

FOREST TREE PRODUCTION CENTRES IN CANADA

1983

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GREAT LAKES FOREST RESEARCH CENTRE

CANADIAN FORESTRY SERVICE

DEPARTMENT OF THE ENVIRONMENT

1984

INFORMATION REPORT 0-X-357

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Catalogue No. Fo46-14/357E
ISBN 0-662-13197-5
ISSN 0822-210X

Copies of this report may be obtained from:

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P6A 5M7*

ABSTRACT

A total of 103 public sector, private and forest industry nurseries produced planting stock for reforestation purposes in 1983. Of these, 47 grew bare-root stock and 83 grew containerized seedlings. Planned production of bare-root and containerized stock for 1983 was 281 million and 260 million seedlings, respectively. Since 1979, bare-root production expanded by 40%, or 81 million seedlings, and containerized stock increased by 140%, or 152 million seedlings. Total production is forecasted to increase to 285 million bare-root and 271 million containerized seedlings in 1984.

RÉSUMÉ

Au total, 103 pépinières, publiques, privées ou appartenant aux industries forestières, ont produit du matériel de reboisement en 1983. De ce nombre, 47 produisaient des plants à racines nues et 83, des semis en contenant. La production prévue était de 281 millions de plants à racines nues et de 260 millions de semis en contenant en 1983. Depuis 1979, les premiers ont connu une augmentation de production de 40%, soit 81 millions de semis, tandis que les seconds, une augmentation de 140%, soit 152 millions de semis. On prévoit que la production totale augmentera jusqu'à 285 millions dans le cas des premiers et à 271 millions dans le cas des seconds, en 1984.

ACKNOWLEDGMENTS

This directory of Canada's forest tree production centres was prepared with the assistance of representatives of provincial forestry agencies, the forest industry and private sector growers across Canada. Their cooperation is greatly appreciated. Special thanks are also due to the Canadian Forestry Service regional FORSTATS representatives who initiated contact with production centre managers and compiled data for their respective regional data bases. We gratefully acknowledge permission granted by L.W. Carlson to reproduce illustrations from his 1979 report, "Guidelines for rearing conifer seedlings in the Prairie Provinces".

FOREWORD

The FORSTATS (FORestry STATisticS) program provides current statistical information on Canada's forest resources, including periodic descriptions and analyses of forest inventory and growth; losses from insects, diseases, and fire; nursery production and silvicultural practice; and social and economic conditions.

The following federal government establishments participate in the FORSTATS program: Canadian Forestry Service headquarters in Hull, P.Q., the Forestry Statistics and Systems Branch in Chalk River, Ont., the Pacific Forest Research Centre in Victoria, B.C., the Northern Forest Research Centre in Edmonton, Alta., the Great Lakes Forest Research Centre in Sault Ste. Marie, Ont., the Laurentian Forest Research Centre in Ste-Foy, P.Q., the Maritimes Forest Research Centre in Fredericton, N.B., the Newfoundland Forest Research Centre in St. John's, Nfld., the Petawawa National Forestry Institute in Chalk River, Ont., and the Forest Pest Management Institute in Sault Ste. Marie, Ont. Provincial forestry agencies, other provincial and federal agencies, and the forest industry cooperate in providing data for the program.

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Cover Photo: Swastika Provincial Tree Nursery, Ontario Ministry of Natural Resources, Swastika, Ontario.

INTRODUCTION

This report was prepared for the purpose of providing current information on forest tree production centres and planned seedling production levels in Canada for the period 1983-1986. It is intended primarily for use by nursery managers and other individuals who have a direct or indirect interest in forest tree production centres, their location, and their production levels. This report is an update of a similar study, *A Directory of Forest Tree Nurseries in Canada*, by J.H. Smyth, published in 1980.

The information contained in this report deals with federal, provincial, industrial, and private commercial production centre operations producing bare-root and containerized forest tree seedlings primarily for reforestation of harvested land. The information on individual forest tree production centres and production levels is presented on a provincial basis.

