategy 1: Strengthen institutional capacity of MAAIF and public agricultural agencies	17.1	68.7	75.9	84.5	111.5	357.6	5.13
Strategy 2: Improve the capacity for quality assurance, regulation, food and safety standards for outputs and products across crops, livestock and fisheries sub-sectors.	6.79	19.9	21.5	28.32	34.1	110.61	1.59
Strategy 3: Mainstream Cross-cutting Issues of Gender, Youth, HIV/AIDS, Environment and Climate Change, food and nutritional security	5.2	12.3	15.8	14.7	20.1	67.9	0.97
Total Budget for the ASSP	488.9	1284.2	1479.9	1693.1	2022.9	6969.0	

5.6 Resource mobilisation

The GoU will seek to provide much of the funding required for implementing the ASSP. This will be done within the national budget framework or MTEF that stipulates the available resource envelope and sector ceilings for each year. However given the limited funding available, additional resources will mobilised from development partners and the private sector. The resource mobilisation and expenditure strategies to be adopted will include:

- Computation of short and medium term financial estimates of budget and off budget internally generated funds (IGFs), projected GoU in-flows and resources from development partners;
- Determination of resource gaps and identification of appropriate strategies for mobilisation of additional resources to fill the financial shortfalls;
- Computation of annual cost estimates (capital and recurrent) of priority programmes and the overall cost of the plan (recurrent and capital);
- Negotiation with potential donors on funding contribution through direct budget support or through specific project or programme funding.

5.6.1 Support from development partners

It is clear that projects and programmes to be implemented will require substantial allocations from the national budget. To this end and in the spirit of continuing and reinforcing past and present collaboration, development partners active in supporting current initiatives will also be part of the funding sources over the plan period. These include the World Bank, Africa Development Bank, European Union, People's Republic of China, United States Aid for International Development, Japan International Cooperation Agency, Danida, The Royal Dutch Embassy, United Nations Organisations (United Nations Development Programme, Food & Agriculture Organisation and World Food Programme), IFAD, the French Development Agency and the Korean International Agency among others,. Tapping into this existing source will further increase the available budget provision together with technical and financial support from international communities, development

partners, NGOs and CSOs.

5.6.2 Support from the private sector

The ASSP explicitly takes into account the important contribution of the private sector through, for example, financing of agricultural activities by banks and other micro-lenders. These contributions are captured through the BoU statistics. The ASSP presents various opportunities for the private financial institutions to fund innovative private sector activities or get involved in PPPs that promote market-driven production, processing and marketing initiatives. The objective of providing opportunities for this type of support and involvement in the ASSP, is to expedite commercialisation of agriculture by catalysing increased private sector participation in market-oriented production and service delivery, promoting productivity and profitability or commercial viability of sector activities at all levels of the wider agricultural sector value chains.

5.7 Financial management arrangements

The GoU has well established and elaborate laws and financial management regulations and these include the Public Financial Management Act (PFMA) and the Public Procurement and Disposal Act (PPDA). The provisions of these laws will be followed in the implementation of the ASSP. Under the provision of PFMA, disbursements for the sector are implemented through eleven vote functions that are administered by eight sector and local government institutions or agencies. For example directly MAAIF administers the vote functions of policy, planning and support services; crops production regulation; animals (including fisheries); and extension services (incorporating agribusiness). The research function vote is controlled by NARO, while coffee development vote is controlled by CDA. The specific allocations are approved by parliament annually upon submission of the ministerial policy statement (MPS) for the sector. It is planned that during the course of the ASSP, resources will mainly be directed at the specified priorities.

5.7.1 Absorption capacity

The sustainability of the ASSP and the achievement of its key objectives rely heavily on the ability of the MAAIF to maintain and execute its role as the lead ministry in the provision of key support and advisory services to the sector. The relatively high amounts of financial resources to be mobilised for funding the ASSP will require the review and reconciliation of funding arrangements with development partners so that conditionalities for loans and grants are aligned with GoU laws. A further complication is the seasonality of agriculture funding and procurements that require calibration of procurement cycles with agricultural seasons.

5.7.2 Return on investment

For the private sector and farmers to increase production and productivity of the identified commodities through the various strategies laid out in the ASSP, there will be need for incentives to be put in place to encourage them to use their own equity capital and/or borrowed funds to develop commercial type operations integrating production, agro processing and value adding as well as marketing of agricultural products specifically targeting either export markets or import substitution or both. Incentives may also target private sector commercial investment in agriculture located in previously disadvantaged rural communities such as in Northern Uganda. Such investments will only materialise if there is a good return on investment.

6 MONITORING AND EVALUATION FRAMEWORK

6.1 M&E framework and process

Over the ASSP implementation period, the national M&E policy and M&E standards from OPM will be implemented in all MAAIF departments and agencies. Monitoring will be routinely conducted so as to track progress on the implementation of the ASSP. The existing framework will be reviewed and further strengthened to ensure availability of an efficient and effective M&E framework structured at national and district levels. At the national level, a schedule of ministerial level strategic monitoring committee meetings will be established and used for monitoring the progress being made by MDAs involved in the implementation of the ASSP. In addition consolidated quarterly, semi-annual and annual progress reports will be produced and disseminated by MAAIF based on inputs from the key departments, agencies and local governments involved in the implementation of the ASSP.

6.2 M&E coordination and outcomes

To coordinate the inputs from different data sources, the M&E division within the MAAIF will lead all the M&E initiatives in the sector, guided by the FIP that provides the framework for operationalising the National Policy on Public Sector Monitoring and Evaluation (NM&E) in the agricultural sector. First, Agricultural sector results framework with outcome indicators and targets will be established at the start of the ASSP implementation. In addition, MDA intermediate outcome indicators and departmental output indicators and targets for every financial year over the ASSP implementation will be defined. The M&E strategy is anchored on two intermediate outcomes. These are:

- 1) ***Availability of timely and reliable M&E information on all ASSP performance indicators.*** This will be achieved through: a) proper coordination and oversight of M&E activities in the agricultural sector, b) recruitment and or assigning focal points in all sector Agencies, departments and local governments responsibility for statistical production, monitoring and evaluation, c) establishment of a computerized web-based agricultural sector M&E system, and d) promoting and enforcing M&E standards.
- 2) ***Increased use of M&E information to inform programme, policy, and resource allocation decisions in the sector.*** This will be achieved through: a) generation of data and explanatory information on progress against performance indicators in the sector, b) planning and budgeting for M&E activities by all projects under the ASSP implementation by MAAIF departments and agencies, including complying with policy recommendations of allocating 3% of the recurrent non-wage budget and 2% of the project budgets to M&E activities, c) tracking monitoring, review and evaluation recommendations for all projects and programmes, d) availing M&E reports to the public and policy makers and programme managers in a timely manner

6.3 Monitoring of ASSP Implementation

Monitoring will be routinely conducted so as to track progress on the implementation of the ASSP. The existing framework will be reviewed and further strengthened to ensure availability of an efficient and effective monitoring and evaluation framework structured at national and DLG levels. At the national level, a schedule of M&E technical working group meetings will be established and used for monitoring the progress being made by MDAs involved in the implementation of the ASSP. In addition, consolidated quarterly, semi-annual and annual progress reports will be produced and disseminated by MAAIF based on inputs from the key departments, agencies and local governments involved in the implementation of the ASSP.

6.4 Evaluation of ASSP Implementation

MAAIF annually, organizes a joint agricultural sector performance review during which respective heads of sub sectors and technical support units present reports on progress of operationalisation of respective development plans of the previous financial year. This strategic plan requires that such reviews will take place at district, regional and national level prior to the overall joint sector review. This is to enable key stakeholders to be brought together to review, learn and devise strategies for overcoming barriers and improving performance in implementation of ASSP at their respective level. In this regard, local level annual feedback and reflection sessions will be timed to take place prior to the Joint Agricultural Sector Annual Review so that the issues arising are shared and consolidated for national level deliberations. In addition, scheduled reviews and evaluation will be periodically conducted to assess the impact of the interventions on the sector, so as to support the overall NDP monitoring and evaluation. These include the Mid Term Review and the Final Evaluation of the ASSP. The schedule of the monitoring activities is shown in the Table 14 below.

Table 14: Monitoring and Evaluation Schedule

Objective Level	Year 1				Year 2				Year 3				Year 4				Year 5			
	Qtr .1	Qtr .2	Qtr .3	Qtr .4	Qtr .1	Qtr .2	Qtr .3	Qtr .4	Qtr .1	Qtr .2	Qtr .3	Qtr .4	Qtr .1	Qtr .2	Qtr .3	Qtr .4	Qtr .1	Qtr .2	Qtr .3	Qtr .4
MONITORING																				
Goals																				
Outcomes																				
Outputs																				
Activities																				
Inputs																				
Monitoring Visits																				
Support Supervision																				
Quarterly Reports																				
Semi-Annual Reports																				
Annual Report																				
EVALUATION																				

Objective Level	Year 1				Year 2				Year 3				Year 4				Year 5			
	Qtr .1	Qtr .2	Qtr .3	Qtr .4	Qtr .1	Qtr .2	Qtr .3	Qtr .4	Qtr .1	Qtr .2	Qtr .3	Qtr .4	Qtr .1	Qtr .2	Qtr .3	Qtr .4	Qtr .1	Qtr .2	Qtr .3	Qtr .4
Baseline Survey																				
Annual reviews																				
Mid-term review																				
Impact Assessment																				
End of Plan Review																				

6.5 ASSP Logical Framework

Indicators for supporting the M&E of the ASSP have been developed at the output, outcome and impact levels. The impact indicators that address medium to long-term results include poverty reduction, economic growth and rural transformation. In the medium term, the outcome indicators include: increased household incomes, increased agricultural production, increased food security/ improved household nutrition, percentage annual growth in agricultural value addition and increased foreign earnings and/ or import substitutions. These are summarized in the Table 15 below.

Table 15: Logical Framework Matrix for M&E

Programme Description	Indicators/Targets	Source of verification	Assumptions
Overall Objective/ Goal Poverty reduction, increased food security and availability of quality food to Ugandans.	%age change in proportion of rural population below the poverty line, target=50% reduction.	UNHS	<ul style="list-style-type: none"> •Adequate budget allocation •Continued GoU commitment
	Agriculture GDP growth rate; target=6%	UBOS	
	Share of agriculture GDP in total GDP	UBOS	
	Labour Productivity (GDP per Worker - US\$)	UBOS	
	% of children under five years of age who are undernourished'	UNHS/UDHS	<ul style="list-style-type: none"> •Adequate budget allocation •Continued GoU commitment
Purpose/Development Outcome Increase productivity by farmers to at least 50% of the yields at research stations for the 12 priority commodities	Level of household agricultural income	UNHS	<ul style="list-style-type: none"> •Adequate budget allocation •Continued GOU commitment
	Percentage of labour force in agriculture	UNHS	<ul style="list-style-type: none"> •
	%age change in agricultural contribution to total GDP	UBOS	<ul style="list-style-type: none"> •Adequate budget allocation •Continued GOU commitment
Transform subsistence farmers into enterprise farmers and transform smallholders farmers into commercial farmers;	%age change in the labour force in subsistence production. Target: Reduction from 6 million in 2012/13 to 3 million in 2019/20.	UNHS	<ul style="list-style-type: none"> •Continued GOU commitment •Adequate budget allocation
	% annual growth in agricultural value added	UNHS	<ul style="list-style-type: none"> •Adequate budget allocation •
Increase agriculture exports to at least US\$4 billion per year;	Value of agricultural exports	UBOS statistical abstract	<ul style="list-style-type: none"> •Adequate budget allocation
	Percentage change in ratio of agricultural exports to total exports	UBOS statistical abstract	
	Percentage change in ratio of agricultural exports to agriculture GDP	UBOS statistical abstract	
Results/Outputs/Immediate Result Increasing agriculture production and productivity,	% change in average agricultural yields of priority commodities and agricultural products.	Annual Sector Review Reports from MAAIF	<ul style="list-style-type: none"> •Continued GOU commitment •Adequate budget allocation
	Percentage change in targeted beneficiaries using improved technologies and practices (by commodity): crop, livestock, fisheries, SLM technologies	Annual Sector Review Reports from MAAIF	<ul style="list-style-type: none"> •Adequate budget allocation •Continued GOU commitment
	% change in production from aquaculture farms	Annual Sector Review Reports from MAAIF	<ul style="list-style-type: none"> •Continued GOU commitment •Adequate budget allocation
	Percentage change in targeted beneficiaries satisfied with extension/advisory services	Annual Sector Review Reports from MAAIF	<ul style="list-style-type: none"> •Adequate budget allocation •Continued GOU commitment
	Percentage change in registered fishers and fish traders complying with fishing standards and regulations	Annual Sector Review Reports	<ul style="list-style-type: none"> •Continued GOU commitment •Adequate budget allocation
	Increasing access to critical farm inputs	% of farmers using labour saving technologies	Annual Sector Review Reports
% of farmers applying recommended package of inputs		Annual Sector Review Reports	<ul style="list-style-type: none"> •Continued GOU commitment •Adequate budget allocation

Programme Description	Indicators/Targets	Source of verification	Assumptions
	Change in area under irrigation as a percentage of total area of agricultural land with irrigation potential	Annual Sector Review Reports	<ul style="list-style-type: none"> •Adequate budget allocation •Continued GOU commitment
	% change in the proportion of farmers with access to a functional irrigation and drainage network	Annual Sector Review Reports	<ul style="list-style-type: none"> •Continued GOU commitment •Adequate budget allocation
Improving agricultural markets and value addition for the 12 prioritised commodities	Agricultural exports as a % of total value added in agricultural sector.	Trade statistics	<ul style="list-style-type: none"> •Adequate budget allocation •Continued GOU commitment
	Value of agricultural exports as a percentage of total exports	Trade statistics	<ul style="list-style-type: none"> •Continued GOU commitment •Adequate budget allocation
	% change in number of functioning and certified agricultural marketing infrastructure	Trade statistics	<ul style="list-style-type: none"> •Adequate budget allocation •Continued GOU commitment
	Percentage of strategic commodities production that is marketed	Trade statistics	<ul style="list-style-type: none"> •Adequate budget allocation •Continued GOU commitment
Strengthening institutional capacity of MAAIF and public agricultural agencies.	Percentage of positions in the approved structure of MAAIF headquarters and her agencies that are filled	Annual Sector Review Reports	<ul style="list-style-type: none"> •Continued GOU commitment •Adequate budget allocation
	No of MDAs and LGs that have an operational and functional agricultural M&E system.	Annual Sector Review Reports	<ul style="list-style-type: none"> •Adequate budget allocation
	No of MDA and DLG that have an operational and functional agricultural statistical data management system	Annual Sector Review Reports	<ul style="list-style-type: none"> •Continued GOU commitment •Adequate budget allocation

ANNEXES

Annex A: Summary of activities along value chains of priority/ strategic commodities

Commodity	Actions
Banana	<ul style="list-style-type: none"> a) Increase banana production and productivity by 30% through better seed systems and agronomic practices. b) Mainstream gender, youth, environment and climate change, HIV/AIDS, food and nutrition security issues in the banana sub-sector. c) Increase access and utilisation of high quality production inputs such as: transgenic plants, fertilisers, mechanisation and herbicides, among others. d) Facilitate domestic, regional and international trade in bananas, plantains and banana-and-plantain based products by the public sector. e) Accelerate the development and value addition of bananas and plantains as an industry. f) Control diseases, pests and vectors in the banana industry. g) Improve the capacity for quality assurance, regulation, food and safety standards for outputs and products across the banana industry.
Beans	<ul style="list-style-type: none"> a) Increase seed production, multiplication and distribution b) Facilitate information and knowledge provision through extension c) Promote mechanisation of beans production d) Promote fertiliser use and sustainable soil management e) Support irrigation technologies in beans production f) Facilitate marketing, postharvest handling and value addition g) Strengthen the institutions and enabling environment
Maize	<ul style="list-style-type: none"> a) Increase seed production, multiplication and distribution b) Facilitate information and knowledge provision through extension c) Promote mechanisation of maize production d) Promote fertiliser use and sustainable soil management e) Support irrigation technologies in maize production f) Facilitate marketing of maize, g) Promote postharvest handling and value addition h) Increase access to agricultural finance and credit; i) Support policy and institutional development
Rice	<ul style="list-style-type: none"> a) Increase seed production, multiplication and distribution b) Facilitate information and knowledge provision through extension c) Promote mechanisation of rice production d) Promote fertiliser use and sustainable soil management e) Support irrigation infrastructure in rice production f) Facilitate marketing, postharvest handling and value addition of rice g) Strengthen the institutions and enabling environment.
Tea	<ul style="list-style-type: none"> a) Expansion of tea growing areas. b) Tea gap-filling in the already planted areas. c) Improved extension service. d) Build processing facilities (tea factories). e) Strengthen tea research. f) Develop and access domestic, regional and international markets. g) Strengthen institutional and the enabling environment.
Coffee	<ul style="list-style-type: none"> a) Improve the quality of Ugandan coffee by ensuring best practices with respect to SPS and food safety principles and application of standards b) Promote the production of coffee through introduction of technology, carrying out research and development and deliberate promotion of coffee growing <p>Strengthen promotion and marketing of Ugandan coffee through information sharing and exchange, education and training as well as communication so as to market the available coffee varieties.</p>
Cassava	<ul style="list-style-type: none"> a) Scale up cassava production in the districts b) Provide clean planting material and value addition interventions,

	<ul style="list-style-type: none"> c) Finalize on the cassava policy d) Sensitize farmers on cassava possessing machinery and equipment e) Promote post-harvest and value addition equipment f) Enforce of the quality standards g) Strengthen extension service delivery and Market information dissemination to farmers.
Fruits & Vegetables	<ul style="list-style-type: none"> a) Production and distribution of quality clean fruits and vegetable seedling materials tolerant to pests and diseases with desirable fresh and processing characteristics. b) Increase production of fresh fruits and vegetables in the country c) Establishment of marketing structures to support value addition activities along the different fruits and vegetables value chain d) Support and evaluate cottage fruits and vegetables processors engaged in product development
Dairy	<ul style="list-style-type: none"> a) Strengthen the dairy sector regulatory frame-work b) Promote local consumption and export of milk and dairy products c) Rehabilitate existing and develop new milk cold chain and processing infrastructure d) Strengthen milk quality assurance system (laboratories, lab technologists, training in hygienic milk handling along the whole dairy value chain). e) Build local capacity in feed production and marketing (conserved feed, pasture and rangeland improvement) f) Enhance availability for improved dairy germplasm g) Develop of a national breeding programme and breeding guidelines h) Develop the national dairy herd information management system i) Build local and National capacity for on-farm animal disease and vector control and management.
Meat	<ul style="list-style-type: none"> a) Provide an enabling environment and data collection for the meat Sector. b) Enhance beef cattle, goat, poultry, pork and productive entomology production and productivity c) Improve meat hygiene services and development of meat industry marketing infrastructure
Fisheries	<ul style="list-style-type: none"> d) Promote recovery of depleted stocks of the large commercial fishes e) Develop the fishery of small pelagic fishes f) Promote aquaculture to a commercial level.
Cocoa	<ul style="list-style-type: none"> a) Strengthen cocoa research and technology development focusing on high yielding varieties, appropriate technologies for improving quality of the beans and, controlling cocoa pests and diseases. b) Improve delivery of extension services to cocoa growers in order to enhance uptake of improved technologies. c) Promote access to mechanisation and high quality planting materials. d) Strengthen the policy, standards enforcement so as to improve the capacity for cocoa quality assurance. e) Establish platforms for championing the development of the cocoa commodity.
Irish Potato	<ul style="list-style-type: none"> a) Production and distribution of formal seed potato of improved varieties with preferred end-user characteristics b) Production and marketing of ware potato for rural and urban consumption c) Facilitate the setting up of an out-growers ware potato scheme and nucleus farm to support small and medium enterprises (SMEs) engaged in processing of potato under a PPP mode
Oil Palm	<ul style="list-style-type: none"> a) Seed multiplication and distribution b) Information and knowledge c) Mechanisation of oil seed production d) Fertilisers and sustainable soil management e) Irrigation (supplemental) f) Access to agricultural finance and credit g) Postharvest handling and value addition h) Marketing i) Policy and institutional development
Oil Seed	<ul style="list-style-type: none"> a) Breed for improved OPV and hybrid parent lines. b) Evaluate introduced new varieties c) Multiply foundation seed d) Monitor distribution of certified oilseeds seeds to farmers e) Provide technical back up support and harmonise extension service f) Training all oilseeds farmers on quality standards and postharvest handling technologies and practices

	<ul style="list-style-type: none">g) Mobilize all farmers/FOs for collective marketingh) Develop and implement Oilseeds policies and standards
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Annex B: Crop, livestock and fisheries production targets for 2015 - 2019 in metric tons.

Commodity	Baseline 2014	2015	2016	2017	2018	2019
Maize	2,868,000	3,513,300	4,567,290	5,937,477	7,718,720	10,000,000
Beans	1,011,000	1,526,610	2,442,576	3,908,122	6,252,995	10,000,000
Bananas	4,578,000	5,493,600	6,592,320	7,910,784	10,204,911	13,000,000
Rice	237,000	243,653	280,201	322,231	456,000	734,160
Coffee	211,872	254,246	305,096	381,370	476,712	595,890
Tea	61,376	73,600	83,200	92,800	102,400	112,000
Beef	202,929	332,640	339,293	346,079	353,000	360,000
Mutton/Goat	37,838	37,032	37,773	38,528	39,299	39,775
Pork	22,138	129,586	132,178	134,821	137,518	139,775
Poultry	54,868	59,257	60,443	61,651	62,884	63,647
Eggs	856,819	891,092	962,379	1,039,369	1,122,519	1,212,321
Dairy	1,550,000	2,089,243	2,256,382	2,482,020	2,978,424	3,350,000
Cotton	12,674	22,458	29,195	37,953	49,339	64,750
Oil Seed	758,500	1,176,600	1,341,300	1,534,300	1,761,000	2,027,800
Oil Palm	75,861	106,000	171,720	198,760	206,060	206,060
Cocoa	25,720	24,968	32,459	42,196	54,855	71,000
Fish Catch	461,726	584,480	607,859	632,174	657,461	674,028
Cassava	2,812,700	2,925,208	3,071,468	3,225,042	3,402,419	3,579,800

Annex C: Agricultural commodity export targets for 2015/16– 2019/20 in US\$ millions

Commodity	Baseline 2014	2015/16	2016/17	2017/18	2018/19	2019/20
Coffee (beans and value added coffee)	410.06	577.70	644.90	735.40	921.90	1,153.50
Cotton (Lint and value added cotton)	21.92	84.00	114.10	160.23	245.87	355.51
Tea	84.74	92.30	99.80	115.60	134.00	155.30
Cocoa (Beans and value added cocoa)	59.40	78.30	92.80	117.80	149.30	192.30
Maize Grain	29.00	35.70	42.20	50.00	59.30	70.20
Value Added Maize	14.57	20.20	22.20	24.50	29.40	35.20
Beans and legumes	26.20	51.82	54.41	57.13	59.99	62.98
Rice	28.70	40.80	45.20	57.20	64.80	73.40
Sesame	55.20	65.40	70.70	89.40	99.00	109.70
Tobacco	66.00	70.30	72.30	74.30	76.30	78.40
Fish & Fish Products	134.80	163.10	179.40	197.30	217.10	238.80
Flowers	28.70	37.97	47.43	59.29	74.14	92.63
Fruits and Vegetables	16.10	32.70	43.50	57.90	77.00	102.40
Hides & Skins	73.80	82.30	75.10	49.70	36.50	33.60
Leather & Leather Products	-	34.10	100.10	175.18	306.56	536.47
Livestock Products	29.50	44.40	53.20	63.90	76.70	92.00
Sugar	68.90	92.00	108.60	128.20	153.80	192.20
Animal/Veg Fats & Oils	102.32	135.60	162.72	195.26	234.29	281.14
Sorghum	35.165	40.44	46.51	53.48	61.50	70.73
Vanilla	2.651	3.05	3.50	4.03	4.63	5.33
Soya beans	0.912	1.27	1.78	2.50	3.50	4.89
Ground-nuts	0.816	1.15	1.61	2.25	3.15	4.41
Bananas	0.587	0.83	1.16	1.62	2.27	3.17
Pepper	0.573	0.80	1.12	1.56	2.19	3.07
Total	1,290.61	1,788.20	2,092.33	2,490.50	3,164.50	4,039.85

Explanatory notes to Annexes B and C

Maize and Beans

Maize and beans production was estimated at 2.87 and 1.01 million mt respectively in 2014. Annual national average yields was 2.6MT/HA for maize and 1.5 mt/HA for beans and, and formal export earnings stood at US\$ 43.57 million and US\$ 26.2 million in 2014 for maize and beans respectively. Productivity, production and export targets for the medium term are:

- Maize productivity doubles from 2.50 – 5.00 mt/HA for maize, 1.5 – 2.5 mt/HA for beans by 2019. This will increase maize and beans production to about 10 million mt each by 2019 on account of increased access to certified seeds and agro-inputs; increase in area planted and increased access to extension services.
- Maize formal exports are projected to increase from US\$ 43.57 million – US\$ 105.4 million in 2019, while export of beans is projected to increase to 62.98 million US\$ in 2019. The key drivers for maize and beans exports are: 1) increased observation and compliance to EAC grain quality standards (in line with the national grain policy) that will ease access to the regional market, 2) expanded regional market with the admission of South Sudan into the EAC, and 3) intensified efforts to formalise trade in grains through the warehouse receipt system and the regional commodity exchange, 4) Government will also promote efforts for value addition in cereal preparation and milling flour for the regional market.

Bananas

Production is currently estimated at 4.578 million MTs per year (UBOS, 2015). Production is expected to almost triple by 2019 to approximately 13 million mt on account of enhanced control of the banana wilt disease, increased access to extension services for proper management of banana plantations and increased access to banana research technologies including high yielding varieties. Banana exports are expected to increase from US\$ 0.587 to 3.17 million by 2019 on account of increasing regional demand with the increased mobility of Ugandans into the regional markets and value addition to bananas targeted at increasing the shelf life.

Rice

Production of rice in 2014 was 237,000 mt, fetching Uganda a total export earnings of 28.7 million US dollars. The current rice productivity stands at about 2.49 metric tonnes per hectare which is still low. Productivity and production targets for medium term

- Rice productivity almost double from 2.49 in 2014 to 4.0 mt/HA by 2020.
- Rice production increase from 237,000 in 2014 to 680,000 mt in 2019.
- Rice as a commodity to become a Net export earner by 2020.
- Rice export earnings to increase from the current US\$28.7 million to US\$73.40 million

Tobacco

Tobacco has been one of the top five export earners, earning the country US\$66 million in 2014. Export earnings of tobacco estimated to grow marginally to approximately 78.4 million dollars on account of the recent closure of BAT Uganda operations and the tobacco control act 2015, that is expected to have a negative impact on the total amount of tobacco produced and exported from Uganda.

Coffee

Under the Commodity Approach the Government set has target of planting 100 million coffee seedlings per annum. Exports expected to reach at least US\$1.153 billion in 2019

Tea

The major objective of tea expansion is to:- To increase tea acreage from the current estimated 20,000 hectares by planting at least 3,000 Ha per year to be able to achieve a target of 15,000Ha planned to have been planted by end of five (5) years (2015/16 – 2019/20) and bring total acreage to 35,000 harvestable Hectares by 2020.

