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D E C R E E
of the Ministry of Agriculture of the Slovak Republic
of September 27, 2004
on sources of forest reproductive material, its collection, production, marketing and use

The Ministry of Agriculture of the Slovak Republic (hereinafter only the „Ministry“) according to the article 31 of the Act no. 217/2003 of the Legal Code on Forest Reproductive Material and Change to Some Acts establishes:

Article 1
Introductory provisions

- (1) This decree sets forth:
- a) Phenotypic classification of forest stands, approval of basic materials, their management, marking in the field and denomination in the forestry maps,
 - b) Keeping of the national register and publication of the national list of basic materials,
 - c) Testing methodology for tested reproductive material,
 - d) Procurement of reproductive material from basic materials and issuing of master certificates,
 - e) Boundaries and maps of provenance regions, rules of the horizontal and vertical transfer of forest reproductive material,
 - f) Proceedings in the protection of forest genetic resources,
 - g) Management of approved clones, clonal mixtures and multiclonal varieties,
 - h) Quality requirements for the forest reproductive material,
 - i) Merging and dividing of lots of forest reproductive material, issuing accompanying documents,
 - j) Use of the forest reproductive material in forest regeneration, afforestation and its records,
 - k) Details concerning members of the examination commission, examination, and issuing certificates of professional competence.

Article 2
Phenotypic classification of forest stands

- 1) During the phenotypic classification of forest stands, the phenotypic value is determined:
 - a) Norway spruce, silver fir, Scots pine, black pine, European larch, common beech, sessile and pedunculate oak in forest stands older than 60 years,
 - b) Swiss stone pine, Douglas fir, grand fir, Eastern white pine, black walnut and red oak in stands older than 40 years,
 - c) European aspen, black poplar, white poplar, black alder, grey alder, silver birch and grey birch in stands older than 20 years,
 - d) Other species in forest stands older than 60 years.
- 2) The phenotypic classification of forest stands is carried out in the case of Norway spruce, silver fir, Scots pine, black pine, European larch, common beech, common ash, narrow-leaved ash, sycamore maple, Norway maple, mountain elm, small-leaved lime, large-leaved lime,

sessile oak and pedunculate oak, in all high forest¹⁾ stands apart of their origin, which are older than the age limits set in paragraph 1.

3) The phenotypic classification of European larch and black pine is carried out according to the rules for Scots pine, classification of common ash and narrow-leaved ash, sycamore maple, Norway maple, mountain ash, small-leaved lime and large-leaved lime is carried out according to the rules for beech.

4) Phenotypic classification of forest stands of tree species not mentioned in article 2 shall be done with regard to the quality of their crown quality, stem shape and production capacity only in the compartments proposed for approval as basic materials.

5) Phenotypic value of forest stands of the tree species listed in paragraph 1 shall be determined as a sum of numerical values depicting the crown quality, stem shape and production at the level of a forest compartment, taking the effects of damage and stem quality into the account.

6) Forest stands are, according to their phenotypic value, classified into the phenotypic categories A, B, C and D. Criteria for classification into the phenotypic categories are provided in Annex 1.

Article 3

Approval of basic materials

(1) The basic materials are approved when a forest management plan (hereinafter only the "FMP") is upgraded and includes:

- a) creation of the list of already approved basic materials and evaluation of the changes in the preceding period,
- b) compiling of list of candidate units classified into phenotypic category A or B including their phenotypic category,
- c) evaluation of the proposals for approval and principles of management of gene reserve forests,
- d) elaboration of approval documents.

(2) The list of approved sources of forest reproductive material with their actual areas and, in the case of seed orchards and generative reproductive plantations, with the number of represented clones or progenies, is submitted by a forest tenant to the forest management planner before the introductory meeting²⁾.

(3) The list of candidate basic materials is worked out by a forest tenant according to the template provided in Annex 2 during the introductory meeting. The forest tenant sends this list to the Forest Research Institute³⁾ (hereinafter only the "research institute") by January 31 of the first year of validity of the FMP. Prior to it, by December 31 of the first year of upgrading of the FMP, a forest tenant is provided by the survey of forest compartments

¹⁾ Article 5, par. 2 of the Decree of the Ministry of Agriculture of the Slovak Republic no 5/1995 of the Legal Code on Forest Management Planning.