NATIONAL SUMMARY

Bare-root Seedling Production

In 1983, approximately 281 million bare-root seedlings were targeted for production in 47 production centres across Canada (Table 1). The majority of the growing stock is destined for reforestation and afforestation projects on

TABLE 1. NATIONAL SUMMARY OF BARE-ROOT SEEDLING PRODUCTION.

| PROVINCE | NUMBER OF PRODUCTION CENTRES | AREA AVAILABLE FOR PRODUCTION -- HECTARES -- (1) | AREA CURRENTLY IN PRODUCTION -- HECTARES -- (2) | SHIPPABLE TREES | | PLANNED PRODUCTION | |
|----------------------|------------------------------------|---|--|--------------------|----------------|-----------------------|------|
| | | | | 1982 | 1983 | 1983 | 1984 |
| | | | | ('000) | | | |
| BRITISH COLUMBIA | 13 | 975 | 334 | 62 149 | 81 059 | 81 759 | |
| ALBERTA | 2 | 193 | 108 | 9 760 | 14 516 | 12 368 | |
| SASKATCHEWAN | 4 | 158 | 89 | 10 520 | 16 442 | 16 442 | |
| MANITOBA | 1 | 46 | 24 | 4 071 | 5 483 | 5 483 | |
| ONTARIO | 11 | 743 | 560 | 63 018 | 77 700 | 82 000 | |
| QUEBEC | 9 | 283 | 250 | 34 604 | 62 549 | 62 549 | |
| NEW BRUNSWICK | 3 | 128 | 92 | 20 550 | 15 120 | 15 200 | |
| NOVA SCOTIA | 2 | 72 | 51 | 4 100 | 5 000 | 5 000 | |
| PRINCE EDWARD ISLAND | 1 | 20 | 2 | 176 | 400 | 400 | |
| NEWFOUNDLAND | 1 | 40 | 40 | 2 243 | 2 300 | 3 800 | |
| TOTAL | 47 | 2 658 | 1 550 | 211 191 | 280 569 | 285 001 | |

(1) Area within the nursery available for growing bare-root stock.
(2) Area within the nursery currently growing bare-root stock.

provincial crown lands with the remainder being planted on federal, industrial freehold, private and municipal lands. Seventy-nine percent of the total targeted seedlings produced were grown in British Columbia, Ontario and Quebec.

A number of significant changes in bare-root production occurred during the five-year period 1979-1983. First, the number of production centres in British Columbia increased from eight in 1979 to 13 in 1983. This increase occurred in the private rather than the public sector. Except for Quebec, which lost one production centre during the five-year period, the number of production centres in the other provinces remained the same. On a national basis, the total number of hectares of land in production increased slightly from 1,363 ha in 1979¹ to 1,550 ha in 1983.

Second, the number of forest tree seedlings produced increased sharply from approximately 200 million in 1979 to 281 million in 1983, an increase of 40%. In comparison with 1979, production rose sharply in all provinces except Saskatchewan, New Brunswick and Prince Edward Island.

In the national context, planned production for 1984 is estimated at 285 million seedlings, an increase of approximately 2% over 1983. Ontario, and to a lesser extent British Columbia and Newfoundland, will account for a large percentage of this increase in production. There will be little or no increase in production levels in the remaining provinces.

Containerized Seedling Production

Approximately 260 million containerized seedlings were targeted for the 83 production centres located throughout Canada in 1983 (Table 2). Eighty-eight percent of this production occurred in four provinces --British Columbia (37%), Ontario (26%), New Brunswick (14%), and Alberta (11%). The number of trees targeted increased sharply by 152 million, or 140%, from the 108 million seedlings produced in 1979. Production for 1984 is estimated to increase marginally over that for 1983 by 4% or 10.7 million seedlings. British Columbia, Manitoba, Ontario, Quebec, New Brunswick, and Nova Scotia are expected to increase production levels over 1983, but only marginally. The remaining provinces, except Saskatchewan, will either maintain or decrease 1984 production levels. Saskatchewan has no planned production for 1984.

