

APPENDIX 3

THE MINISTER OF AGRICULTURE'S DECREE

NO.: 460/Kpts/Org/XI/1971

CONCERNING

THE IMPLEMENTATION OF THE PRESIDENTIAL  
DECREE NUMBER 72 OR THE YEAR 1971

THE MINISTER OF AGRICULTURE,

CONSIDERING : That within the framework of implementing the provisions decreed under the Presidential Decision Number 72 of the year 1971, it is necessary to prescribe regulations for the guidance, the control of seed marketing and certification of seed.

IN VIEW OF : 1. The Presidential Decision Number 183 of the year 1968;  
2. The Presidential Decision Number 184 of the year 1968;  
3. The Presidential Decision Number 27 of the year 1971;  
4. The Presidential Decision Number 72 of the year 1971;  
5. The Letter of Decision of the Minister of Agriculture Number 284/Kpts/Org/8/1969;  
6. The Letter of Decision of the Minister of Agriculture Number 126/Kpts/Org/OP/4/1969;  
7. The Letter of Decision of the Minister of Agriculture Number 174/Kpts/org/4/1971.

HEREBY DECIDES

TO STIPULATE : THE FOLLOWING PROVISIONS ON THE GUIDANCE, REGULATION AND CONTROL OF SEED MARKETING AND THE CERTIFICATION OF SEED.

CHAPTER I

GENERAL TERMS AND DEFINITIONS

Article 1

In this letter of Decision and annexs, unless otherwise

specified, the meaning of terms used shall be as follows :

- a. Hybrid means the first generation of seed produced by controlling the pollination and combination.
- b. "Seed Producer" means any person, or corporation engaged in the production of seed for marketing and sowing purposes.
- c. "Seed merchant" means any person, or corporation engaged in the marketing of seed.
- d. "Regulated Seed" means the kind and/or varieties or crops, whose seed are declared as subject to marketing regulation and control pursuant to the provisions of this Decision.
- e. "Origin" means the place, where the seed were produced.
- f. "Treated" means that the seed have been given an application of substance or subjected to a process designed to destroy or repel certain disease organisms, insects, or other pests attacking or infesting seed or seedlings grown therefrom to improve their planting value or to serve any other purpose.
- g. "Records" means information which related to the origin, germination, varietal identity and purity of each lot of regulated seed sold, offered for sale or exposed for sale, and includes seed sold, offered for sale testing reports. Declarations or records pertaining to the seed, labels, sales, cleaning, blending, treating, and storage, and a representative sample of the seed.
- h. "Minimum Standards" for seed marketing means the minimum standards of seed quality adopted for regulated seed pursuant to the provisions of this Decision.
- i. "Breeder Seed", "Foundation Seed", "Stock Seed", and Extension Seed are as defined in Annex 3 to this Decision.

- j. "Processing" of seed means all activities including drying, cleaning, treating and packaging and other operations wherein seed are prepared for marketing.
- k. "Pure Seed" means all seeds of the kind and variety or strain under consideration, whether shriveled, creaked or otherwise injured, and pieces of broken seeds large than one-half of the original size.
- l. "Other cropsed" means the seed of all kinds or varieties of seed, not of the kind or variety declared on the label or tag.
- m. "Mixed seed" means seeds consisting or more than one kind or variety, each in excess of 5 percent of the whole.
- n. "Inert matter" means all matter not seeds, and includes, among others, broken seeds, steril florets, chaff, stones, etc.
- o. "Weed Seed" means seed of all plants generally recognized as weeds.
- p. "Germination" means the percentage of seeds capable of producing normal seedlings under ordinarily favorable conditions.
- q. "Hard seed" means the percentage of seeds which, because of hardness or impermeability, do not absorb moisture or germinate under prescribed tests, but remain during the period prescribed for germination of the kind of seed concerned.
- r. "Regulated Province/Subdivision" means Province or sub division thereof in which control and regulation of seed marketing will be exercised.

## Article 2

The Minister after consultation with the National Seed

Board will specify the kinds and/or varieties of regulated and the regulated provinces or subdivision, thereof.

CHAPTER II  
GUIDANCE, CONTROL AND REGULATION  
OF SEED MARKETING.

Article 3

The Minister will carry out the guidance related to seed program, and activities related there to, especial on research extension, production, distribution and control.

Article 4

1. Every Seed Merchant shall be registered with the Seed Control and Certification Section.
2. Registration specified under Article 4, paragraph (1) consist of a listing of the name and adress of the seed merchant and the regulated seed merchandized.

Article 5

1. Each container of regulated seed to be merchandized offered for sale shall bear thereof or have attached there to in a conspicuous place a plainly written or printed label or tag in Indonesia language, giving the following informations:
  - a. The commonly accepted name of kind and variety of the seed.
  - b. Lot number or indentification mark;
  - c. Origin (the place, where produced);
  - d. Percentage (%) by weight of seed of the labelled kind and variety present in the lot this portoin shall be known as the pure seed;

- e. Percentage (%) by weight of the seed of other varieties and/or kinds in the lot;
  - f. Percentage (%) by weight of seeds of weeds present in the lot;
  - g. Percentage (%) by weight of inert matter present in the lot;
  - h. Percentage (%) of germination by number if present;
  - i. The calendar month and year in which the test was completed to determine germination and/or hard seed percentage (%);
  - j. The name and address of the person, or corporation who labelled or sells, offers or exposes for sale such seed.
2. For seed treated with fungicides, insecticides, or other chemicals needs :
- a. A statement on the seed label or separate label that the seed have been treated;
  - b. The commonly accepted name of the substance used in such treatment;
  - c. A clean caution statement if the substance used in treatment in the amount residual on the seed is harmful to human or other vertebrate animals; In addition, the accepted and easily understood symbol for a poisonous substance will be printed on the tag if the substance is very toxic, along with the words "DO NOT USE FOR FOOD OR FEED".
3. The seed label will be in the general form as indicated in the rules and regulations promulgated by the seed control and certification section.

Article 6

Each seed merchant handling regulated seed will maintain for 1(one) year a complete records of each seed lot handled and or merchandized, such records to include seed, testing report, declarations on information pertaining to the seed, labels and records of sale, cleaning, blending, treating, and storage and a representative sample of the seed.