Parameters	Baseline 2014	2015	2016	2017	2018	2019
Total Planted Area (Ha)	23,000	26,000	29,000	32,000	35,000	38,000
Total Harvestable Area (Ha)	20,000	23,000	26,000	29,000	32,000	35,000
Production Estimates (mt)	66,000	73,600	83,200	92,800	102,400	112,000
Processed tea Export in mt	61,395	68,465	77,395	86,326	95,256	104,186
Estimated Export Value in US\$ Millions	84.70	92.30	99.80	115.60	134.00	155.30

Livestock Products- Meat and Milk

The overall objective of the meat sector programme is “to increase incomes of small and large scale beef cattle, goat and poultry farmers through acceleration of meat production and attainment of up to 13% per year growth rate by the end of five year period”. To achieve this, the sub-sector interventions will broadly focus on the following specific objectives:

- Provision of an enabling environment and data collection system for the meat sector.
- Enhance beef cattle, meat goat, sheep, pig and poultry production and productivity
- Improving meat hygiene services and developing meat industry marketing infrastructure
- Enhancing productivity and export potential of commodities from productive insects

To increase production and productivity, Government will invest in improving access to water and pastures, control of livestock disease, importation of breeds with high productivity, improving the marketing infrastructure for livestock and strengthening the regulatory capacity the MDAs including for compliance to SPS requirements.

Dairy

Priority interventions were selected and synthesized and will continue to be implemented as a programme (The Dairy Sector Enhancement Programme) which commenced in FY 2015/16 and implemented until FY 2019/20. The programme has three components, namely:-

- a) Enabling environment;
- b) Dairy marketing and value addition;
- c) Improving dairy production and productivity;
- d) Improving dairy production and productivity component; addresses development of improved feeds, stocking improved breeds to foster milk productivity, management of livestock pests and diseases and building the capacity of farmers to improve dairy management practices.

The targeted performance indicators to be pursued during the implementation period are summarised in the matrix below:

Item	2015/16	2016/17	2017/18	2018/19	2019/20
Milk production	1.94 Bn	2.08 Bn	2.22 Bn	2.36 Bn	2.5 Bn
Milk marketable (70%)	1.26 Bn	1.36 Bn	1.46 Bn	1.55 Bn	1.65 Bn
Milk export (Tons)	63,400	74,100	84,800	95,500	1,062,000
Milk processed	676,000	792,000	908,000	1,024,000	1,140,000
Milk traded through formal channels (%)	20%	26%	32%	38%	44%
Milk traded through formal channels (Quantity)	690,410	968,767	1,280,000	1,613,699	1,989,041

Cotton

The Government together with other EAC countries have agreed to progressively ban importation of second hand clothes into the EAC. This will reduce competition and create new export markets for cotton and cotton value added products into the EAC countries. According production is expected to increase from the baseline value of 12,674MT of lint to 64,750MT of link by 2019/20. Equally exports of link and value added cotton products are projected to increase from 21.92 million dollars in 2014 to 355.51 million dollars by 2019/20.

Oil Seed

Area planted, total production and productivity of oil seeds have been increasing over the years. The total production is expected to continue increasing on account of the planned expansion of acreage under palm oil and other oil seeds, from 758,500 mt in 2014 to an estimated 2,027,800MT by 2019/20. Equally, export earnings of vegetable fats and oils are projected to more than double from the current 102.32 million dollars to 281.14million dollars by 2019/20.

Cocoa

Production was estimated at 25,720 MTs in 2014 and it's expected to increase to approximately 71,000 mt by 2019. The area under cocoa production is projected to increase, while cocoa farmers will get targeted support including seeds, extension services and fertilizers. The current good prices on the international market are also expected to continue in the medium term. Targeted support will be directed towards value addition on cocoa to take advantage of the regional market. Accordingly, cocoa exports (Beans and value added cocoa) are expected to increase from US\$ 59.40in 2014 to 192.30 million dollars by 2020.

Fisheries

The recovery of the fisheries sub-sector was experienced during the DSIP period with fish catch increasing 16%. The recovery is projected to continue and aquaculture productions will continue to be promoted across the country. The ASSP targets to increase capture fish and aquaculture production by 45.9% from 461,726tons in 2014 to 674,028 metric tons by 2020, which is well within the known existing Ugandan potential. Annual export earnings to grow from US\$134.80 million in 2014 to US\$238.8 million by 2020.

Annex D: Indicative budget (UGX billions), constrained by the NDPII budget

ASSP IMPLEMENTATION MATRIX AND CONSTRAINED BUDGET IN LINE WITH THE NDP II												
ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
Total budget						479.96	782.41	875.72	1,080.03	1,408.30	4,626.42	
Outcome 1: Increase agricultural production and productivity	X	X	X	X	X	232.62	391.14	393.99	472.66	571.85	2,062.26	
Strategy 1: Strengthening ecologically sound agricultural research and climate change resilient technologies and practices	X	X	X	X	X	86.73	103.80	109.35	116.88	128.69	545.46	<i>NARO</i>
Agricultural technologies, innovations and management practices (TIMPS) generation	X	X	X	X	X	34.06	34.80	35.60	36.40	37.60	178.46	<i>NARO</i>
<i>Breeding of climate smart – nutrient enriched farmer preferred varieties and breeds</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>4.49</i>	<i>4.54</i>	<i>4.66</i>	<i>4.77</i>	<i>4.94</i>	<i>23.40</i>	<i>NARO</i>
<i>Develop improved higher yielding crop varieties and livestock breeds</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>4.71</i>	<i>4.85</i>	<i>4.98</i>	<i>5.13</i>	<i>5.34</i>	<i>25.01</i>	<i>NARO</i>
<i>Nutrient fortified and transgenic crops (Bananas, Maize, Irish potatoes)</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>4.14</i>	<i>4.23</i>	<i>4.33</i>	<i>4.42</i>	<i>4.55</i>	<i>21.68</i>	<i>NARO</i>
<i>Characterizing plant and animal disease strains and agents</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>3.57</i>	<i>3.62</i>	<i>3.64</i>	<i>3.71</i>	<i>3.79</i>	<i>18.33</i>	<i>NARO</i>
<i>Develop and release disease, pest and drought resistant varieties/breeds</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>4.71</i>	<i>4.85</i>	<i>4.98</i>	<i>5.13</i>	<i>5.34</i>	<i>25.01</i>	<i>NARO</i>
<i>Develop non-conventional animal feed</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>4.14</i>	<i>4.23</i>	<i>4.33</i>	<i>4.42</i>	<i>4.55</i>	<i>21.68</i>	<i>NARO</i>
<i>Conduct on-station and multi-location evaluation of generated lines</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>4.14</i>	<i>4.23</i>	<i>4.33</i>	<i>4.42</i>	<i>4.55</i>	<i>21.68</i>	<i>NARO</i>
<i>On-farm trials and national variety evaluation trials for VCU and DUS</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>4.14</i>	<i>4.23</i>	<i>4.33</i>	<i>4.42</i>	<i>4.55</i>	<i>21.68</i>	<i>NARO</i>
Strengthening the functioning of the National Agricultural Research System (NARS) by identifying and building key human resource capacity to support the sector	X	X	X	X	X	3.36	9.00	10.00	10.20	10.60	43.16	<i>NARO</i>
<i>Conduct an HR capacity needs assessment</i>	<i>X</i>					<i>0.50</i>					<i>0.50</i>	<i>NARO</i>

ASSP IMPLEMENTATION MATRIX AND CONSTRAINED BUDGET IN LINE WITH THE NDP II

ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Develop and implement a staff recruitment and retention strategy</i>	X					0.25				0.25	0.50	NARO
<i>Develop and implement a mentoring programme for junior scientists</i>	X	X	X	X	X	1.00	1.00	1.00	1.00	1.00	5.00	NARO
<i>Conduct short and long term training on Adaptive Research for staff</i>	X	X	X	X	X	1.41	3.00	4.00	4.20	4.35	16.96	NARO
<i>Establish an effective staff performance appraisal system</i>	X					0.20					0.20	NARO
<i>Support to NARO scientists</i>		X	X	X	X		5.00	5.00	5.00	5.00	20.00	
Develop and implement a policy and regulatory framework for biotechnology in agriculture.	X	X	X	X	X	0.40	0.90	0.90	0.90	0.90	4.00	NARO
<i>Fast tracking the laws and standards of GMOs production and utilization</i>	X	X	X	X	X	0.20	0.40	0.40	0.40	0.40	1.80	NARO
<i>develop and enhance capacity for implementing research guidelines and procedures on biotechnology use and biosafety</i>	X	X	X	X	X	0.20	0.50	0.50	0.50	0.50	2.20	NARO
Develop and promote technologies and protocols for value addition in agriculture and agro processing	X	X	X	X	X	9.80	14.20	14.40	14.43	14.64	67.47	NARO
<i>Conducting product development and end user marketability tests to enhance utilization options for a range of strategic and priority commodities</i>	X	X	X	X	X	3.60	3.60	3.60	3.85	3.80	18.44	NARO
<i>Developing and validating technologies and protocols for agro-processing including protocols for enhancing shelf life, uniform ripening, stability</i>	X	X	X	X	X	3.00	3.00	3.00	3.00	3.00	15.00	NARO
<i>Testing and ascertain thresholds on a range of parameters for food safety and quality assurance and validate capacity for compliance</i>	X	X	X	X	X	1.80	1.80	1.80	1.58	1.84	8.83	NARO
<i>Development of processing/packaging tools and equipment</i>	X	X	X	X	X	1.40	5.80	6.00	6.00	6.00	25.20	NARO

ASSP IMPLEMENTATION MATRIX AND CONSTRAINED BUDGET IN LINE WITH THE NDP II

ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
Up-scaling uptake of existing and new appropriate technologies, innovations and management practices (TIMPS).	X	X	X	X	X	9.03	14.00	17.55	23.66	33.12	97.37	DAES/NARO
<i>Technology promotion (production and agro-processing) and farmer access to information/ knowledge</i>	X	X	X	X	X	5.46	9.00	11.05	15.21	21.29	62.01	DAES/NARO
<i>Technology uptake grants for farmers, farmer groups and agro-processors</i>	X	X	X	X	X	3.57	5.00	6.50	8.45	11.83	35.35	DAES
Accelerate Research and Technology Development of the selected priority/ strategic commodities	X	X	X	X	X	30.08	30.90	30.90	31.29	31.83	155.00	NARO
<i>Banana research and technology development</i>	X	X	X	X	X	1.85	2.35	2.35	2.35	2.35	11.25	NARO
<i>Beans Research and technology development</i>	X	X	X	X	X	1.65	2.15	2.15	2.15	2.21	10.31	NARO
<i>Fruits Research support programme</i>	X	X	X	X	X	2.00	2.50	2.50	2.50	2.50	12.00	NARO
<i>Maize Research Programme</i>	X	X	X	X	X	1.82	2.36	2.36	2.32	2.44	11.29	NARO
<i>Cassava Research Programme</i>	X	X	X	X	X	1.70	1.18	1.18	1.16	1.22	6.43	NARO
<i>Rice Research Programme</i>	X	X	X	X	X	1.88	2.37	2.37	2.37	2.51	11.49	NARO
<i>Oil seed Research Programme</i>	X	X	X	X	X	2.08	2.59	2.59	2.59	2.82	12.65	NARO
<i>Tea Research</i>	X	X	X	X	X	4.16	2.86	2.86	3.34	3.37	16.60	NARO
<i>Improvement of Coffee Research Systems</i>	X	X	X	X	X	5.08	5.18	5.18	5.18	5.06	25.67	NARO
<i>Strengthening cocoa research and technology development</i>	X	X	X	X	X	1.96	2.20	2.20	2.20	2.20	10.78	NARO
<i>Strengthening cotton production research</i>	X	X	X	X	X	3.40	2.17	2.17	2.14	2.14	12.02	NARO
<i>Oil Palm research and technology development</i>	X	X	X	X	X	2.50	3.00	3.00	3.00	3.00	14.50	NARO

ASSP IMPLEMENTATION MATRIX AND CONSTRAINED BUDGET IN LINE WITH THE NDP II												
ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
Strategy 2: Implement a Single Spine Agricultural Extension system while promoting gendered innovation in agricultural research centres and extension services.	X	X	X	X	X	32.42	99.98	104.98	114.98	141.18	493.54	DAES
<i>Wage costs of extension staff</i>	X	X	X	X	X	16.28	49.98	49.98	49.98	49.98	216.20	LG
<i>Non-wage/operational costs at districtlevel</i>	X	X	X	X	X	14.14	45.00	50.00	60.00	85.00	254.14	LG
<i>Farmer education and refresher trainings of extension staff</i>	X	X	X	X	X		1.00	1.00	1.00	1.40	4.40	DAES
<i>Institutional strengthening of extension systems</i>	X	X	X	X	X	2.00	2.00	2.00	2.00	2.00	10.00	DAES
<i>Strengthening Joint M&E and data systems between agricultural research and extension services</i>	X	X	X	X	X		1.00	1.00	1.00	1.40	4.40	DAES
<i>Promote strategic partnerships between research and technology development and extension services at all levels</i>	X	X	X	X	X		1.00	1.00	1.00	1.40	4.40	DAES
Strategy 3: Strengthen Farmer Group formation and cohesion including commodity associations, platforms, federations and co-operatives	X	X	X	X	X	2.48	6.48	6.48	9.00	12.60	37.04	MAAIF
<i>Farmer Institutional Development</i>	X	X	X	X	X	1.00	2.00	2.00	2.00	2.80	9.80	MAAIF
<i>Establish & run atleast ten commodity platforms to constantly discuss issues pertaining to particular commodity value chains</i>	X	X	X	X	X	0.48	0.48	0.48	1.00	1.40	3.84	MAAIF
<i>Agribusiness development services and market linkages</i>	X	X	X	X	X	1.00	4.00	4.00	6.00	8.40	23.40	DAI & ED /NAADS
Strategy 4: Accelerate the development and commercialisation of the prioritised agricultural commodities	X	X	X	X	X	56.30	79.34	72.63	112.04	136.91	457.23	MAAIF

ASSP IMPLEMENTATION MATRIX AND CONSTRAINED BUDGET IN LINE WITH THE NDP II

ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Increasing Banana Production and Productivity</i>	X	X	X	X	X	0.80	1.15	1.15	1.65	2.25	7.00	MAAIF
<i>Increasing Beans Production and Productivity</i>	X	X	X	X	X	0.80	1.35	1.35	1.85	2.39	7.74	MAAIF
<i>Increasing Maize Production and Productivity</i>	X	X	X	X	X	1.00	1.42	1.28	1.76	2.27	7.73	
<i>Increasing Cassava Production and Productivity</i>	X	X	X	X	X	1.29	1.42	1.28	1.76	2.27	8.02	
Rice	X	X	X	X	X	1.62	1.93	1.93	3.93	4.71	14.12	MAAIF
<i>Information and Knowledge</i>	X	X	X	X	X	0.32	0.63	0.63	1.13	1.39	4.10	MAAIF
<i>Mechanisation</i>	X	X	X	X	X	0.60	0.60	0.60	1.10	1.34	4.24	MAAIF
<i>Fertilization and sustainable soil management</i>	X	X	X	X	X	0.40	0.40	0.40	0.90	1.06	3.16	MAAIF
<i>Institutions and enabling environment strengthening</i>	X	X	X	X	X	0.30	0.30	0.30	0.80	0.92	2.62	MAAIF
Tea	X	X	X	X	X	1.01	3.24	3.52	4.91	6.27	18.95	MAAIF
<i>Tea Extension Service</i>	X	X	X	X	X	0.45	0.74	1.22	2.18	2.85	7.43	MAAIF
<i>Tea Area Expansion</i>	X	X	X	X	X	-	2.00	1.50	2.00	2.60	8.10	MAAIF
<i>Tea Policy</i>	X	X	X	X	X	0.56	0.50	0.80	0.73	0.82	3.42	MAAIF
Coffee	X	X	X	X	X	7.31	7.51	8.41	23.26	30.97	77.45	UCDA
<i>Promote and support adoption of good agronomic practice at farm level</i>	X	X	X	X	X	1.62	1.62	1.62	3.62	4.27	12.74	UCDA
<i>Promote coffee growing in new areas and expansion in traditional coffee growing areas</i>	X	X	X	X	X	1.00	1.10	2.00	10.85	16.00	30.95	UCDA
<i>Coffee Agro Extensions and Business Development Services</i>	X	X	X	X	X	2.47	2.47	2.47	4.47	5.46	17.35	UCDA

ASSP IMPLEMENTATION MATRIX AND CONSTRAINED BUDGET IN LINE WITH THE NDP II

ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Support and Strengthen Farmer Organizations</i>	X	X	X	X	X	2.22	2.32	2.32	4.32	5.24	16.41	UCDA
<i>Fruits and Vegetables</i>	X	X	X	X	X	1.50	1.50	1.50	2.50	2.50	9.50	MAAIF
<i>Dairy</i>	X	X	X	X	X	5.49	6.40	4.59	7.09	9.68	33.26	DDA
<i>Institutional strengthening and creation of enabling environment</i>	X	X	X	X	X	0.60	0.60	0.60	1.60	2.20	5.60	MAAIF/D DA
<i>Enhancing availability of improved dairy cattle germplasm</i>	X	X	X	X	X	2.00	2.00	2.00	2.00	2.00	10.00	NAGRC & DB
<i>Strengthening milk quality assurance system</i>	X	X	X	X	X	0.09	0.09	0.09	0.59	0.68	1.54	DDA
<i>Building local capacity in feed production and marketing</i>	X	X	X	X	X	2.50	3.41	1.60	2.10	3.71	13.32	DDA
<i>Developing the national dairy herd information management system</i>	X	X	X	X	X	0.30	0.30	0.30	0.80	1.10	2.80	DDA
<i>Fisheries</i>	X	X	X	X	X	7.48	8.78	8.68	11.58	15.01	51.51	MAAIF/D FR
<i>Promoting recovery of depleted stocks of the large commercial fishes</i>	X	X	X	X	X	0.80	0.90	0.90	1.40	1.76	5.76	MAAIF/D FR
<i>Developing the Fishery of Small Pelagic Fishes</i>	X	X	X	X	X	1.38	1.38	1.38	1.88	2.43	8.43	MAAIF/D FR
<i>Promoting commercial aquaculture</i>	X	X	X	X	X	2.10	2.10	2.00	2.60	3.44	12.24	MAAIF/D FR
<i>Infrastructure development along the value chain</i>	X	X	X	X	X	1.20	1.20	1.20	1.70	2.18	7.48	MAAIF/D FR
<i>Strengthen monitoring on all water bodies</i>	X	X	X	X	X	2.00	2.00	2.00	2.50	3.30	11.80	MAAIF/D FR
<i>Control of the new breed of weed and water hyacinth</i>	X	X	X	X	X	-	1.20	1.20	1.50	1.90	5.80	MAAIF/D FR
<i>Meat</i>	X	X	X	X	X	8.93	8.69	8.16	7.08	9.91	42.77	MAAIF/D AR

ASSP IMPLEMENTATION MATRIX AND CONSTRAINED BUDGET IN LINE WITH THE NDP II

ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Provision of an Enabling Environment for the Meat</i>	X	X	X	X	X	0.50	0.50	0.50	0.50	0.70	2.70	MAAIF/DAR
<i>Animal Feeds, Forage and Water Security Enhancement</i>	X	X	X	X	X	0.80	0.80	0.80	0.80	1.12	4.32	MAAIF/DAR
<i>Animal Feeds Production and Quality Assurance Enhancement</i>	X	X	X	X	X	1.98	2.09	1.00	1.08	1.51	7.66	MAAIF/DAR
<i>National Beef Genetics Resource Development</i>	X	X	X	X	X	2.00	2.00	2.00	2.00	2.80	10.80	NAGRC & DB
<i>Goat Breed Improvement Schemes</i>	X	X	X	X	X	1.00	0.65	0.65	0.67	0.94	3.90	MAAIF/DAR
<i>Support Investments in the Poultry Sector</i>	X	X	X	X	X	1.00	1.00	1.00	0.41	0.57	3.98	MAAIF/DAR
<i>Kuroiler and Indigenous Chicken Resource Development</i>	X	X	X	X	X	0.55	0.55	1.11	0.53	0.74	3.47	MAAIF/DAR
<i>Develop the sericulture and silk production value chain</i>	X	X	X	X	X	0.50	0.50	0.50	0.50	0.70	2.70	MAAIF/DAR
<i>Support to Apiculture</i>	X	X	X	X	X	0.60	0.60	0.60	0.60	0.84	3.24	MAAIF/DAR
Cocoa	X	X	X	X	X	1.10	0.89	0.89	1.34	2.01	6.25	MAAIF
<i>Cocoa Extension Services</i>	X	X	X	X	X	1.10	0.89	0.89	1.34	2.01	6.25	MAAIF
Cotton	X	X	X	X	X	2.78	2.78	2.78	4.16	6.24	18.73	CDO
<i>formation of farmers' associations and capacity building</i>	X	X	X	X	X	0.78	0.78	0.78	1.16	1.74	5.23	CDO
<i>reduction of cotton contamination</i>	X	X	X	X	X	2.00	2.00	2.00	3.00	4.50	13.50	CDO
Oil Seed	X	X	X	X	X	1.70	1.79	1.82	2.86	3.61	11.79	MAAIF
<i>enhance oilseed production and productivity</i>	X	X	X	X	X	1.48	1.52	1.58	2.12	2.77	9.46	MAAIF

ASSP IMPLEMENTATION MATRIX AND CONSTRAINED BUDGET IN LINE WITH THE NDP II

ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>institutional and enabling environment strengthening</i>	X	X	X	X	X	0.22	0.27	0.25	0.75	0.85	2.33	MAAIF
Oil Palm	X	X	X	X	X	13.50	30.50	25.30	36.30	36.82	142.42	MAAIF
<i>Land identification and acquisition</i>	X	X	X	X	X	10.00	20.00	15.00	25.00	25.00	95.00	MAAIF
<i>Plantation establishment and development</i>	X	X	X	X	X	2.00	9.00	9.00	10.00	10.00	40.00	MAAIF
<i>Reform and strengthen agricultural extension</i>	X	X	X	X	X	1.00	1.00	1.00	1.00	1.40	5.40	MAAIF
<i>Strengthen the institutional capacity of MAAIF</i>	X	X	X	X	X	0.30	0.30	0.30	0.30	0.42	1.62	MAAIF
<i>Strengthen the capacity for quality assurance, regulation and food safety standards</i>	X	X	X	X	X	0.20	0.20	-	-	-	0.40	MAAIF
Strategy 5: Control Pests, Vectors and Diseases	X	X	X	X	X	51.18	75.14	74.15	78.76	100.85	380.07	MAAIF
Control of pests and diseases for crops	X	X	X	X	X	14.83	15.73	16.17	16.65	21.15	84.52	
<i>Crop pests and disease control regulatory strengthening</i>	X	X	X	X	X	1.50	1.50	1.50	1.50	1.50	7.50	MAAIF
<i>Conduct early detection and control of crop pests, weeds and diseases</i>	X	X	X	X	X	4.00	4.40	4.84	5.32	5.86	24.42	MAAIF
<i>Crop pests and disease control infrastructure</i>	X	X	X	X	X	4.00	4.00	4.00	4.00	6.00	22.00	MAAIF
<i>Banana bacterial wilt control</i>	X	X	X	X	X	0.40	0.90	0.90	0.90	0.90	4.00	MAAIF
<i>Management of Coffee Diseases and Pests</i>	X	X	X	X	X	4.93	4.93	4.93	4.93	6.90	26.60	UCDA/MAAIF
Control livestock diseases and vectors to ensure that communicable diseases are managed in order to promote animal health as a means to greater productivity and market penetration.	X	X	X	X	X	26.95	46.86	46.47	51.37	64.80	236.45	MAAIF
<i>Uganda Tsetse and Trypanosomiasis Eradication</i>	X	X	X	X	X	2.00	5.07	5.30	12.99	15.00	40.36	MAAIF/C OCTU

ASSP IMPLEMENTATION MATRIX AND CONSTRAINED BUDGET IN LINE WITH THE NDP II

ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Eastern Uganda Regional Tsetse and Trypanosomiasis Eradication</i>	X	X	X	X	X	2.00	5.00	5.00	5.00	7.00	24.00	MAAIF/C OCTU
<i>North Western Uganda Tsetse Project</i>	X	X	X	X	X	1.00	9.85	9.95	6.65	9.31	36.76	MAAIF/C OCTU
<i>Strengthening COCTU in Coordination, Policy and Planning</i>	X	X	X	X	X	0.09	0.06	0.15	0.05	0.07	0.41	COCTU
<i>Control and Surveillance of Ticks</i>	X	X	X	X	X	2.21	1.78	1.17	1.10	1.53	7.79	MAAIF
<i>Control of East Coast Fever (ECF)</i>	X	X	X	X	X	2.36	2.73	2.15	4.04	5.66	16.94	MAAIF
<i>Control of Foot and Mouth Disease (FMD)</i>	X	X	X	X	X	10.00	15.00	15.00	15.00	20.00	75.00	MAAIF
<i>Control of Rift Valley Fever</i>	X	X	X	X	X	1.19	1.33	1.11	0.92	0.83	5.38	MAAIF
<i>Control of Rabies</i>	X	X	X	X	X	2.20	2.16	2.14	1.12	0.90	8.52	MAAIF
<i>Control of African Swine Fever (ASF)</i>	X	X	X	X	X	3.00	3.00	3.00	3.00	3.00	15.00	MAAIF
<i>Capacity Building for Animal Disease Surveillance and Control Systems in Uganda</i>	X	X	X	X	X	0.30	0.30	0.50	0.50	0.50	2.10	MAAIF
<i>Capacity Building for Enforcement of Veterinary Regulations in Uganda</i>	X	X	X	X	X	0.30	0.30	0.50	0.50	0.50	2.10	MAAIF
<i>Control of Human and Animal Brucellosis</i>	X	X	X	X	X	0.30	0.30	0.50	0.50	0.50	2.10	MAAIF
Creating an Enabling Policy and Regulatory Environment for Livestock disease control	X	X	X	X	X	2.81	2.26	1.62	1.66	1.73	10.08	MAAIF
<i>Review three (3) outdated legislations</i>	X					0.60	0.20	0.20	0.20	0.20	1.40	MAAIF
<i>Enact eight (8) Draft bills,</i>	X	X				0.75	0.75	0.20	0.20	0.20	2.10	MAAIF
<i>Formulate twelve (12) regulations</i>		X					0.12				0.12	MAAIF
<i>Approve & print developed Standards</i>	X		X			0.02		0.02			0.03	MAAIF