There were approximately 264,000 m² of growing space available for containerized production in 1983. The total production area includes heated and non-heated greenhouses, and shelterhouses. The production area of 264,000 m² represents an increase of 153%, or 160,000 m², over the available growing space of 104,000 m² recorded for 1979.

¹ The area in production and other production data for the Prairie Farm Rehabilitation Administration tree nursery in Saskatchewan and the two federal experimental nurseries located in Ontario and Newfoundland, respectively, as noted in the 1980 report, "A Directory of Forest Tree Nurseries in Canada", are excluded from the calculations.

TABLE 2. NATIONAL SUMMARY OF CONTAINERIZED SEEDLING PRODUCTION.

| PROVINCE | NUMBER OF PRODUCTION CENTRES | AREA AVAILABLE FOR PRODUCTION - SQUARE METRES - | SHIPPABLE TREES | | | PLANNED PRODUCTION | | |
|----------------------|------------------------------|---|-----------------|---------|---------|--------------------|--|--|
| | | | 1982 | 1983 | 1984 | ('000) | | |
| BRITISH COLUMBIA | 22 | 117 355 | 65 226 | 96 632 | 102 132 | | | |
| ALBERTA | 4 | 17 833 | 20 797 | 29 097 | 26 600 | | | |
| SASKATCHEWAN | 2 | 1 401 | 872 | 000 | 000 | | | |
| MANITOBA | 2 | 1 977 | 981 | 2 051 | 3 677 | | | |
| ONTARIO | 28 | 61 792 | 32 593 | 67 134 | 68 376 | | | |
| QUEBEC | 5 | 10 999 | 5 718 | 13 318 | 15 518 | | | |
| NEW BRUNSWICK | 9 | 27 164 | 27 363 | 37 305 | 38 606 | | | |
| NOVA SCOTIA | 7 | 18 624 | 9 650 | 9 591 | 10 964 | | | |
| PRINCE EDWARD ISLAND | 1 | 3 717 | 1 633 | 1 000 | 1 000 | | | |
| NEWFOUNDLAND | 3 | 3 204 | 1 627 | 3 800 | 3 800 | | | |
| TOTAL | 83 | 264 066 | 166 460 | 259 928 | 270 673 | | | |

The number of containerized production centres increased dramatically during the five-year period leading up to 1983. This increase occurred mainly in British Columbia and Ontario, which gained 12 and 20 production centres, respectively. In both provinces, the additional production centres have been entirely within the private sector.

The type of container used to rear growing stock varies considerably across the country. In British Columbia the most popular container, and the one used almost exclusively, is the BC/CFS styroplug. Spencer-Lemaire Roottrainer "books" and Japanese paperpots are also used, but to a much lesser extent.

In Alberta, Spencer-Lemaire Roottrainer "books" are used exclusively at both provincial and private sector production centres. In Manitoba, the Japanese paperpot FH408 is used exclusively at the province's two production centres.

In Ontario, several types of container are used. The Japanese paperpot FH408 is the most popular and most widely used, followed by Spencer-Lemaire Roottrainer "books". The Japanese paperpot FH308 and Can-Am Multipot containers are also used, but to a very limited extent.

In Quebec a variety of containers are used, including the Quebec tube, IPL container, Can-Am Multipot, BC/CFS styroblock, and Japanese paperpot FH408. At present, the Quebec tube and the IPL container are the two most popular containers in use.

In Atlantic Canada, the type of container used varies considerably from province to province. In New Brunswick, the Japanese paperpot FH408 is the most widely used container, although the Can-Am Multipot and BC/CFS styroblock are used extensively, and in some cases exclusively, in a number of production centres. In Nova Scotia the Can-Am Multipot is used almost exclusively, while in Prince Edward Island and Newfoundland the Spencer-Lemaire Roottrainer "books" are the most widely used containers. Appendix 1 provides a brief description of each of the more commonly used containers in forest tree production centres across Canada.