Article 7

1. It shall be unlawful for any seed merchant to merchandized seed of any regulated kind and/or variety in regulated Provinces or subdivisions, thereof if.
  - a. The seed merchant has not been registered in accordance with article 4;
  - b. The test to determine the percenttage of germination and/or hard seeds required under Article 5 (1) a and Annex I of this Decree have not been completed;
  - c. The seed are not labeled in accordance with provision of Article 5;
  - d. Having misleading labeling;
  - e. Misleading advertising;
  - f. It does not conform, to the provision defined in Article 1.k. of the Presidential Decision Number 72 year 1971;
  - g. The quality does not meet the minimum standards prescribed in Annex I of this Decree.
2. It shall be unlawful for any person within the regulated Province or subdivision thereof :
  - a. To detack, alter, or destory any label provided for;
  - b. To disseminate false advertisements;

- b. To sell any seed labeled as "Foundation Seed", or "Extension Seed" unless it has been produced in accordance with the procedures and in compliance with the existing rules and regulations;
- d. To sell seed represented as hybrid unless such seed conforms to the definition of a hybrid as defined in article 1.a of this Decree;
- e. To hinder or obstruct the authorized agent of the seed Control and Certification Section in the performance of his duties to enforce the provisions of the existing rules and regulations;
- f. To fail to comply with a "stop sale" order for seed.

#### Article 8

Seed of regulated kinds and varieties shall be exempt from the provisions of this Decree, when :

- a. Produced by a farmer, or several farmers of a village for marketing and sale within the village;
- b. Marketed or sold for purposes other than seeding or sowing;
- c. Transported to or at far processing.

#### Article 9

1. For the purpose of carrying out the control of seed marketing and the certification of seed, the Minister or his designated staff will establish a seed testing laboratory in the central office in the province as an apparatus of the Seed Control and Certification Section.
2. The information required for labeling of seed mentioned in this Decree must be determined by testing of seed that will be based upon seed test conducted at the seed laboratory above.

Article 10

1. The principal penalties for violations of the provisions of this Decree, article 4,5,6,7, and 9, shall be "Stop sale" orders which will prohibit sale of the lot of seed in violation for seeding or sowing purpose.
2. In the case of violations of stop sale orders by the any person, corporation, or seed merchant, the registration, required under Article 4 for marketing of regulated seed may be cancelled.

CHAPTER III  
CERTIFICATION OF SEED

Article 11

1. The purpose of seed certification shall be to maintain and make available to the farmers, seed of superior crop varieties so multiplied, produced and distributed as to maintain a high degree of varietal purity and quality.
2. Certification of seed shall be service to seed producer/growers and dealers.
3. Certification of seed shall be confined to superior varieties of crops listed on the list of varieties eligible for certification maintained by the National Seed Board and provinces in the country or subdivisions thereof, in which the certification service is to be offered.

Article 12

1. The Seed Control and certification section established pursuant to the terms and provisions of the Letter of Decision of the Minister of Agriculture Number 174/Kpts/4/1971 will be the official Seed certifying Agency on Indonesia, and no other agency, person, institution, or corporation in Indonesia will be permitted to certify seed.

2. Considering the existing rules and regulations, seed certification may be recognized for imported seed.

#### Article 13

The rules, regulations of standards and procedures for certification of seed are as specified in Annex II/of this letter of Decision.

#### Article 14

1. Certification of seed shall not be compulsory for seed processors or other persons who handle and market seed.
2. Seed producers or seed merchants may apply to the seed control and certification section for seed certification in accordance with the rules and regulation, specified by the seed control and Certification Section.
3. The certification of any lot of seed may be revoked if the Head of the Seed Control and certification section or his agents later determine that essential facts were misrepresented, or procedures were not complied with, during the certification process.
4. Certification of seed of any class will conform to the provisions established in chapter II, Article 3,4,5,6,7,8 and 9 of this Decision.

#### CHAPTER IV TRANSITIONAL PROVISION AND EFFECTIVE DATE

#### Article 16

The seed Control and certification Section is hereby authorized to carry out the implementation and enforcement of the provisions of this Decree.

Article 17

1. Detail duties of the Seed Control and Certification Section will be specified in Annex IV of this Decisions.
2. Detail duties mentioned in Paragraph (1) of this Article are subject to amendments by the Director General of Agriculture and as approved by the Minister.

Article 18

Enforcement of standards for imported seed will be the responsibility the Seed Control and Certification Section of the Directorate General of Agriculture.

Article 19

1. In casee of disputes arising the implementation of any of the provision contained heroin, the Minister has the right to decide, which is abiding.
2. All matters not sufficiently covered in this Letter of Decision shall be as interpreted and determined afterrawds.

Article 20

This Letter of Decision is in force as from the date of anactment.

ANNEX I

TO LETTER OF DECISION BY MINISTER OF AGRICULTURE  
NUMBER : 460/Kpts/Org/XI/1971

The regulation and procedures for the control and the marketing of seed as may be designated under article 7 Chapter II letter of Decision of The Minister of Agriculture Number : 460/Kpts/Org/XI/1971 are as follows :

1. Sampling and Analyzing Seed.

The methods of taking, handling, analyzing and testing samples of seed and the tolerance and methods of determination shall be arranged further by the Seed Control and Certification Section and shall be no less stringent than those presently in use by the International Seed Testing Association ( I.S.T.A. )

2. Germination Test Date.

No regulated seed shall be sold, exposed for sale or marketed when a period of more than six (6) calendar months has elapsed between the germination test date and the time the seed is offered or exposed for sale; as for vegetables and period is 9 ( nine ) months.

3. Minimum Standards for Regulation Seed.

No regulated seed shall be sold, exposed for sale or marketed that is lower in quality than the standards stipulated below:

a. Paddy	minimum % pure seed	95 %
	minimum % germination	60 %
	maximum % weed seed	2 %
b. Corn	minimum % pure seed	95 %
	minimum % germination	60 %
	maximum % weed seed	2 %
c. Horticultura Crops	minimum % pure seed	98 %
	minimum % germination	75 %
	maximum % weed seed	1 %

4. Identification and size of samples.

Seed samples submitted to the Seed Testing laboratory shall be of at least the following size :

a. Paddy	1000 gram
b. Corn	1500 gram
c. Peanut	1000 gram
d. Soybean	1000 gram
e. Mungbean	1000 gram

5. Fees for Testing

Seed samples submitted to the Seed Testing laboratory exclusive of samples taken by inspections in enforcement of seed marketing regulations shall be assed a fee for testing.

Enacted in : J a k a r t a

D a t e : November 2, 1971

MINISTER OF AGRICULTURE,

(Prof.Dr.Ir.Tojib Hadiwidjaja)

ANNEX II

TO LETTER OF DECISION BY MINISTER OF AGRICULTURE

NUMBER : 460/Kpts/Org/XI/1971

The Kind and/or varieties of seed regulated and in the Provinces specified are designated as follows :

Kind : Paddy

Varieties : PB-5, C-4-63, Pelita I/1, and Pelita I/2.

Areas : Provinces of West Java, Central Java, Java, D.K.I. Jakarta and D.I. Yogyakarta.-

Jakarta, November 2, 1971

MINISTER OF AGRICULTURE,

( Prof.Dr.Ir.Tojib Hadiwidjaja ).