ASSP IMPLEMENTATION MATRIX AND CONSTRAINED BUDGET IN LINE WITH THE NDP II												
ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Review & approve three (3) policies</i>	X					0.15					0.15	MAAIF
<i>Develop & disseminated 10 Strategies</i>	X	X				0.10	0.04				0.14	MAAIF
<i>Operationalise approved policies</i>	X	X	X	X	X	0.51	0.56	0.61	0.67	0.74	3.08	MAAIF
<i>Equip & support established animal law enforcement Unit</i>	X	X	X	X	X	0.12	0.12	0.12	0.12	0.12	0.60	MAAIF
<i>Equip & finance work of UVB</i>	X	X	X	X	X	0.54	0.44	0.44	0.44	0.44	2.31	MAAIF
<i>Support continuous professional training</i>	X	X	X	X	X	0.03	0.03	0.03	0.03	0.03	0.15	MAAIF
Establishment of Disease Control infrastructure and operationalization of effective disease control	X	X	X	X	X	6.60	10.29	9.90	9.07	13.16	49.02	MAAIF
<i>Rehabilitation or construction and equipping of 4 quarantine stations, 14 holding grounds + 14 border posts</i>	X	X	X	X	X	2.23	2.23	2.23	2.23	4.00	12.94	MAAIF
<i>Provision of proper transport and cold chain equipment for the Veterinary Offices</i>	X	X	X	X	X	-	2.76	2.76	2.76	5.53	13.82	MAAIF
<i>Development and implementation of prevention and control strategy for major diseases</i>	X	X	X	X	X	0.17	0.17	0.17	0.17	0.17	0.86	MAAIF
<i>Creation and implementation of individual animal (cattle) herd and flock (goat and poultry) identification for traceability</i>	X	X	X	X	X	1.40	1.48	1.98	1.98	1.98	8.82	MAAIF
<i>Renovate and equip the National Laboratory and establish 12 Regional Laboratory facilities</i>	X	X	X			0.82	0.82	0.82			2.47	MAAIF
<i>Personnel and operational costs of the national and regional laboratoris infrastructure</i>	X	X	X	X	X	1.37	1.37	1.37	1.37	1.37	6.84	MAAIF
<i>Establish a national Animal Feed quality analysis laboratory-Diary feeds</i>	X	X	X	X	X	0.60	1.45	0.56	0.56	0.12	3.28	MAAIF
Strategy 6: Other production and productivity enhancing measures	X	X	X	X	X	3.50	26.40	26.40	41.00	51.62	148.92	MAAIF

ASSP IMPLEMENTATION MATRIX AND CONSTRAINED BUDGET IN LINE WITH THE NDP II												
ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Sustainable Land Management/Promote adaptation of climate change resilient agricultural production systems, technologies and practices</i>	X	X	X	X	X	1.70	5.00	5.00	7.00	9.00	27.70	MAAIF
<i>Increase access to agricultural finance services by implementing Agricultural commodity based Development Credit facilities</i>	X	X	X	X	X		18.60	18.60	28.20	36.43	101.83	MAAIF
<i>Promote commercialisation of agriculture particularly amongst small holder farmers</i>	X	X	X	X	X	1.00	2.00	2.00	5.00	5.00	15.00	MAAIF
<i>Promote time and labour saving technologies targeting women farmers</i>	X	X	X	X	X	0.40	0.40	0.40	0.40	0.40	2.00	MAAIF
<i>Strengthen linkages between farmers and production support services (including financial services, capacity development and marketing) in partnership with Ministry of Finance and other stakeholders</i>	X	X	X	X	X	0.40	0.40	0.40	0.40	0.79	2.39	MAAIF
Outcome 2: Increase access to critical farm inputs:	X	X	X	X	X	193.42	260.56	300.14	343.94	510.97	1,609.03	
Strategy 1: Promote Agriculture mechanisation	X	X	X	X	X	8.16	30.06	37.11	38.78	46.14	160.24	DAI & WFP
<i>Promoting acquisition and utilization of agricultural mechanization technologies using a series of Public- Private- Partnership (PPP)</i>	x	x	x	x	x	3.40	19.14	26.00	28.00	34.00	110.54	DAI & WFP
<i>Promote sustainable local manufacture and maintenance of suitable agricultural machinery for farm production and postharvest processing</i>	x	x	x	x	x	0.50	1.08	0.55	0.49	0.60	3.23	DAI & WFP
<i>Formulate and implement incentive frameworks for acquisition and financing of labour saving technologies.</i>	x	x	x	x	x	0.50	0.61	0.55	0.39	0.35	2.40	DAI & WFP
<i>Promoting the strengthening of capacity for technical information acquisition, equipment evaluation and sustainable operation of agricultural machinery</i>	x	x	x	x	x	0.50	0.66	0.38	0.36	0.34	2.24	DAI & WFP

ASSP IMPLEMENTATION MATRIX AND CONSTRAINED BUDGET IN LINE WITH THE NDP II

ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Establish an agricultural mechanization resource centre for training machinery operators, generating technical information, and provision of referral workshop services for testing/ evaluating agricultural machinery.</i>	x	x	x	x	x	1.00	3.89	4.74	4.69	6.00	20.32	DAI & WFP
<i>Strengthen the capacity of technical and vocational institutions for training agricultural mechanics and technicians</i>	x	x	x	x	x	2.17	3.89	4.74	4.69	4.69	20.18	DAI & WFP
<i>Strengthen collaboration with the National Bureau of Standards to eliminate importation and trade of substandard agricultural mechanisation equipments</i>	x	x	x	x	x	0.09	0.79	0.15	0.15	0.15	1.33	DAI & WFP
Strategy 2: Improve access to high quality seeds, planting and stocking materials	X	X	X	X	X	171.75	179.05	180.15	182.70	201.60	915.26	MAAIF
Strengthening and rationalizing the Department of Regulation and Certification's seed services	X	X	X	X	X	4.99	3.91	2.61	2.11	1.81	15.43	DCI & C
<i>Improve phytosanitary control at entry points</i>	X	X	X	X	X	0.74	1.04	0.24	0.24	0.24	2.50	DCI & C
<i>Strengthen Namelere laboratory</i>	X	X		X		0.80	0.50	-	0.30	-	1.60	NARO/DCI & C
<i>Transport to improve communication and service delivery</i>	X					0.44	-	-	-	-	0.44	DCI & C
<i>Improve data and other information on the seed industry to support better policy and program plans, both by government and by the private sector</i>	X	X	X	X	X	0.20	0.20	0.20	0.20	0.20	1.00	DCI & C
<i>Promote seed quality insurance</i>	X	X	X	X	X	2.66	2.02	2.02	1.22	1.22	9.14	DCI & C
<i>Achieve ISTA accreditation and maintain OECD Seed Schemes accreditation</i>	X	X	X	X	X	0.10	0.10	0.10	0.10	0.10	0.50	DCI & C
<i>Implement PVP</i>	X	X	X	X	X	0.05	0.05	0.05	0.05	0.05	0.25	DCI & C
Enhancing the capacity of the private seed industry to produce pre-basic seed	X	X	X	X	X	2.88	1.01	1.46	1.01	0.41	6.77	MAAIF

ASSP IMPLEMENTATION MATRIX AND CONSTRAINED BUDGET IN LINE WITH THE NDP II

ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
Strengthening capacity of NARI institutes involved in input supply	X	X	X	X	X	0.57	4.27	3.97	3.47	16.37	28.66	<i>NARO</i>
<i>Enhance Breeder/foundation seed production and supply</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>0.07</i>	<i>0.27</i>	<i>0.27</i>	<i>0.27</i>	<i>0.27</i>	1.16	<i>NARO</i>
<i>Strengthen/establish agribusiness incubation service centres</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>0.50</i>	<i>4.00</i>	<i>3.70</i>	<i>3.20</i>	<i>16.10</i>	27.50	<i>NARO</i>
Strengthen policies, laws and regulations for agricultural inputs including seeds and planting materials supply and use	X	X	X	X	X	2.00	4.35	3.60	5.10	10.00	25.05	<i>MAAIF</i>
<i>Operationalise and implement PVP Act</i>		<i>X</i>					<i>0.25</i>				0.25	<i>MAAIF</i>
<i>Establish a National Seed Sector Database</i>		<i>X</i>					<i>0.50</i>				0.50	<i>MAAIF</i>
<i>Conduct regular market severance of input dealers (wholesale and retails)</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>2.00</i>	<i>3.60</i>	<i>3.60</i>	<i>5.10</i>	<i>10.00</i>	24.30	<i>MAAIF</i>
Upscaling use of improved seeds and planting material						1.42	1.62	1.62	2.12	2.12	8.90	<i>MAAIF</i>
<i>Extend the dealer network/Support to UNADA</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>0.05</i>	<i>0.25</i>	<i>0.25</i>	<i>0.25</i>	<i>0.25</i>	1.04	<i>MAAIF</i>
<i>Improve farmer knowledge of new varieties</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>1.03</i>	<i>1.03</i>	<i>1.03</i>	<i>1.03</i>	<i>1.03</i>	5.16	<i>MAAIF</i>
<i>Support to seed companies to test and promote new varieties and cultivars</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>0.34</i>	<i>0.34</i>	<i>0.34</i>	<i>0.84</i>	<i>0.84</i>	2.70	<i>MAAIF</i>
Strengthen the national certification and regulation system to guarantee the quality of seeds and other agro-inputs.	X	X	X	X	X	5.00	9.00	12.00	12.00	14.00	52.00	<i>MAAIF</i>
Increase availability and access to quality seeds, planting and stocking materials	X	X	X	X	X	154.89	154.89	154.89	156.89	156.89	778.45	<i>NAADS</i>
<i>Multiplication and distribution of clean planting materials of Bananas</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>3.30</i>	<i>3.30</i>	<i>3.30</i>	<i>3.30</i>	<i>3.30</i>	16.50	<i>NAADS</i>
<i>Beans Seed production, multiplication and distribution</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>8.00</i>	<i>8.00</i>	<i>8.00</i>	<i>8.00</i>	<i>8.00</i>	40.00	<i>NAADS</i>

ASSP IMPLEMENTATION MATRIX AND CONSTRAINED BUDGET IN LINE WITH THE NDP II

ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Maize Seed production, multiplication and distribution</i>	X	X	X	X	X	14.00	14.00	14.00	14.00	14.00	70.00	NAADS
<i>Rice Seed production, multiplication and distribution</i>	X	X	X	X	X	1.00	1.00	1.00	1.00	1.00	5.00	NAADS
<i>production and distribution of clean planting material of improved cassava varieties</i>	X	X	X	X	X	4.50	4.50	4.50	4.50	4.50	22.50	NAADS
<i>Planting materials for Tea Area Expansion</i>	X	X	X	X	X	36.00	36.00	36.00	36.00	36.00	180.00	NAADS
<i>Provision of high Yielding, diseases and pest resistant coffee varieties to promote growing in new areas and expansion in traditional coffee growing areas , and provision of agr-chemicals</i>	X	X	X	X	X	20.00	20.00	20.00	20.00	20.00	100.00	UCDA
<i>production and distribution of quality clean citrus seedlings</i>	X	X	X	X	X	14.50	14.50	14.50	16.50	16.50	76.50	NAADS
<i>distribution of quality clean pineapple seedlings tolerant to pests and diseases</i>	X	X	X	X	X	0.90	0.90	0.90	0.90	0.90	4.50	NAADS
<i>production and distribution of quality clean apple seedlings tolerant to pests and diseases</i>	X	X	X	X	X	2.00	2.00	2.00	2.00	2.00	10.00	NAADS
<i>Provision of quality inputs for production of mangoes</i>	X	X	X	X	X	7.50	7.50	7.50	7.50	7.50	37.50	NAADS
<i>Provision of inputs for vegetables production</i>	X	X	X	X	X	0.60	0.60	0.60	0.60	0.60	3.00	NAADS
<i>Provision of inputs for fisheries production</i>	X	X	X	X	X	2.30	2.30	2.30	2.30	2.30	11.50	NAADS
<i>Provision of beef cattle</i>	X	X	X	X	X	0.90	0.90	0.90	0.90	0.90	4.50	NAADS
<i>Provision of heifers - dairy cattle</i>	X	X	X	X	X	25.00	25.00	25.00	25.00	25.00	125.00	NAADS
<i>Multiplication of pasture seed</i>	X	X	X	X	X	1.00	1.00	1.00	1.00	1.00	5.00	NAADS
<i>Provision of improved goats</i>	X	X	X	X	X	2.00	2.00	2.00	2.00	2.00	10.00	NAADS
<i>Cocoa seedlings provision</i>	X	X	X	X	X	3.10	3.10	3.10	3.10	3.10	15.50	NAADS

ASSP IMPLEMENTATION MATRIX AND CONSTRAINED BUDGET IN LINE WITH THE NDP II

ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Cotton inputs support to farmers</i>	X	X	X	X	X	1.25	1.25	1.25	1.25	1.25	6.25	CDO
<i>addressing challenges of access to critical farm inputs for oil palm</i>	X	X	X	X	X	1.30	1.30	1.30	1.30	1.30	6.50	MAAIF
<i>Oil seed provision</i>	X	X	X	X	X	1.74	1.74	1.74	1.74	1.74	8.70	NAADS/M AAIF
<i>Provision of poultry units and piglets</i>	X	X	X	X	X	4.00	4.00	4.00	4.00	4.00	20.00	NAADS
Strategy 3: Increase access to water for agricultural production (irrigation, water for livestock, aquaculture).	X	X	X	X	X	6.10	40.30	68.42	83.70	157.61	356.13	DAI & WFP
Strengthen the legal and institutional framework and capacity for developing water for agricultural production	X	X	X	X	X	1.00	1.00	1.00	1.00	1.00	5.00	DAI & WFP
<i>development of irrigation master plan, guidelines, action plans, framework and principles for dissemination</i>	X					0.40	0.20				0.60	DAI & WFP
<i>preparation of guidelines for appraisal and design of small-scale farmer-based irrigation schemes</i>	X					0.20					0.20	DAI & WFP
<i>development of appropriate mechanisms for cost sharing and funding of water for agricultural production-based interventions</i>	X					0.20					0.20	DAI & WFP
<i>Development of guidelines for a Community Based Management System (CBMS) for operation and maintenance of water for agricultural production facilities and for WUAs</i>	X					0.10					0.10	DAI & WFP
<i>Institutionalize Water User Associations (WUAs), cooperative societies and other farmer groups in regulation and management of irrigated agriculture</i>		X				0.10					0.10	DAI & WFP
<i>establish technical support units to LGs in agricultural water management (AWM)</i>		X	X	X	X		0.30	0.50	0.50	0.50	1.80	DAI & WFP
<i>Promote the uptake and use of the adapted small scale irrigation technologies/options</i>		X	X	X	X		0.50	0.50	0.50	0.50	2.00	DAI & WFP

ASSP IMPLEMENTATION MATRIX AND CONSTRAINED BUDGET IN LINE WITH THE NDP II

ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
Investing in modern irrigation technologies through construction of large and promotion of small scale irrigation technologies in line with the zoning strategy and development of large and medium water reservoirs.	X	X	X	X	X	4.30	33.30	59.38	72.70	134.00	303.68	DAI & WFP
<i>Evaluation and rehabilitation of nine (9) existing public irrigation schemes of Atera, Kiige, Labori, Ongom, Olweny and Odina</i>	X	X	X	X	X	1.00	10.00	28.00	30.00	40.00	109.00	DAI & WFP
<i>Construction of Rhino Camp in Arua District, Labwor in Moroto District, Katete in Kanungu District, Biiso in Bullisa District, Pabbo in Amuru District, Namalu, Kibimba-Gomba, Musamya, Torchi in Oyam District among others</i>		X	X	X	X	3.00	15.00	28.88	28.50	63.50	138.88	DAI & WFP
<i>carrying out feasibility studies and design of 3 other irrigation schemes covering an area of 6,900 ha-Acomai irrigation Scheme, Atari Irrigation scheme and Namatala Irrigation Scheme</i>		X	X	X			5.80				5.80	DAI & WFP
<i>Establish 11,000 ha of community-based/strategic medium to large scale schemes at Naigomwa in Iganga District and Igogero in Bugiri District</i>				X	X				11.70	24.00	35.70	DAI & WFP
<i>Promotion of small scale irrigation technologies by establishing at least a demonstration unit per district per year across the country</i>	X	X	X	X	X	0.20	1.00	1.00	1.00	3.00	6.20	DAI & WFP
<i>Adapt and make affordable small scale irrigation technologies/options including garden hose, drip systems</i>	X	X	X	X	X	0.10	1.50	1.50	1.50	3.50	8.10	DAI & WFP
Promote rainwater harvesting and storage at household and farm levels for agriculture.	X	X	X	X	X	0.80	6.00	8.04	10.00	22.61	47.45	DAI & WFP
<i>Rehabilitation/expansion of 102 public Valley dams</i>	X	X	X	X	X	0.10	1.00	1.00	1.00	2.00	5.10	DAI & WFP
<i>Rehabilitation/expansion of 195 valley tanks</i>	X	X	X	X	X	0.10	0.80	0.74	0.80	0.80	3.24	DAI & WFP

ASSP IMPLEMENTATION MATRIX AND CONSTRAINED BUDGET IN LINE WITH THE NDP II

ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Construction of 1,200 new valley tanks</i>	X	X	X	X	X	0.50	2.00	4.00	4.20	12.00	22.70	DAI & WFP
<i>Establish 4 commercial aquaculture sites of minimum 10 ponds</i>			X	X	X			0.60	1.20	2.40	4.20	DAI & WFP
<i>Establishing of two (2) well-planned Aquaculture Parks (APs) in Mpologoma catchment and Olweny catchment</i>		X					1.70			1.70	3.40	DAI & WFP
<i>Establish four three (3) fish farms each with four (4) ponds in the districts of Mbarara, Gulu and Sironko</i>			X	X	X			1.20	1.20	1.80	4.20	DAI & WFP
<i>Development of two (2) landing sites in Kaliro and Amolatar districts</i>				X	X				1.00	1.31	2.31	DAI & WFP
<i>Develop and Promote Rainwater harvesting technologies and Best Practices for smallholder farmers</i>	X	X	X	X	X	0.10	0.50	0.50	0.60	0.60	2.30	DAI & WFP
Strategy 4: Enhance access and use of fertilizers by all categories of farmers.	X	X	X	X	X	7.42	11.15	14.45	38.75	105.62	177.40	MAAIF
Create an enabling environment for fertilizer production, importation and distribution	X	X	X	X	X	1.24	3.93	5.13	5.96	0.33	16.59	MAAIF
<i>Support to the Fertilizer Market Development Council (FMDC)</i>	X	X	X	X	X	0.84	0.33	0.33	0.33	0.33	2.17	MAAIF
<i>review of the national fertilizer policy and implementing regulations</i>	X	X	X	X	X	0.40	0.30	-	-	-	0.70	MAAIF
<i>Credit support for Bulk Purchase and Risk Management Fund</i>		X	X	X	X	-	3.30	4.80	5.63	0.00	13.73	MAAIF
Strengthen soil fertility knowledge management and awareness creation	X	X	X	X	X	1.10	1.18	1.16	1.09	0.96	5.50	MAAIF
<i>update soil fertility management and fertilizer use recommendations</i>	X	X	X	X	X	0.14	0.33	0.31	0.24	0.05	1.07	MAAIF
<i>develop soil fertility management and fertilizer use extension materials</i>	X	X	X	X	X	0.12	0.01	0.01	0.01	0.08	0.23	MAAIF
<i>increase number of agro-dealers trained about fertilizer and with enhanced business skills</i>	X	X	X	X	X	0.30	0.30	0.30	0.30	0.30	1.52	MAAIF

ASSP IMPLEMENTATION MATRIX AND CONSTRAINED BUDGET IN LINE WITH THE NDP II												
ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
Increase number of Technology Transfer Agents (TTAs) with fertilizer knowledge and matching inputs	X	X	X	X	X	0.14	0.14	0.14	0.14	0.14	0.68	MAAIF
Increase number of farmers with fertilizer knowledge and matching inputs	X	X	X	X	X	0.40	0.40	0.40	0.40	0.40	2.00	MAAIF
Capacity Building and Physical Infrastructure for Fertilizers						1.93	2.89	5.02	28.56	101.18	139.56	MAAIF
Crop Production Risk Management	X	X	X	X	X	0.05	0.44	0.86	1.10	0.32	2.77	MAAIF
Capacity Building Project	X	X	X	X	X	1.88	2.45	4.16	2.46	5.86	16.79	MAAIF
Support Physical Infrastructure Project	X	X	X	X	X	-	-	-	5.00	15.00	20.00	MAAIF
Development of Domestic Resources for Soil Productivity Enhancement	X	X	X	X	X	-	-	-	20.00	80.00	100.00	MAAIF
Provision of fertiliser inputs to farmers	X	X	X	X	X	3.15	3.15	3.15	3.15	3.15	15.75	NAADS
Outcome 3: Improve agricultural markets and value addition for the 12 prioritised commodities	X	X	X	X	X	25.43	81.89	115.70	183.74	207.60	614.35	MAAIF
Strategy 1: Promote private sector investment in value addition of the 12 prioritised commodities through PPP	X	X	X	X	X	1.00	5.00	10.00	15.00	15.00	46.00	MAAIF
Strategy 2: Build capacities of farmers, traders and processors in quality standards and market requirements of the 12 priority commodities	X	X	X	X	X	20.23	39.89	65.70	83.74	107.60	317.15	MAAIF
Strengthen higher level farmer organization for collective marketing, bulking, quality and standards improvement	X	X	X	X	X	2.00	3.00	4.00	5.20	7.12	21.32	MAAIF
Promote appropriate technologies and practices for minimizing post harvest losses along the entire commodity value chain.	X	X	X	X	X	2.10	8.00	11.80	14.76	19.94	56.60	MAAIF/NA RO

ASSP IMPLEMENTATION MATRIX AND CONSTRAINED BUDGET IN LINE WITH THE NDP II

ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Develop and adapt appropriate technologies and practices for postharvest handling along the value chain of all priority commodities</i>	X	X	X	X	X	0.40	2.40	2.80	2.80	3.20	11.60	MAAIF/NARO
<i>Build Capacity of Value chain actors on best post harvest handling practices for each priority commodity</i>	X	X	X	X	X	0.30	1.00	4.00	6.00	6.00	17.30	MAAIF/NARO
<i>Provide farmers/ groups assorted SME processing demo/equipment</i>	X	X	X	X	X	1.00	1.00	1.40	1.96	2.74	8.10	MAAIF/NARO
<i>Develop and improve food handling, marketing and distribution systems and linkages to local and export markets.</i>	X	X	X	X	X	0.40	3.60	3.60	4.00	8.00	19.60	MAAIF/NARO
Promote Commodity/farm based storage and agro processing, as a means to increasing access to domestic and regional market, through demonstrations and PPPs.	X	X	X	X	X	3.80	8.85	9.68	9.30	9.30	40.93	MAAIF
<i>Innovate and adapt affordable on-farm storage solutions for the priority and strategic commodities</i>	X	X	X	X	X	0.50	0.80	0.80	0.80	0.80	3.70	MAAIF
<i>Facilitate private sector uptake, development, marketing and distribution of on farm storage solutions to smallholder farmers including developing a cost effective sales distribution system</i>	X	X	X	X	X	0.30	1.05	1.88	1.50	1.50	6.23	MAAIF
<i>Enhance efficiency (higher output at reduced cost) at all value chain nodes through trainings and demonstration sites of appropriate improved TIMPS</i>	X	X	X	X	X	0.50	2.00	2.00	2.00	2.00	8.50	MAAIF
<i>Product development to meet end-user market requirements e.g. quality& safety standards, traceability, packaging, certification for niche markets, bar coding for supermarket outlets, etc</i>	X	X	X	X	X	1.00	2.00	2.00	2.00	2.00	9.00	MAAIF
<i>Knowledge and skills development to enhance capacity for engaging in high quality export markets e.g. for horticulture</i>	X	X	X	X	X	0.50	1.00	1.00	1.00	1.00	4.50	MAAIF

ASSP IMPLEMENTATION MATRIX AND CONSTRAINED BUDGET IN LINE WITH THE NDP II

ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Promote cottage processing industries through incubation of new processing technologies for both food and non-food products</i>	X	X	X	X	X	1.00	2.00	2.00	2.00	2.00	9.00	MAAIF
Marketing and value addition for specific priority and strategic commodities	X	X	X	X	X	12.33	20.04	40.22	54.48	71.23	198.30	MAAIF
<i>Developing National and Regional Markets for Ugandan bananas and banana processed products</i>	X	X	X	X	X	1.00	1.25	2.25	2.25	2.25	9.00	MAAIF
<i>Beans Marketing</i>	X	X	X	X	X	1.00	1.00	2.00	2.00	2.00	8.00	MAAIF
<i>Maize Marketing and value addition</i>	X	X	X	X	X	1.00	2.60	4.00	6.00	6.00	19.60	MAAIF
<i>Rice Marketing and value addition</i>	X	X	X	X	X	1.00	1.00	2.00	2.00	1.72	7.72	MAAIF
<i>Cocoa marketing and Value addition support</i>	X	X	X	X	X	1.45	1.53	1.59	1.66	1.72	7.95	
<i>support cassava farmers and SMEs to engage in profitable processing and marketing of quality cassava flour and chips as an agribusiness enterprise</i>	X	X	X	X	X	1.00	1.50	3.00	3.00	4.70	13.20	MAAIF
<i>Establishment of new Tea Processing Facilities for value addition</i>	X	X	X	X	X	-	2.00	3.00	3.00	8.40	16.40	MAAIF
<i>Tea Marketing</i>	X	X	X	X	X	0.18	0.18	0.18	0.18	0.18	0.88	MAAIF
<i>Coffee value addition and Generic Promotion</i>	X	X	X	X	X	1.00	1.00	1.23	0.46	0.46	4.15	UCDA
<i>Support marketing of adequate quantities of fresh citrus fruits, pineapples and apples for local and regional markets</i>	X	X	X	X	X	0.90	1.00	3.00	5.00	3.10	13.00	MAAIF
<i>support fruit processors to engage in the product development of fresh juice from green citrus fruits as a product for local market</i>	X	X	X	X	X	0.50	0.50	0.50	2.50	2.50	6.50	MAAIF
<i>Promoting local consumption and export of milk and dairy products.</i>	X	X	X	X	X	0.98	0.98	0.98	0.93	0.91	4.80	DDA

ASSP IMPLEMENTATION MATRIX AND CONSTRAINED BUDGET IN LINE WITH THE NDP II												
ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Rehabilitate existing and develop new milk cold chain and processing infrastructure</i>	X	X	X	X	X	0.32	1.00	3.00	3.00	0.86	8.18	DDA
<i>Development of Meat Marketing Infrastructure</i>			X	X	X	-	2.00	9.40	17.40	30.70	59.50	MAAIF
<i>promotion of domestic value addition to lint</i>	X	X	X	X	X	0.50	0.80	2.00	3.00	3.62	9.92	CDO
<i>Facilitate domestic, regional and international trade in Vegetable Oil Products</i>	X	X	X	X	X	0.80	0.80	0.80	0.80	0.80	4.00	MAAIF
<i>Strengthen producer-buyer/aggregator contractual relationships for the strategic/priority commodities</i>	X	X	X	X	X	0.30	0.30	0.30	0.30	0.30	1.50	MAAIF
<i>Identify and strengthen producer groups adding value to agricultural commodities through training and exposure to technologies befitting their activities.</i>	X	X	X	X	X	0.20	0.30	0.50	0.50	0.50	2.00	MAAIF
<i>Promote structured trading systems by linking organized collective marketing farmer groups to large buyers and storage handlers/warehouse operators</i>	X	X	X	X	X	0.20	0.30	0.50	0.50	0.50	2.00	MAAIF
Strategy 3: Operationalize the commercialisation fund	X	X	X	X	X	3.00	7.00	10.00	10.00	10.00	40.00	NAADS
Strategy 4: Ensure the development, maintenance and improvement of physical agricultural marketing infrastructure	X	X	X	X	X	1.20	30.00	30.00	75.00	75.00	211.20	MAAIF
<i>Cold Chain storage Infrastructure</i>	X	X	X	X	X	0.40	10.00	10.00	25.00	25.00	70.40	MAAIF
<i>Physical agricultural commodity markets</i>	X	X	X	X	X	0.40	10.00	10.00	25.00	25.00	70.40	MAAIF
<i>Community based grain storage facilities</i>	X	X	X	X	X	0.40	10.00	10.00	25.00	25.00	70.40	MAAIF
Outcome 4: Institutional and enabling environment strengthening	X	X	X	X	X	28.49	48.82	65.89	79.69	117.88	340.78	MAAIF

