

**DENR Memorandum Circular
No. 20
December 18, 1995**

SUBJECT : Implementing Guidelines of DENR Administrative Order No. 95-9, Series of 1995, Regulation on Forest Tree Seed Production, Collection and Disposition.

Pursuant to Section 12 of DENR Administrative Order No. 95-9, dated 29 March 1995, and in order to ensure the use of quality forest tree seeds for the country's forestation program, the following guidelines and procedures are hereby issued for the guidance and compliance of all concerned.

Sec. 1 Identification and Establishment of Seed Production Areas (SPAs)

- 1.1 The prioritization of species and the number of SPAs to be established shall be based on Regional needs. The minimum area for individual SPA shall be two (2) hectares. Areas less than 2 hectares that meet the requirements provided for under DAO No. 95-9, Series of 1995 shall be considered as seed sources. Provided, however, that seeds should only be collected from selected phenotypically superior trees. Additional potential SPAs to be identified by the different Regional Forest Tree Seed Committees (RFTSCs) in their respective regions shall be validated by teams to be fielded out by the National Forest Tree Seed Committee (NFTSC).
- 1.2 The boundaries of the selected SPAs shall be clearly demarcated in the area with poles and signboards, and shall be indicated in the forest map.
- 1.3 Seed trees shall be selected based on the criteria specified in Annex B of DAO 95-9. The identified seed trees shall be marked with a paint band and consecutively numbered. Trees that do not meet the standard shall be marked with an X and cut during roguing operations.
- 1.4 The number identities of all these trees shall be retained and used in all subsequent activities, i.e. genetic tests for future tree improvement endeavors.
- 1.5 Only trees of superior bole form, with balanced crowns, proportionately small branches, healthy (without any sign of insect or disease damage) and are dominant or co-dominant will be retained as seed trees. All suppressed trees and those which are defective, with irregular bole form must be rogued.

- 1.6 A one hundred meter wide buffer zone for the identified SPA shall be constructed and maintained. Trees of the same species within the buffer zones with undesirable traits shall likewise be removed.

Sec. 2 Maintenance and Protection of Established Seed Production Areas (SPAs)

- 2.1 An integrated management plan for the SPA/Seed Source shall be prepared by the PENRO/CENRO in collaboration with the Regional Forest Tree Seed Committee (RFTSC). Such plan shall be submitted for evaluation and approval by the National Forest Tree Seed Committee (NFTSC). The RED/PENRO/CENRO shall be responsible for the operationalization/implementation of the plan.

2.2 Roguing

In feeling the trees to be removed during roguing operations, the fall should be properly directed so as not to cause any damage to be selected trees. In cases where damage cannot be avoided, the girdling of trees to be removed shall be done. The girdled trees shall be subsequently cut after their branches have fallen. A second roguing may be necessary to remove other inferior trees that might have been missed during the elimination process. Roguing operations shall be supervised by a trained/competent forester authorized by the Regional Forest Tree Seed Committee. Trees removed and/or pruned branches shall be disposed in accordance with existing rules and regulations.

2.3 Stand Improvement

All stand improvement activities such as thinning, pruning, and liberation cutting shall be done in accordance with the plan as approved by the Regional Executive Director.

2.4 Protection of SPAs

All other activities incompatible with the purpose of seed production, shall not be allowed. The RED/PENRO/ CENRO shall be responsible for the protection of these areas.

Sec. 3 Documentation

A Seed Production Area Register (Annex C of DAO No 95-09) shall be accomplished for all proclaimed SPAs. A copy of these registers shall be sent to

the Forest Management Bureau (FMB) who shall be responsible for the incorporation of these into Forest Genetic Resources Information Data Base System (FGRID). All RFTSCs/PENRO/CENRO shall be responsible for the documentation of all activities conducted in the SPAs, records on seed yield and other relevant information.

Sec. 4 Accreditation

All private plantation owners seeking accreditation SPAs shall submit an integrated management plan of are applied for. These areas shall also be validated by a team organized by the NFTSC whose findings shall serve as basis in the accreditation of the areas as SPA by the concerned Regional Executive Director. The said accreditation shall be renewed every five (5) years, subject to the evaluation and recommendation of the NFTSC. However, this shall not preclude the DENR in cancelling/suspending such accreditation pursuant to the provisions of DAO 95-09.

Sec. 5 General Procedures for Seed Collection.

5.1 Time of Collection

Seeds shall be collected from SPAs where majority of the fruits are ripe enough to contain mature/well developed seeds. This can be determined from periodic visits to SPA that should be done during flowering and fruiting of the trees.