Seedling Production by Ownership

Table 3 summarizes bare-root and container seedling production by ownership and province for 1983. Of Canada's total production of tree seedlings, 91% of bare-root stock and 51% of containerized stock was grown by provincial governments. These percentages, however, vary from province to province. Gener-

TABLE 3. NATIONAL SUMMARY OF SEEDLING PRODUCTION BY OWNERSHIP - 1983

| PROVINCE | | FEDERAL (%) | PROVINCIAL (%) | INDUSTRY (%) | PRIVATE (%) | TOTAL PRODUCTION ('000) |
|----------------------|-----------|-------------|----------------|--------------|-------------|-------------------------|
| BRITISH COLUMBIA | BARE-ROOT | - | 82.3 | 6.2 | 11.5 | 81 059 |
| | CONTAINER | - | 45.9 | 11.0 | 43.1 | 96 632 |
| ALBERTA | BARE-ROOT | - | 100.0 | - | - | 14 516 |
| | CONTAINER | - | 90.2 | 9.8 | - | 29 097 |
| SASKATCHEWAN | BARE-ROOT | - | 100.0 | - | - | 16 442 |
| | CONTAINER | - | - | - | - | - |
| MANITOBA | BARE-ROOT | - | 100.0 | - | - | 5 483 |
| | CONTAINER | - | 100.0 | - | - | 2 051 |
| ONTARIO | BARE-ROOT | - | 98.7 | 1.3 | - | 77 700 |
| | CONTAINER | - | 27.0 | - | 73.0 | 67 134 |
| QUEBEC | BARE-ROOT | - | 99.2 | .8 | - | 62 549 |
| | CONTAINER | - | 55.9 | 20.8 | 23.5 | 13 318 |
| NEW BRUNSWICK | BARE-ROOT | - | 33.1 | 66.9 | - | 15 120 |
| | CONTAINER | - | 68.4 | 31.6 | - | 37 305 |
| NOVA SCOTIA | BARE-ROOT | - | 100.0 | - | - | 5 000 |
| | CONTAINER | 16.3 | 36.5 | 27.1 | 20.1 | 9 591 |
| PRINCE EDWARD ISLAND | BARE-ROOT | - | 100.0 | - | - | 1 400 |
| | CONTAINER | - | 100.0 | - | - | 1 000 |
| NEWFOUNDLAND | BARE-ROOT | - | 100.0 | - | - | 2 300 |
| | CONTAINER | - | 100.0 | - | - | 3 800 |
| TOTAL CANADA | BARE-ROOT | - | 90.8 | 5.9 | 3.3 | 280 569 |
| | CONTAINER | .6 | 50.8 | 11.8 | 36.8 | 259 928 |

ally speaking, the greater percentage of bare-root production was undertaken by provincial governments in all jurisdictions except New Brunswick, where only 33% of the bare-root stock was grown in government nurseries.

In the production of containerized seedlings, only the provinces of Alberta, Manitoba, Prince Edward Island and Newfoundland grew the greater percentage of their container stock in provincially owned production centres. In British Columbia, Ontario, Quebec, New Brunswick and Nova Scotia, a significant proportion of total production was undertaken mainly by the forest industry and private sector. In British Columbia, Ontario, and Nova Scotia 54%, 73%, and 47%, respectively, of the total number of trees reared in 1983 were produced by the forest industry and by commercial operators in the private sector.

DIRECTORY

Explanation of Directory Information

(a) Bare-root Production Centres

- Area Available for Production: The area within the nursery available for growing bare-root stock.
- Area Currently in Production: The area within the nursery currently growing bare-root stock.
- Productive Capacity: The quantity of bare-root stock that could be grown if the total area available for production were utilized.
- Trees Shipped: The total number of trees that were shipped from the production centre in each of the calendar years 1980, 1981 and 1982.
- Planned Production: The estimated planned production for the production centre for each of the calendar years 1983, 1984, 1985 and 1986.