ASSP IMPLEMENTATION MATRIX AND CONSTRAINED BUDGET IN LINE WITH THE NDP II												
ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
Strategy 1: Strengthen institutional capacity of MAAIF and public agricultural agencies	X	X	X	X	X	17.09	32.42	44.39	53.47	80.48	227.86	MAAIF
Institutional Strengthening and Capacity Building	X	X	X	X	X	6.30	13.00	22.90	31.00	57.30	130.50	MAAIF
<i>Construction of MAAIF headquarters Building in Kampala</i>			X	X	X	1.00	1.00	10.00	17.00	43.30	72.30	MAAIF
<i>Construction of administrative infrastructure for selected district production departments</i>	X	X	X	X	X	0.40	6.00	6.00	6.00	6.00	24.40	MAAIF
<i>Human Resource Development-Training/capacity building</i>	X	X	X	X	X	1.00	2.00	2.00	3.00	3.00	11.00	MAAIF
<i>Strengthening Institutional Linkages and Networking Capacity</i>	X	X	X	X	X	1.00	1.00	1.00	1.00	1.00	5.00	MAAIF
<i>improving access to working facilities, tools and equipment for MAAIF, its Agencies and local governments.</i>	X	X	X	X	X	2.90	3.00	3.90	4.00	4.00	17.80	MAAIF
transform ATIs (Bukalasa College and Fisheries Training Institute), into institutions that are responsive to knowledge and skill market in the extension service.	X	X	X	X	X	1.00	3.90	4.40	4.40	4.10	17.80	Bukalasa College and Fisheries Training Institute
Bukalasa Agricultural College	X	X	X	X	X	0.50	1.95	2.20	2.20	2.05	8.90	Bukalasa College
<i>Curriculum review</i>	X	X	X	X	X	0.05	0.05	0.20	0.20	0.05	0.55	Bukalasa College
<i>Human resources strengthening</i>	X	X	X	X	X	0.10	0.30	0.50	0.50	0.50	1.90	Bukalasa College

ASSP IMPLEMENTATION MATRIX AND CONSTRAINED BUDGET IN LINE WITH THE NDP II

ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Infrastructural rehabilitation/development</i>	X	X	X	X	X	0.25	1.50	1.50	1.50	1.50	6.25	Bukalasa College
<i>Restructuring and Operationalization</i>	X	X				0.10	0.10	-	-	-	0.20	Bukalasa College
Fisheries Training Institute	X	X	X	X	X	0.50	1.95	2.20	2.20	2.05	8.90	Fisheries Training Institute
<i>Curriculum review</i>	X	X	X	X	X	0.05	0.05	0.20	0.20	0.05	0.55	Fisheries Training Institute
<i>Human resources strengthening</i>	X	X	X	X	X	0.10	0.30	0.50	0.50	0.50	1.90	Fisheries Training Institute
<i>Infrastructural rehabilitation/development</i>	X	X	X	X	X	0.25	1.50	1.50	1.50	1.50	6.25	Fisheries Training Institute
<i>Restructuring and Operationalization</i>	X	X				0.10	0.10	-	-	-	0.20	Fisheries Training Institute
Support to the National Farmers' Leadership Centre (NFLC)						0.8	1	1.12	1.5	1.5	5.92	NFLC
<i>Infrastructure Development and Rehabilitation</i>	X	X	X	X	X	0.5	0.5	0.5	0.6	0.5	2.6	NFLC
<i>Equipment and Tooling</i>	X	X	X	X	X	0.2	0.3	0.32	0.4	0.5	1.72	NFLC
<i>Training, Administration and Services</i>	X	X	X	X	X	0.1	0.2	0.3	0.5	0.5	1.6	NFLC
Support to District Agriculture Training and Information Centres (DATICS)	X	X	X	X	X	0.42	4.42	5.00	5.00	5.00	19.84	MAAIF

ASSP IMPLEMENTATION MATRIX AND CONSTRAINED BUDGET IN LINE WITH THE NDP II

ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Review and development of curriculum</i>	X	X	X	X	X	0.42	0.42	1.00	1.00	1.00	3.84	MAAIF
<i>Infrastructure Development</i>	X	X	X	X	X	-	4.00	4.00	4.00	4.00	16.00	MAAIF
Support to Agriculture Sector Policy and Planning						2.50	3.00	3.00	3.00	3.00	14.50	MAAIF/APD
<i>Capacity building for MAAIF staff in Policy and Planning</i>	X	X	X	X	X	0.40	0.60	0.60	0.60	0.60	2.80	MAAIF/APD
<i>Production of bankable project proposals to support ASSP implementation</i>	X	X	X	X	X	0.30	0.40	0.40	0.40	0.40	1.90	MAAIF/APD
<i>Undertake budget execution assessment exercises</i>	X	X	X	X	X	1.00	1.10	1.10	1.10	1.10	5.40	MAAIF/APD
<i>Link ASSP implementation with regional agriculture policy undertakings (EAC, COMESA, CADAP, etc)</i>	X	X	X	X	X	0.30	0.40	0.40	0.40	0.40	1.90	MAAIF/APD
<i>Cordinate production of Agricultural Sector mandatory policy/planning/budget papers</i>	X	X	X	X	X	0.50	0.50	0.50	0.50	0.50	2.50	MAAIF/APD
Come up with an efficient Food Agricultural Statistics (FAS) system to provide statistics that underpin major government policy initiatives and poverty eradication	X	X	X	X	X	2.41	3.18	4.08	4.37	5.39	19.43	MAAIF/Statistics Division
<i>Strengthening the Coordination and Management of agriculture sector statistical system</i>	X	X	X	X	X	0.30	0.50	0.60	0.70	0.90	3.00	MAAIF/Statistics Division
<i>Improve usability and dissemination of agriculture statistics</i>	X	X	X	X	X	0.36	0.32	0.16	0.16	0.28	1.28	MAAIF/Statistics Division
<i>Mainstreaming Quality Assurance in Agriculture statistical production</i>	X	X	X	X	X	0.37	-	0.11	0.26	0.10	0.84	MAAIF/Statistics Division

ASSP IMPLEMENTATION MATRIX AND CONSTRAINED BUDGET IN LINE WITH THE NDP II

ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Strengthening Human Resource and Management</i>	X	X	X	X	X	0.38	0.36	0.21	0.24	0.11	1.31	MAAIF/Statistics Division
<i>Strengthening production and Management of Agriculture statistics</i>	X	X	X	X	X	1.00	2.00	3.00	3.00	4.00	13.00	MAAIF/Statistics Division
Strengthening and improve the Sector M&E systems	X	X	X	X	X	3.11	3.00	3.02	3.61	3.63	16.37	MAAIF/APD
<i>Production of quality monitoring and evaluation data and information on ASSP implementation</i>	X	X	X	X	X	2.28	1.87	2.42	3.00	3.00	12.57	MAAIF/APD
<i>Strengthening Institutional and Organizational Capacity for M&E</i>	X	X	X	X	X	0.83	1.13	0.60	0.61	0.63	3.80	MAAIF/APD
Implementing the Agricultural Sector Communication Strategy (ASCS)	X	X	X	X	X	0.56	0.92	0.87	0.60	0.56	3.50	MAAIF/Comm. & Info division(C&ID)
<i>Establishing a national agricultural information and communication system</i>	X	X	X	X	X	0.08	0.06	0.04	0.04	0.08	0.30	MAAIF/C&ID
<i>Strengthening the ASCS framework</i>	X	X	X	X	X	0.19	0.39	0.40	0.19	0.18	1.34	MAAIF/C&ID
<i>Create an effective and efficient platform for information and knowledge management</i>	X	X	X	X	X	0.02	0.09	0.07	0.06	0.04	0.28	MAAIF/C&ID
<i>Creating an enabling environment for communication</i>	X	X	X	X	X	0.10	0.13	0.16	0.16	0.11	0.66	MAAIF/C&ID
<i>Support Innovation in Agro-Communication across the Agro-Value-Chain</i>	X	X	X	X	X	0.17	0.25	0.20	0.15	0.15	0.92	MAAIF/C&ID
Strategy 2: Improve the capacity for quality assurance, regulation, food and safety standards for outputs and products across crops, livestock and fisheries sub-sectors.	X	X	X	X	X	5.20	6.90	8.50	14.32	20.10	55.02	MAAIF

ASSP IMPLEMENTATION MATRIX AND CONSTRAINED BUDGET IN LINE WITH THE NDP II												
ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Enact new laws and or review existing laws, regulations and policies to be consistent with changes in technology, regional integration commitments and other global/regional commitments in the crops, livestock and fisheries sub-sectors.</i>	X	X	X	X	X	0.20	0.20	0.20	0.20	0.20	1.00	MAAIF
<i>Undertake market surveillance and strengthen enforce capacity of all existing laws, regulations, standards and guidelines along the entire value chain.</i>	X	X	X	X	X	2.00	2.00	3.00	4.00	6.00	17.00	MAAIF
<i>Create awareness among farmers, traders, processors and agro exporters about quality standards and market requirements</i>	X	X	X	X	X	1.00	2.00	2.00	4.00	6.00	15.00	MAAIF
<i>Train food inspectors in legislation, policy, modern inspection systems and quality management systems</i>	X	X	X	X	X	1.00	1.70	2.30	3.12	4.00	12.12	MAAIF
<i>Strengthen national capacity for quality assurance, regulation and safety standards to promote increased trade at all levels.</i>	X	X	X	X	X	1.00	1.00	1.00	3.00	3.90	9.90	MAAIF
Strategy 3: Mainstream Cross-cutting Issues of Gender, Youth, HIV/AIDS, Environment and Climate Change, food and nutritional security	X	X	X	X	X	6.20	9.50	13.00	11.90	17.30	57.90	
promote the use of gender analysis and gender-based budgeting in all community-based development programmes	X	X	X	X	X	1.10	1.10	1.60	1.60	1.60	7.00	MAAIF/APD
Mainstream promotion of youth engagement in Agriculture in all sector programmes	X	X	X	X	X	1.00	1.00	1.00	1.00	1.00	5.00	MAAIF
Mainstream adaptation of agricultural technologies and practices to climate change in all sector programmes-SLM	X	X	X	X	X	1.50	2.00	5.00	3.90	5.30	17.70	MAAIF
Implement HIV/AIDS policies and strategies- in the Agriculture Sector including local governments and farming communities	X	X	X	X	X	1.00	1.00	1.00	1.00	1.00	5.00	MAAIF

ASSP IMPLEMENTATION MATRIX AND CONSTRAINED BUDGET IN LINE WITH THE NDP II

ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
Improve Food and Nutrition Security through Enhance consumption of diverse diets at household level	X	X	X	X	X	1.60	4.40	4.40	4.40	8.40	23.20	MAAIF
<i>promote awareness on food availability across Agricultural Zones</i>	X	X	X	X	X	0.50	2.00	2.00	2.00	2.00	8.50	MAAIF
<i>generate and promote nutrient bio-fortified varieties across the priority commodities</i>	X	X	X	X	X	0.10	0.40	0.40	0.40	0.40	1.70	MAAIF
<i>Develop early warning systems to prevent and mitigate shocks affecting nutrition and food security</i>	X	X	X	X	X	1.00	2.00	2.00	2.00	6.00	13.00	MAAIF

Annex E: Indicative ideal budget (UGX Billions)

ASSP IDEAL BUDGET												
ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
Total budget						488.85	1,284.23	1,479.89	1,693.09	2,022.89	6,968.96	
Outcome 1: Increase agricultural production and productivity	X	X	X	X	X	239.01	496.56	560.26	653.99	757.47	2,707.29	
Strategy 1: Strengthening ecologically sound agricultural research and climate change resilient technologies and practices	X	X	X	X	X	75.47	106.62	112.17	119.73	131.47	545.46	<i>NARO</i>
Agricultural technologies, innovations and management practices (TIMPS) generation	X	X	X	X	X	34.06	34.80	35.60	36.40	37.60	178.46	<i>NARO</i>
<i>Breeding of climate smart – nutrient enriched farmer preferred varieties and breeds</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>4.49</i>	<i>4.54</i>	<i>4.66</i>	<i>4.77</i>	<i>4.94</i>	23.40	<i>NARO</i>
<i>Develop improved higher yielding crop varieties and livestock breeds</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>4.71</i>	<i>4.85</i>	<i>4.98</i>	<i>5.13</i>	<i>5.34</i>	25.01	<i>NARO</i>
<i>Nutrient fortified and transgenic crops (Bananas, Maize, Irish potatoes)</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>4.14</i>	<i>4.23</i>	<i>4.33</i>	<i>4.42</i>	<i>4.55</i>	21.68	<i>NARO</i>
<i>Characterizing plant and animal disease strains and agents</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>3.57</i>	<i>3.62</i>	<i>3.64</i>	<i>3.71</i>	<i>3.79</i>	18.33	<i>NARO</i>
<i>Develop and release disease, pest and drought resistant varieties/breeds</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>4.71</i>	<i>4.85</i>	<i>4.98</i>	<i>5.13</i>	<i>5.34</i>	25.01	<i>NARO</i>
<i>Develop non-conventional animal feed</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>4.14</i>	<i>4.23</i>	<i>4.33</i>	<i>4.42</i>	<i>4.55</i>	21.68	<i>NARO</i>
<i>Conduct on-station and multi-location evaluation of generated lines</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>4.14</i>	<i>4.23</i>	<i>4.33</i>	<i>4.42</i>	<i>4.55</i>	21.68	<i>NARO</i>
<i>On-farm trials and national variety evaluation trials for VCU and DUS</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>X</i>	<i>4.14</i>	<i>4.23</i>	<i>4.33</i>	<i>4.42</i>	<i>4.55</i>	21.68	<i>NARO</i>
Strengthening the functioning of the National Agricultural Research System (NARS) by identifying and building key human resource capacity to support the sector	X	X	X	X	X	3.36	9.00	10.00	10.20	10.60	43.16	<i>NARO</i>
<i>Conduct an HR capacity needs assessment</i>	<i>X</i>					<i>0.50</i>					0.50	<i>NARO</i>

ASSP IDEAL BUDGET

ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Develop and implement a staff recruitment and retention strategy</i>	X					0.25				0.25	0.50	NARO
<i>Develop and implement a mentoring programme for junior scientists</i>	X	X	X	X	X	1.00	1.00	1.00	1.00	1.00	5.00	NARO
<i>Conduct short and long term training on Adaptive Research for staff</i>	X	X	X	X	X	1.41	3.00	4.00	4.20	4.35	16.96	NARO
<i>Establish an effective staff performance appraisal system</i>	X					0.20					0.20	NARO
<i>Support to NARO scientists</i>		X	X	X	X		5.00	5.00	5.00	5.00	20.00	
Develop and implement a policy and regulatory framework for biotechnology in agriculture.	X	X	X	X	X	0.40	0.90	0.90	0.90	0.90	4.00	NARO
<i>Fast tracking the laws and standards of GMOs production and utilization</i>	X	X	X	X	X	0.20	0.40	0.40	0.40	0.40	1.80	NARO
<i>develop and enhance capacity for implementing research guidelines and procedures on biotechnology use and biosafety</i>	X	X	X	X	X	0.20	0.50	0.50	0.50	0.50	2.20	NARO
Develop and promote technologies and protocols for value addition in agriculture and agro processing	X	X	X	X	X	9.80	14.20	14.40	14.43	14.64	67.47	NARO
<i>Conducting product development and end user marketability tests to enhance utilization options for a range of strategic and priority commodities</i>	X	X	X	X	X	3.60	3.60	3.60	3.85	3.80	18.44	NARO
<i>Developing and validating technologies and protocols for agro-processing including protocols for enhancing shelf life, uniform ripening, stability</i>	X	X	X	X	X	3.00	3.00	3.00	3.00	3.00	15.00	NARO
<i>Testing and ascertain thresholds on a range of parameters for food safety and quality assurance and validate capacity for compliance</i>	X	X	X	X	X	1.80	1.80	1.80	1.58	1.84	8.83	NARO

ASSP IDEAL BUDGET												
ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Development of processing/packaging tools and equipment</i>	X	X	X	X	X	1.40	5.80	6.00	6.00	6.00	25.20	NARO
Up-scaling uptake of existing and new appropriate technologies, innovations and management practices (TIMPS).	X	X	X	X	X	9.03	14.00	17.55	23.66	33.12	97.37	DAES/NARO
<i>Technology promotion (production and agro-processing) and farmer access to information/knowledge</i>	X	X	X	X	X	5.46	9.00	11.05	15.21	21.29	62.01	DAES/NARO
<i>Technology uptake grants for farmers, farmer groups and agro-processors</i>	X	X	X	X	X	3.57	5.00	6.50	8.45	11.83	35.35	DAES
Accelerate Research and Technology Development of the selected priority/strategic commodities	X	X	X	X	X	18.81	33.72	33.72	34.14	34.60	155.00	NARO
<i>Banana research and technology development</i>	X	X	X	X	X	2.00	2.35	2.35	2.35	2.35	11.40	NARO
<i>Beans Research and technology development</i>	X	X	X	X	X	1.65	2.15	2.15	2.15	2.21	10.31	NARO
<i>Fruits Research support programme</i>	X	X	X	X	X	1.00	2.50	2.50	2.50	2.50	11.00	NARO
<i>Maize Research Programme</i>	X	X	X	X	X	3.00	2.36	2.36	2.32	2.44	12.47	NARO
<i>Cassava Research Programme</i>	X	X	X	X	X	1.70	4.00	4.00	4.00	4.00	17.70	NARO
<i>Rice Research Programme</i>	X	X	X	X	X	1.00	2.37	2.37	2.37	2.51	10.62	NARO
<i>Oil seed Research Programme</i>	X	X	X	X	X	1.00	2.59	2.59	2.59	2.82	11.58	NARO
<i>Tea Research</i>	X	X	X	X	X	1.00	2.86	2.86	3.34	3.37	13.44	NARO
<i>Improvement of Coffee Research Systems</i>	X	X	X	X	X	1.00	5.18	5.18	5.18	5.06	21.59	NARO
<i>Strengthening cocoa research and technology development</i>	X	X	X	X	X	1.96	2.20	2.20	2.20	2.20	10.78	NARO

ASSP IDEAL BUDGET												
ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Strengthening cotton production research</i>	X	X	X	X	X	1.00	2.17	2.17	2.14	2.14	9.62	NARO
<i>Oil Palm research and technology development</i>	X	X	X	X	X	2.50	3.00	3.00	3.00	3.00	14.50	NARO
Strategy 2: Implement a Single Spine Agricultural Extension system while promoting gendered innovation in agricultural research centres and extension services.	X	X	X	X	X	31.42	101.00	166.00	195.00	228.80	722.22	DAES
<i>Wage costs of extension staff</i>	X	X	X	X	X	16.28	50.00	60.00	79.00	112.00	317.28	LG
<i>Non-wage/operational costs at district level</i>	X	X	X	X	X	14.14	45.00	100.00	110.00	110.00	379.14	LG
<i>Farmer education and refresher trainings of extension staff</i>	X	X	X	X	X		2.00	2.00	2.00	2.00	8.00	DAES
<i>Institutional strengthening of extension systems - Policy</i>	X	X	X	X	X	-	0.50	0.50	0.50	0.50	2.00	DAES
<i>support to extension information systems and ICT</i>						-	1.50	1.50	1.50	1.50	6.00	DAES
<i>Reform and strengthen agricultural extension(oil palm)</i>	X	X	X	X	X	1.00	1.00	1.00	1.00	1.40	5.40	MAAIF
<i>Promote strategic partnerships between research and technology development and extension services at all levels</i>	X	X	X	X	X		1.00	1.00	1.00	1.40	4.40	DAES
Strategy 3: Strengthen Farmer Group formation and cohesion including commodity associations, platforms, federations and co-operatives	X	X	X	X	X	1.00	11.50	11.50	13.50	15.90	53.40	MAAIF
<i>farmer institutional strengthening</i>						-	2.50	2.50	2.50	2.50	10.00	MAAIF
<i>Support to harmonize the farmers by UNFFE</i>	X	X	X	X	X	-	5.00	5.00	5.00	5.00	20.00	NAADS

ASSP IDEAL BUDGET

ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>agribusiness support services</i>	X	X	X	X	X	1.00	4.00	4.00	6.00	8.40	23.40	DAI & ED / NAADS
Strategy 4: Accelerate the development and commercialisation of the prioritised agricultural commodities	X	X	X	X	X	67.61	136.53	131.82	166.79	188.58	691.33	MAAIF
Banana	X	X	X	X	X	3.80	4.15	4.15	4.65	5.25	22.00	
<i>Increasing Banana Production and Productivity(fertilizer promotion)</i>	X	X	X	X	X	0.80	1.15	1.15	1.65	2.25	7.00	MAAIF
<i>Banana Extension Support</i>						3.00	3.00	3.00	3.00	3.00	15.00	MAAIF
Beans	X	X	X	X	X	1.00	1.00	2.00	2.00	2.00	8.00	
<i>Beans Extension</i>						1.00	1.00	2.00	2.00	2.00	8.00	
Maize	X	X	X	X	X	1.30	6.42	6.28	6.76	7.27	28.03	
<i>Fertilizer use and promotion</i>	X	X	X	X	X	1.00	5.00	5.00	5.00	5.00	21.00	MAAIF
<i>Support to improving maize post harvest handling practices and technologies</i>	X	X	X	X	X	0.30	1.42	1.28	1.76	2.27	7.03	MAAIF
Cassava	X	X	X	X	X	1.29	1.42	1.28	1.76	2.27	8.02	
<i>Cassava Extension</i>	X	X	X	X	X	1.29	1.42	1.28	1.76	2.27	8.02	MAAIF
Rice	X	X	X	X	X	1.62	1.93	1.93	3.93	4.71	14.12	MAAIF
<i>Information and Knowledge</i>	X	X	X	X	X	0.32	0.63	0.63	1.13	1.39	4.10	MAAIF
<i>Mechanisation</i>	X	X	X	X	X	0.60	0.60	0.60	1.10	1.34	4.24	MAAIF
<i>Fertilization and sustainable soil management</i>	X	X	X	X	X	0.40	0.40	0.40	0.90	1.06	3.16	MAAIF

ASSP IDEAL BUDGET												
ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Promote and distribute appropriate post-harvest technologies</i>	X	X	X	X	X	0.30	0.30	0.30	0.80	0.92	2.62	MAAIF
Tea	X	X	X	X	X	7.01	9.24	9.52	10.91	12.27	48.95	MAAIF
<i>Tea Extension Service</i>	X	X	X	X	X	6.45	6.74	7.22	8.18	8.85	37.43	MAAIF
<i>Tea Area Expansion</i>	X	X	X	X	X	-	2.00	1.50	2.00	2.60	8.10	MAAIF
<i>Tea Policy</i>	X	X	X	X	X	0.56	0.50	0.80	0.73	0.82	3.42	MAAIF
Coffee	X	X	X	X	X	7.31	7.51	8.41	21.26	28.05	72.53	UCDA
<i>Promote and support adoption of good agronomic practice at farm level</i>	X	X	X	X	X	1.62	1.62	1.62	3.62	4.27	12.74	UCDA
<i>Promote coffee growing in new areas and expansion in traditional coffee growing areas</i>	X	X	X	X	X	1.00	1.10	2.00	10.85	16.00	30.95	UCDA
<i>Coffee Agro Extensions and Business Development Services</i>	X	X	X	X	X	2.47	2.47	2.47	4.47	5.46	17.35	UCDA
<i>Support and Strengthen Farmer Organizations</i>	X	X	X	X	X	2.22	2.32	2.32	2.32	2.32	11.49	UCDA
Fruits and Vegetables pests and disease control	X	X	X	X	X	1.50	1.50	1.50	2.50	2.50	9.50	MAAIF
Dairy	X	X	X	X	X	5.40	6.31	4.50	6.50	9.01	31.72	DDA
<i>Institutional strengthening and creation of enabling environment</i>	X	X	X	X	X	0.60	0.60	0.60	1.60	2.20	5.60	MAAIF/DDA
<i>Enhancing availability of improved dairy cattle germplasm</i>	X	X	X	X	X	2.00	2.00	2.00	2.00	2.00	10.00	NAGRC&DB
<i>Building local capacity in feed production and marketing</i>	X	X	X	X	X	2.50	3.41	1.60	2.10	3.71	13.32	DDA
<i>Developing the national dairy herd information management system</i>	X	X	X	X	X	0.30	0.30	0.30	0.80	1.10	2.80	DDA

ASSP IDEAL BUDGET

ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
Fisheries	X	X	X	X	X	6.68	28.38	29.28	31.18	33.45	128.95	MAAIF/DFR
<i>support to restocking of water bodies</i>	X	X	X	X	X	-	3.75	3.75	3.75	3.75	15.00	MAAIF/DFR
<i>Developing the Fishery of Small Pelagic Fishes</i>	X	X	X	X	X	1.38	1.38	1.38	1.88	2.43	8.43	MAAIF/DFR
<i>Promoting commercial aquaculture</i>	X	X	X	X	X	2.10	2.10	2.00	2.60	3.44	12.24	MAAIF/DFR
<i>Infrastructure development along the value chain</i>	X	X	X	X	X	1.20	1.20	1.20	1.70	2.18	7.48	MAAIF/DFR
<i>Strengthen monitoring on all water bodies</i>	X	X	X	X	X	2.00	4.00	5.00	5.00	5.00	21.00	MAAIF/DFR
<i>Fisheries aquaculture infrastructure</i>							12.00	12.00	12.00	12.00	48.00	MAAIF/DFR
<i>Extension for fish farming</i>							2.50	2.50	2.50	2.50	10.00	MAAIF/DFR
<i>Control of the new breed of weed and water hyacinth</i>	X	X	X	X	X	-	1.45	1.45	1.75	2.15	6.80	MAAIF/DFR
Meat	X	X	X	X	X	9.63	24.49	23.96	22.33	24.62	105.03	MAAIF/DAR
<i>Provision of an Enabling Environment for the Meat</i>	X	X	X	X	X	0.50	0.50	0.50	0.50	0.70	2.70	MAAIF/DAR
<i>Animal Feeds, Forage and Water Security Enhancement</i>	X	X	X	X	X	0.80	0.80	0.80	0.80	1.12	4.32	MAAIF/DAR
<i>Animal Feeds Production and Quality Assurance Enhancement</i>	X	X	X	X	X	1.98	2.09	1.00	1.08	1.51	7.66	MAAIF/DAR
<i>National Beef Genetics Resource Development</i>	X	X	X	X	X	2.00	2.00	2.00	2.00	2.80	10.80	NAGRC&DB
<i>Support to animal breeding infrastructure</i>			X	X	X	-	8.00	8.00	8.00	8.00	32.00	NAGRC&DB
<i>transport and logistical support for animal breeding</i>			X	X	X		1.75	1.75	1.75	1.75	7.00	NAGRC&DB