No. Varieties	Y E A R																			
	1975	1976	1977	1978	1979	1980	1981	1982	1983	1984	1985	1986	1987	1988						
	Area (Ha)	Area (Ha)																		
<b>1. New High Yielding Variety :</b>																				
- PB 5	616,100	8.7	724,207	9.9	267,491	3.5	161,195	1.9	122,426	1.5	72,760	0.9	48,176	0.6	40,952	0.5	35,701	0.4	19,047	0.3
- PB 8	68,265	0.9	40,340	0.5	31,263	0.4	28,594	0.4	8,543	0.1	8,727	0.1	3,229	0.1	7,031	0.1	4,871	0.1	864	0.0
- Si Ampat	532,465	7.5	371,895	5.2	329,715	4.3	268,423	3.3	105,097	1.3	158,308	1.9	79,626	0.8	57,191	0.7	52,829	0.6	28,054	0.5
- Pelita I/1	1,221,849	17.1	939,716	12.9	558,582	7.3	441,187	5.4	236,375	2.9	263,131	3.1	112,618	1.3	80,269	1.0	78,464	0.9	28,645	0.5
- Pelita I/2	338,147	4.8	151,497	2.1	157,992	2.1	151,988	1.8	85,350	1.1	76,594	0.9	65,319	0.8	41,290	0.5	34,388	0.4	23,885	0.4
- Adil	-	-	-	-	3,550	0.0	6,703	0.1	5,679	0.1	12,272	0.2	12,036	0.1	9,821	0.1	11,937	0.1	21,374	0.4
- Makmur	-	-	-	-	656	0.0	2,275	0.0	1,456	0.0	3,912	0.0	1,471	0.0	2,474	0.0	10,556	0.1	6,663	0.1
- Genar	-	-	-	-	463	0.0	1,653	0.0	6,161	0.1	1,836	0.0	2,018	0.0	2,476	0.0	1,093	0.0	764	0.0
- Gati	-	-	-	-	13	0.0	23,402	0.3	257	0.0	53	0.0	317	0.0	114	0.0	189	0.0	52	0.0
- Gata	-	-	-	-	532	0.0	496	0.0	106	0.0	1,006	0.0	45	0.0	618	0.0	1,028	0.0	478	0.0
<b>Total</b>	<b>2,775,832</b>	<b>39.0</b>	<b>2,230,655</b>	<b>30.7</b>	<b>1,353,257</b>	<b>17.8</b>	<b>1,086,317</b>	<b>13.3</b>	<b>572,450</b>	<b>7.2</b>	<b>604,593</b>	<b>7.2</b>	<b>322,956</b>	<b>3.7</b>	<b>252,239</b>	<b>3.3</b>	<b>231,064</b>	<b>2.8</b>	<b>129,826</b>	<b>2.4</b>
<b>2. BPM Resistance High Yielding Variety :</b>																				
- PB20	163,185	2.4	113,592	1.6	107,059	1.4	30,207	0.4	15,608	0.2	14,453	0.2	3,312	0.0	1,986	0.0	3,796	0.0	906	0.0
- PD24	623,862	8.8	940,588	12.9	562,878	7.4	267,468	3.3	87,568	1.1	40,776	0.5	12,255	0.1	14,702	0.2	28,126	0.3	1,966	0.0
- PB28	26,770	0.4	210,466	2.9	183,865	2.4	101,013	1.2	30,750	0.4	24,060	0.3	10,625	0.1	8,570	0.1	16,033	0.2	8,214	0.2
- PB30	53,132	0.7	495,259	6.8	678,054	8.9	324,643	3.9	86,423	1.1	45,557	0.5	11,184	0.1	10,222	0.1	12,218	0.1	1,957	0.0
- PB34	8,211	0.1	285,219	3.9	162,994	2.2	77,393	0.9	26,974	0.3	17,903	0.2	59,413	0.6	40,063	0.5	9,802	0.1	2,835	0.0
- PB32	681	0.0	57,902	0.8	546,765	7.2	473,774	5.8	478,115	6.0	355,050	4.2	177,894	2.1	104,429	1.4	127,146	1.5	37,563	0.7
- Asahan	-	-	-	-	820	0.0	35,518	0.4	36,855	0.4	30,159	0.4	26,104	0.3	12,428	0.2	7,871	0.1	6,337	0.1
- Brantes	-	-	-	-	23	0.0	10,076	0.1	9,232	0.1	16,099	0.2	5,599	0.1	4,703	0.1	6,793	0.1	1,455	0.0
- Citaram	-	-	-	-	371	0.0	56,986	0.7	145,533	1.8	75,854	0.9	47,092	0.5	37,176	0.5	28,292	0.3	7,914	0.1
- Serayu	-	-	-	-	150	0.0	10,073	0.1	24,240	0.3	28,873	0.3	17,435	0.2	14,918	0.2	12,060	0.1	12,735	0.2
- PB36	-	-	19,119	0.3	908,656	11.9	1,433,405	17.5	2,933,041	37.0	3,099,955	36.0	2,902,440	33.7	2,575,418	33.6	2,747,466	33.3	1,884,169	24.5
- PODE	-	-	320	0.0	121,516	1.6	604,371	7.4	811,264	10.2	541,722	6.5	290,781	3.4	202,152	2.6	139,685	1.7	60,668	1.1
- Sempu	-	-	-	-	-	-	2,903	0.0	34,724	0.4	196,544	2.0	174,621	2.0	171,489	2.2	167,472	2.0	106,671	1.9
- Cisadane	-	-	-	-	-	-	-	-	3,617	0.0	275,237	3.0	973,448	11.3	1,241,823	15.2	1,736,153	21.0	1,004,659	18.4
- Cinendiri	-	-	-	-	-	-	-	-	-	-	8,169	0.1	173,786	2.0	161,130	2.1	78,650	0.9	37,842	0.7
- Ayung	-	-	-	-	-	-	-	-	-	-	2,785	0.0	25,540	0.3	14,426	0.2	25,283	0.3	14,795	0.3
- PB42	-	-	-	-	-	-	-	-	39,206	0.5	284,039	3.4	399,312	4.6	405,265	5.3	412,062	5.0	135,001	2.5
- PB50	-	-	-	-	-	-	-	-	-	-	13,587	0.2	66,251	0.8	128,824	1.7	148,312	1.8	63,218	1.2
- PB52	-	-	-	-	-	-	-	-	-	-	100	0.0	26,005	0.3	59,591	0.8	97,547	1.2	52,016	0.9
- PB54	-	-	-	-	-	-	-	-	-	-	162	0.0	55,466	0.6	128,573	1.7	181,867	2.2	46,725	0.8
- Cipunegara	-	-	-	-	-	-	-	-	-	-	-	-	-	69,837	0.9	128,875	1.6	84,421	1.5	
- Barito	-	-	-	-	-	-	-	-	-	-	-	-	-	16,073	0.2	15,386	0.2	16,659	0.3	
- Krueng	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
- Aceh	-	-	-	-	-	-	-	-	-	-	-	-	-	-	98,222	1.3	248,116	3.0	529,811	9.7
- Batang	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
- Aceh	-	-	-	-	-	-	-	-	-	-	-	-	-	-	5,554	0.1	2,117	0.0	4,482	0.1
- Aronita (1 - 2)	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	98	0.0	2,572	0.0
- PB44	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	29,133	0.4	66,872	1.2
- Sndang	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	3,547	0.0	22,730	0.4
- Smtani	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	370	0.0	1,809	0.0
- Tondano	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	6	0.0	10	0.0
- Singkarak	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	32	0.0
- IP46	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	115,573	1.4	138,270	2.5
- Mahakan	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	67	0.0	282	0.0
- Porong	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	468	0.0
- Bogowonto	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	1,737	0.0
- Kelara	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	225	0.0	39,728	0.7
- Citanduy	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	113	0.0	6,592	0.1
- Bahbolon	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	36,767	0.7
<b>Total</b>	<b>880,841</b>	<b>12.4</b>	<b>2,122,465</b>	<b>29.3</b>	<b>3,280,151</b>	<b>43.1</b>	<b>3,470,930</b>	<b>41.9</b>	<b>4,763,153</b>	<b>60.1</b>	<b>5,073,675</b>	<b>60.1</b>	<b>5,412,555</b>	<b>63.3</b>	<b>5,527,624</b>	<b>72.2</b>	<b>6,530,322</b>	<b>79.2</b>	<b>4,411,089</b>	<b>81.4</b>
<b>Total (Nany-IRV)</b>	<b>3,657,673</b>	<b>51.4</b>	<b>4,353,120</b>	<b>60.0</b>	<b>4,633,408</b>	<b>60.9</b>	<b>4,515,147</b>	<b>55.2</b>	<b>5,335,603</b>	<b>67.3</b>	<b>5,678,274</b>	<b>67.6</b>	<b>5,772,511</b>	<b>67.0</b>	<b>5,779,863</b>	<b>75.5</b>	<b>6,761,386</b>	<b>82.0</b>	<b>4,570,915</b>	<b>83.7</b>
<b>Total Other Variety</b>	<b>3,451,659</b>	<b>48.6</b>	<b>2,902,944</b>	<b>40.0</b>	<b>2,971,025</b>	<b>39.1</b>	<b>3,658,516</b>	<b>44.8</b>	<b>2,591,451</b>	<b>32.7</b>	<b>2,718,448</b>	<b>32.4</b>	<b>2,841,172</b>	<b>33.0</b>	<b>1,874,306</b>	<b>21.5</b>	<b>1,483,892</b>	<b>18.0</b>	<b>880,195</b>	<b>16.3</b>
<b>Total</b>	<b>7,109,332</b>	<b>100</b>	<b>7,256,064</b>	<b>100</b>	<b>7,601,433</b>	<b>100</b>	<b>8,173,693</b>	<b>100</b>	<b>7,927,057</b>	<b>100</b>	<b>8,296,922</b>	<b>100</b>	<b>8,613,681</b>	<b>100</b>	<b>7,653,169</b>	<b>100</b>	<b>8,244,278</b>	<b>100</b>	<b>5,150,110</b>	<b>100</b>