²⁾ Article 3, par. 4 of the Act of the Slovak National Council no. 100/1977 on Forest Management and State Forest Administration.

³⁾ Article 3, par. 1 of the Act of the Slovak National Council no. 217/2004 on Forest Reproductive Material and Change of some Acts.

classified into the phenotypic categories A and B with their areas and (other) data, The first year of upgrading of FMP is the year when the introductory meeting is summoned by the regional forest authority.

(4) According to the results of phenotypic classification, the forest management planner works out the list of all forest compartments classified into the phenotypic category A and B according to the template provided in Annex 3, and submits it to the forest tenant by March 15 of the first year of validity of a forest management plan. The proposal to approve additional forest compartments marked out in the lists, is sent by a forest tenant to the research institute by March 31 of the same year.

(5) After evaluation of the proposals according to the paragraph 3 and 4, the research institute assigns registration code to the candidate basic materials registration codes according to article 11 and, by April 15 of the first year of validity of FMP at the latest, approval certificates shall be issued according to following the templates:

- a) for approved stands in Annex 4,
- b) for gene reserve forests in Annex 5,
- c) for seed orchards in Annex 6,
- d) for plus trees in Annex 7,
- e) for seed orchards in Annex 8,
- f) for clones in Annex 9,
- g) for clonal mixtures and multiclonal varieties in Annex 10.

(6) The approval certificates of basic materials are submitted by the forestry institute to the district forest authority for decision about approval⁴⁾ no later than one month in advance of the date of final meeting.

(7) For all basic materials the origin shall be determined whether it is autochthonous, indigenous, non-autochthonous and unknown.

Article 4 **Approved stands**

(1) Only forest compartments classified into the phenotypic category A and B in the forest management plans can be approved. In their respective sites, they are superior in growth, quality and resistance to biotic and abiotic agents, they bear seeds, and surpass the minimum age set in Article 2, paragraph 1.

(2) Several neighbouring forest stands can be approved as one unit by the „research institute“, if they belong to the same phenotypic category and seed zone, altitudinal zone, have the same tenant and belong to the same administrative district.

(3) In approved stands of the phenotypic category A, only small size shelterwood system⁴⁾ or selection system⁵⁾ can be applied. Requirements for a specific management during the period of approval shall be specified in an annex to their approving certificate.

⁴⁾ Article 3 par. 1 of the Act of the Slovak National Council no. 100/1977 of the Legal Code on forest management and state forest administration, as amended by later legal regulations

⁵⁾ Article 7 of the Act 100/1977 of the Legal Code as amended by later regulations

(4) Regeneration felling in approved stands shall be done preferably in a medium or full mast year when the seed is ripe.

(5) Approved stands are managed with the aim to improve their phenotypic quality, stability, improve fructification and establish natural regeneration.

Article 5

Gene reserve forests

(1) Only approved stands shall be used for the procurement of forest reproductive material in a gene reserve forest (hereinafter only the "GRF"). The stands within GRF, which are not approved, can be used as a basic material for the source-identified category.

(2) Gene reserve forests is established during the upgrade of FMP according to the project attached to the approval certificate provided in Annex 5.

(3) When requested by the research institute, the forest management planner shall provide data needed for elaboration of the project of a GRF by March 31 of the first year of validity of FMP. Coloured forestry map and harvesting map of concerned forest stands shall be provided by the forest management planner by March 31 of the second year of validity of FMP.

(4) The management guidelines set up in the project of a GRF shall be incorporated into the FMP, if they were predefined by the research institute and approved at the introductory meeting.

(5) The approved stands are approved and registered in a GRF according to the rules set in Article 3, irrespectively of the establishment of a GRF.

(6) If non-autochthonous phenotypically unsuitable stands are present in a GRF, they can be removed before the age of regeneration⁶).