ASSP IDEAL BUDGET

ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>support to liquid nitrogen cold chain</i>			X	X	X	-	0.65	0.65	0.10	-	1.40	NAGRC&DB
<i>Goat Breed Improvement Schemes</i>	X	X	X	X	X	1.00	0.65	0.65	0.67	0.94	3.90	MAAIF/DAR
<i>Support Investments in the Poultry Sector</i>	X	X	X	X	X	1.00	1.00	1.00	0.41	0.57	3.98	MAAIF/DAR
<i>Kuroiler and Indigenous Chicken Resource Development</i>	X	X	X	X	X	0.55	0.55	1.11	0.53	0.74	3.47	MAAIF/DAR
<i>Develop the sericulture and silk production value chain</i>	X	X	X	X	X	1.50	1.50	1.50	1.50	1.50	7.50	MAAIF/DAR
<i>Support to Apiculture</i>	X	X	X	X	X	0.30	5.00	5.00	5.00	5.00	20.30	MAAIF/DAR
Cocoa	X	X	X	X	X	1.10	0.89	0.89	1.34	2.01	6.25	MAAIF
<i>Cocoa Extension Services</i>	X	X	X	X	X	1.10	0.89	0.89	1.34	2.01	6.25	MAAIF
Cotton	X	X	X	X	X	4.78	11.00	11.00	12.50	14.75	54.03	CDO
<i>Improving markets through formation of farmers' associations and capacity building</i>	X	X	X	X	X	0.78	2.00	2.00	2.00	2.00	8.78	CDO
<i>cotton extension services</i>	X	X	X	X	X	2.00	3.00	3.00	4.50	6.75	19.25	CDO
<i>support to mechanisation in cotton</i>						1.00	2.50	2.50	2.50	2.50	11.00	
<i>cotton infrastructure development</i>						1.00	3.50	3.50	3.50	3.50	15.00	CDO
Oil Seed	X	X	X	X	X	1.70	1.79	1.82	2.86	3.61	11.79	MAAIF
<i>enhance oilseed production and productivity</i>	X	X	X	X	X	1.48	1.52	1.58	2.12	2.77	9.46	MAAIF
<i>institutional and enabling environment strengthening</i>	X	X	X	X	X	0.22	0.27	0.25	0.75	0.85	2.33	MAAIF

ASSP IDEAL BUDGET												
ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
Oil Palm	X	X	X	X	X	13.50	30.50	25.30	36.30	36.82	142.42	MAAIF
<i>Land identification and acquisition</i>	X	X	X	X	X	10.00	20.00	15.00	25.00	25.00	95.00	MAAIF
<i>Plantation establishment and development</i>	X	X	X	X	X	2.00	9.00	9.00	10.00	10.00	40.00	MAAIF
<i>Reform and strengthen agricultural extension</i>	X	X	X	X	X	1.00	1.00	1.00	1.00	1.40	5.40	MAAIF
<i>Strengthen the institutional capacity of MAAIF</i>	X	X	X	X	X	0.30	0.30	0.30	0.30	0.42	1.62	MAAIF
<i>Strengthen the capacity for quality assurance, regulation and food safety standards</i>	X	X	X	X	X	0.20	0.20	-	-	-	0.40	MAAIF
Strategy 5: Control Pests, Vectors and Diseases	X	X	X	X	X	61.21	114.51	112.37	117.97	141.10	547.16	MAAIF
Control of pests and diseases for crops	X	X	X	X	X	18.23	27.60	27.89	29.36	34.91	137.99	
<i>Crop pests and disease control regulatory strengthening</i>	X	X	X	X	X	1.50	1.50	1.50	1.50	1.50	7.50	MAAIF
<i>Conduct early detection and control of crop pests, weeds and diseases</i>	X	X	X	X	X	4.00	4.40	4.84	5.32	5.86	24.42	MAAIF
<i>Crop pests and disease control infrastructure</i>	X	X	X	X	X	4.00	4.00	4.00	4.00	6.00	22.00	MAAIF
<i>Maize Pest and Disease control</i>	X	X	X	X	X	1.00	1.42	1.28	1.76	2.27	7.73	MAAIF
<i>Beans Pest and Disease control</i>	X	X	X	X	X	0.80	1.35	1.35	1.85	2.39	7.74	MAAIF
<i>Banana bacterial wilt control</i>	X	X	X	X	X	2.00	10.00	10.00	10.00	10.00	42.00	MAAIF
<i>Management of Coffee Diseases and Pests</i>	X	X	X	X	X	4.93	4.93	4.93	4.93	6.90	26.60	UCDA/MAAIF

ASSP IDEAL BUDGET

ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
Control livestock diseases and vectors to ensure that communicable diseases are managed in order to promote animal health as a means to greater productivity and market penetration.	X	X	X	X	X	32.87	54.86	54.47	59.37	72.80	274.37	MAAIF
<i>Uganda Tsetse and Trypanosomiasis Eradication</i>	X	X	X	X	X	2.00	5.07	5.30	12.99	15.00	40.36	MAAIF/COCTU
<i>Eastern Uganda Regional Tsetse and Trypanosomiasis Eradication</i>	X	X	X	X	X	2.00	5.00	5.00	5.00	7.00	24.00	MAAIF/COCTU
<i>North Western Uganda Tsetse Project</i>	X	X	X	X	X	1.00	9.85	9.95	6.65	9.31	36.76	MAAIF/COCTU
<i>Strengthening COCTU in Coordination, Policy and Planning</i>	X	X	X	X	X	0.09	0.06	0.15	0.05	0.07	0.41	COCTU
<i>Control and Surveillance of Ticks</i>	X	X	X	X	X	2.21	1.78	1.17	1.10	1.53	7.79	MAAIF
<i>Control of East Coast Fever (ECF)</i>	X	X	X	X	X	2.36	2.73	2.15	4.04	5.66	16.94	MAAIF
<i>Control of Foot and Mouth Disease (FMD)</i>	X	X	X	X	X	10.00	15.00	15.00	15.00	20.00	75.00	MAAIF
<i>Control of Rift Valley Fever</i>	X	X	X	X	X	1.11	1.33	1.11	0.92	0.83	5.30	MAAIF
<i>Control of Rabies</i>	X	X	X	X	X	2.20	2.16	2.14	1.12	0.90	8.52	MAAIF
<i>control of PPR</i>						3.00	3.00	3.00	3.00	3.00	15.00	MAAIF
<i>Control HPAI</i>						-	2.00	2.00	2.00	2.00	8.00	MAAIF
<i>Control of Newcastle Disease</i>						3.00	3.00	3.00	3.00	3.00	15.00	MAAIF
<i>Control of African Swine Fever (ASF)</i>	X	X	X	X	X	3.00	3.00	3.00	3.00	3.00	15.00	MAAIF
<i>Capacity Building for Animal Disease Surveillance and Control Systems in Uganda</i>	X	X	X	X	X	0.30	0.30	0.50	0.50	0.50	2.10	MAAIF

ASSP IDEAL BUDGET												
ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Capacity Building for Enforcement of Veterinary Regulations in Uganda</i>	X	X	X	X	X	0.30	0.30	0.50	0.50	0.50	2.10	MAAIF
<i>Control of Human and Animal Brucellosis</i>	X	X	X	X	X	0.30	0.30	0.50	0.50	0.50	2.10	MAAIF
Creating an Enabling Policy and Regulatory Environment for Livestock disease control	X	X	X	X	X	2.81	2.26	1.62	1.66	1.73	10.08	MAAIF
<i>Review three (3) outdated legislations</i>	X					0.60	0.20	0.20	0.20	0.20	1.40	MAAIF
<i>Enact eight (8) Draft bills,</i>	X	X				0.75	0.75	0.20	0.20	0.20	2.10	MAAIF
<i>Formulate twelve (12) regulations</i>		X					0.12				0.12	MAAIF
<i>Approve & print developed Standards</i>	X		X			0.02		0.02			0.03	MAAIF
<i>Review & approve three (3) policies</i>	X					0.15					0.15	MAAIF
<i>Develop & disseminated 10 Strategies</i>	X	X				0.10	0.04				0.14	MAAIF
<i>Operationalise approved policies</i>	X	X	X	X	X	0.51	0.56	0.61	0.67	0.74	3.08	MAAIF
<i>Equip & support established animal law enforcement Unit</i>	X	X	X	X	X	0.12	0.12	0.12	0.12	0.12	0.60	MAAIF
<i>Equip & finance work of UVB</i>	X	X	X	X	X	0.54	0.44	0.44	0.44	0.44	2.31	MAAIF
<i>Support continuous professional training</i>	X	X	X	X	X	0.03	0.03	0.03	0.03	0.03	0.15	MAAIF
Establishment of Disease Control infrastructure and operationalization of effective disease control	X	X	X	X	X	7.30	29.79	28.40	27.57	31.66	124.72	MAAIF
<i>Rehabilitation or construction and equipping of 4 quarantine stations, 14 holding grounds + 14 border posts</i>	X	X	X	X	X	2.23	2.23	2.23	2.23	4.00	12.94	MAAIF

ASSP IDEAL BUDGET												
ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Provision of proper transport and cold chain equipment for the Veterinary Offices</i>	X	X	X	X	X	-	2.76	2.76	2.76	5.53	13.82	MAAIF
<i>Development and implementation of prevention and control strategy for major diseases</i>	X	X	X	X	X	0.17	0.17	0.17	0.17	0.17	0.86	MAAIF
<i>Creation and implementation of individual animal (cattle) herd and flock (goat and poultry) identification for traceability</i>	X	X	X	X	X	1.98	1.98	1.98	1.98	1.98	9.90	MAAIF
<i>Renovate and equip the National Laboratory and establish 12 Regional Laboratory facilities</i>	X	X	X			0.82	0.82	0.82			2.47	MAAIF
<i>Personnel and operational costs of the national and regional laboratories infrastructure</i>	X	X	X	X	X	1.37	1.37	1.37	1.37	1.37	6.84	MAAIF
<i>establishment of livestock disease control infrastructure in LGs</i>	X	X	X	X	X	0.40	17.00	17.00	17.00	17.00	68.40	MAAIF
<i>logistical support to laboratory and technicians</i>			X	X	X		1.50	1.50	1.50	1.50	6.00	MAAIF/DDA
<i>Establish a national Animal Feed quality analysis laboratory-Diary feeds</i>	X	X	X	X	X	0.32	1.95	0.56	0.56	0.12	3.50	MAAIF
Strategy 6: Other production and productivity enhancing measures	X	X	X	X	X	2.30	26.40	26.40	41.00	51.62	147.72	MAAIF
<i>Sustainable Land Management/Promote adaptation of climate change resilient agricultural production systems, technologies and practices</i>	X	X	X	X	X	1.00	5.00	5.00	7.00	9.00	27.00	MAAIF
<i>Increase access to agricultural finance services by implementing Agricultural commodity based Development Credit facilities</i>	X	X	X	X	X		18.60	18.60	28.20	36.43	101.83	MAAIF
<i>Promote commercialisation of agriculture particularly amongst small holder farmers</i>	X	X	X	X	X	0.50	2.00	2.00	5.00	5.00	14.50	MAAIF
<i>Promote time and labour saving technologies targeting women farmers</i>	X	X	X	X	X	0.40	0.40	0.40	0.40	0.40	2.00	MAAIF

ASSP IDEAL BUDGET												
ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Strengthen linkages between farmers and production support services (including financial services, capacity development and marketing) in partnership with Ministry of Finance and other stakeholders</i>	X	X	X	X	X	0.40	0.40	0.40	0.40	0.79	2.39	MAAIF
Outcome 2: Increase access to critical farm inputs:	X	X	X	X	X	194.87	493.96	589.36	631.74	802.77	2,712.70	
Strategy 1: Promote Agriculture mechanisation	X	X	X	X	X	7.76	30.06	37.11	38.78	46.14	159.84	DAI & WFP
<i>Promoting acquisition and utilization of agricultural mechanization technologies using a series of Public- Private- Partnership (PPP)</i>	x	x	x	x	x	3.00	19.14	26.00	28.00	34.00	110.14	DAI & WFP
<i>Promote sustainable local manufacture and maintenance of suitable agricultural machinery for farm production and postharvest processing</i>	x	x	x	x	x	0.50	1.08	0.55	0.49	0.60	3.23	DAI & WFP
<i>Formulate and implement incentive frameworks for acquisition and financing of labour saving technologies.</i>	x	x	x	x	x	0.50	0.61	0.55	0.39	0.35	2.40	DAI & WFP
<i>Promoting the strengthening of capacity for technical information acquisition, equipment evaluation and sustainable operation of agricultural machinery</i>	x	x	x	x	x	0.50	0.66	0.38	0.36	0.34	2.24	DAI & WFP
<i>Establish an agricultural mechanization resource centre for training machinery operators, generating technical information, and provision of referral workshop services for testing/ evaluating agricultural machinery.</i>	x	x	x	x	x	1.00	3.89	4.74	4.69	6.00	20.32	DAI & WFP
<i>Strengthen the capacity of technical and vocational institutions for training agricultural mechanics and technicians</i>	x	x	x	x	x	2.17	3.89	4.74	4.69	4.69	20.18	DAI & WFP

ASSP IDEAL BUDGET												
ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Strengthen collaboration with the National Bureau of Standards to eliminate importation and trade of substandard agricultural mechanisation equipments</i>	x	x	x	x	x	0.09	0.79	0.15	0.15	0.15	1.33	DAI & WFP
Strategy 2: Improve access to high quality seeds, planting and stocking materials	X	X	X	X	X	173.60	384.85	468.25	469.00	491.90	1,987.61	MAAIF
Strengthening and rationalizing the Department of Regulation and Certification's seed services	X	X	X	X	X	4.98	3.91	2.61	2.11	1.81	15.42	DCI & C
<i>Improve phytosanitary control at entry points</i>	X	X	X	X	X	0.74	1.04	0.24	0.24	0.24	2.50	DCI & C
<i>Strengthen Namelere laboratory</i>	X	X		X		0.80	0.50	-	0.30	-	1.60	NARO/DCI & C
<i>Transport to improve communication and service delivery</i>	X					0.44	-	-	-	-	0.44	DCI & C
<i>Improve data and other information on the seed industry to support better policy and program plans, both by government and by the private sector</i>	X	X	X	X	X	0.20	0.20	0.20	0.20	0.20	1.00	DCI & C
<i>Promote seed quality insurance</i>	X	X	X	X	X	2.65	2.02	2.02	1.22	1.22	9.13	DCI & C
<i>Achieve ISTA accreditation and maintain OECD Seed Schemes accreditation</i>	X	X	X	X	X	0.10	0.10	0.10	0.10	0.10	0.50	DCI & C
<i>Implement PVP</i>	X	X	X	X	X	0.05	0.05	0.05	0.05	0.05	0.25	DCI & C
Enhancing the capacity of the private seed industry to produce pre-basic seed	X	X	X	X	X	2.88	1.01	1.46	1.01	0.41	6.77	MAAIF
Strengthening capacity of NARI institutes involved in input supply	X	X	X	X	X	0.27	4.27	4.27	3.47	22.27	34.56	NARO
<i>Enhance Breeder/foundation seed production and supply</i>	X	X	X	X	X	0.07	0.27	0.27	0.27	0.27	1.16	NARO
<i>Strengthen/establish agribusiness incubation service centres</i>	X	X	X	X	X	0.20	4.00	4.00	3.20	22.00	33.40	NARO

ASSP IDEAL BUDGET												
ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
Strengthen policies, laws and regulations for agricultural inputs including seeds and planting materials supply and use	X	X	X	X	X	2.00	5.75	5.00	7.00	10.00	29.75	MAAIF
<i>Operationalise and implement PVP Act</i>		X					0.25				0.25	MAAIF
<i>Establish a National Seed Sector Database</i>		X					0.50				0.50	MAAIF
<i>Conduct regular market severance of input dealers (wholesale and retails)</i>	X	X	X	X	X	2.00	5.00	5.00	7.00	10.00	29.00	MAAIF
Upscaling use of improved seeds and planting material						1.42	1.62	1.62	2.12	2.12	8.90	MAAIF
<i>Extend the dealer network/Support to UNADA</i>	X	X	X	X	X	0.05	0.25	0.25	0.25	0.25	1.04	MAAIF
<i>Improve farmer knowledge of new varieties</i>	X	X	X	X	X	1.03	1.03	1.03	1.03	1.03	5.16	MAAIF
<i>Support to seed companies to test and promote new varieties and cultivars</i>	X	X	X	X	X	0.34	0.34	0.34	0.84	0.84	2.70	MAAIF
Strengthen the national certification and regulation system to guarantee the quality of seeds and other agro-inputs.	X	X	X	X	X	5.00	9.00	12.00	12.00	14.00	52.00	MAAIF
Increase availability and access to quality seeds, planting and stocking materials	X	X	X	X	X	157.05	359.29	441.29	441.29	441.29	1,840.21	NAADS
<i>Multiplication and distribution of clean planting materials of Bananas</i>	X	X	X	X	X	3.30	4.30	5.40	5.40	5.40	23.80	NAADS
<i>Beans Seed production, multiplication and distribution</i>	X	X	X	X	X	8.00	27.00	34.00	34.00	34.00	137.00	NAADS
<i>Maize Seed production, multiplication and distribution</i>	X	X	X	X	X	14.00	63.00	79.00	79.00	79.00	314.00	NAADS
<i>Rice Seed production, multiplication and distribution</i>	X	X	X	X	X	1.00	3.50	4.30	4.30	4.30	17.40	NAADS
<i>production and distribution of clean planting material of improved cassava varieties</i>	X	X	X	X	X	4.50	19.20	24.00	24.00	24.00	95.70	NAADS

ASSP IDEAL BUDGET

ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Planting materials for Tea Area Expansion</i>	X	X	X	X	X	33.76	82.00	103.00	103.00	103.00	424.76	NAADS
<i>Provision of high Yielding, diseases and pest resistant coffee varieties to promote growing in new areas and expansion in traditional coffee growing areas , and provision of agr-chemicals</i>	X	X	X	X	X	27.00	47.00	59.00	59.00	59.00	251.00	UCDA
<i>production and distribution of quality clean citrus seedlings</i>	X	X	X	X	X	14.50	26.00	33.00	33.00	33.00	139.50	NAADS
<i>distribution of quality clean pineapple seedlings tolerant to pests and diseases</i>	X	X	X	X	X	0.60	0.60	0.70	0.70	0.70	3.30	NAADS
<i>production and distribution of quality clean apple seedlings tolerant to pests and diseases</i>	X	X	X	X	X	2.00	5.90	7.40	7.40	7.40	30.10	NAADS
<i>Provision of quality inputs for production of mangoes</i>	X	X	X	X	X	7.50	12.00	15.00	15.00	15.00	64.50	NAADS
<i>Provision of inputs for vegetables production</i>	X	X	X	X	X	0.60	0.60	0.60	0.60	0.60	3.00	NAADS
<i>Fish Inputs(Fingerlings and feeds)</i>							20.00	20.00	20.00	20.00	80.00	NAADS
<i>Provision of beef cattle</i>	X	X	X	X	X	0.90	3.00	3.70	3.70	3.70	15.00	NAADS
<i>Provision of heifers - dairy cattle</i>	X	X	X	X	X	25.00	25.00	29.50	29.50	29.50	138.50	NAADS
<i>Multiplication of pasture seed</i>	X	X	X	X	X	1.00	1.00	1.00	1.00	1.00	5.00	NAADS
<i>Provision of improved goats</i>	X	X	X	X	X	2.00	2.00	2.00	2.00	2.00	10.00	NAADS
<i>Cocoa seedlings provision</i>	X	X	X	X	X	3.10	3.10	3.10	3.10	3.10	15.50	NAADS
<i>Cotton inputs support to farmers</i>	X	X	X	X	X	1.25	1.25	1.25	1.25	1.25	6.25	CDO

ASSP IDEAL BUDGET												
ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>addressing challenges of access to critical farm inputs for oil palm</i>	X	X	X	X	X	1.30	1.30	1.30	1.30	1.30	6.50	MAAIF
<i>Oil seed provision</i>	X	X	X	X	X	1.74	1.74	1.74	1.74	1.74	8.70	NAADS/MAAIF
<i>Provision of poultry units and piglets</i>	X	X	X	X	X	4.00	9.80	12.30	12.30	12.30	50.70	NAADS
Strategy 3: Increase access to water for agricultural production (irrigation, water for livestock, aquaculture).	X	X	X	X	X	6.10	67.90	69.54	85.20	159.11	387.85	DAI & WFP
Strengthen the legal and institutional framework and capacity for developing water for agricultural production	X	X	X	X	X	1.00	1.60	1.00	1.00	1.00	5.60	DAI & WFP
<i>development of irrigation master plan, guidelines, action plans, framework and principles for dissemination</i>	X					0.40	0.20				0.60	DAI & WFP
<i>preparation of guidelines for appraisal and design of small-scale farmer-based irrigation schemes</i>	X					0.20	0.20				0.40	DAI & WFP
<i>development of appropriate mechanisms for cost sharing and funding of water for agricultural production-based interventions</i>	X					0.20	0.20				0.40	DAI & WFP
<i>Development of guidelines for a Community Based Management System (CBMS) for operation and maintenance of water for agricultural production facilities and for WUAs</i>	X					0.10	0.10				0.20	DAI & WFP
<i>Institutionalize Water User Associations (WUAs), cooperative societies and other farmer groups in regulation and management of irrigated agriculture</i>		X				0.10	0.10				0.20	DAI & WFP
<i>establish technical support units to LGs in agricultural water management (AWM)</i>		X	X	X	X		0.30	0.50	0.50	0.50	1.80	DAI & WFP

ASSP IDEAL BUDGET

ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Promote the uptake and use of the adapted small scale irrigation technologies/options</i>		X	X	X	X		0.50	0.50	0.50	0.50	2.00	DAI & WFP
Investing in modern irrigation technologies through construction of large and promotion of small scale irrigation technologies in line with the zoning strategy and development of large and medium water reservoirs.	X	X	X	X	X	4.30	58.30	60.50	74.20	135.50	332.80	DAI & WFP
<i>Evaluation and rehabilitation of nine (9) existing public irrigation schemes of Atera, Kiige, Labori, Ongom, Olweny and Odina</i>	X	X	X	X	X	1.00	20.00	28.00	30.00	40.00	119.00	DAI & WFP
<i>Construction of Rhino Camp in Arua District, Labwor in Moroto District, Katete in Kanungu District, Biiso in Bullisa District, Pabbo in Amuru District, Namalu, Kibimba-Gomba, Musamya, Torchi in Oyam District among others</i>		X	X	X	X	3.00	30.00	30.00	30.00	65.00	158.00	DAI & WFP
<i>carrying out feasibility studies and design of 3 other irrigation schemes covering an area of 6,900 ha-Acomai irrigation Scheme, Atari Irrigation scheme and Namatala Irrigation Scheme</i>		X	X	X			5.80				5.80	DAI & WFP
<i>Establish 11,000 ha of community-based/strategic medium to large scale schemes at Naigomwa in Iganga District and Igogero in Bugiri District</i>				X	X				11.70	24.00	35.70	DAI & WFP
<i>Promotion of small scale irrigation technologies by establishing at least a demonstration unit per district per year across the country</i>	X	X	X	X	X	0.20	1.00	1.00	1.00	3.00	6.20	DAI & WFP
<i>Adapt and make affordable small scale irrigation technologies/options including garden hose, drip systems</i>	X	X	X	X	X	0.10	1.50	1.50	1.50	3.50	8.10	DAI & WFP
Promote rainwater harvesting and storage at household and farm levels for agriculture.	X	X	X	X	X	0.80	8.00	8.04	10.00	22.61	49.45	DAI & WFP

ASSP IDEAL BUDGET												
ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Rehabilitation/expansion of 102 public Valley dams</i>	X	X	X	X	X	0.10	1.00	1.00	1.00	2.00	5.10	DAI & WFP
<i>Rehabilitation/expansion of 195 valley tanks</i>	X	X	X	X	X	0.10	0.80	0.74	0.80	0.80	3.24	DAI & WFP
<i>Construction of 1,200 new valley tanks</i>	X	X	X	X	X	0.50	4.00	4.00	4.20	12.00	24.70	DAI & WFP
<i>Establish 4 commercial aquaculture sites of minimum 10 ponds</i>			X	X	X			0.60	1.20	2.40	4.20	DAI & WFP
<i>Establishing of two (2) well-planned Aquaculture Parks (APs) in Mpologoma catchment and Olweny catchment</i>		X					1.70			1.70	3.40	DAI & WFP
<i>Establish four three (3) fish farms each with four (4) ponds in the districts of Mbarara, Gulu and Sironko</i>			X	X	X			1.20	1.20	1.80	4.20	DAI & WFP
<i>Development of two (2) landing sites in Kaliro and Amolatar districts</i>				X	X				1.00	1.31	2.31	DAI & WFP
<i>Develop and Promote Rainwater harvesting technologies and Best Practices for smallholder farmers</i>	X	X	X	X	X	0.10	0.50	0.50	0.60	0.60	2.30	DAI & WFP
Strategy 4: Enhance access and use of fertilizers by all categories of farmers.	X	X	X	X	X	7.42	11.15	14.45	38.75	105.62	177.40	MAAIF
Create an enabling environment for fertilizer production, importation and distribution	X	X	X	X	X	1.24	3.93	5.13	5.96	0.33	16.59	MAAIF
<i>Support to the Fertilizer Market Development Council (FMDC)</i>	X	X	X	X	X	0.84	0.33	0.33	0.33	0.33	2.17	MAAIF
<i>review of the national fertilizer policy and implementing regulations</i>	X	X	X	X	X	0.40	0.30	-	-	-	0.70	MAAIF
<i>Credit support for Bulk Purchase and Risk Management Fund</i>		X	X	X	X	-	3.30	4.80	5.63	0.00	13.73	MAAIF
Strengthen soil fertility knowledge management and awareness creation	X	X	X	X	X	1.10	1.18	1.16	1.09	0.96	5.50	MAAIF

ASSP IDEAL BUDGET												
ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>update soil fertility management and fertilizer use recommendations</i>	X	X	X	X	X	0.14	0.33	0.31	0.24	0.05	1.07	MAAIF
<i>develop soil fertility management and fertilizer use extension materials</i>	X	X	X	X	X	0.12	0.01	0.01	0.01	0.08	0.23	MAAIF
<i>increase number of agro-dealers trained about fertilizer and with enhanced business skills</i>	X	X	X	X	X	0.30	0.30	0.30	0.30	0.30	1.52	MAAIF
<i>Increase number of Technology Transfer Agents (TTAs) with fertilizer knowledge and matching inputs</i>	X	X	X	X	X	0.14	0.14	0.14	0.14	0.14	0.68	MAAIF
<i>Increase number of farmers with fertilizer knowledge and matching inputs</i>	X	X	X	X	X	0.40	0.40	0.40	0.40	0.40	2.00	MAAIF
Capacity Building and Physical Infrastructure for Fertilizers						1.93	2.89	5.02	28.56	101.18	139.56	MAAIF
<i>Crop Production Risk Management</i>	X	X	X	X	X	0.05	0.44	0.86	1.10	0.32	2.77	MAAIF
<i>Capacity Building Project</i>	X	X	X	X	X	1.88	2.45	4.16	2.46	5.86	16.79	MAAIF
<i>Support Physical Infrastructure Project</i>	X	X	X	X	X	-	-	-	5.00	15.00	20.00	MAAIF
<i>Development of Domestic Resources for Soil Productivity Enhancement</i>	X	X	X	X	X	-	-	-	20.00	80.00	100.00	MAAIF
Provision of fertiliser inputs to farmers	X	X	X	X	X	3.15	3.15	3.15	3.15	3.15	15.75	NAADS
Outcome 3: Improve agricultural markets and value addition for the 12 prioritised commodities	X	X	X	X	X	25.89	192.89	217.16	279.93	297.04	1,012.90	MAAIF
Strategy 1: Promote private sector investment in value addition of the 12 prioritised commodities through PPP	X	X	X	X	X	1.00	5.00	10.00	15.00	15.00	46.00	MAAIF
Strategy 2: Build capacities of farmers, trades and processors in quality standards and market requirements of the 12 priority commodities	X	X	X	X	X	20.69	150.89	167.16	179.93	197.04	715.70	MAAIF