## APPENDIX 5.

## DISCRIPTION OF THE RICE VARIETIES

No.	Name of Varieties	Year of Release	Pedigree	Yield Potential (Ton)	The day of Maturity	Adaptation	Scattering	Pest and Diseases Resistance	Taste	
1	2	3	4	5	6	7	8	9	10	
1.	PB5	1967	Peta x Tangkai Rotan	5,5	145	Lowland rice	600m s.l.	Moderate	SB	Poor
2.	PB8	1967	Peta x Dei-Geo-Woo-Gen	5,5	130	"	"	"	SB	Poor
3.	Si Ampat	1969	Peta x BPI-76	5,0	130	"	"	Susceptible	Tungro	Nice
4.	Pelita I/1	1971	PB5 x Syntha	5,5	145	"	"	Moderate	Tungro	Nice
5.	Pelita I/2	1971	PB5 x Syntha	5,5	145	"	"	Moderate	BLB	Nice
6.	PB20	1974	IR262-24-3xTKM-6	4,0	125	"	"	Moderate	BPH 1	Poor
7.	PB26	1975	IR24 <sub>3</sub> x TKM-6	5,0	130	"	"	Susceptible	BPH 1	Poor
8.	PB28	1975	Peta <sup>3</sup> /TNI/Gam Pai 15/4/ TKM-6 <sup>2</sup> /TNI//IR8/Tandukan/ /IR24 <sup>4</sup> /O.nivara	4,0	125	"	"	"	GR,RS	Poor
9.	PB30	1975	IR24/TKM-6//IR20 <sup>3</sup> /O.ni- vara <sub>3</sub>	4,5	120	"	"	"	BPH 1	Poor
10.	PE34	1976	Peta <sup>3</sup> /TNI//Gam Pai 15/ 4/IR8/Tandukan//TKM-6 <sup>4</sup> /O.nivara	4,0	140	"	"	"	BPH 1,2, Tungro, BLB, GS	Poor
11.	Adil	1976	Pelita I-1 x IR1108	6,0	140	Lowland rice	600m s.l.	Moderate	-	Poor
12.	Makmur	1976	Pelita I-1 x IR1108	5,5	140	"	"	Moderate	-	Poor
13.	Gemar	1976	Jerak x PB8	5,5	150	"	"	Moderate	BLB	Moderate
14.	Gati	1976	Short Sigadis x Basmati	4,5	115	Lowland rice	600m s.l.	Moderate	BLB	Poor
				3,0	125	Upland rice		Moderate	BLB	Poor
				3,0	130	Upland rice		Moderate	BLB	Poor
15.	Gata	1976	Short Sigadisx Syntha	5,5	125	Lowland rice	600m s.l.	Moderate	BLB	Nice
				3,5	130	Upland rice		Moderate	BLB	Nice
				3,5	130	Upland rice		Moderate	BLB	Nice
16.	PB32	1977	IR20 <sup>2</sup> /O.nivara//CR94-13	4,5	145	Lowland rice	600 m s.l.	Susceptible	BPH 1, BLB, GS, RS	Moderate
17.	Asahan	1978	IR1561-228-1-2/IR1737/ CR94-13	4,5	125	"	"	Moderate	BPH 1	Nice
18.	Brantas	1978	IR2180-2/IR2178-1	4,5	125	"	"	Moderate	BPH 1	Poor
19.	Citarum	1978	B2362/Pelita I-1	4,5	130	"	"	Moderate	BPH 1	Nice
20.	Serayu	1978	Pelita I-1/EK1263	4,5	130	"	"	Susceptible	BPH 1	Poor
21.	PB36	1978	IR1561-228/IR24 <sup>4</sup> /O.niva- ra//CR94-13	4,5	120	"	"	Susceptible	BPH 1	Poor
22.	PB38	1978	IR20 <sup>2</sup> /O.nivara//CR94-13	4,5	125	"	"	"	BPH 1,2, Tungro, BLB, BLS, GS	Poor