(b) Containerized Production Centres

- Area Available for Production: Includes heated and unheated greenhouses, shelterhouses, hoopouses, etc., but does not include shade areas and open holding areas.
- Shippable Trees: Refers to the number of trees available for shipping in each of the calendar years 1980, 1981, and 1982.

PROVINCE OF BRITISH COLUMBIA
BARE-ROOT PRODUCTION CENTRES

| OWNERSHIP | MAILING ADDRESS PHONE NUMBER SUPERVISOR | AREA AVAILABLE FOR PRODUCTION (HA) | AREA CURRENTLY IN PRODUCTION (HA) | PRODUCTIVE CAPACITY ('000 TREES) | TREES SHIPPED | | | PLANNED PRODUCTION 1983-1986 | | MAJOR SPECIES GROWN | |
|-----------|---|--|---|---|-----------------------|-----------------------|-------|--|------------------------------|------------------------------|--|
| | | | | | 1980 ('000 TREES) | 1981 ('000 TREES) | 1982 | ('000 TREES) | ('000 TREES) | | |
| INDUSTRY | GRANDVIEW NURSERY, WEYERHAEUSER CANADA LTD., R.R. 3, ST. ANNE'S RD., ARMSTRONG, B.C., VOE 1B0 604-546-8711 T.G. DANIELS | 27 | 17 | 8 300 | - | - | - | 1983 - 5 000 1984 - 5 000 1985 - 5 000 1986 - 5 000 | LP DF WS ES OCON | 80% 10% 4% 4% 2% | |
| PRIVATE | GREATER VICTORIA WATER DIST., 479 ISLAND HIGHWAY, V9B 1H7 604-478-1715 D.H. PILLAR | .5 | .2 | 150 | 75 | 80 | 75 | 1983 - 60 1984 - 60 1985 - 60 1986 - 60 | AF WRC | 85% 15% | |
| PRIVATE | INDUSTRIAL FORESTRY SERVICE NESS LAKE FOREST NURSERY, #101-1595 FIFTH AVENUE, PRINCE GEORGE, B.C., V2L 3L9 604-564-4115 F.P. DONNELLY | 16 | 8 | 8 000 | 700 | 2 000 | 4 000 | 1983 - 4 800 1984 - 5 500 1985 - 6 000 1986 - 6 000 | WS | 100% | |
| PRIVATE | NORTHWOOD PULP AND TIMBER FOREST CENTRE, BOX 9000, PRINCE GEORGE, B.C., V2L 4W2 604-962-9611 K. WATSON | 117 | 34 | 4 500 | - | - | 2 800 | 1983 - 4 000 1984 - 4 000 1985 - 4 000 1986 - 4 000 | WS | 100% | |
| PRIVATE | RIVERSIDE NURSERY, BOX 185, HEDLEY, B.C., VOX 1K0 604-292-8397 I. NELSON | 8 | 2 | 3 000 | - | 262 | 383 | 1983 - 500 1984 - 500 1985 - 500 1986 - 500 | WS | 100% | |
| PROVINCE | CAMPBELL RIVER NURSERY, MINISTRY OF FORESTS, BOX 25, CAMPBELL RIVER, B.C., V9W 4Z9 604-286-1015 R.G. HUDSON | 90 | 39 | 11 100 | 5 347 | 9 104 | 8 476 | 1983 - 6 000 1984 - 6 000 1985 - 6 000 1986 - 6 000 | S BF AF | 38% 35% 27% | |
| PROVINCE | CHILLIWACK NURSERY, MINISTRY OF FORESTS, BOX 242, VEDDER CROSSING, B.C., VOX 1Z0 604-858-7156 V. BITTERLICH | 51 | 40 | 9 000 | 4 968 | 8 260 | 6 092 | 1983 - 9 000 1984 - 9 000 1985 - 9 000 1986 - 9 000 | S AF BF | 56% 43% 1% | |