ASSP IDEAL BUDGET

ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
Strengthen higher level farmer organization for collective marketing, bulking, quality and standards improvement	X	X	X	X	X	2.00	3.00	4.00	5.20	7.12	21.32	MAAIF
Promote appropriate technologies and practices for minimizing post harvest losses along the entire commodity value chain.	X	X	X	X	X	2.10	8.00	11.80	14.76	19.94	56.60	MAAIF/NARO
<i>Develop and adapt appropriate technologies and practices for postharvest handling along the value chain of all priority commodities</i>	X	X	X	X	X	0.40	2.40	2.80	2.80	3.20	11.60	MAAIF/NARO
<i>Build Capacity of Value chain actors on best post harvest handling practices for each priority commodity</i>	X	X	X	X	X	0.30	1.00	4.00	6.00	6.00	17.30	MAAIF/NARO
<i>Provide farmers/ groups assorted SME processing demo/equipment</i>	X	X	X	X	X	1.00	1.00	1.40	1.96	2.74	8.10	MAAIF/NARO
<i>Develop and improve food handling, marketing and distribution systems and linkages to local and export markets.</i>	X	X	X	X	X	0.40	3.60	3.60	4.00	8.00	19.60	MAAIF/NARO
Promote Commodity/farm based storage and agro processing, as a means to increasing access to domestic and regional market, through demonstrations and PPPs.	X	X	X	X	X	3.80	8.85	9.68	9.30	9.30	40.93	MAAIF
<i>Innovate and adapt affordable on-farm storage solutions for the priority and strategic commodities</i>	X	X	X	X	X	0.50	0.80	0.80	0.80	0.80	3.70	MAAIF
<i>Facilitate private sector uptake, development, marketing and distribution of on farm storage solutions to smallholder farmers including developing a cost effective sales distribution system</i>	X	X	X	X	X	0.30	1.05	1.88	1.50	1.50	6.23	MAAIF
<i>Enhance efficiency (higher output at reduced cost) at all value chain nodes through trainings and demonstration sites of appropriate improved TIMPS</i>	X	X	X	X	X	0.50	2.00	2.00	2.00	2.00	8.50	MAAIF

ASSP IDEAL BUDGET												
ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Product development to meet end-user market requirements e.g. quality & safety standards, traceability, packaging, certification for niche markets, bar coding for supermarket outlets, etc</i>	X	X	X	X	X	1.00	2.00	2.00	2.00	2.00	9.00	MAAIF
<i>Knowledge and skills development to enhance capacity for engaging in high quality export markets e.g. for horticulture</i>	X	X	X	X	X	0.50	1.00	1.00	1.00	1.00	4.50	MAAIF
<i>Promote cottage processing industries through incubation of new processing technologies for both food and non-food products</i>	X	X	X	X	X	1.00	2.00	2.00	2.00	2.00	9.00	MAAIF
Marketing and value addition for specific priority and strategic commodities	X	X	X	X	X	12.79	131.04	141.68	150.67	160.67	596.84	MAAIF
<i>Developing National and Regional Markets for Ugandan bananas and banana processed products</i>	X	X	X	X	X	1.00	2.25	2.25	2.25	2.25	10.00	MAAIF
<i>Beans Marketing</i>	X	X	X	X	X	1.00	1.00	2.00	2.00	2.00	8.00	MAAIF
<i>Maize Marketing and value addition</i>	X	X	X	X	X	1.00	2.60	4.00	6.00	6.00	19.60	MAAIF
<i>Rice Marketing and value addition</i>	X	X	X	X	X	1.00	1.00	1.20	2.00	2.62	7.82	MAAIF
<i>Cocoa marketing and Value addition support</i>	X	X	X	X	X	1.45	1.53	1.59	1.66	1.72	7.95	
<i>support cassava farmers and SMEs to engage in profitable processing and marketing of quality cassava flour and chips as an agribusiness enterprise</i>	X	X	X	X	X	1.00	2.00	3.00	3.00	4.70	13.70	MAAIF
<i>Establishment of new Tea Processing Facilities for value addition</i>	X	X	X	X	X	-	9.00	10.00	10.00	15.40	44.40	MAAIF
<i>Tea Marketing</i>	X	X	X	X	X	0.18	0.18	0.18	0.18	0.18	0.88	MAAIF
<i>Coffee value addition and Generic Promotion</i>	X	X	X	X	X	1.00	1.00	5.00	10.00	10.00	27.00	UCDA

ASSP IDEAL BUDGET												
ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Fisheries Marketing and value addition infrastructure</i>							13.00	13.00	13.00	13.00	52.00	MAAIF/DFR
<i>Improving grading standards, packaging and handling of fruits and vegetables</i>	X	X	X	X	X	0.90	1.00	3.00	3.00	5.10	13.00	MAAIF
<i>Support to fruit processing</i>	X	X	X	X	X	0.90	29.00	34.88	34.50	34.50	133.78	NAADS
<i>Promoting local consumption and export of milk and dairy products.</i>	X	X	X	X	X	0.98	0.98	0.98	0.98	0.98	4.91	DDA
<i>Rehabilitate existing and develop new milk processing infrastructure</i>	X	X	X	X	X	-	2.00	2.50	2.50	2.50	9.50	DDA
<i>Creating a buffer stock/animal handling grounds to support beef processing/abattoirs</i>			X	X	X	1.00	58.00	50.00	50.00	50.00	209.00	MAAIF
<i>promotion of domestic value addition to lint</i>	X	X	X	X	X		4.80	6.00	7.50	7.62	25.92	CDO
<i>Facilitate domestic, regional and international trade in Vegetable Oil Products</i>	X	X	X	X	X	0.80	0.80	0.80	0.80	0.80	4.00	MAAIF
<i>Strengthen producer-buyer/aggregator contractual relationships for the strategic/priority commodities</i>	X	X	X	X	X	0.30	0.30	0.30	0.30	0.30	1.50	MAAIF
<i>Identify and strengthen producer groups adding value to agricultural commodities through training and exposure to technologies befitting their activities.</i>	X	X	X	X	X	0.10	0.30	0.50	0.50	0.50	1.90	MAAIF
<i>Promote structured trading systems by linking organized collective marketing farmer groups to large buyers and storage handlers/warehouse operators</i>	X	X	X	X	X	0.18	0.30	0.50	0.50	0.50	1.98	MAAIF
Strategy 3: Operationalize the commercialisation fund	X	X	X	X	X	3.00	7.00	10.00	10.00	10.00	40.00	NAADS
Strategy 4: Ensure the development, maintenance and improvement of physical agricultural marketing infrastructure	X	X	X	X	X	1.20	30.00	30.00	75.00	75.00	211.20	MAAIF

ASSP IDEAL BUDGET												
ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Cold Chain storage Infrastructure</i>	X	X	X	X	X	0.40	10.00	10.00	25.00	25.00	70.40	MAAIF
<i>Physical agricultural commodity markets</i>	X	X	X	X	X	0.40	10.00	10.00	25.00	25.00	70.40	MAAIF
<i>Community based grain storage facilities</i>	X	X	X	X	X	0.40	10.00	10.00	25.00	25.00	70.40	MAAIF
Outcome 4: Institutional and enabling environment strengthening	X	X	X	X	X	29.08	100.82	113.12	127.44	165.61	536.08	MAAIF
Strategy 1: Strengthen institutional capacity of MAAIF and public agricultural agencies	X	X	X	X	X	17.09	68.67	75.87	84.47	111.46	357.57	MAAIF
Institutional Strengthening and Capacity Building	X	X	X	X	X	6.30	47.25	53.15	61.25	87.55	255.50	MAAIF
<i>Construction of MAAIF headquarters Building in Kampala</i>			X	X	X	1.00	5.00	10.00	17.00	43.30	76.30	MAAIF
<i>Construction of administrative infrastructure for selected district production departments</i>	X	X	X	X	X	0.40	6.00	6.00	6.00	6.00	24.40	MAAIF
<i>Human Resource Development- Training/capacity building</i>	X	X	X	X	X	1.00	2.00	2.00	3.00	3.00	11.00	MAAIF
<i>Strengthening Institutional Linkages and Networking Capacity</i>	X	X	X	X	X	1.00	1.00	1.00	1.00	1.00	5.00	MAAIF
<i>improving access to working facilities, tools and equipment for MAAIF, its Agencies and local governments.</i>	X	X	X	X	X	2.90	3.00	3.90	4.00	4.00	17.80	MAAIF
<i>logistical support to entebbe dairy training school</i>			X	X	X		0.25	0.25	0.25	0.25	1.00	DDA
<i>institutional support to distribution of seed planting and stocking material - OWC</i>							20.00	20.00	20.00	20.00	80.00	NAADS
<i>institutional support to distribution of seed planting and stocking material - NAADS SEC</i>							10.00	10.00	10.00	10.00	40.00	NAADS

ASSP IDEAL BUDGET

ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
transform ATIs (Bukalasa College and Fisheries Training Institute), into institutions that are responsive to knowledge and skill market in the extension service.	X	X	X	X	X	1.00	3.90	4.40	4.40	4.10	17.80	Bukalasa College and Fisheries Training Institute
Bukalasa Agricultural College	X	X	X	X	X	0.50	1.95	2.20	2.20	2.05	8.90	Bukalasa College
<i>Curriculum review</i>	X	X	X	X	X	0.05	0.05	0.20	0.20	0.05	0.55	Bukalasa College
<i>Human resources strengthening</i>	X	X	X	X	X	0.10	0.30	0.50	0.50	0.50	1.90	Bukalasa College
<i>Infrastructural rehabilitation/development</i>	X	X	X	X	X	0.25	1.50	1.50	1.50	1.50	6.25	Bukalasa College
<i>Restructuring and Operationalization</i>	X	X				0.10	0.10	-	-	-	0.20	Bukalasa College
Fisheries Training Institute	X	X	X	X	X	0.50	1.95	2.20	2.20	2.05	8.90	Fisheries Training Institute
<i>Curriculum review</i>	X	X	X	X	X	0.05	0.05	0.20	0.20	0.05	0.55	Fisheries Training Institute
<i>Human resources strengthening</i>	X	X	X	X	X	0.10	0.30	0.50	0.50	0.50	1.90	Fisheries Training Institute
<i>Infrastructural rehabilitation/development</i>	X	X	X	X	X	0.25	1.50	1.50	1.50	1.50	6.25	Fisheries Training Institute
<i>Restructuring and Operationalization</i>	X	X				0.10	0.10	-	-	-	0.20	Fisheries Training Institute

ASSP IDEAL BUDGET												
ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
Support to the National Farmers' Leadership Centre (NFLC)						0.8	1	1.12	1.5	1.5	5.92	NFLC
<i>Infrastructure Development and Rehabilitation</i>	X	X	X	X	X	0.5	0.5	0.5	0.6	0.5	2.6	NFLC
<i>Equipment and Tooling</i>	X	X	X	X	X	0.2	0.3	0.32	0.4	0.5	1.72	NFLC
<i>Training, Administration and Services</i>	X	X	X	X	X	0.1	0.2	0.3	0.5	0.5	1.6	NFLC
Support to District Agriculture Training and Information Centres (DATICS)	X	X	X	X	X	0.42	4.42	5.00	5.00	5.00	19.84	MAAIF
<i>Review and development of curriculum</i>	X	X	X	X	X	0.42	0.42	1.00	1.00	1.00	3.84	MAAIF
<i>Infrastructure Development</i>	X	X	X	X	X	-	4.00	4.00	4.00	4.00	16.00	MAAIF
Support to Agriculture Sector Policy and Planning						2.50	3.00	3.00	3.00	3.00	14.50	MAAIF/APD
<i>Capacity building for MAAIF staff in Policy and Planning</i>	X	X	X	X	X	0.40	0.60	0.60	0.60	0.60	2.80	MAAIF/APD
<i>Production of bankable project proposals to support ASSP implementation</i>	X	X	X	X	X	0.30	0.40	0.40	0.40	0.40	1.90	MAAIF/APD
<i>Undertake budget execution assessment exercises</i>	X	X	X	X	X	1.00	1.10	1.10	1.10	1.10	5.40	MAAIF/APD
<i>Link ASSP implementation with regional agriculture policy undertakings (EAC, COMESA, CADAP, etc)</i>	X	X	X	X	X	0.30	0.40	0.40	0.40	0.40	1.90	MAAIF/APD
<i>Cordinate production of Agricultural Sector mandatory policy/planning/budget papers</i>	X	X	X	X	X	0.50	0.50	0.50	0.50	0.50	2.50	MAAIF/APD
Agricultural Statistics, ICT and Risk Management	X	X	X	X	X	2.41	5.18	5.31	4.83	5.85	23.58	MAAIF/Statistics Division

ASSP IDEAL BUDGET

ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Strengthening the Coordination and Management of agriculture sector statistical system</i>	X	X	X	X	X	0.30	0.50	0.60	0.70	0.90	3.00	MAAIF/Statistics Division
<i>Improve usability and dissemination of agriculture statistics</i>	X	X	X	X	X	0.36	0.32	0.16	0.16	0.28	1.28	MAAIF/Statistics Division
<i>Mainstreaming Quality Assurance in Agriculture statistical production</i>	X	X	X	X	X	0.37	-	0.11	0.26	0.10	0.84	MAAIF/Statistics Division
<i>Strengthening Human Resource and Management</i>	X	X	X	X	X	0.38	0.36	0.21	0.24	0.11	1.31	MAAIF/Statistics Division
<i>Strengthening production and Management of Agriculture statistics</i>	X	X	X	X	X	0.85	1.50	2.30	2.30	3.00	9.95	MAAIF/Statistics Division
<i>Undertake a National Coffee Census, establish and maintain a national coffee data bank</i>	X	X	X	X	X	-	2.00	1.23	0.46	0.46	4.15	UCDA/MAAIF
<i>ICT and Risk Management</i>	X	X	X	X	X	0.15	0.50	0.70	0.70	1.00	3.05	MAAIF
Strengthening and improve the Sector M&E systems	X	X	X	X	X	3.11	3.00	3.02	3.90	3.90	16.92	<i>MAAIF/APD</i>
<i>Production of quality monitoring and evaluation data and information on ASSP implementation</i>	X	X	X	X	X	2.28	1.87	2.42	3.29	3.27	13.13	MAAIF/APD
<i>Strengthening Institutional and Organizational Capacity for M&E</i>	X	X	X	X	X	0.83	1.13	0.60	0.61	0.63	3.80	MAAIF/APD
Implementing the Agricultural Sector Communication Strategy (ASCS)	X	X	X	X	X	0.56	0.92	0.87	0.60	0.56	3.50	<i>MAAIF/Comm. & Info division(C &ID)</i>

ASSP IDEAL BUDGET												
ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Establishing a national agricultural information and communication system</i>	X	X	X	X	X	0.08	0.06	0.04	0.04	0.08	0.30	MAAIF/C&ID
<i>Strengthening the ASCS framework</i>	X	X	X	X	X	0.19	0.39	0.40	0.19	0.18	1.34	MAAIF/C&ID
<i>Create an effective and efficient platform for information and knowledge management</i>	X	X	X	X	X	0.02	0.09	0.07	0.06	0.04	0.28	MAAIF/C&ID
<i>Creating an enabling environment for communication</i>	X	X	X	X	X	0.10	0.13	0.16	0.16	0.11	0.66	MAAIF/C&ID
<i>Support Innovation in Agro-Communication across the Agro-Value-Chain</i>	X	X	X	X	X	0.17	0.25	0.20	0.15	0.15	0.92	MAAIF/C&ID
Strategy 2: Improve the capacity for quality assurance, regulation, food and safety standards for outputs and products across crops, livestock and fisheries sub-sectors.	X	X	X	X	X	6.79	19.90	21.50	28.32	34.10	110.61	MAAIF
<i>Enact new laws and or review existing laws, regulations and policies to be consistent with changes in technology, regional integration commitments and other global/regional commitments in the crops, livestock and fisheries sub-sectors.</i>	X	X	X	X	X	0.20	0.20	0.20	0.20	0.20	1.00	MAAIF
<i>Undertake market surveillance and strengthen enforce capacity of all existing laws, regulations, standards and guidelines along the entire value chain.</i>	X	X	X	X	X	2.00	2.00	3.00	4.00	6.00	17.00	MAAIF
<i>Create awareness among farmers, traders, processors and agro exporters about quality standards and market requirements</i>	X	X	X	X	X	1.00	2.00	2.00	4.00	6.00	15.00	MAAIF
<i>Train food inspectors in legislation, policy, modern inspection systems and quality management systems</i>	X	X	X	X	X	1.00	1.70	2.30	3.12	4.00	12.12	MAAIF
<i>Strengthen national capacity for quality assurance, regulation and safety standards to promote increased trade at all levels.</i>	X	X	X	X	X	1.00	1.00	1.00	3.00	3.90	9.90	MAAIF

ASSP IDEAL BUDGET												
ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Fisheries licensing and other regulatory activities</i>							5.00	5.00	5.00	5.00	20.00	MAAIF/DFR
<i>support fisheries policies and accreditaion activities</i>							1.00	1.00	1.00	1.00	4.00	MAAIF/DFR
<i>fish quality assurance activities</i>							2.00	2.00	2.00	2.00	8.00	MAAIF/DFR
<i>Livestock diagnostics and quality assurance</i>			X	X	X		1.50	1.50	1.50	1.50	6.00	DDA/MAAIF
<i>Strengthening milk quality assurance system</i>	X	X	X	X	X	0.09	2.00	2.00	2.00	2.00	8.09	DDA
<i>Support to inspection, quality assurance, quality control and licensing of fruits exporters</i>	X	X	X	X	X	1.50	1.50	1.50	2.50	2.50	9.50	MAAIF
Strategy 3: Mainstream Cross-cutting Issues of Gender, Youth, HIV/AIDS, Environment and Climate Change, food and nutritional security	X	X	X	X	X	5.20	12.25	15.75	14.65	20.05	67.90	
promote the use of gender analysis and gender-based budgeting in all community-based development programmes	X	X	X	X	X	1.10	1.10	1.60	1.60	1.60	7.00	MAAIF/APD
Mainstream promotion of youth engagement in Agriculture in all sector programmes	X	X	X	X	X		3.75	3.75	3.75	3.75	15.00	MAAIF
Mainstream adaptation of agricultural technologies and practices to climate change in all sector programmes-SLM	X	X	X	X	X	1.50	2.00	5.00	3.90	5.30	17.70	MAAIF
Implement HIV/AIDS policies and strategies- in the Agriculture Sector including local governments and farming communities	X	X	X	X	X	1.00	1.00	1.00	1.00	1.00	5.00	MAAIF
Improve Food and Nutrition Security through Enhance consumption of diverse diets at household level	X	X	X	X	X	1.60	4.40	4.40	4.40	8.40	23.20	MAAIF
<i>promote awareness on food availability across Agricultural Zones</i>	X	X	X	X	X	0.50	2.00	2.00	2.00	2.00	8.50	MAAIF

ASSP IDEAL BUDGET

ASSP undertakings	Y1	Y2	Y3	Y4	Y5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>generate and promote nutrient bio-fortified varieties across the priority commodities</i>	X	X	X	X	X	0.10	0.40	0.40	0.40	0.40	1.70	MAAIF
<i>Develop early warning systems to prevent and mitigate shocks affecting nutrition and food security</i>	X	X	X	X	X	1.00	2.00	2.00	2.00	6.00	13.00	MAAIF

Annex F: Indicative ideal budget (UGX billions), by commodity and thematic area

ASSP IDEAL BUDGET BY COMMODITY AND THEMATIC AREA												
ASSP undertakings	Y 1	Y 2	Y 3	Y 4	Y 5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
GRAND TOTAL	X	X	X	X	X	488.85	1,284.23	1,479.89	1,693.09	2,022.89	6,968.96	
Coffee												
<i>Improvement of Coffee Research Systems</i>	X	X	X	X	X	1.00	5.18	5.18	5.18	5.06	21.59	NARO
<i>Promote and support adoption of good agronomic practice at farm level</i>	X	X	X	X	X	1.62	1.62	1.62	3.62	4.27	12.74	UCDA
<i>Promote coffee growing and fertiliser use in new areas and expansion in traditional coffee growing areas</i>	X	X	X	X	X	1.00	1.10	2.00	10.85	16.00	30.95	UCDA
<i>Coffee Agro Extensions and Business Development Services</i>	X	X	X	X	X	2.47	2.47	2.47	4.47	5.46	17.35	UCDA
<i>Support and Strengthen Farmer Organizations</i>	X	X	X	X	X	2.22	2.32	2.32	2.32	2.32	11.49	UCDA
<i>Management of Coffee Diseases and Pests</i>	X	X	X	X	X	4.93	4.93	4.93	4.93	6.90	26.60	UCDA/MAAI F
<i>Promoting Coffee Growing in New Areas and Expansion in Traditional Coffee Growing Areas</i>	X	X	X	X	X	27.00	47.00	59.00	59.00	59.00	251.00	UCDA
<i>Coffee value addition and Generic Promotion</i>	X	X	X	X	X	1.00	1.00	5.00	10.00	10.00	27.00	UCDA
<i>Undertake a National Coffee Census, establish and maintain a national coffee data bank</i>	X	X	X	X	X	-	2.00	1.23	0.46	0.46	4.15	UCDA
Sub-Total						41.23	67.61	83.74	100.83	109.46	402.87	
Tea												
<i>Tea Research</i>	X	X	X	X	X	1.00	2.86	2.86	3.34	3.37	13.44	NARO

ASSP IDEAL BUDGET BY COMMODITY AND THEMATIC AREA												
ASSP undertakings	Y 1	Y 2	Y 3	Y 4	Y 5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Tea Extension Service and farmer mobilization</i>	X	X	X	X	X	6.45	6.74	7.22	8.18	8.85	37.43	MAAIF
<i>Tea Area Expansion</i>	X	X	X	X	X	-	2.00	1.50	2.00	2.60	8.10	MAAIF
<i>Tea Policy and establishing a conducive institutional arrangement</i>	X	X	X	X	X	0.56	0.50	0.80	0.73	0.82	3.42	MAAIF
<i>Distribution of quality tea plantlets</i>	X	X	X	X	X	33.76	82.00	103.00	103.00	103.00	424.76	NAADS
<i>Establishment of new Tea Processing Facilities for value addition</i>	X	X	X	X	X	-	9.00	10.00	10.00	15.40	44.40	MAAIF
<i>Tea Marketing</i>	X	X	X	X	X	0.18	0.18	0.18	0.18	0.18	0.88	MAAIF
Sub-Total						41.95	103.28	125.56	127.42	134.21	532.42	
Rice												
<i>Rice Research Programme</i>	X	X	X	X	X	1.00	2.37	2.37	2.37	2.51	10.62	NARO
<i>Information and Knowledge</i>	X	X	X	X	X	0.32	0.63	0.63	1.13	1.39	4.10	MAAIF
<i>Mechanisation</i>	X	X	X	X	X	0.60	0.60	0.60	1.10	1.34	4.24	MAAIF
<i>Fertilization and sustainable soil management</i>	X	X	X	X	X	0.40	0.40	0.40	0.90	1.06	3.16	MAAIF
<i>Promote and distribute appropriate post-harvest technologies</i>	X	X	X	X	X	0.30	0.30	0.30	0.80	0.92	2.62	MAAIF
<i>Rice Seed production, multiplication and distribution</i>	X	X	X	X	X	1.00	3.50	4.30	4.30	4.30	17.40	NAADS
<i>Rice Marketing and value addition</i>	X	X	X	X	X	0.88	1.00	1.20	2.00	2.62	7.70	MAAIF
Sub-Total						4.50	8.80	9.80	12.60	14.14	49.84	

ASSP IDEAL BUDGET BY COMMODITY AND THEMATIC AREA												
ASSP undertakings	Y 1	Y 2	Y 3	Y 4	Y 5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
Maize												
<i>Maize Research Programme</i>	X	X	X	X	X	3.00	2.36	2.36	2.32	2.44	12.47	NARO
<i>Maize Pest and Disease control</i>	X	X	X	X	X	1.00	1.42	1.28	1.76	2.27	7.73	MAAIF
<i>Maize Seed production, multiplication and distribution</i>	X	X	X	X	X	14.00	63.00	79.00	79.00	79.00	314.00	NAADS
<i>Fertilizer use and promotion</i>	X	X	X	X	X	1.00	5.00	5.00	5.00	5.00	21.00	MAAIF
<i>Support to improving maize post harvest handling practices and technologies</i>	X	X	X	X	X	0.30	1.42	1.28	1.76	2.27	7.03	MAAIF
<i>Maize Marketing and value addition</i>	X	X	X	X	X	1.00	2.60	4.00	6.00	6.00	19.60	MAAIF
Sub-total						20.30	75.80	92.91	95.84	96.98	381.83	
Banana												
<i>Banana research and technology development</i>	X	X	X	X	X	2.00	2.35	2.35	2.35	2.35	11.40	NARO
<i>Increasing Banana Production and Productivity(fertilizer promotion)</i>	X	X	X	X	X	0.80	1.15	1.15	1.65	2.25	7.00	MAAIF
<i>Banana bacterial wilt control</i>	X	X	X	X	X	2.00	10.00	10.00	10.00	10.00	42.00	MAAIF
<i>Multiplication and distribution of clean planting materials of Bananas</i>	X	X	X	X	X	3.30	4.30	5.40	5.40	5.40	23.80	NAADS
<i>Banana Extension Support</i>						3.00	3.00	3.00	3.00	3.00	15.00	MAAIF
<i>Support to value addition through PPPs</i>	X	X	X	X	X	1.00	2.25	2.25	2.25	2.25	10.00	MAAIF
Sub-Total						12.10	23.05	24.15	24.65	25.25	109.20	
Beans												