1	2	3	4	5	6	7	8	9	10
23.	Semeru	1980	CR-13/IR1561-228-3-3	5,5	150	Lowland rice	600 m s.l.	Susceptible	BPH 1,2, Poor Tungro, BLB BLS, GS
				5,5	132	"		"	BPH 1,2 Poor
24.	Cisadane	1980	Pelita I-1/B2388	5,5	145	"		Moderate	BPH 1,2 Nice
25.	Cimandiri	1980	Pelita I-1/B2709	4,5	145	"		Moderate	BPH 1,1,3 Nice
26.	Ayung	1980	Pelita I-1/B2388	5,5	145	Lowland rice, tidal swamp		Moderate	BPH 1,2, Poor Tungro, BLB, GS
27.	PB42	1980	IR2042/CR94-13	5,5	145	Lowland rice	600m s.l.	Moderate	BPH 1,2,3, Poor Tungro
28.	PB50	1981	IR2153-14-1-6-2/IR28/IR2070 -625-1	4,5	105	"		Moderate	BPH 1,2,3, Poor Tungro
29.	PB52	1981	Nam Sa Gui/IR2071-88/IR2061- 214-3-6-20	4,5	115	"		Moderate	" Poor
30.	PB54	1981	Nam Sa Gui/IR2071-88/IR2061- 214-3-6-20	4,5	125	"		Moderate	BPH 1,2, Nice
31.	Cipunegara	1981	Pelita I-1/B2393	5,0	135	"		Moderate	BPH 1,2 Nice
32.	Barito	1981	Pelita I-1/B2393	5,0	145	Lowland rice, tidal swamp		Moderate	BPH 1 Nice
33.	Krueng Aceh	1981	Pelita I-1/B2709	5,5	135	Lowland rice	600m s.l.	Moderate	BPH 1,2,3 Nice
34.	Btg. Agam	1981	Sirendah Merah/IR153-159-1-4	4,5	159	Lowland rice	600m s.l.	Susceptible	Tungro Poor
35.	Atomita 1	1982	Radiasi Pelita I-lxSinar Gama	5,0	127	Lowland rice	600m s.l.	Moderate	BPH 1 Nice
36.	PB56	1983	IR4432-52-33/Ptb33/IR2071/ 625/1/252	4,5	115	"		Moderate	BPH1,2,3 SU Moderate
37.	Sadang	1983	B4596-Pn-132-9-3/IR2071-588- 5-6	6,9	125	"		Moderate	BPH1,2, BLB, Nice Tungro, WBPH
38.	Atomita 2	1983	Radiasi Pelita I-lxSinar Gama	5,0	125	Lowland saline		Moderate	BLB, BLS, FL Nice
39.	Bahbolon	1983	IR2035-117-3/IR2061-522-6-9/ IR2307-64-2-2	5,0	125	"		Moderate	BPH1,2,3, Poor Tungro, WBPH, BLB
40.	Sentani	1983	IR2061-464-2/SR887/IR2053- 521-1-1	3,0	114	Upland rice		Moderate	BPH1, BLS Nice NBlast
41.	Tondano	1983	Gati/Genjah Lampung	2,0	114	"		Moderate	BPH1, Blast Nice
42.	Singkarak	1983	C22/IR36	3,5	115	"		Moderate	BPH1,2,3, Moderate BLB, BLS, Blast
43.	IR46	1983	IR1416-131-5/IR1346-37-3-1-1/ /IR1366-120-3-1/IR1539-37-3-1	4,5	130	"		Moderate	BPH1,3, SU Poor
44.	Mahakam	1983	Pelita I-2/T442-36	4,0	140	Lowland rice, tidal swamp		Moderate	FL, IR Moderate
45.	Porong	1983	B2791b-Mr-134-1-3/PB36//PB36	5,0	110	Lowland rice, 600m s.l.		Moderate	BPH1,2, GL Nice

1	2	3	4	5	6	7	8	9	10	
46.	Bogowonto	1983	B2791b-Mr-134-1-3/PB36//PB36 PB36	5,0	115	Lowland rice	600m s.l	Moderate	BLB,Blast	Nice
47.	Kelara	1983	R Heenati/IR3404-267-1//IR34	5,0	105	"		Moderate	BPH1,2,SU, Tungro,Blast	Poor
48.	Citanduy	1983	IR2006-P3-31-3/IR146-68-1/ IR2061-465-1-4/IR2055-475-2	5,0	120	"		Moderate	BPH1,2,GL, BLB,Blast	Nice
49.	Cikapundung	1984	Pelita I-1 <sup>4</sup> /IR2071-137-5-5-1	5,0	115	"		Moderate	BPH1,2,3BLB	Nice
50.	Btg.Ombilin	1984	Kuning Galung/IR2061-714- 3-8-7	4,5	150	Lowland rice	+600m s.l.	Moderate	BPH 1	Poor
51.	Kapuas	1984	Pelita I-1//CR94-12/IR20	5,0 3,0	127 127	Lowland rice,	tidle swamp	Moderate	BPH1,2,BLB	Nice
52.	Ranau	1984	IR8 <sup>4</sup> /Dawn/Siampat/Aries	2,0	106	Upland rice		Susceptible	Blast	Moderate
53.	Aries	1984	Lokal Sumatra Utara	2,0	135			"	Blast	Moderate
54.	Maninjau	1985	IR8/Syntha//Genjah Lampung ///Short Sigadis/Syntha// Tabente MaINTI.	2,0	115	upland and		Moderate	Blast	Nice

Notation : BPH = Brown Blanthopper  
 WBPH= Whitebacked Planthopper  
 BLB =Bacterial Leaf Blight  
 SU = BPH Sumatra Utara  
 BLS = Bacterial Leaf Streak  
 GS = Grassy Stunt  
 RS = Ragged Stunt  
 GL = Green Leaf Hopper  
 FL = Flooding

APPENDIX 6.

THE PADDY PRODUCTION OF CERTIFIED AND LABELLED

HIGH YIELDING VARIETY 1975 - 1984

No.	Seed Classes	1975		1976		1977		1978		1979		1980		1981		1982		1983		1984		Total	
		Area (ha)	Production (ton)																				
1.	Foundation Seed (FS)	9	13	12	19	5	20	11	19	22	45	57	114	53	94	82	148	76	157	71	82	398	711
2.	Stock Seed (SS)	95	139	120	180	119	163	201	152	642	950	662	1071	967	2158	1173	1946	1521	2309	1170	1567	6670	10635
3.	Extension Seed (ES)	1500	1611	2409	2193	2433	3570	2021	1854	5571	6092	6111	8927	7087	11714	7609	13584	10495	16194	8997	14416	54233	80155
4.	Labelled Seed	531	1135	924	1458	1648	780	3059	1700	876	1095	4920	19682	3493	13974	4481	17924	5098	22827	4382	27872	29412	108447
Total		2135	2898	3465	3850	4205	4533	5292	3725	7111	8182	11750	29794	11600	27940	13345	33602	17190	41487	14620	43937	90713	199948

APPENDIX 7.