5.2 Collection Method

Depending on economic and practicability, seeds could either be collected from the ground or from standing trees. Appropriate tools and equipment shall be used for efficiency and safety.

5.3 Records and Labels

Each seed lot collected shall be properly labelled and identified. Appropriate information shall be placed inside and outside each container. Use indelible and waterproof writing materials. The following are the minimum information that shall be included in a label:

- 5.3.1 Species name (common and botanical)
- 5.3.2 Seed lot ID
- 5.3.3 Provenance
- 5.3.4 Amount of seeds in kg.
- 5.3.5 Source/Location

- 5.3.6 Date collected
- 5.3.7 Collector's name

A "Seed Register" form for each seed lot shall be properly filled up in accordance with Annex "C" of DAO 95-09 and submitted to the Seed Storage and Testing Centers together with the seed lot.

5.4 Temporary Storage After Collection

If collection cannot be completed in one day and immediate transport of fruits/cones or seeds is not possible heating up shall be prevented by providing adequate ventilation and stacking in thin piles. Avoid contact with moist soil or soaking the seeds, fruits/cones in rain or water.

Sec. 6. Transport

Immediate transport to the seed storage and testing centers is recommended. During transport, heating shall be avoided by adequate ventilation, prevention of direct exposure to sunlight or contact with hot engine.

Sec. 7. Seed Processing

Seed Collected from any of the identified SPAs shall be processed before they are submitted to the nearest seed storage and testing centers. This is to ensure that seed deterioration is minimized and the quality of the seed is maintained prior to storage or disposition for planting. Care must be taken to ensure that seed lots are not mislabeled after they have been processed. The label should be properly attached to the seedlot immediately after bagging and putting them in appropriate containers. The information on the corresponding seed processing method used for the species should also be added to its seed register form.

Sec. 8. General Procedure for Tree Seed Testing

8.1 Seed Quality Tests

The following seed test shall be performed on samples of submitted seed lots immediately after receipt of the seeds; viability test, test for moisture content, seed vigor and seed health tests should be performed in a regular basis thereafter depending on the species, to monitor changes on the quantity on the seeds.

8.2 Documentation of Test Results

Data gathered from these tests shall be recorded in the seed register form and indicated in the seed tag or label that must accompany all seeds bound for storage or distribution. As previously mentioned, the tag or labels should be prepared in duplicate, one to be placed in the seeds container and the other one tagged outside of the container. All data gathered must be recorded and kept for ready reference and to serve as basis for monitoring the quality and performance of the seed lot. A copy of the same shall be submitted to the FMB for appropriate storage in the FGRID system. These data are crucial in refining seed quality test standards through the years.

8.3 Conduct and Supervision of the Tests

The procedures in conducting these tests are detailed in the attached manual by species where applicable. A regular seed technologist of the Seed Storage and Testing center must conduct the test, the result of which must be duly certified by his/her supervisor. No seedlot shall be disposed without these seed tests, especially the viability and seed health test. All tests should be done promptly and results immediately sent to the requesting parting. The standard procedures to be used for each test are given in Annex A.

Sec. 9 Seed Storage

- 9.1 Large quantities of seeds shall be brought to the nearest Seed Storage and Testing Centers for processing and storage, while seeds of small quantity shall be processed and stored directly in the region for their immediate and future use.
- 9.2 All recalcitrant seeds shall be immediately sent to the center for appropriate storage and handling.
- 9.3 The Center shall render service to owners of private SPAs in terms of processing, testing and storage for a fee as may be prescribed. Payment shall depend upon the bulk of fruits/seeds to be processed, tested and stored.
- 9.4 The recommended storage for selected species is presented in Annex B.

Sec. 10 Seed Disposition

- 10.1 The DENR Seed Storage and Testing Centers and accredited SPA owners shall make available quality seeds to all reforestation projects and plantation-related projects at prevailing market prices.

10.2 The Seed Storage and Testing Centers may also provide seeds in limited quantities, free of charge to researchers, and institutions for experimental purposes upon request.

Sec. 11 Revisions of standards and technical procedures

Standard and technical procedures specified in this implementing guidelines shall be modified or revised based on the generated information/technology on forestry seeds.

Sec. 12 Repealing Clause

The provisions of DAO No. 31, Series of 1991 with respect to the option of buying tree seeds from accredited SPAs, MC No. 11, Series of 1991, DAO No. 95-5 and other related issuances which are inconsistent with this guidelines are hereby modified accordingly.

Sec. 13 Effectivity

This Memorandum Circular shall take effect immediately.

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