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PROVINCE OF BRITISH COLUMBIA
BARE-ROOT PRODUCTION CENTRES

| OWNERSHIP | MAILING ADDRESS PHONE NUMBER SUPERVISOR | AREA AVAILABLE FOR PRODUCTION (HA) | AREA CURRENTLY IN PRODUCTION (HA) | PRODUCTIVE CAPACITY ('000 TREES) | TREES SHIPPED | | | PLANNED PRODUCTION 1983-1986 ('000 TREES) | | MAJOR SPECIES GROWN | |
|-----------|--|--|---|---|---------------|--------|--------|--|---------------------|---------------------------|--|
| | | | | | 1980 | 1981 | 1982 | | | | |
| PROVINCE | GREEN TIMBERS NURSERY, MINISTRY OF FORESTS, 9800-140 STREET, SURREY, B.C., V3T 4M5 604-581-2464 M.N. COLLARD | 65 | 27 | 6 500 | 4 468 | 2 558 | 3 669 | 1983 - 4 500 1984 - 4 500 1985 - 4 500 1986 - 4 500 | F P S OCON | 86% 9% 4% 1% | |
| PROVINCE | KOKSILAH NURSERY, (*) MINISTRY OF FORESTS, 5847 CHESTERFIELD ST., BOX 816, DUNCAN, B.C., V9L 3Y2 604-746-5452 N.A. MARSHALL | 28 | 10 | 6 500 | 2 919 | 2 699 | 2 636 | 1983 - - 1984 - - 1985 - - 1986 - - | F C S H | 46% 31% 14% 9% | |
| PROVINCE | RED ROCK NURSERY, MINISTRY OF FORESTS, 15 MILE ROAD, R.R. 7, R.M.D. 6, PRINCE GEORGE, B.C., V2N 2J5 604-963-9651 W. BERG | 220 | 60 | 14 700 | 8 780 | 10 204 | 9 138 | 1983 - 10 550 1984 - 10 550 1985 - 10 550 1986 - 10 550 | S P | 76% 24% | |
| PROVINCE | SKIMIKIN NURSERY, MINISTRY OF FORESTS, GENERAL DELIVERY, TAPPEN, B.C., VOE 2X0 604-835-4541 T.H. HAMILTON | 162 | 24 | 9 700 | 4 905 | 7 224 | 7 960 | 1983 - 7 792 1984 - 7 792 1985 - 7 792 1986 - 7 792 | S F P OCON | 63% 30% 6% 1% | |
| PROVINCE | SURREY NURSERY, MINISTRY OF FORESTS, 3605-192 STREET, SURREY, B.C., V3S 4N8 604-576-9161 H. SCHROEDER | 188 | 71 | 30 500 | 23 380 | 16 114 | 16 211 | 1983 - 28 050 1984 - 28 050 1985 - 28 050 1986 - 28 050 | S F OCON | 73% 23% 4% | |
| PROVINCE | TELKWA NURSERY, MINISTRY OF FORESTS, BOX 310, TELKWA, B.C., VOJ 2X0 N. CHADSEY | 2.4 | 2.2 | 1 500 | 547 | 1 293 | 709 | 1983 - 807 1984 - 807 1985 - 807 1986 - 807 | S | 100% | |