ASSP IDEAL BUDGET BY COMMODITY AND THEMATIC AREA												
ASSP undertakings	Y 1	Y 2	Y 3	Y 4	Y 5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Beans Research and technology development</i>	X	X	X	X	X	1.65	2.15	2.15	2.15	2.21	10.31	NARO
<i>Beans Extension</i>						1.00	1.00	2.00	2.00	2.00	8.00	
<i>Beans Marketing</i>	X	X	X	X	X	1.00	1.00	2.00	2.00	2.00	8.00	MAAIF
<i>Beans Seed production, multiplication and distribution</i>	X	X	X	X	X	8.00	27.00	34.00	34.00	34.00	137.00	NAADS
<i>Pest and Disease control</i>	X	X	X	X	X	0.80	1.35	1.35	1.85	2.39	7.74	MAAIF
Sub-Total						12.45	32.50	41.50	42.00	42.60	171.05	
Cassava												
<i>Cassava Research Programme</i>	X	X	X	X	X	1.70	4.00	4.00	4.00	4.00	17.70	NARO
<i>Cassava Extension</i>	X	X	X	X	X	1.29	1.42	1.28	1.76	2.27	8.02	MAAIF
<i>production and distribution of clean planting material of improved cassava varieties</i>	X	X	X	X	X	4.50	19.20	24.00	24.00	24.00	95.70	NAADS
<i>support cassava farmers and SMEs to engage in profitable processing and marketing of quality cassava flour and chips as an agribusiness enterprise</i>	X	X	X	X	X	1.00	2.00	3.00	3.00	4.70	13.70	MAAIF
Sub-Total						8.49	26.62	32.28	32.76	34.97	135.12	
Fruits and Veg												
<i>Fruits Research support programme</i>	X	X	X	X	X	1.00	2.50	2.50	2.50	2.50	11.00	NARO
<i>Support to inspection, quality assurance, quality control and licensing of fruits exporters</i>	X	X	X	X	X	1.50	1.50	1.50	2.50	2.50	9.50	MAAIF

ASSP IDEAL BUDGET BY COMMODITY AND THEMATIC AREA												
ASSP undertakings	Y 1	Y 2	Y 3	Y 4	Y 5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>distribution of quality clean citrus seedlings</i>	X	X	X	X	X	14.50	26.00	33.00	33.00	33.00	139.50	NAADS
<i>distribution of quality clean pineapple seedlings tolerant to pests and diseases</i>	X	X	X	X	X	0.60	0.60	0.70	0.70	0.70	3.30	NAADS
<i>distribution of quality clean apple seedlings tolerant to pests and diseases</i>	X	X	X	X	X	2.00	5.90	7.40	7.40	7.40	30.10	NAADS
<i>Provision of quality inputs for production of mangoes</i>	X	X	X	X	X	7.50	12.00	15.00	15.00	15.00	64.50	NAADS
<i>Provision of inputs for vegetables production</i>	X	X	X	X	X	0.60	0.60	0.60	0.60	0.60	3.00	NAADS
<i>Support to fruit processing</i>	X	X	X	X	X	0.90	29.00	34.88	34.50	34.50	133.78	MAAIF
<i>Fruits and Vegetables pests and disease control</i>	X	X	X	X	X	1.50	1.50	1.50	2.50	2.50	9.50	MAAIF
<i>Improving grading standards, packaging and handling of fruits and vegetables</i>	X	X	X	X	X	0.90	1.00	3.00	3.00	5.10	13.00	MAAIF
Sub-Total						31.00	80.60	100.08	101.70	103.80	417.18	
Dairy												
<i>Institutional strengthening and creation of enabling environment policy formulation</i>	X	X	X	X	X	0.60	0.60	0.60	1.60	2.20	5.60	MAAIF/DDA
<i>Enhancing availability of improved dairy cattle germplasm</i>	X	X	X	X	X	2.00	2.00	2.00	2.00	2.00	10.00	NAGRC&DB
<i>Strengthening milk quality assurance system</i>	X	X	X	X	X	0.09	2.00	2.00	2.00	2.00	8.09	DDA
<i>Building local capacity in feed production and marketing</i>	X	X	X	X	X	2.50	3.41	1.60	2.10	3.71	13.32	DDA/MAAIF
<i>Developing the national dairy herd information management system</i>	X	X	X	X	X	0.30	0.30	0.30	0.80	1.10	2.80	DDA/MAAIF & NAGRC

ASSP IDEAL BUDGET BY COMMODITY AND THEMATIC AREA												
ASSP undertakings	Y 1	Y 2	Y 3	Y 4	Y 5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Provision of heifers - dairy cattle</i>	X	X	X	X	X	25.00	25.00	29.50	29.50	29.50	138.50	NAADS/DDA/ NAGRC
<i>Multiplication of pasture seed</i>	X	X	X	X	X	0.50	0.50	0.50	0.50	0.50	2.50	NAADS
<i>Promoting local consumption and export of milk and dairy products.</i>	X	X	X	X	X	0.98	0.98	0.98	0.98	0.98	4.91	DDA
<i>Rehabilitate existing and develop new milk processing infrastructure</i>		X	X	X	X	-	2.00	2.50	2.50	2.50	9.50	MAAIF/DDA
<i>Establish a national Animal Feed quality analysis laboratory-Diary feeds</i>	X	X	X	X	X	0.32	1.95	0.56	0.56	0.12	3.50	MAAIF
<i>logistical support to entebbe dairy training school</i>			X	X	X		0.25	0.25	0.25	0.25	1.00	DDA
Sub-Total						32.30	38.99	40.79	42.79	44.85	199.72	
Meat and Other Livestock Products												
<i>Provision of an Enabling Environment for the livestock sub-sector</i>	X	X	X	X	X	0.50	0.50	0.50	0.50	0.70	2.70	MAAIF/DAR
<i>Animal Feeds, Forage and Water Security Enhancement</i>	X	X	X	X	X	0.80	0.80	0.80	0.80	1.12	4.32	MAAIF/DAR
<i>Animal Feeds Production and Quality Assurance Enhancement</i>	X	X	X	X	X	1.98	2.09	1.00	1.08	1.51	7.66	MAAIF/DAR
<i>National Beef Genetics Resource Development</i>	X	X	X	X	X	2.00	2.00	2.00	2.00	2.80	10.80	NAGRC&DB
<i>Goat Breed Improvement Schemes</i>	X	X	X	X	X	1.00	0.65	0.65	0.67	0.94	3.90	MAAIF/DAR
<i>Support Investments in the Poultry Sector</i>	X	X	X	X	X	1.00	1.00	1.00	0.41	0.57	3.98	MAAIF/DAR
<i>Kuroiler and Indigenous Chicken Resource Development</i>	X	X	X	X	X	0.55	0.55	1.11	0.53	0.74	3.47	MAAIF/DAR

ASSP IDEAL BUDGET BY COMMODITY AND THEMATIC AREA												
ASSP undertakings	Y 1	Y 2	Y 3	Y 4	Y 5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Develop the sericulture and silk production value chain</i>	X	X	X	X	X	1.50	1.50	1.50	1.50	1.50	7.50	MAAIF/DAR
<i>support to apiculture subsector</i>	X	X	X	X	X	0.30	5.00	5.00	5.00	5.00	20.30	MAAIF/DAR
<i>Uganda Tsetse and Trypanosomiasis Eradication</i>	X	X	X	X	X	2.00	5.07	5.30	12.99	15.00	40.36	MAAIF/COC TU
<i>Eastern Uganda Regional Tsetse and Trypanosomiasis Eradication</i>	X	X	X	X	X	2.00	5.00	5.00	5.00	7.00	24.00	MAAIF/COC TU
<i>North Western Uganda Tsetse Project</i>	X	X	X	X	X	1.00	9.85	9.95	6.65	9.31	36.76	MAAIF/COC TU
<i>Strengthening COCTU in Coordination, Policy and Planning</i>	X	X	X	X	X	0.09	0.06	0.15	0.05	0.07	0.41	COCTU
<i>Control and Surveillance of Ticks</i>	X	X	X	X	X	2.21	1.78	1.17	1.10	1.53	7.79	MAAIF
<i>Control of East Coast Fever (ECF)</i>	X	X	X	X	X	2.36	2.73	2.15	4.04	5.66	16.94	MAAIF
<i>Control of Foot and Mouth Disease (FMD)</i>	X	X	X	X	X	10.00	15.00	15.00	15.00	20.00	75.00	MAAIF
<i>Control of Rift Valley Fever</i>	X	X	X	X	X	1.11	1.33	1.11	0.92	0.83	5.30	MAAIF
<i>Control of Rabies</i>	X	X	X	X	X	2.20	2.16	2.14	1.12	0.90	8.52	MAAIF
<i>control of PPR</i>						3.00	3.00	3.00	3.00	3.00	15.00	MAAIF
<i>Control HPAI</i>						-	2.00	2.00	2.00	2.00	8.00	MAAIF
<i>Control of Newcastle Disease</i>						3.00	3.00	3.00	3.00	3.00	15.00	MAAIF
<i>Control of African Swine Fever (ASF)</i>	X	X	X	X	X	3.00	3.00	3.00	3.00	3.00	15.00	MAAIF
<i>Capacity Building for Animal Disease Surveillance and Control Systems in Uganda</i>	X	X	X	X	X	0.30	0.30	0.50	0.50	0.50	2.10	MAAIF

ASSP IDEAL BUDGET BY COMMODITY AND THEMATIC AREA												
ASSP undertakings	Y 1	Y 2	Y 3	Y 4	Y 5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Capacity Building for Enforcement of Veterinary Regulations in Uganda</i>	X	X	X	X	X	0.30	0.30	0.50	0.50	0.50	2.10	MAAIF
<i>Control of Human and Animal Brucellosis</i>	X	X	X	X	X	0.30	0.30	0.50	0.50	0.50	2.10	MAAIF
<i>Provision of beef cattle</i>	X	X	X	X	X	0.90	3.00	3.70	3.70	3.70	15.00	NAADS
<i>Multiplication of pasture seed</i>	X	X	X	X	X	0.50	0.50	0.50	0.50	0.50	2.50	NAADS
<i>Provision of improved goats</i>	X	X	X	X	X	2.00	2.00	2.00	2.00	2.00	10.00	NAADS
<i>Provision of poultry units and piglets</i>	X	X	X	X	X	4.00	9.80	12.30	12.30	12.30	50.70	NAADS
<i>Creating a buffer stock/animal handling grounds to support beef processing/abattoirs</i>	X	X	X	X	X	1.00	58.00	50.00	50.00	50.00	209.00	MAAIF
<i>Support to animal breeding infrastructure</i>			X	X	X	-	8.00	8.00	8.00	8.00	32.00	NAGRC&DB
<i>transport and logistical support for animal breeding</i>			X	X	X		1.75	1.75	1.75	1.75	7.00	NAGRC&DB
<i>logistical support to laboratory and technicians</i>			X	X	X		1.50	1.50	1.50	1.50	6.00	MAAIF/DDA
<i>support to liquid nitrogen cold chain</i>			X	X	X	-	0.65	0.65	0.10	-	1.40	NAGRC&DB
<i>Livestock diagnostics and quality assurance</i>			X	X	X		1.50	1.50	1.50	1.50	6.00	DDA/MAAIF
<i>Establishment of Disease Control infrastructure and operationalization of effective disease control</i>											-	
<i>Establishment of livestock disease control infrastructure in LGs</i>	X	X	X	X	X	0.40	17.00	17.00	17.00	17.00	68.40	MAAIF
<i>Rehabilitation or construction and equipping of 4 quarantine stations, 14 holding grounds + 14 border posts</i>	X	X	X	X	X	2.23	2.23	2.23	2.23	4.00	12.94	MAAIF

ASSP IDEAL BUDGET BY COMMODITY AND THEMATIC AREA												
ASSP undertakings	Y 1	Y 2	Y 3	Y 4	Y 5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Provision of proper transport and cold chain equipment for the Veterinary Offices</i>	X	X	X	X	X	-	2.76	2.76	2.76	5.53	13.82	MAAIF
<i>Development and implementation of prevention and control strategy for major diseases</i>	X	X	X	X	X	0.17	0.17	0.17	0.17	0.17	0.86	MAAIF
<i>Creation and implementation of individual animal (cattle) herd and flock (goat and poultry) identification for traceability</i>	X	X	X	X	X	1.98	1.98	1.98	1.98	1.98	9.90	MAAIF
<i>Renovate and equip the National Laboratory and establish 12 Regional Laboratory facilities</i>	X	X	X			0.82	0.82	0.82			2.47	MAAIF
<i>Personnel and operational costs of the national and regional laboratories infrastructure</i>	X	X	X	X	X	1.37	1.37	1.37	1.37	1.37	6.84	MAAIF
Sub-Total						57.87	181.99	176.27	178.72	198.97	793.82	
Fish												
<i>support to restocking of water bodies</i>	X	X	X	X	X	-	3.75	3.75	3.75	3.75	15.00	MAAIF/DFR
<i>Developing the Fishery of Small Pelagic Fishes</i>	X	X	X	X	X	1.38	1.38	1.38	1.88	2.43	8.43	MAAIF/DFR
<i>Promoting commercial aquaculture</i>	X	X	X	X	X	2.10	2.10	2.00	2.60	3.44	12.24	MAAIF/DFR
<i>Infrastructure development along the value chain</i>	X	X	X	X	X	1.20	1.20	1.20	1.70	2.18	7.48	MAAIF/DFR
<i>Strengthen monitoring on all water bodies</i>	X	X	X	X	X	2.00	4.00	5.00	5.00	5.00	21.00	MAAIF/DFR
<i>Control of the new breed of weed and water hyacinth</i>	X	X	X	X	X	-	1.45	1.45	1.75	2.15	6.80	MAAIF/DFR
<i>Fish Inputs(Fingerlings and feeds)</i>							20.00	20.00	20.00	20.00	80.00	MAAIF/DFR

ASSP IDEAL BUDGET BY COMMODITY AND THEMATIC AREA

ASSP undertakings	Y 1	Y 2	Y 3	Y 4	Y 5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Fisheries aquaculture infrastructure</i>							12.00	12.00	12.00	12.00	48.00	MAAIF/DFR
<i>Fisheries Marketing and value addition infrastructure</i>							13.00	13.00	13.00	13.00	52.00	MAAIF/DFR
<i>Fisheries licensing and other regulatory activities</i>							5.00	5.00	5.00	5.00	20.00	MAAIF/DFR
<i>support fisheries policies and accreditaion activities</i>							1.00	1.00	1.00	1.00	4.00	MAAIF/DFR
<i>fish quality assurance activities</i>							2.00	2.00	2.00	2.00	8.00	MAAIF/DFR
<i>Extension for fish farming</i>							2.50	2.50	2.50	2.50	10.00	MAAIF/DFR
Sub-Total						6.68	69.38	70.28	72.18	74.45	292.95	
Cotton												
<i>Strengthening cotton research</i>	X	X	X	X	X	1.00	2.17	2.17	2.14	2.14	9.62	NARO
<i>Improving markets through formation of farmers' associations and capacity building</i>	X	X	X	X	X	0.78	2.00	2.00	2.00	2.00	8.78	CDO
<i>cotton extension services</i>	X	X	X	X	X	2.00	3.00	3.00	4.50	6.75	19.25	CDO
<i>Cotton inputs support to farmers</i>	X	X	X	X	X	1.25	1.25	1.25	1.25	1.25	6.25	CDO
<i>promotion of domestic value addition to lint</i>	X	X	X	X	X	-	4.80	6.00	7.50	7.62	25.92	CDO
<i>support to mechanisation in cotton</i>						1.00	2.50	2.50	2.50	2.50	11.00	
<i>cotton infrastructure development</i>						1.00	3.50	3.50	3.50	3.50	15.00	CDO
Sub-Total						7.03	19.22	20.42	23.39	25.76	95.82	

ASSP IDEAL BUDGET BY COMMODITY AND THEMATIC AREA												
ASSP undertakings	Y 1	Y 2	Y 3	Y 4	Y 5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
Cocoa												
<i>Strengthening cocoa research and technology development</i>	X	X	X	X	X	1.96	2.20	2.20	2.20	2.20	10.78	NARO
<i>Cocoa Extension Services</i>	X	X	X	X	X	1.10	0.89	0.89	1.34	2.01	6.25	MAAIF
<i>Cocoa seedlings provision</i>	X	X	X	X	X	3.10	3.10	3.10	3.10	3.10	15.50	NAADS/MAAIF
<i>Cocoa marketing and Value addition support</i>	X	X	X	X	X	1.45	1.53	1.59	1.66	1.72	7.95	MAAIF
Sub-Total						7.62	7.73	7.79	8.31	9.04	40.48	
Oil Palm and Oil Seeds												
Oil Palm												
<i>Oil Palm research and technology development</i>	X	X	X	X	X	2.50	3.00	3.00	3.00	3.00	14.50	NARO
<i>Land identification and acquisition</i>	X	X	X	X	X	10.00	20.00	15.00	25.00	25.00	95.00	MAAIF
<i>Plantation establishment and development</i>	X	X	X	X	X	2.00	9.00	9.00	10.00	10.00	40.00	MAAIF
<i>Reform and strengthen agricultural extension</i>	X	X	X	X	X	1.00	1.00	1.00	1.00	1.40	5.40	MAAIF
<i>Strengthen the institutional capacity of MAAIF</i>	X	X	X	X	X	0.30	0.30	0.30	0.30	0.42	1.62	MAAIF
<i>Strengthen the capacity for quality assurance, regulation and food safety standards</i>	X	X	X	X	X	0.20	0.20	-	-	-	0.40	MAAIF
<i>Provision of critical farm inputs for oil palm</i>	X	X	X	X	X	1.30	1.30	1.30	1.30	1.30	6.50	MAAIF
Oil Seed												
<i>Oil seed Research Programme</i>	X	X	X	X	X	1.00	2.59	2.59	2.59	2.82	11.58	NARO
<i>enhance oilseed production and productivity</i>	X	X	X	X	X	1.48	1.52	1.58	2.12	2.77	9.46	MAAIF

ASSP IDEAL BUDGET BY COMMODITY AND THEMATIC AREA												
ASSP undertakings	Y 1	Y 2	Y 3	Y 4	Y 5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Oil seed provision</i>	X	X	X	X	X	1.74	1.74	1.74	1.74	1.74	8.70	NAADS/MAAIF
<i>institutional and enabling environment strengthening</i>	X	X	X	X	X	0.22	0.27	0.25	0.75	0.85	2.33	MAAIF
<i>Facilitate domestic, regional and international trade in Vegetable Oil Products</i>	X	X	X	X	X	0.80	0.80	0.80	0.80	0.80	4.00	MAAIF
Sub-Total						22.54	41.72	36.55	48.59	50.09	199.49	
Agricultural Extension												
<i>Wage costs of extension staff at district</i>	X	X	X	X	X	16.28	50.00	60.00	79.00	112.00	317.28	LG
<i>Non-wage/operational costs at district level</i>	X	X	X	X	X	14.14	45.00	100.00	110.00	110.00	379.14	LG
<i>Farmer education and refresher trainings of extension staff</i>	X	X	X	X	X		2.00	2.00	2.00	2.00	8.00	DAES
<i>farmer institutional strengthening</i>						-	2.50	2.50	2.50	2.50	10.00	
<i>Institutional strengthening of extension systems - Policy</i>	X	X	X	X	X	-	0.50	0.50	0.50	0.50	2.00	DAES
<i>Promote strategic partnerships between research and technology development and extension services at all levels</i>	X	X	X	X	X		1.00	1.00	1.00	1.40	4.40	DAES
<i>agribusiness support services</i>	X	X	X	X	X	1.00	4.00	4.00	6.00	8.40	23.40	DAI & ED / NAADS
<i>support to extension information systems and ICT</i>						-	1.50	1.50	1.50	1.50	6.00	
<i>Reform and strengthen agricultural extension(oil palm)</i>	X	X	X	X	X	1.00	1.00	1.00	1.00	1.40	5.40	MAAIF
<i>Technology promotion (production and agro-processing) and farmer access to information/ knowledge</i>	X	X	X	X	X	5.46	9.00	11.05	15.21	21.29	62.01	DAES/NARO

ASSP IDEAL BUDGET BY COMMODITY AND THEMATIC AREA												
ASSP undertakings	Y 1	Y 2	Y 3	Y 4	Y 5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Technology uptake grants for farmers, farmer groups and agro-processors</i>	X	X	X	X	X	3.57	5.00	6.50	8.45	11.83	35.35	DAES
<i>Support to harmonize the farmers by UNFFE</i>	X	X	X	X	X	-	5.00	5.00	5.00	5.00	20.00	NAADS
<i>support to youth in agriculture</i>							3.75	3.75	3.75	3.75	15.00	
Sub-Total						41.46	130.25	198.80	235.91	281.57	887.99	
Agricultural Research												
Agricultural technologies, innovations and management practices (TIMPS) generation												
<i>Breeding of climate smart – nutrient enriched farmer preferred varieties and breeds</i>	X	X	X	X	X	4.49	4.54	4.66	4.77	4.94	23.40	NARO
<i>Develop improved higher yielding crop varieties and livestock breeds</i>	X	X	X	X	X	4.71	4.85	4.98	5.13	5.34	25.01	NARO
<i>Nutrient fortified and transgenic crops (Bananas, Maize, Irish potatoes)</i>	X	X	X	X	X	4.14	4.23	4.33	4.42	4.55	21.68	NARO
<i>Characterizing plant and animal disease strains and agents</i>	X	X	X	X	X	3.57	3.62	3.64	3.71	3.79	18.33	NARO
<i>Develop and release disease, pest and drought resistant varieties/breeds</i>	X	X	X	X	X	4.71	4.85	4.98	5.13	5.34	25.01	NARO
<i>Develop non-conventional animal feed</i>	X	X	X	X	X	4.14	4.23	4.33	4.42	4.55	21.68	NARO
<i>Conduct on-station and multi-location evaluation of generated lines</i>	X	X	X	X	X	4.14	4.23	4.33	4.42	4.55	21.68	NARO
<i>On-farm trials and national variety evaluation trials for VCU and DUS</i>	X	X	X	X	X	4.14	4.23	4.33	4.42	4.55	21.68	NARO

ASSP IDEAL BUDGET BY COMMODITY AND THEMATIC AREA												
ASSP undertakings	Y 1	Y 2	Y 3	Y 4	Y 5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
Strengthening the functioning of the National Agricultural Research System (NARS) by identifying and building key human resource capacity to support the sector												
<i>Conduct an HR capacity needs assessment</i>	X					0.50					0.50	NARO
<i>Develop and implement a staff recruitment and retention strategy</i>	X					0.25				0.25	0.50	NARO
<i>Develop and implement a mentoring programme for junior scientists</i>	X	X	X	X	X	1.00	1.00	1.00	1.00	1.00	5.00	NARO
<i>Conduct short and long term training on Adaptive Research for staff</i>	X	X	X	X	X	1.41	3.00	4.00	4.20	4.35	16.96	NARO
<i>Establish an effective staff performance appraisal system</i>	X					0.20					0.20	NARO
<i>Support to NARO scientists</i>		X	X	X	X		5.00	5.00	5.00	5.00	20.00	
Develop and implement a policy and regulatory framework for biotechnology in agriculture.												
<i>Fast tracking the laws and standards of GMOs production and utilization</i>	X	X	X	X	X	0.20	0.40	0.40	0.40	0.40	1.80	NARO
<i>develop and enhance capacity for implementing research guidelines and procedures on biotechnology use and biosafety</i>	X	X	X	X	X	0.20	0.50	0.50	0.50	0.50	2.20	NARO
Develop and promote technologies and protocols for value addition in agriculture and agro processing												
<i>Conducting product development and end user marketability tests to enhance utilization options for a range of strategic and priority commodities</i>	X	X	X	X	X	3.60	3.60	3.60	3.85	3.80	18.44	NARO

ASSP IDEAL BUDGET BY COMMODITY AND THEMATIC AREA												
ASSP undertakings	Y 1	Y 2	Y 3	Y 4	Y 5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Developing and validating technologies and protocols for agro-processing including protocols for enhancing shelf life, uniform ripening, stability</i>	X	X	X	X	X	3.00	3.00	3.00	3.00	3.00	15.00	NARO
<i>Testing and ascertain thresholds on a range of parameters for food safety and quality assurance and validate capacity for compliance</i>	X	X	X	X	X	1.80	1.80	1.80	1.58	1.84	8.83	NARO
<i>Development of processing/packaging tools and equipment</i>	X	X	X	X	X	1.40	5.80	6.00	6.00	6.00	25.20	NARO
Strengthening capacity of NARI institutes involved in input supply												
<i>Enhance Breeder/foundation seed production and supply</i>	X	X	X	X	X	0.07	0.27	0.27	0.27	0.27	1.16	NARO
<i>Strengthen/establish agribusiness incubation service centres</i>	X	X	X	X	X	0.20	4.00	4.00	3.20	22.00	33.40	NARO
Sub-Total						47.89	63.17	65.17	65.40	86.01	327.65	
Water for agricultural production (irrigation, water for livestock, aquaculture).												
Strengthen the legal and institutional framework and capacity for developing water for agricultural production												
<i>development of irrigation master plan, guidelines, action plans, framework and principles for dissemination</i>	X					0.40	0.20				0.60	DAI & WFP
<i>preparation of guidelines for appraisal and design of small-scale farmer-based irrigation schemes</i>	X					0.20	0.20				0.40	DAI & WFP
<i>development of appropriate mechanisms for cost sharing and funding of water for agricultural production-based interventions</i>	X					0.20	0.20				0.40	DAI & WFP

ASSP IDEAL BUDGET BY COMMODITY AND THEMATIC AREA												
ASSP undertakings	Y 1	Y 2	Y 3	Y 4	Y 5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Development of guidelines for a Community Based Management System (CBMS) for operation and maintenance of water for agricultural production facilities and for WUAs</i>	X					0.10	0.10				0.20	DAI & WFP
<i>Institutionalize Water User Associations (WUAs), cooperative societies and other farmer groups in regulation and management of irrigated agriculture</i>		X				0.10	0.10				0.20	DAI & WFP
<i>establish technical support units to LGs in agricultural water management (AWM)</i>		X	X	X	X		0.30	0.50	0.50	0.50	1.80	DAI & WFP
<i>Promote the uptake and use of the adapted small scale irrigation technologies/options</i>		X	X	X	X		0.50	0.50	0.50	0.50	2.00	DAI & WFP
Investing in modern irrigation technologies through construction of large and promotion of small scale irrigation technologies in line with the zoning strategy and development of large and medium water reservoirs.												
<i>Evaluation and rehabilitation of nine (9) existing public irrigation schemes of Atera, Kiige, Labori, Ongom, Olweny and Odina</i>	X	X	X	X	X	1.00	20.00	28.00	30.00	40.00	119.00	DAI & WFP
<i>Construction of Rhino Camp in Arua District, Labwor in Moroto District, Katete in Kanungu District, Biiso in Bullisa District, Pabbo in Amuru District, Namalu, Kibimba-Gomba, Musamya, Torchi in Oyam District among others</i>		X	X	X	X	3.00	30.00	30.00	30.00	65.00	158.00	DAI & WFP
<i>carrying out feasibility studies and design of 3 other irrigation schemes covering an area of 6,900 ha-Acomai irrigation Scheme, Atari Irrigation scheme and Namatala Irrigation Scheme</i>		X	X	X			5.80				5.80	DAI & WFP