(7) The management objective shall be to maximize natural regeneration of tree species, for which it is established. If natural regeneration fails, artificial regeneration using the material originating from approved stands included into a GR shall be applied.

Article 6

Generative reproductive plantations

(1) The economical value and endangerment of a genetic resource of concerned species in its respective seed and altitudinal zone shall be taken into the account at the establishment of a generative reproductive plantation.

(2) Seed stands are established according to a project, which contains the record of origin of seed, plan of plantation, guideline for establishment and management of a stand.

(3) A generative reproductive plantation shall be established using a seed of at least 40 trees from one approved unit.

(4) Generative reproductive plantation may contain also natural regeneration of approved stands of concerned species.

⁶) Article 9, par. 11 of the Decree no 5/1995 of the Legal Code

(5) Seed stands shall not be established in the vicinity of phenotypically inferior stands of concerned species classified into the category D.

(6) The approval certificate of a generative reproductive plantation shall be issued after its establishment.

Article 7

Parent – plus trees

(1) Parent–plus trees (hereinafter „plus trees“) are phenotypically superior individuals, which phenotypic quality, wood production, resistance and other important properties are substantially better if compared with other individuals of the same species and age at the same site.

(2) Description of basic phenotypic requirements for approval of plus is provided in Annex 11.

(3) In the case of parent – plus trees intended for the production of artificial hybrids, the percentage of hybrids in the reproductive material shall be determined by a verification test.

(4) Plus trees shall be harvested only when their protection period expires.

Article 8

Seed orchards

1) Seed orchards are established of individuals collected by means of ramets or generative progenies of plus trees. Its purpose is to produce seed of known or expected genetic quality, and to preserve gene pools of plus trees.

2) At the establishment of a seed orchard, economic importance and long term need of a reproductive material of concerned species in its respective seed and altitudinal zone is considered.

3) Seed orchard shall be established according to a project approved by the forestry institute, which contains:

- a) The reasoning for establishment of an orchard and definition of the use of seed to be produced,
- b) Description of the site, where orchard is established and proposal of measures preventing undesirable contamination from other forest stands,
- c) The origin and number of plus trees, and technology used to produce ramets,
- d) The design of an orchard – layout in which ramets or progenies are planted,
- e) Way in which the orchard is established, design of silvicultural, protection and soil improvement measures.

(4) The minimum number of component plus trees is 50. The difference between the most and least represented plus tree shall not be more than threefold.

(5) The approval certificate shall be issued by the forestry institute when 75% of all ramets is planted and requirements according to paragraph 3 are fulfilled. The records of a seed orchard

consist of the approval certificate and Book of a Seed Orchard maintained according to the template provided in annex 8.

Article 9

Clones and multiclonal varieties

- (1) A clone can be approved for the category of reproductive material
 - a) Qualified, as a recommended clone, referring to its phenotypic traits unless testing is completed,
 - b) Tested, as a regionalized clone (cultivar) pursuant to evaluation of long-term tests established in order to evaluate all its economical and ecological characteristics.
- (2) Clonal mixture is a mixture of clones of the same species or interspecific hybrids with known proportions. It is a source of reproductive material in category qualified, in order to reduce risks related with the reduction of genetic diversity in the course of vegetative propagation.
- (3) Multiclonal variety is a tested mixture of clones with the same site requirements and similar growth characteristics. It is a basic material for the tested category.
- 4) Clones, clonal mixtures and multiclonal varieties shall be approved by the research institute according to Article 3 paragraph 5 if
 - a) There is at least one distinct characteristic, in which they are performing better from the economical or ecological point of view,
 - b) Their properties were verified by a single assessment of by an evaluation of long-term experiments,
 - c) It is possible to identify them according to different genetic characteristics.
- (5) The minimum number of clones represented in a clonal mixture or multiclonal variety with equal number of ramets shall be 10 for the fast growing tree species and 25 for other tree species.
- (6) The minimum number of clones represented in a clonal mixture or multiclonal variety with unequal number of ramets is 50.
- (7) Approved clones, clonal mixtures and multiclonal varieties shall be maintained in special plantations, such as stool-beds and stump-nurseries, established for the purpose of production of reproductive materials according to projects approved by the research institute.