DISCRIPTION OF MAIZE VARIETIES.

Varieties Year relea- sed and the discription of variety	Harapan Baru	B r o m o	Arjuna	Parikesit
1. Year Released	1978	1980	1980	1981
2. Discription				
- Parentage	Harapan x Phil DMR 5	Introduced from Philipi- pine	Introduced from Thai- land	H-DMR, Bogor
- Clasification	Free pollen	Free pollen	Free pollen	Free pollen
- Age(days to harvest)	110 days	90 days	90 days	105 days
- Seed	Half pearl	Pearl	Pearl	Half pearl
- Seed colour	Yellow	White milk	Yellow, some are white	Yellow
- Corn warppings	All seed covered	Ear corn covered	Not all covered	All seed covered
- Position of ear corn	Middle of the stem	Middle of the stem	Middle of the stem	Middle of the stem
- Decree of falling out	Resistance	Resistance	Resistance	Resistance
- Weight/1.000 beans	261 gram	241 gram	272 gram	286 gram
- Average yield(dry seed)	4.7 ton/ha	5.0 ton/ha	6.0 ton/ha	5.0 ton/ha
- Resistance of desease	Resistance of scleros- pora Maydis, Leaf Spot Rust	Resistance of Scleros- pora Maydis, Leaf Spot Rust	Resistance of Scleros- pora Maydis, Leaf Spot Rust	Resistance of Scleros- pora Maydis, Leaf
- Others	-	Good for low land area(500 m height)	Good for low land area (500 m height)	Good for low land area

Varieties	Abimanyu	Hibrida C-1	Sadewa	Nakula
Year released and the discription of variety				
1. Year Released	1983	1983	1983	1983
2. Discription :				
- Parentage	Randu/Arjuna	FL SC 6385/Improved	V.Suwan 1/Genjah Kretek	Suwan 1 x Penjalinan
- Classification	Free pollen	Hibrida	Free pollen	Free pollen
- Age(days to harvest)	80 days	100 days	86 days	85 days
- Seed	Pearl	Half Pearl	Half Pearl	Pearl
- Seed Colour	Yellow	Yellow to red	Yellow, some are white	Yellow to orange
- Corn warppings	All covered	Not all covered	All seed covered	All seed covered
- Position of ear corn	Middle of the stem	Middle of the stem	Middle of the stem	Middle of the stem
- Decree of falling out	Resistance	Resistance	Resistance	Resistance
- Weight/1,000 beans	208 gram	317 gram	283 gram	243 gram
- Average yield(dry seed)	3.0 ton/ha	5.8 ton/ha	3.7 ton/ha	3.6 ton/ha
- Resistance of desease	Resistance of Sclerospora Maydis	Resistance of Sclerospora Maydis	Resistance of Sclerospora Maydis	Resistance of Sclerospora Maydis
- Others	Good for low land area (400 m height)	Good for low land area (500 m height)	Good for low land area (500 m height)	Good for low land area 1,000 m

Varieties Year released and the discription of variety	Genjah Kertas	Kretek	Harapan
1. Year released	-	-	1984
2. Discription :			
- Parentage	Banyuwangi	Kediri(Local)	No.142-148(Guatemala)
- Classification	Free pollen	Free pollan	-
- Age(days to harvest)	95 days	90 days	105 days
- Seed	Pearl	Pearl	Semi Pearl
- Seed colour	Yellow **	Yellow	Yellow to red
- Corn warppings	-	-	Ear corn covered
- Position of ear corn	-	-	Middle of the stem
- Decree of falling out	Resistance	Resistance	Resistance
- Weight/1,000 beans	-	223 gram	340 gram
- Average yield(dry seed)	4 ton/ha	4 ton/ha	5.4 ton/ha
- Resistance of disease	Resestance of Sclerospora and Helminthosporium Sp.	Resistance of Sclerospora Maydis and Helminthosporium Sp.	Resistance of Helminthosporium and Puccinia
- Others	Good for height under 1,000 m	Good for height under 1,000 m	Good for height until 1,200 m

APPENDIX 8

DISTRIBUTION ACREAGE FOR MAIZE  
DURING 1980 - 1984

No.	Year Varieties	1980		1981		1982		1983		1984	
		Area (ha)	(%)								
1.	Harapan	687,181	24.8	687,181	23.2	11,433	0.6	57,746	1.9	14,248	0.5
2.	Harapan Baru	NA	NA	NA	NA	NA	NA	10,906	0.4	16,230	0.5
3.	Bromo	NA	NA	NA	NA	NA	NA	2,549	0.1	491	0.0
4.	Arjuna	129	0.0	129	0.0	3,077	0.1	83,770	2.7	7,519	0.2
5.	Parikesit	540	0.0	540	0.0	NA	NA	3,720	0.1	43,950	1.4
6.	Abimanyu							-		264	0.0
7.	Hibrida C1							52	0.0	3,302	0.1
8.	Nakula									76	0.0
9.	Sadewa									42	0.0
10.	Genjah Kretek	220	0.0	220	0.0	2,540	0.1	77,787	2.6	47,342	1.6
11.	Genjah kertas	NA	NA	NA	NA	NA	NA	66,338	2.2	4,783	0.1
12.	Other varieties	2,082,497	75.1	2,266,969	76.7	2,047,326	99.3		89.9		95.5
								2,699,359		2,887,261	
	Total	2,770,567	100	2,955,039	100	2,061,299	100	2,061,299	100	3,025,408	100

NA = Not available

- = variety is being released  
blank coloms indicate variety  
has not been released.

## APPENDIX 9.

CERTIFIED AND LABELLED FOR MAIZE SEED PRODUCTION  
DURING 1982 - 1984

No.	Seed classes	1982		1983		1984		Total	
		Area(ha)	Yield(ton)	Area(ha)	Yield(ton)	Area(ha)	Yield(ton)	Area(ha)	Yield(ton)
1.	Foundation Seed	17.00	14.386	65.58	84.567	70.13	38.033	152.71	136.986
2.	Stock Seed	16.70	54.000	64.00	47.774	89.64	28.146	170.34	129.920
3.	Extension Seed	NA	NA	83.97	118.062	1,306.91	2,497.567	1,390.88	2,615.629
4.	Labelled Seed	NA	NA	160.00	156.400	84.10	234.200	244.10	390.600
Total		33.70	68.386	373.55	406.803	1,550.78	2,797.946	1,958.03	3,273.135

NA = Not available

APPENDIX 10.