ASSP IDEAL BUDGET BY COMMODITY AND THEMATIC AREA												
ASSP undertakings	Y 1	Y 2	Y 3	Y 4	Y 5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Establish 11,000 ha of community-based/strategic medium to large scale schemes at Naigomwa in Iganga District and Igogero in Bugiri District</i>				X	X				11.70	24.00	35.70	DAI & WFP
<i>Promotion of small scale irrigation technologies by establishing at least a demonstration unit per district per year across the country</i>	X	X	X	X	X	0.20	1.00	1.00	1.00	3.00	6.20	DAI & WFP
<i>Adapt and make affordable small scale irrigation technologies/options including garden hose, drip systems</i>	X	X	X	X	X	0.10	1.50	1.50	1.50	3.50	8.10	DAI & WFP
Promote rainwater harvesting and storage at household and farm levels for agriculture.												
<i>Rehabilitation/expansion of 102 public Valley dams</i>	X	X	X	X	X	0.10	1.00	1.00	1.00	2.00	5.10	DAI & WFP
<i>Rehabilitation/expansion of 195 valley tanks</i>	X	X	X	X	X	0.10	0.80	0.74	0.80	0.80	3.24	DAI & WFP
<i>Construction of 1,200 new valley tanks</i>	X	X	X	X	X	0.50	4.00	4.00	4.20	12.00	24.70	DAI & WFP
<i>Establish 4 commercial aquaculture sites of minimum 10 ponds</i>			X	X	X			0.60	1.20	2.40	4.20	DAI & WFP
<i>Establishing of two (2) well-planned Aquaculture Parks (APs) in Mpologoma catchment and Olweny catchment</i>		X					1.70			1.70	3.40	DAI & WFP
<i>Establish four three (3) fish farms each with four (4) ponds in the districts of Mbarara, Gulu and Sironko</i>			X	X	X			1.20	1.20	1.80	4.20	DAI & WFP
<i>Development of two (2) landing sites in Kaliro and Amolatar districts</i>				X	X				1.00	1.31	2.31	DAI & WFP
<i>Develop and Promote Rainwater harvesting technologies and Best Practices for smallholder farmers</i>	X	X	X	X	X	0.10	0.50	0.50	0.60	0.60	2.30	DAI & WFP
Sub-total						6.10	67.90	69.54	85.20	159.11	387.85	

ASSP IDEAL BUDGET BY COMMODITY AND THEMATIC AREA												
ASSP undertakings	Y 1	Y 2	Y 3	Y 4	Y 5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
Agricultural mechanisation												
<i>Promoting acquisition and utilization of agricultural mechanization technologies using a series of Public- Private- Partnership (PPP)</i>	x	x	x	x	x	3.00	19.14	26.00	28.00	34.00	110.14	DAI & WFP
<i>Promote sustainable local manufacture and maintenance of suitable agricultural machinery for farm production and postharvest processing</i>	x	x	x	x	x	0.50	1.08	0.55	0.49	0.60	3.23	DAI & WFP
<i>Formulate and implement incentive frameworks for acquisition and financing of labour saving technologies.</i>	x	x	x	x	x	0.50	0.61	0.55	0.39	0.35	2.40	DAI & WFP
<i>Promoting the strengthening of capacity for technical information acquisition, equipment evaluation and sustainable operation of agricultural machinery</i>	x	x	x	x	x	0.50	0.66	0.38	0.36	0.34	2.24	DAI & WFP
<i>Establish an agricultural mechanization resource centre for training machinery operators, generating technical information, and provision of referral workshop services for testing/ evaluating agricultural machinery.</i>	x	x	x	x	x	1.00	3.89	4.74	4.69	6.00	20.32	DAI & WFP
<i>Strengthen the capacity of technical and vocational institutions for training agricultural mechanics and technicians</i>	x	x	x	x	x	2.17	3.89	4.74	4.69	4.69	20.18	DAI & WFP
<i>Strengthen collaboration with the National Bureau of Standards to eliminate importation and trade of substandard agricultural mechanisation equipments</i>	x	x	x	x	x	0.09	0.79	0.15	0.15	0.15	1.33	DAI & WFP
Sub-Total						7.76	30.06	37.11	38.78	46.14	159.84	
Fertiliser												

ASSP IDEAL BUDGET BY COMMODITY AND THEMATIC AREA												
ASSP undertakings	Y 1	Y 2	Y 3	Y 4	Y 5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
Support to the Fertilizer Market Development Council (FMDC)	X	X	X	X	X	0.841	0.331	0.331	0.331	0.331	2.17	MAAIF
review of the national fertilizer policy and implementing regulations	X	X	X	X	X	0.4	0.3				0.70	MAAIF
Credit support for Bulk Purchase and Risk Management Fund		X	X	X	X		3.3	4.8	5.6255	0.003	13.73	MAAIF
update soil fertility management and fertilizer use recommendations	X	X	X	X	X	0.141	0.3333	0.3065	0.2415	0.0455	1.07	MAAIF
develop soil fertility management and fertilizer use extension materials	X	X	X	X	X	0.122	0.01	0.01	0.01	0.077	0.23	MAAIF
increase number of agro-dealers trained about fertilizer and with enhanced business skills	X	X	X	X	X	0.304	0.304	0.304	0.304	0.304	1.52	MAAIF
Increase number of Technology Transfer Agents (TTAs) with fertilizer knowledge and matching inputs	X	X	X	X	X	0.136	0.136	0.136	0.136	0.136	0.68	MAAIF
Increase number of farmers with fertilizer knowledge and matching inputs	X	X	X	X	X	0.4	0.4	0.4	0.4	0.4	2.00	MAAIF
Crop Production Risk Management	X	X	X	X	X	0.05	0.44	0.86	1.1	0.32	2.77	MAAIF
Capacity Building Project	X	X	X	X	X	1.875	2.445	4.155	2.455	5.855	16.79	MAAIF
Support Physical Infrastructure Project	X	X	X	X	X	0	0	0	5	15	20.00	MAAIF
Development of Domestic Resources for Soil Productivity Enhancement	X	X	X	X	X	0	0	0	20	80	100.00	MAAIF
Provision of fertiliser inputs to farmers	X	X	X	X	X	3.15	3.15	3.15	3.15	3.15	15.75	NAADS
Sub-Total						7.419	11.1493	14.4525	38.753	105.6215	177.3953	
Institutional and enabling environment strengthening												
Institutional Strengthening and Capacity Building												

ASSP IDEAL BUDGET BY COMMODITY AND THEMATIC AREA												
ASSP undertakings	Y 1	Y 2	Y 3	Y 4	Y 5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
Construction of MAAIF headquarters Building in Kampala			X	X	X	1.00	5.00	10.00	17.00	43.30	76.30	MAAIF
Construction of administrative infrastructure for selected district production departments	X	X	X	X	X	0.40	6.00	6.00	6.00	6.00	24.40	MAAIF
Human Resource Development- Training/capacity building	X	X	X	X	X	1.00	2.00	2.00	3.00	3.00	11.00	MAAIF
Strengthening Institutional Linkages and Networking Capacity	X	X	X	X	X	1.00	1.00	1.00	1.00	1.00	5.00	MAAIF
improving access to working facilities, tools and equipment for MAAIF, its Agencies and local governments.	X	X	X	X	X	2.90	3.00	3.90	4.00	4.00	17.80	MAAIF
Sub-Total						6.30	17.00	22.90	31.00	57.30	134.50	
Transform ATIs (Bukalasa College and Fisheries Training Institute), into institutions that are responsive to knowledge and skill market in the extension service.												
Bukalasa Agricultural College												<i>Bukalasa College</i>
Curriculum review	X	X	X	X	X	0.05	0.05	0.20	0.20	0.05	0.55	<i>Bukalasa College</i>
Human resources strengthening	X	X	X	X	X	0.10	0.30	0.50	0.50	0.50	1.90	<i>Bukalasa College</i>
Infrastructural rehabilitation/development	X	X	X	X	X	0.25	1.50	1.50	1.50	1.50	6.25	<i>Bukalasa College</i>

ASSP IDEAL BUDGET BY COMMODITY AND THEMATIC AREA												
ASSP undertakings	Y 1	Y 2	Y 3	Y 4	Y 5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Restructuring and Operationalization</i>	X	X				0.10	0.10	-	-	-	0.20	Bukalasa College
Fisheries Training Institute												<i>Fisheries Training Institute</i>
<i>Curriculum review</i>	X	X	X	X	X	0.05	0.05	0.20	0.20	0.05	0.55	<i>Fisheries Training Institute</i>
<i>Human resources strengthening</i>	X	X	X	X	X	0.10	0.30	0.50	0.50	0.50	1.90	<i>Fisheries Training Institute</i>
<i>Infrastructural rehabilitation/development</i>	X	X	X	X	X	0.25	1.50	1.50	1.50	1.50	6.25	<i>Fisheries Training Institute</i>
<i>Restructuring and Operationalization</i>	X	X				0.10	0.10	-	-	-	0.20	<i>Fisheries Training Institute</i>
Sub-Total						1.00	3.90	4.40	4.40	4.10	17.80	
Support to the National Farmers' Leadership Centre (NFLC)												
<i>Infrastructure Development and Rehabilitation</i>	X	X	X	X	X	0.5	0.5	0.5	0.6	0.5	2.6	NFLC
<i>Equipment and Tooling</i>	X	X	X	X	X	0.2	0.3	0.32	0.4	0.5	1.72	NFLC
<i>Training, Administration and Services</i>	X	X	X	X	X	0.1	0.2	0.3	0.5	0.5	1.6	NFLC
Sub-Total						0.8	1	1.12	1.5	1.5	5.92	
Support to District Agriculture Training and Information Centres (DATICS)												MAAIF

ASSP IDEAL BUDGET BY COMMODITY AND THEMATIC AREA												
ASSP undertakings	Y 1	Y 2	Y 3	Y 4	Y 5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Review and development of curriculum</i>	X	X	X	X	X	0.42	0.42	1.00	1.00	1.00	3.84	MAAIF
<i>Infrastructure Development</i>	X	X	X	X	X		4.00	4.00	4.00	4.00	16.00	MAAIF
Sub-Total						0.42	4.42	5.00	5.00	5.00	19.84	
Support to Agriculture Sector Policy and Planning												
<i>Capacity building for MAAIF staff in Policy and Planning</i>	X	X	X	X	X	0.40	0.60	0.60	0.60	0.60	2.80	MAAIF/APD
<i>Production of bankable project proposals to support ASSP implementation</i>	X	X	X	X	X	0.30	0.40	0.40	0.40	0.40	1.90	MAAIF/APD
<i>Undertake budget execution assessment exercises</i>	X	X	X	X	X	1.00	1.10	1.10	1.10	1.10	5.40	MAAIF/APD
<i>Link ASSP implementation with regional agriculture policy undertakings (EAC, COMESA, CADAP, etc)</i>	X	X	X	X	X	0.30	0.40	0.40	0.40	0.40	1.90	MAAIF/APD
<i>Cordinate production of Agricultural Sector mandatory policy/planning/budget papers</i>	X	X	X	X	X	0.50	0.50	0.50	0.50	0.50	2.50	MAAIF/APD
Sub-Total						2.50	3.00	3.00	3.00	3.00	14.50	
Agricultural Statistics, ICT and Risk Management												
<i>Strengthening the Coordination and Management of agriculture sector statistical system</i>	X	X	X	X	X	0.30	0.50	0.60	0.70	0.90	3.00	MAAIF/Statistics Division
<i>Improve usability and dissemination of agriculture statistics</i>	X	X	X	X	X	0.36	0.32	0.16	0.16	0.28	1.28	MAAIF/Statistics Division

ASSP IDEAL BUDGET BY COMMODITY AND THEMATIC AREA												
ASSP undertakings	Y 1	Y 2	Y 3	Y 4	Y 5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Mainstreaming Quality Assurance in Agriculture statistical production</i>	X	X	X	X	X	0.37	-	0.11	0.26	0.10	0.84	<i>MAAIF/Statistics Division</i>
<i>Strengthening Human Resource and Management</i>	X	X	X	X	X	0.38	0.36	0.21	0.24	0.11	1.31	<i>MAAIF/Statistics Division</i>
<i>Strengthening production and Management of Agriculture statistics</i>	X	X	X	X	X	0.85	1.50	2.30	2.30	3.00	9.95	<i>MAAIF/Statistics Division</i>
<i>ICT and Risk Management</i>	X	X	X	X	X	0.15	0.50	0.70	0.70	1.00	3.05	
Sub-Total						2.41	3.18	4.08	4.37	5.39	19.43	
Strengthening and improve the Sector M&E systems												
<i>Production of quality monitoring and evaluation data and information on ASSP implementation</i>	X	X	X	X	X	2.28	1.87	2.42	3.29	3.27	13.13	<i>MAAIF/APD</i>
<i>Strengthening Institutional and Organizational Capacity for M&E</i>	X	X	X	X	X	0.83	1.13	0.60	0.61	0.63	3.80	<i>MAAIF/APD</i>
Sub-Total						3.11	3.00	3.02	3.90	3.90	16.92	
Implementing the Agricultural Sector Communication Strategy (ASCS)												<i>MAAIF/Comm. & Info division(C &ID)</i>
<i>Establishing a national agricultural information and communication system</i>	X	X	X	X	X	0.08	0.06	0.04	0.04	0.08	0.30	<i>MAAIF/C&ID</i>

ASSP IDEAL BUDGET BY COMMODITY AND THEMATIC AREA												
ASSP undertakings	Y 1	Y 2	Y 3	Y 4	Y 5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Strengthening the ASCS framework</i>	X	X	X	X	X	0.19	0.39	0.40	0.19	0.18	1.34	MAAIF/C&ID
<i>Create an effective and efficient platform for information and knowledge management</i>	X	X	X	X	X	0.02	0.09	0.07	0.06	0.04	0.28	MAAIF/C&ID
<i>Creating an enabling environment for communication</i>	X	X	X	X	X	0.10	0.13	0.16	0.16	0.11	0.66	MAAIF/C&ID
<i>Support Innovation in Agro-Communication across the Agro-Value-Chain</i>	X	X	X	X	X	0.17	0.25	0.20	0.15	0.15	0.92	MAAIF/C&ID
Sub-Total						0.56	0.92	0.87	0.60	0.56	3.50	
Improve the capacity for quality assurance, regulation, food and safety standards for outputs and products across crops, livestock and fisheries sub-sectors.												
<i>Enact new laws and or review existing laws, regulations and policies to be consistent with changes in technology, regional integration commitments and other global/regional commitments in the crops, livestock and fisheries sub-sectors.</i>	X	X	X	X	X	0.20	0.20	0.20	0.20	0.20	1.00	MAAIF
<i>Undertake market surveillance and strengthen enforce capacity of all existing laws, regulations, standards and guidelines along the entire value chain.</i>	X	X	X	X	X	2.00	2.00	3.00	4.00	6.00	17.00	MAAIF
<i>Create awareness among farmers, traders, processors and agro exporters about quality standards and market requirements</i>	X	X	X	X	X	1.00	2.00	2.00	4.00	6.00	15.00	MAAIF
<i>Train food inspectors in legislation, policy, modern inspection systems and quality management systems</i>	X	X	X	X	X	1.00	1.70	2.30	3.12	4.00	12.12	MAAIF

ASSP IDEAL BUDGET BY COMMODITY AND THEMATIC AREA												
ASSP undertakings	Y 1	Y 2	Y 3	Y 4	Y 5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Strengthen national capacity for quality assurance, regulation and safety standards to promote increased trade at all levels.</i>	X	X	X	X	X	1.00	1.00	1.00	3.00	3.90	9.90	MAAIF
Upscaling use of improved seeds and planting material												
<i>Extend the dealer network/Support to UNADA</i>	X	X	X	X	X	0.05	0.25	0.25	0.25	0.25	1.04	MAAIF
<i>Improve farmer knowledge of new varieties</i>	X	X	X	X	X	1.03	1.03	1.03	1.03	1.03	5.16	MAAIF
<i>Support to seed companies to test and promote new varieties and cultivars</i>	X	X	X	X	X	0.34	0.34	0.34	0.84	0.84	2.70	MAAIF
Strengthen the national certification and regulation system to guarantee the quality of seeds and other agro-inputs.	X	X	X	X	X	5.00	9.00	12.00	12.00	14.00	52.00	MAAIF
Strengthening and rationalizing the Department of Regulation and Certification's seed services												
<i>Improve phytosanitary control at entry points</i>	X	X	X	X	X	0.74	1.04	0.24	0.24	0.24	2.50	DCI & C
<i>Strengthen Namelere laboratory</i>	X	X		X		0.80	0.50	-	0.30	-	1.60	NARO/DCI & C
<i>Transport to improve communication and service delivery</i>	X					0.44	-	-	-	-	0.44	DCI & C
<i>Improve data and other information on the seed industry to support better policy and program plans, both by government and by the private sector</i>	X	X	X	X	X	0.20	0.20	0.20	0.20	0.20	1.00	DCI & C
<i>Promote seed quality insurance</i>	X	X	X	X	X	2.65	2.02	2.02	1.22	1.22	9.13	DCI & C
<i>Achieve ISTA accreditation and maintain OECD Seed Schemes accreditation</i>	X	X	X	X	X	0.10	0.10	0.10	0.10	0.10	0.50	DCI & C
<i>Implement PVP</i>	X	X	X	X	X	0.05	0.05	0.05	0.05	0.05	0.25	DCI & C

ASSP IDEAL BUDGET BY COMMODITY AND THEMATIC AREA												
ASSP undertakings	Y 1	Y 2	Y 3	Y 4	Y 5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
Strengthen policies, laws and regulations for agricultural inputs including seeds and planting materials supply and use												
<i>Operationalise and implement PVP Act</i>		X					0.25				0.25	MAAIF
<i>Establish a National Seed Sector Database</i>		X					0.50				0.50	MAAIF
<i>Conduct regular market severance of input dealers (wholesale and retails)</i>	X	X	X	X	X	2.00	5.00	5.00	7.00	10.00	29.00	MAAIF
Enhancing the capacity of the private seed industry to produce pre-basic seed	X	X	X	X	X	2.88	1.01	1.46	1.01	0.41	6.77	MAAIF
Creating an Enabling Policy and Regulatory Environment for Livestock disease control												
<i>Review three (3) outdated legislations</i>	X					0.60	0.20	0.20	0.20	0.20	1.40	MAAIF
<i>Enact eight (8) Draft bills,</i>	X	X				0.75	0.75	0.20	0.20	0.20	2.10	MAAIF
<i>Formulate twelve (12) regulations</i>		X					0.12				0.12	MAAIF
<i>Approve & print developed Standards</i>	X		X			0.02		0.02			0.03	MAAIF
<i>Review & approve three (3) policies</i>	X					0.15					0.15	MAAIF
<i>Develop & disseminated 10 Strategies</i>	X	X				0.10	0.04				0.14	MAAIF
<i>Operationalise approved policies</i>	X	X	X	X	X	0.51	0.56	0.61	0.67	0.74	3.08	MAAIF
<i>Equip & support established animal law enforcement Unit</i>	X	X	X	X	X	0.12	0.12	0.12	0.12	0.12	0.60	MAAIF
<i>Equip & finance work of UVB</i>	X	X	X	X	X	0.54	0.44	0.44	0.44	0.44	2.31	MAAIF

ASSP IDEAL BUDGET BY COMMODITY AND THEMATIC AREA												
ASSP undertakings	Y 1	Y 2	Y 3	Y 4	Y 5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Support continuous professional training</i>	X	X	X	X	X	0.03	0.03	0.03	0.03	0.03	0.15	MAAIF
Sub-total						24.29	30.45	32.81	40.22	50.17	177.94	
Crop Pests and Disease Control												
<i>Crop pests and disease control regulatory strengthening</i>	X	X	X	X	X	1.50	1.50	1.50	1.50	1.50	7.50	MAAIF
<i>Conduct early detection and control of crop pests, weeds and diseases</i>	X	X	X	X	X	4.00	4.40	4.84	5.32	5.86	24.42	MAAIF
<i>Crop pests and disease control infrastructure</i>	X	X	X	X	X	4.00	4.00	4.00	4.00	6.00	22.00	MAAIF
Sub-total	X	X	X	X	X	9.50	9.90	10.34	10.82	13.36	53.92	
Mainstream Cross-cutting Issues of Gender, Youth, HIV/AIDS, Environment and Climate Change, food and nutritional security												
promote the use of gender analysis and gender-based budgeting in all community-based development programmes	X	X	X	X	X	1.10	1.10	1.60	1.60	1.60	7.00	MAAIF/APD
Mainstream adaptation of agricultural technologies and practices to climate change in all sector programmes-SLM	X	X	X	X	X	1.50	2.00	5.00	3.90	5.30	17.70	MAAIF
Implement HIV/AIDS policies and strategies- in the Agriculture Sector including local governments and farming communities	X	X	X	X	X	1.00	1.00	1.00	1.00	1.00	5.00	MAAIF
Improve Food and Nutrition Security through Enhance consumption of diverse diets at household level											-	
<i>promote awareness on food availability across Agricultural Zones</i>	X	X	X	X	X	0.50	2.00	2.00	2.00	2.00	8.50	MAAIF

ASSP IDEAL BUDGET BY COMMODITY AND THEMATIC AREA												
ASSP undertakings	Y 1	Y 2	Y 3	Y 4	Y 5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>generate and promote nutrient bio-fortified varieties across the priority commodities</i>	X	X	X	X	X	0.10	0.40	0.40	0.40	0.40	1.70	MAAIF
<i>Develop early warning systems to prevent and mitigate shocks affecting nutrition and food security</i>	X	X	X	X	X	1.00	2.00	2.00	2.00	6.00	13.00	MAAIF
<i>institutional support to distribution of seed planting and stocking material - OWC</i>							20.00	20.00	20.00	20.00	80.00	NAADS
<i>institutional support to distribution of seed planting and stocking material - NAADS SEC</i>							10.00	10.00	10.00	10.00	40.00	NAADS
Sub-Total						5.20	38.50	42.00	40.90	46.30	172.90	
Agricultural Markets and Value Addition												
Promote private sector investment in value addition of the 12 prioritised commodities through PPP	X	X	X	X	X	1.00	5.00	10.00	15.00	15.00	46.00	MAAIF
Build capacities of farmers, traders and processors in quality standards and market requirements												
Strengthen higher level farmer organization for collective marketing, bulking, quality and standards improvement	X	X	X	X	X	2.00	3.00	4.00	5.20	7.12	21.32	MAAIF
Promote appropriate technologies and practices for minimizing post harvest losses along the entire commodity value chain.												
<i>Develop and adapt appropriate technologies and practices for postharvest handling along the value chain of all priority commodities</i>	X	X	X	X	X	0.40	2.40	2.80	2.80	3.20	11.60	MAAIF/NAR O
<i>Build Capacity of Value chain actors on best post harvest handling practices for each priority commodity</i>	X	X	X	X	X	0.30	1.00	4.00	6.00	6.00	17.30	MAAIF/NAR O

ASSP IDEAL BUDGET BY COMMODITY AND THEMATIC AREA												
ASSP undertakings	Y 1	Y 2	Y 3	Y 4	Y 5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Provide farmers/ groups assorted SME processing demo/equipment</i>	X	X	X	X	X	1.00	1.00	1.40	1.96	2.74	8.10	MAAIF/NAR O
<i>Develop and improve food handling, marketing and distribution systems and linkages to local and export markets.</i>	X	X	X	X	X	0.40	3.60	3.60	4.00	8.00	19.60	MAAIF/NAR O
Promote Commodity/farm based storage and agro processing, as a means to increasing access to domestic and regional market, through demonstrations and PPPs.												
<i>Innovate and adapt affordable on-farm storage solutions for the priority and strategic commodities</i>	X	X	X	X	X	0.50	0.80	0.80	0.80	0.80	3.70	MAAIF
<i>Facilitate private sector uptake, development, marketing and distribution of on farm storage solutions to smallholder farmers including developing a cost effective sales distribution system</i>	X	X	X	X	X	0.30	1.05	1.88	1.50	1.50	6.23	MAAIF
<i>Enhance efficiency (higher output at reduced cost) at all value chain nodes through trainings and demonstration sites of appropriate improved TIMPS</i>	X	X	X	X	X	0.50	2.00	2.00	2.00	2.00	8.50	MAAIF
<i>Product development to meet end-user market requirements e.g. quality & safety standards, traceability, packaging, certification for niche markets, bar coding for supermarket outlets, etc</i>	X	X	X	X	X	1.00	2.00	2.00	2.00	2.00	9.00	MAAIF
<i>Knowledge and skills development to enhance capacity for engaging in high quality export markets e.g. for horticulture</i>	X	X	X	X	X	0.50	1.00	1.00	1.00	1.00	4.50	MAAIF
<i>Promote cottage processing industries through incubation of new processing technologies for both food and non-food products</i>	X	X	X	X	X	1.00	2.00	2.00	2.00	2.00	9.00	MAAIF

ASSP IDEAL BUDGET BY COMMODITY AND THEMATIC AREA												
ASSP undertakings	Y 1	Y 2	Y 3	Y 4	Y 5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Strengthen producer-buyer/aggregator contractual relationships for the strategic/priority commodities</i>	X	X	X	X	X	0.30	0.30	0.30	0.30	0.30	1.50	MAAIF
<i>Identify and strengthen producer groups adding value to agricultural commodities through training and exposure to technologies befitting their activities.</i>	X	X	X	X	X	0.20	0.30	0.50	0.50	0.50	2.00	MAAIF
<i>Promote structured trading systems by linking organized collective marketing farmer groups to large buyers and storage handlers/warehouse operators</i>	X	X	X	X	X	0.20	0.30	0.50	0.50	0.50	2.00	MAAIF
Development, maintenance and improvement of physical agricultural marketing infrastructure												
<i>Cold Chain storage Infrastructure</i>	X	X	X	X	X	0.40	10.00	10.00	25.00	25.00	70.40	MAAIF
<i>Physical agricultural commodity markets</i>	X	X	X	X	X	0.40	10.00	10.00	25.00	25.00	70.40	MAAIF
<i>Community based grain storage facilities</i>	X	X	X	X	X	0.40	10.00	10.00	25.00	25.00	70.40	MAAIF
Sub-Total						10.80	55.75	66.78	120.56	127.67	381.56	
Other production and productivity enhancing measures												
<i>Sustainable Land Management/Promote adaptation of climate change resilient agricultural production systems, technologies and practices</i>	X	X	X	X	X	1.00	5.00	5.00	7.00	9.00	27.00	MAAIF
<i>Increase access to agricultural finance services by implementing Agricultural commodity based Development Creditv facilities</i>	X	X	X	X	X		18.60	18.60	28.20	36.43	101.83	MAAIF

ASSP IDEAL BUDGET BY COMMODITY AND THEMATIC AREA												
ASSP undertakings	Y 1	Y 2	Y 3	Y 4	Y 5	Year 1	Year 2	Year 3	Year 4	Year 5	Total	Lead Implementer
<i>Promote commercialisation of agriculture particularly amongst small holder farmers</i>	X	X	X	X	X	0.50	2.00	2.00	5.00	5.00	14.50	MAAIF
<i>Promote time and labour saving technologies targeting women farmers</i>	X	X	X	X	X	0.40	0.40	0.40	0.40	0.40	2.00	MAAIF
<i>Operationalize the commercialisation fund</i>	X	X	X	X	X	3.00	7.00	10.00	10.00	10.00	40.00	NAADS
<i>Strengthen linkages between farmers and production support services (including financial services, capacity development and marketing) in partnership with Ministry of Finance and other stakeholders</i>	X	X	X	X	X	0.40	0.40	0.40	0.40	0.79	2.39	MAAIF
Sub-Total						5.30	33.40	36.40	51.00	61.62	187.72	