Article 10

Denomination of basic material

- (1) Each parent – plus tree shall be marked by its serial number in the approval certificate. The number is painted in yellow colour at the height of 1,3 m on the side visible from the closest road or route. On both sides of the number, two 5 cm – wide strips with a 15 cm wide empty space in between of them shall be painted on a stem circumference.
- (2) The approved stand of A category shall be marked by one 5 cm - wide green strip on a stem circumference at the height of 1,3 m on trees along the outer stand boundary.

(3) The approved stand of category B is marked by the green letter „X“ on trees along the boundary of a stand.

(4) The generative reproductive plantation is marked by the fixed stacks on corners and break-points of their boundaries. When the trees are grown up, the boundary is marked by yellow, 10-cm wide strip around the stem at the height of 1.3 m on marginal trees of a stand.

(5) The boundary of a gene reserve forest is marked by a green letter „G“ on the outer side of marginal trees along the outer boundary of a gene reserve.

(6) The boundaries of approved stands, generative reproductive plantations and gene reserve forests shall be marked in such a density that they are visible from one marked tree to another.

7) The field marking of approved basic materials shall be done in the forest tenant.

8) In the forestry maps, the approved basic materials are denominated by the following symbols:

a) Approved stands category A



b) Approved stands category B



c) Plus trees



d) Seed orchards



e) Forest stands in a gene reserve forests



f) Generative reproductive plantations



9) When a forest compartment is approved for several forest tree species with different phenotypic categories, the highest phenotypic shall be indicated in a forestry map.

Article 11

National register of approved basic materials

1) National register of approved basic material contains for each approved stand all information available in its approval certificate.

2) National list is structured according to the tree species, categories of basic material and provenance regions.

3) Each basic material entered into the national register is assigned a unique 10-position alphanumeric registration code by the forestry institute according to annex 12, part A.

4) The registration code of a basic material for source-identified reproductive material contains information according to Annex 12, part B.

5) By February 15, an owner of the basic material provides the research institute with information about changes in approved basic materials as of December 31, using the form in

Annex 13. After their validation, the forestry institute informs district forest authority about said changes.

Article 12

Testing of basic materials for category “tested”

(1) Seedlings or plants provided by the owner of concerned basic material for the purpose of testing, shall be of the same age, raised using the same method, of the same external quality, healthy and not damaged.

(2) Duration of the tests of basic materials shall be:

- 5-10 years for fast growing species where usual rotation is up to 40 years,
- 15-20 years for species where usual rotation is 40 to 60 years,
- 20-25 years for tree species where rotation is longer than 60 years.

(3) Tests of the basic materials may be:

- shortened or prolonged by the maximum of 5 years,
- interrupted or terminated following a request of an applicant.

(4) The method of testing of economical and ecological properties of basic materials intended for the tested category shall be proposed by the research institute.

Article 13

Procurement of reproductive material and issuing of master certificate

(1) The collection of reproductive material from the basic material may be carried out if announced using a form according to Annex 14.

(2) The application for a permit to collect a source identified reproductive material shall be submitted not later than one month in advance of the intended harvest of seed or seed units according to the template provided in Annex 15.

(3) If the basic material, for which a permit is requested according to paragraph 2, is not classified phenotypically in the FRM, its suitability for seed collection may be verified by the forestry institute in the field.

(4) The seedlings from natural regeneration of tree species according to Article 14, paragraph 1 shall be lifted only in approved stands,

(5) The seedlings from natural regeneration of other tree species can be lifted also in identified sources but only in a case of their acute shortage and for self-consumption of the same forest tenant in whose forest the seedlings originate.

(6) Lifting of seedlings from natural regenerations can be done only with the intensity that shall not endanger the species structure and density of natural regeneration needed for successful stand establishment in the concerned basic material.

(7) The template of the Letter of Origin of a Reproductive Material (hereinafter only the “letter of origin”) is provided in Annex 16 All three copies of the letter of origin shall be provided by original stamps and signatures.

(8) Prior to registration, collected reproductive material shall be labelled according to Annex 17.