DISCRIPTION OF SOYABEAN VARIETIES.

Varieties				
Year of release and the discription of variety	Galunggung	Lokon	Guntur	Wilis
1. Year of Release	1981	1982	1982	1983
2. Discription :				
- Parentage	Davros (1248)x TK5 (1291)	Gm 26(TK5)/GM 14 (shortage of Slawi)	Gm 26(TK 5)/GM 14(short tage of Slawi)	Number 1682/1343-I-10
- Age(days to harvest)	90 days	75 days	79 days	88 days
- Age size	Short age	Short age	Short age	Short age
- Colour of hipocotile	Green	Green	Red	Purple
- Colour of flower	White	White	Purple	Purple
- Colour of shell bean (polong)	Shinning yellow	Yellow	Yellow	Yellow
- Branching	2-5 branch/Stem	-	-	-
- Falling of	Resistant	Fall's in fertile soil	Fall's in fertile soil	Resistant
- Size of Seed	Medium	Oval and rather Flat	Oval and rather Flat	Oval and rather Flat
- Weight/1000 shell beans(polong)	125 gram	106 gram	105 gram	100 gram
- Flat Percentage	19,9%	15,8%	18,4%	18%
- Average Yield	1,5 ton/ha dry bean	1,7 ton/ha,dry bean	1,8 ton/ha, dry bean	1,6 ton/ha, dry bean
- Resistance to disease	Susceptible to rust	Susceptible to rust and virus	Susceptible to rust and virus	Susceptible to rust and virus

DESCRIPTION OF SOYABEAN VARIETIES

Varieties	Dempo	Orba	Taichung
Year of release and the description of varieties			
1. Year released	1984	1974	-before 1950
2. Description :			
- Parentage	Introduce from columbia	Crossed from Davros/Shakti	Introduce from Phillipine
- Age (days to harvest)	95 days	90 days	80 days
- Age size	Short age	Short age	Short age
- Colour of hipocotile	Purple	Purple	Purple
- Colour of flower	Purple	Purple	Purple
- Colour of bean	Yellow	Yellow	Yellow
- Branching	NA	NA	NA
- Falling of	Resistance	Resistance	Resistance
- Size of seed	NA	NA	Oval
- Weight/1000 beans	125 gram	140 gram	105 gram
- Potein Percentage	41%	38,5%	34,3%
- Fat percentage	18%	18,6%	NA
- Average yield	1.5 ton/h, dry bean	1.5 ton/ha, dry bean	1.5 ton/ha, dry bean
- Resistant to disease	Resistant to rust	Resistant to rust	NA

NA = Not available

## APPENDIX 11

DISTRIBUTION ACREAGE OF SOYABEAN VARIETIES  
1980 - 1984

No.	Varieties	1980		1981		1982		1983		1984	
		Area(ha)	%								
1.	Orba	74.747	10,3	87.682	10,8	87.615	19,0	84.654	13,2	76.503	9,13
2.	Taichung	NA	NA	NA	NA	NA	NA	1.571	0,2	NA	NA
3.	Galunggung	NA	NA	NA	NA	NA	NA	15	0,0	1.500	0,2
4.	Lokon	1	0,0	1	0,0	68	0,0	1.333	0,2	5.253	0,6
5.	Guntur	NA	NA	NA	NA	NA	NA	140	0,0	948	0,1
6.	Wilis	25	0,0	25	0,0	25	0,0	135	0,0	450	0,0
7.	Dempo	NA	NA								
8.	Others	651.240	89,7	722.270	89,2	373.630	81,0	552.028	86,3	753.130	89,9
Total		726.013	100	809.978	100	461.338	100	639.876	100	837.784	100

NA = Not available.

APPENDIX 12.

CERTIFIED AND LABELLED SOYABEAN SEED PRODUCTION

1982 - 1984

No. Seed Classes	1982		1983		1984		Total	
	Area(ha)	Produc- tion(ton)	Area (ha)	Produc- tion(ton)	Area(ha)	Produc- tion(ton)	Area(ha)	Produc- tion(ton)
1. Foundation Seed	3,8	2,1	25,5	9,0	46,78	18.097	76,1	29,197
2. Stock Seed	67,9	19,1	100,0	29,0	75,25	21,000	243,15	69,100
3. Extension Seed	NA	NA	NA	NA	47,50	1,000	47,50	1.000
4. Label Seed	NA	NA	5.355,0	467,0	2.405,0	424,0	7.760,0	891,0
<b>T O T A L</b>	<b>71,7</b>	<b>21,2</b>	<b>5.480,5</b>	<b>505,0</b>	<b>2.574,53</b>	<b>464,097</b>	<b>8.126,70</b>	<b>990,297</b>

NA = Not available.

APPENDIX 13

DESCRIPTION OF GROUNDNUT VARIETIES

Varieties					
Description	Rusa	Anoa	Tapir	Tupai	Gajah
1. Year Released	1983	1983	1983	1983	1950
2. Description :					
- Pedigree	Gajah/AH 223 (P1350680)/AM1511	Gajah/AH223 (P1350680)/AH1505	Kidang x Virginia Bunh Improved	US 26 x Kidang	No.21 x No. 111
- Day of Mature	110	110	100	100	110
- Flower color	Yellow	Yellow	Rose	Red	Pink
- Figure of shell	Clear	Shallow	Shallow	Shallow	-
- Number of shell/crop	17	17	20	20	-
- Weight of 1000 seed	950 gr	760 gr	560 gr	557 gr	537 gr
- Fat content	47,9%	48,6%	39%	44%	48%
- Protein content	22,9%	23,3%	31%	28%	29%
- Rendement	55%	55%	70%	70%	-
- Average yield (dried shell)	1861 kg/ha	1800 kg/ha	2000 kg/ha	2000 kg/ha	1800 kg/ha
- Resistancy	Resistant to leaf spot, rust and withered	Resistant to leaf spot, rust and withered	Resistant to withered	Resistant to withered	Resistant to withered

DESCRIPTION OF GROUNDNUT VARIETIES

Description	Varieties			
	Pelanduk	Macan	Banteng	Kidang
1. Year released	1983	1950	1950	1950
2. Description :				
- Pedigree	Kidang x VBI	No.21 x No.111	No.21 x No.113	No.21 x No.206
- Day of Mature	110	110	110	110
- - Flower colour	Yellow	Yellow	Yellow	Yellow
- Seed colour	Rad	Pink	Pink	Pink
- Figure of shell	Shallow	NA	NA	NA
- Number of shell/crop	20	NA	NA	NA
- Weight of 1000 seeds	573 gr	462 gr	476 gr	492 gr
- Fat content	35%	47%	48%	49%
- Protein content	27%	30%	28%	29%
- Rendement	70%	70%	70%	70%
- Average yield(dried shell)	2000 kg/ha	1800 kg/ha	1800kg/ha	1800 kg/ha
- Resistancy	Resistant to withered	Resistant to Withered red	Resistant to withered	Resistant to withered

NA = Not available.

