

**Minnesota Department of Natural Resources
Division of Forestry**

Circular Letter To: All Forestry Personnel
Subject: Nursery Seed Source Control
Date: January 9, 1996
File: #3421-2

(Replaces Circular Letter 3421-2 dated June 27, 1983)

Purpose

The goal of the DNR Nursery and Tree Improvement Program is to economically produce forest regeneration material of the highest genetic and biologic quality in the quantity needed for environmental programs. It has been recognized for many years that seed source control is the cornerstone of a successful reforestation program. The use of properly adapted seed sources is the necessary first step in establishing forest tree plantations. Usually, seed sources nearest the intended planting zone are best.

The purpose of this policy is to establish control of forest tree seed sources utilized by the state forest nurseries, such that identity of seed is maintained from collection through to redeployment as direct seedings or seedlings. This policy is intended to promote the practice of returning seed and seedlings back to their zone of origin.

Responsibilities

The Tree Improvement Program Coordinator directs the state Tree Improvement Program and suggests policies to the Directors Management Team. The Tree Improvement Coordinator, the Nursery Supervisors, Regional Silviculturists, and Area Forest Supervisors share responsibilities for policy administration. Nursery personnel, Area Program Foresters, and Area Technicians are responsible for policy implementation.

Policies

Seed Zones

Based on prevailing climatic conditions, the State of Minnesota has been divided into six seed zones. These seed zones essentially follow administrative area boundaries existing on July 1, 1994 and are shown in Exhibit I. Because of documented poor performance, North Shore tree seed sources should be avoided for use in forest plantations. Other plants of significant interest from the shore zone will be processed.

Seed Source Control at the Point of Origin

Areas will be responsible for locating and recording forest tree stands having potential for good seed production, for species identified by the State Forest Nurseries. Seed collection and production areas should be located on state lands where possible. Formal cooperative agreements can be considered for other ownerships. These stands should be recorded by completing Form NA-02074-01, >Seed Collection Stand Record=, and submitted to the State Forest Nurseries for review and selection (see Exhibit II).

Seed collection and production areas should be reserved for seed production. The Area should prepare a management plan with cooperation from the Division Tree Improvement Specialist to indicate how the stand will be managed and how seeds or cones will be harvested. Each year, the Area will estimate the seed or cone crop in designated stands, reporting these estimates to the State Forest Nurseries no later than August 1.

Seed collection goals and prices to be paid will be set by the State Forest Nurseries with input from the local Area to reflect market prices. The area will be responsible for meeting assigned seed collection goals. Cone and seed collection should be directed toward seed collection and production areas previously determined. Cones and seed may be accepted from non-selected stands; however, the Area should inspect and approve these stands prior to accepting cones or seed. Cones and seed may be obtained by direct purchase from individuals, contracts awarded by competitive bidding, or collections by Division of Forestry personnel; but only from approved sites. Expanded contract purchasing and vendor development can be investigated through Nursery and Area cooperation.

If cones or seed are to be obtained by direct purchase, the Area should advertise locally so that cones or seed will be purchased only from individuals registered to collect cones or seed from approved sites. Cones or seed collected in stands other than approved seed collection and production areas should only be purchased following inspection and approval by the Area.

The area should inspect samples of cones and seed for maturity and seed set. Immature seed, or cones with seed set below established standards for the species should not be purchased.

The area should measure, sack, and tag all seed and cones purchased in their area. At a minimum, tags should include the species name, the measured volume, the seed zone (Exhibit I) and the date collected (if known). If cones and seed cannot be shipped to the State Forest Nursery immediately, the Area should store cones and seed under conditions appropriate for each species to prevent molding, heating, rodent depredation, and other problems that may affect seed quality. If storage and hauling becomes a problem for the local Area, the Nursery should be contacted for pickup.

Seed Source Control at the State Forest Nurseries

Upon receipt at the State Forest Nurseries, an accurate record of cones and seed received will be maintained. Cones and seed should be properly stored until processing. Accurate and precise seed source records will be kept from extraction through storage of cleaned seed. Seed storage containers should contain both the Area name and seed zone number. Seed extraction, yield and quality reports will be forwarded to the Areas each year by April 1st.

When seed is sown in the State Forest Nurseries, accurate and precise records will be kept including seed zone number, where it was sown in the nursery, and the date of sowing. Records should be sufficient so that any seedling can be identified by seed zone at all times.

When seedlings are lifted, sorted, packed, and shipped, they should be returned to their seed zone of origin whenever possible. If seedlings are requested for a seed zone from which no seed was either produced or available, an appropriate seed source may be substituted. Appropriate substitute seed sources should be determined prior to the packing season. To comply with plantation record-keeping in the Forest Development Module, seedlings shipped for state lands should include the seed zone number on the shipping container.

1-9-96

Date

/s/

Gerald A. Rose

Director, Division of Forestry

Seed Collection Zones for Minnesota