(9) Registered reproductive material can be marketed when labelled according to Annex 18.

Article 16

Provenance regions

1) The provenance regions are delineated for the following forest tree species:

a) Norway spruce (*Picea abies* Karst.)

1. Inside the natural range: Tatranská, Fatransko-Podtatranská, Rudohorská, Šarišsko-Spišská, Kysucko-Oravská,
2. Outside the natural range: Západoslovenská and Juhoslovenská.

b) European silver fir (*Abies alba* Mill.)

1. Inside the natural range: Tatranská, Severoslovenská, Stredoslovenská, Horehronsko-Hnilecká, and Východokarpatská,
2. Outside the natural range: Juhoslovenská.

c) Scots pine (*Pinus sylvestris*)

1. Inside the natural range: Tatranská, Podtatranská, Hnilecká, Šarišsko-Spišská, Severozápadná, and Záhorie,
2. Outside the natural range: Juhovýchodoslovenská and Stredoslovenská.

d) European larch (*Larix decidua* Mill.)

1. Inside the natural range: Tatranská, Stredoslovenská, Šarišsko-Spišská, and Oravská,
2. Outside the natural range: Juhozápadoslovenská, Východoslovenská.

e) European beech (*Fagus sylvatica* L.)

1. Inside the natural range: Podtatranská, Východoslovenská, and Stredoslovenská,
2. Outside the natural range: Tatranská and Juhoslovenská.

f) Sessile oak (*Quercus petraea* Liebl.)

1. Inside the natural range: Východoslovenská, Stredoslovenská, and Juhoslovenská,
2. Outside the natural range: Severoslovenská, Západoslovenská, and Juhovýchodoslovenská.

g) Pedunculate oak (*Quercus robur* L.)

1. Inside the natural range: Západoslovenská, Juhoslovenská, and Juhovýchodoslovenská,
2. Outside the natural range: Východoslovenská, Stredoslovenská and Severoslovenská.

2) The maps, numerical denomination and description of the provenance regions is provided in Annexes 19 to 25.

Article 15

Principles of the transfer of reproductive material

Horizontal transfer of a forest reproductive material shall be allowed between the provenance regions according to Article 14 paragraph 1 only outside of natural ranges of respective tree species.

Article 16

Procedures in conservation of forest genetic resources

- 1) The purpose of the conservation of forest genetic resources is to preserve biological diversity of forests for their sustainable use on behalf of current and future generations. It is carried out:
 - a) in situ in approved stands, parent – plus trees, gene reserve forests and generative reproductive plantations,
 - b) ex situ in seed orchards, generative reproductive plantations, forest seed bank, clonal and progeny archives.
- 2) The clonal and progeny archives serve for long-term conservation of parent - plus trees, clones or progenies of extraordinary biological and economical value when they disappear in situ.
- 3) The Forest Seed Bank represents a collection of seedlots serving for a long-term conservation of representative samples of the gene pool of highly valuable and in situ endangered stands offorest tree species.

Article 17

Management of approved clones, clonal mixtures and multiclonal varieties.

- (1) For the period of approval, the clones, clonal mixtures or multiclonal varieties shall be:
 - a) parent-plus trees, clones, clonal mixtures and multiclonal varieties maintained in special plantations according to Article 9, paragraph 7,
 - b) records about the quantity and end users of produced seed, seed units or parts of plants for vegetative propagation,
 - c) control samples provided of produced seed, seed units or parts of plants for vegetative propagation.
- (2) If a clone or multiclonal variety does not fulfil requirements for the category, for which they were approved, their owner shall be given a period for elimination of revealed defaults.

Article 18

Requirements on external quality and classification of forest reproductive material

- (1) The quality of seeds shall be characterized by the purity, germination percentage or vitality, weight of 1000 seeds and number of germinable seeds in 1 kg, determined by a laboratory accredited for testing of quality of forest seeds.
- (2) The quality of seeds, regarding small lots⁷⁾, shall not be assessed
- (3) Lots of seeds and raw seed may not be marketed unless they reach species purity of 99%. Lots of fruits, seeds of closely related species of forest trees except of artificial hybrids, are . in Annex I, excluding artificial hybrids. The species and sub-species purity of a seed lot shall be stated on its label.