(*) NURSERY CURRENTLY BEING PHASED OUT

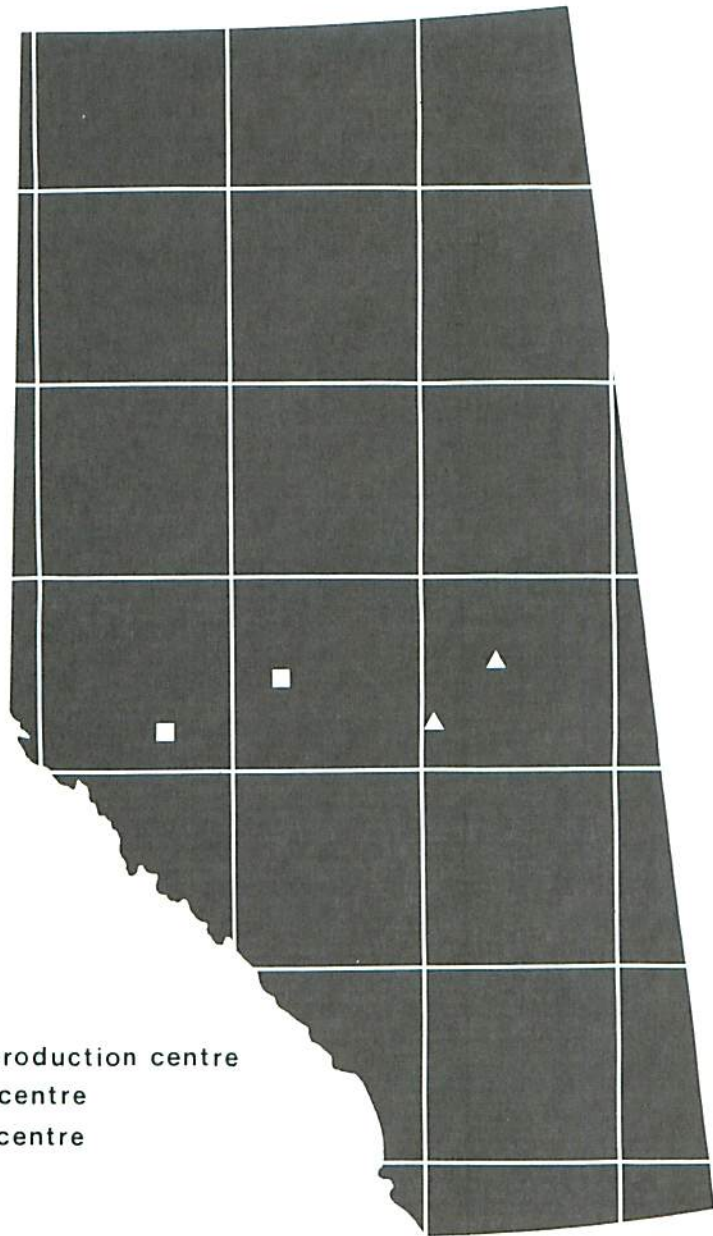
PROVINCE OF BRITISH COLUMBIA
CONTAINER STOCK PRODUCTION CENTRES

| OWNERSHIP | MAILING ADDRESS PHONE NUMBER SUPERVISOR | PRODUCTION AREA (TYPE) | AREA AVAILABLE FOR PRODUCTION (SQ. M.) | SHIPPABLE TREES | | | PLANNED PRODUCTION 1983-1986 ('000 TREES) | CONTAINER TYPE | MAJOR SPECIES GROWN |
|-----------|---|-------------------------------------|--|-----------------|-----------------------|-------|--|--|---------------------------------|
| | | | | 1980 | 1981 ('000 TREES) | 1982 | | | |
| PROVINCE | GREEN TIMBERS NURSERY, MINISTRY OF FORESTS, 9800 - 140 STREET, SURREY, B.C., V3T 4M5 604-581-2464 M.N. COLLARD | HEATED SHADEFRAME | 5 632 2 880 | 4 851 | 5 095 | 5 979 | 1983 - 5 672 1984 - 5 672 1985 - 5 672 1986 - 5 672 | STYRO 211, S 313 F C | 77% 16% 7% |
| PROVINCE | HARROP NURSERY, MINISTRY OF FORESTS, R.R. 3, NELSON, B.C. V1L 5P6 604-229-5353 H. ELIAS | HEATED UNHEATED | 5 647 261 | 482 | 153 | 251 | 1983 - 4 500 1984 - 4 500 1985 - 4 500 1986 - 4 500 | STYRO 211, S 313 LP | 93% 7% |
| PROVINCE | KOKSILAH NURSERY, MINISTRY OF FORESTS, 5847 CHESTERFIELD ST., BOX 816, DUNCAN, B.C. V9L 3Y2 604-746-5452 N.A. MARSHALL | HEATED UNHEATED OPEN COMPOUND | 9 275 3 132 2 880 | 4 871 | 6 847 | 5 924 | 1983 - 8 971 1984 - 8 971 1985 - 8 971 1986 - 8 971 | STYRO 211, S 313 WRC SP/LE 5 H F P | 28% 22% 19% 19% 12% |
| PROVINCE | RED ROCK NURSERY, MINISTRY OF FORESTS, 15 MILE ROAD, R.R. 7, R.M.D. 6, PRINCE GEORGE, B.C., V2N 2J5 604-963-9651 W. BERG | HEATED UNHEATED | 1 105 837 | 320 | 804 | 924 | 1983 - 770 1984 - 770 1985 - 770 1986 - 770 | STYRO 211, P 313 S | 85% 15% |
