

THE STATUS OF CONTAINER PLANTING PROGRAMS IN THE NORTHERN UNITED STATES

1. NORTHEASTERN UNITED STATES

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Abstract.--Over 80% (53 million ha) of all forest land in the northeastern United States is under nonindustrial private ownership. Private planting depends heavily on bare-root planting stock grown in state-operated nurseries. These nurseries accounted for 70% of the total of 136 million seedlings produced in 1981. Fewer than 5% of these were containerized seedlings, which were produced primarily in forest industry and private nurseries.

Résumé.--Plus de 80% (53 millions d'ha) de toutes les régions forestières du nord-est des États-Unis appartiennent à des particuliers et ne servent pas à des fins industrielles. Ces particuliers comptent surtout sur le matériel de reproduction à racines nues des pépinières gérées par l'État, et ces dernières ont fourni 70% des 136 millions de semis produits en 1981. Moins de 5% de ces plants étaient en mottes emballées. Ce sont surtout les pépinières privées et l'industrie forestière qui produisent des plants de ce genre.

This report covers container production in the northeastern area of the United States with the exception of the three Great Lakes states of Michigan, Minnesota and Wisconsin. These three states are covered in a separate report (Aim 1982).

The USDA Forest Service's Northeastern Area includes the states from Maine to Minnesota, south to Missouri and east to Maryland. There are 20 states in all, with a total area (land and water) of 172.1 million ha. Approximately 38% of this area (65.7 million ha) is classified as forest land.

One of the most striking features of land use in the Northeastern Area is that over 80% (52.4 million ha) of all forest land is under nonindustrial private ownership. Only about 8.4% (5.5 million ha) of forest land is federally owned.

This private ownership factor has had a strong influence on the development of seedling production and planting programs within the area. The small, nonindustrial private landowner depends heavily on bare-root seedlings grown in state-operated nurseries. Eighteen of these 20 states have at least one state nursery. Some states have as many as three small nurseries. State-owned nurseries accounted for nearly 70% of the total of 136 million seedlings produced in the Northeastern Area in 1980 (Table 1). Production of containerized seedlings amounted to less than 5% (5.8 million seedlings) of this total, most of them (97%) being produced in forest industry and private nurseries.

A total of 57,680 ha of forest land were replanted in 1980, the greater portion (61%) of this planting being on privately owned nonindustrial lands (Table 2).

The remainder of this report deals with individual states in which container stock is commercially produced for reforestation purposes.

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Table 1. Seedling production by stock type and agency in the Northeastern Area (fiscal year 1980)^a

Agency	Seedling production 1980	
	Bare-root(000)	Containerized (000)
Publicly operated nurseries		
federal	9,340 ^b	93 ^b
state	93,245 ^c	98 ^c
other (SCS, etc.)	10,000 ^c	--
public subtotal	112,585	191
Private nurseries		
forest industry	1,464 ^c	3,356 ^c
private	10,045 ^c	2,261 ^c
private subtotal	11,509	5,617
Total, all agencies	124,094	5,808
Grand total		129,902

^aExcludes states of Michigan, Minnesota and Wisconsin

^bReforestation and Timber Stand Improvement Report for fiscal year 1980, USDA Forest Service

^cAnnual Cooperative Forestry Accomplishment Reports for fiscal year 1980, USDA Forest Service

STATE-BY-STATE REPORT

Maine

Table 2. Planting by agency in the Northeastern Area (fiscal year 1980)^a

	Area planted (ha)
Public forest lands	
federal	6,238 ^b
state	4,244 ^c
local	2,944 ^c
public subtotal	13,426
Private forest lands	
forest industry	8,188 ^c
other industry	897 ^c
nonindustrial	35,351 ^c
private subtotal	44,436
Total, all agencies	57,862

^aExcludes states of Michigan, Minnesota and Wisconsin.

^bReforestation and Timber Stand Improvement Report for fiscal year 1980, USDA Forest Service.

^cAnnual Cooperative Forestry Accomplishment Report for fiscal year 1980, USDA Forest Service.

Five nurseries produce containerized stock in Maine--the state nursery, two private nurseries and two owned and operated by forest industry. In 1980 these nurseries produced about 2.5 million seedlings for reforestation as follows: black spruce (*Picea mariana* [Mill.] B.S.P.) 1,144,000; white spruce (*P. glauca* [Moench] Voss) 416,000; red spruce (*P. rubens* Sarg.) 200,000; various larches (*Larix* spp.) 375,000; red pine (*Pinus resinosa* Ait.) 161,000; jack pine (*P. banksiana* Lamb.) 156,000; and white pine (*P. strobus* L.) 16,000.

The type of container varies from nursery to nursery. Only one nursery uses several types of container, among which are the FH 308 and FH 408 Japanese paperpots, Can-Am Multipots, and Styrofoam quarter blocks 2 and 4 in.³ (32.8 and 65.6 cm³).

Vermont

Only one private nursery in Vermont raises forest seedlings in containers. The greenhouse is just coming on line, and although there was no production in 1980, plans call for a production of 50,000 seedlings annually. Seedlings will be grown in both styroblocks and multipots supplied by the purchaser.

Missouri

One large private nursery is growing a small amount of Paulownia (*Paulownia tomentosa*) for several southern lumber firms. The seed is sown in flats and then transplanted to Jiffy 7 pots within about 2 weeks. After 6 or 7 weeks the plants are 15-20 cm tall and are ready for shipment. These fragile, fast-growing seedlings are very difficult to handle and ship, and can be compared with young tomato plants in this respect.

Production targets for 1983 call for an increase at only one of the seven nurseries covered in this report. This would increase production for this area by about one million seedlings.

The types of greenhouses in use at the seven nurseries include traditional style glass, both wood and steel frame double-poly, and corrugated fibreglass. The double-poly house is by far the most common. The other types of house are all provided with an inner skin of polyethylene to help insulate them against heat loss. Heat sources include oil, oil with wood backup, and propane. The Missouri nursery claims solar energy as its sole heat source for growing Paulownia. The rest of the nurseries may be located in the wrong climates.

CONCLUSION

There is a fair amount of interest in growing and planting containerized stock in

the Northeastern Area. The forest industry is the largest producer of containerized planting stock, although this accounts for a relatively small portion of total seedling production by all agencies (2.58%) (Table 1). Lack of funding for most state nurseries is evident even in their bare-root operations. Lack of capital to embark on container programs is probably the major reason that containerized seedling production is not more prevalent in this area.

Even though care must be exercised in the culture and handling of containerized planting stock, this type of planting product is considered much hardier than bare-root stock. It seems likely that the relatively inexperienced nonindustrial forest landowners might have greater establishment success if they were purchasing and planting container stock. The long transportation distances, lack of proper bare-root delivery systems, and the inexperience of handlers and planters are all strong arguments for the greater use of container stock in the Northeastern Area.

LITERATURE CITED

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