⁷⁾ Commission regulation (EC) No 2301/2002 of 20 December 2002 laying down detailed rules for the application of Council Directive 1999/105/EC as regards the definition of small quantities of seed

(4) Reproductive material shall be, regarding its morphological traits, size, health condition, vitality and physiological quality, of a usual commercial quality.

(5) Parts of plants intended for vegetative propagation of poplars and willows, shall match with the classification criteria set in Annex 26.

Article 19

Mixing and dividing of lots

1) If the mixed lots originate in several basic materials, the certificate according to Annex 27 shall be issued. If the mixed lots originate in different crops of the same basic material, the certificate shall be issued according to the template in Annex 28.

2) The registration code of a mixture of reproductive materials contains information according to Annex 12, part C.

3) Only registered lots of reproductive material may be divided.

4) All new lots originating in division shall be provided by accompanying certificates of reproductive material according to Annex 28. New master certificates may be issued for lots originating in division on a request of a producer or supplier.

Article 20

Use of forest reproductive material in forest regeneration and afforestation

(1) The requirement to issue a master certificate of a reproductive material to be marketed shall be stated in a request for registration according to Annex 30 and 31.

(2) The report on seeds stored as of June 30 and December 31 of a current year, i.e. after spring and autumn sowing, shall be sent on a filled form provided in Annexes 30 and 31 in 15 days from the aforementioned days.

(3) Reproductive material obtained from another member states of the European union and third countries, may be used for artificial forest regeneration and afforestation only when a certificate for its use was issued. A template of such certificate is issued in Annex 33.

(4) Reproductive material used for forest regeneration and afforestation shall be recorded by in the File of Stand Origin following the template provided in Annex 34. If the management records are kept electronically⁸), the file of stand origin may be kept accordingly.

(5) When natural and artificial regeneration is combined or lots of planting stock of different origin were used for artificial regeneration, the origin of a stand shall be determined in the forest management plan according to Article 3 paragraph 7. The origin shall be the same as of the prevailing component of regeneration.

(6) Forest tenant shall provide information according to paragraph 5 to the forest management planner, who will state it in a respective part of a management plan.

⁸) Article 1 par. 2 of the Regulation of Ministry of Agriculture of the Slovak Republic no. 31/1999 of the Legal Code on forest management records.

Article 21
Examination commission, professional exam
and issuing of the certificate of professional competence

- (1) The application for issuing the certificate of professional competence for collection, processing, storing, raising and marketing of forest reproductive material is addressed by March 31 of a current year according to the template provided in Annex 35.
- (2) The following documents shall be attached to the application:
- a) officially copy of educational proofs,
 - b) review of the register of punishment not older than 3 months.
- (3) The exam of professional competence shall be carried out by a three-member commission nominated by the Minister of Agriculture of the Slovak Republic. The commission shall be chaired by a worker of the ministry. Members of the commission shall be representatives of the research institute, Technical University in Zvolen, state and non-state forestry institutions.
- (4) The applicant shall be provided the details about the date and place, summary of questions and examination procedures not later than 15 days in advance of the exam. The examination shall consist of the written and oral part.
- (5) The certificate of professional competence shall be issued for applicants who passed the exam successfully, using a template provided in Annex 36, part A.
- (6) Natural or legal person, who deals with forest reproductive material and employs a person holding the said certificate, shall be granted a certificate of professional competence according to Annex 36, part B or C.
- (7) A natural or legal persons from another member state of the European Union shall be granted a certificate of professional competence according to Annex 36, part D.

Article 22
Transitory and closing provisions

Generative reproductive plantations and seed orchards established according to the previous regulation shall be considered compliant with the present decree.

Article 23

The Decree of the Ministry of Agriculture of the Slovak Republic no. 64/2001 of the Legal Code on Forest Reproductive Material, its Procurement and Records shall be cancelled.

Article 24

This decree shall enter into force by November 1, 2004.