APPENDIX 14

DISTRIBUTION ACREAGE OF GROUNDNUT VARIETIES  
1982 - 1984

No.	Year Varieties	1982		1983		1984	
		Acreage(ha)	%	Acreage(ha)	%	Acreage(ha)	%
1.	G a j a h	10,511	2.3	21,910	4.6	13,371	2.5
2.	M a c a n	1,973	0.4	12,627	2.6	7,614	1.4
3.	B a n t e n g	1,063	0.2	1,478	0.3	1,313	0.2
4.	K i d a n g	4,891	1.1	3,941	0.8	9,087	1.7
5.	R u s a	-	-	-	-	223	0.0
6.	A n o a	-	-	-	-	48	0.0
7.	P e l a n d u k	-	-	-	-	16	0.0
8.	T u p a i	-	-	-	-	NA	NA
9.	Other Varieties	442,902	96.0	440,554	91.7	491,648	93.9
T o t a l		461,338	100	480,410	100	523,320	100

NA = Not available

- = Variety is being released

Blank column indicate variety has not been released

APPENDIX 15.

CERTIFIED AND LABELLED FOR GROUNDNUT SEED PRODUCTION  
DURING 1982 - 1984

No.	Seed classes	1982		1983		1984		Total	
		Acreage (ha)	Yield (ton)	Acreage (ha)	Yield (ton)	Acreage (ha)	Yield (ton)	Acreage (ha)	Yield (ton)
1.	Foundation Seed	4,60	2,100	15,10	7,000	19,20	6,300	38,90	15,400
2.	Stock Seed	47,00	12,600	50,80	24,600	25,70	9,700	123,50	46,900
3.	Extension Seed	NA	NA	NA	NA	5,50	1,370	5,50	1,370
4.	Labelled Seed	NA	NA	67,00	22,500	100,30	311,200	167,30	333,700
Grand Total		51,60	14,700	132,90	54,100	150,70	328,570	335,20	397,370

NA = Not available.

## APPENDIX 16

## DISCRIPTION OF MUNGBEAN VARIETIES

No.	Varieties							
	Year of release and the discription of variety	Number 129	Merak	Nuri	Manyar	Betet	Walet	Gelatik
1. Year of release	1978	1981	1983	1983	1983	1983	1985	1985
2. Discription :								
- Parentage	Phillipine	Phillipine	Taiwan	Taiwan	-	Taiwan	Taiwan	Taiwan
- Origin Code	MG50-IDA(BPI-Mungo)	ACC No.178	AVRDC(No.V2773)	AVRDC(No.VC1089 B29-3B-2B)	MB 129 Siwalik	AVRDC	AVRDC	AVRDC
- Colour of Hipocotyle	Green	Green	Red	Red	Green	Green	Green	Green
- Colour of Hower	Green outside & Yellow inside	Yellow	-	Yellow to grey	Yellow	Yellow	Yellow	Yellow
- Colour of shell bean(polong)	Black	Black	Black	Black	Black	Black	Black	Black
- Size of Seed	Big	Big	Small	Medium	Medium	B 19	Medium	Medium
- Age(day to harvest)	59 days	65 days	65 days	65 days	60 days	58 days	58 days	58 days
- Bean's charateristic	Unbreakable	Unbreakable	Unbreakable	Unbreakable	Unbreakable	Unbreakable	Unbreakable	Unbreakable
- Total bean plant	14	15	12	12	20	17	15	
- Weight/1000(polong) shell beans	65 gram	78 gram	36 gram	46 gram	58 gram	63 gram	60 gram	
- Protein percentage	21,6%	22,4%	24,8%	22,4%	22,9%	22%	22%	
- Yield potencial	16 kw/ha, dry bean	16 kw/ha, dry bean	15 kw/ha, dry bean	14,6 kw/ha, dry bean	14,6 kw/ha, dry bean	16,6 kw/ha, dry bean	15,6 kw/ha, dry bean	
- Resistant to Disease	Resistant to Scabies	Resistant to Cercospora and Scabies	Resistant to leaf spot	Resistant to leaf spot and rust	Resistant to Fly Seed	Resistant to leaf spot	Resistant to leaf spot	Resistant to leaf spot

## APPENDIX 17.

## DISTRIBUTION ACREAGE OF MUNGBEAN VARIETIES

1980 - 1984

No. Varieties	1980		1981		1982		1983		1984	
	Area (ha)	%	Area (ha)	%	Area (ha)	%	Area (ha)	%	Area (ha)	%
1. Bhakti	155	0,1	155	0,1	1,985	1,0	1,220	0,4	2,829	1,0
2. No.129	8	0,0	8	0,0	10.116	4,9	26,940	9,2	7,800	2,7
3. Merak	-	-	-	-	30	0,0	3,976	1,3	4,154	1,4
4. Nuri	-	-	-	-	-	-	-	-	26	0,0
5. Manyar	-	-	-	-	-	-	-	-	210	0,1
6. Gelatik	-	-	-	-	-	-	-	-	-	-
7. Walet	-	-	-	-	-	-	-	-	-	-
8. Betet	-	-	-	-	-	-	-	-	-	-
9. Artoijo	NA	NA	NA	NA	3	0,0	1,095	0,4	399	0,1
10. Siwalik	NA	NA	NA	NA	803	0,4	1,035	0,3	1	0,0
11. No. 116	NA	NA	NA	NA	NA	NA	7.000	2,4	-	-
12. Other Variety	256.251	99,9	269,797	99,9	191,433	93,7	251,804	85,9	274,231	94,7
<b>T o t a l</b>	<b>256.414</b>	<b>100</b>	<b>269,960</b>	<b>10,0</b>	<b>204,370</b>	<b>100</b>	<b>293,070</b>	<b>100</b>	<b>289,650</b>	<b>100</b>

NA = Data is not available

- = Variety is being released

Blank column indicate variety has not been released.

APPENDIX 18.

CERTIFIED AND LABELLED MUNGBEANS SEED PRODUCTION

1982 - 1984

No.	Seeds Classes	Area (ha)	Produc- tion(ton)	Area (ha)	Produc- tion(ton)	Area (ha)	Produc- tion(ton)	Area (ha)	Produc- tion(ton)
1.	Foundation Seed	7,50	2,300	17,20	5,200	9,15	7,499	33,85	14.999
2.	Stock Seed	26,50	4,500	45,50	12,600	23,30	5,200	95,30	22,300
3.	Extension Seed	NA	NA	NA	NA	NA	NA	NA	NA
4.	Label Seed	NA	NA	133,00	308,500	125,1	296,700	258,10	605.200
T O T A L :		34,00	6.800	145,70	326,3	157,55	309,399	387,25	642.499

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NA = Not available