| PROVINCE | SKIMIKIN NURSERY, MINISTRY OF FORESTS, GENERAL DELIVERY, TAPPEN, B.C., VOE 2X0 604-835-4541 T.H. HAMILTON | HEATED OPEN COMPOUND | 3 880 18 800 | 2 516 | 2 793 | 3 348 | 1983 - 5 658 1984 - 5 658 1985 - 5 658 1986 - 5 658 | STYRO 211, P 313 WL F S | 86% 9% 4% 1% |
| PROVINCE | SURREY NURSERY, MINISTRY OF FORESTS, 3605 - 192 STREET, SURREY, B.C. V3S 4N8 604-576-9161 H. SCHROEDER | HEATED UNHEATED SHADE FRAME | 5 927 1 026 11 520 | 9 911 | 11 481 | 8 419 | 1983 - 12 412 1984 - 12 412 1985 - 12 412 1986 - 12 412 | STYRO 211, S 313 H F | 67% 24% 9% |
| PROVINCE | VERNON NURSERY, MINISTRY OF FORESTS, 4604 PLEASANT VALLEY ROAD, VERNON, B.C. V1T 4M6 604-542-0264 K. STRALBISKI | HEATED OPEN COMPOUND | 88 5 325 | 2 711 | 3 280 | 3 261 | 1983 - 3 246 1984 - 3 246 1985 - 3 246 1986 - 3 246 | STYRO 211, P 313 | 100% |

NOTE: PERCENTAGE USE OF CONTAINERS IN PROVINCIALY-OWNED NURSERIES; STYRO 313 - 70%, STYRO 211 - 20%, STYRO 415 - 4%, SP/LE - 6%.

CONTAINER TYPES: STYRO = BC/CFS STYROPLUG; SP/LE = SPENCER LEMAIRE "ROOTRAINERS"; PAPPT = PAPERPOT.

Alberta



- ▲ bare-root/container production centre
- bare-root production centre
- container production centre

| PROVINCIAL SUMMARY | bare-root | container |
|----------------------------------|-----------|-----------------------|
| Number of production centres | 2 | 4 |
| Area available for production | 193 ha | 17 833 m ² |
| Area currently in production | 108 ha | - |
| 1982 Shippable production ('000) | 9 760 | 20 797 |
| 1983 Targeted production ('000) | 14 516 | 29 097 |

PROVINCE OF ALBERTA
BARE-ROOT PRODUCTION CENTRES

| OWNERSHIP | MAILING ADDRESS PHONE NUMBER SUPERVISOR | AREA AVAILABLE FOR PRODUCTION (HA) | AREA CURRENTLY IN PRODUCTION (HA) | PRODUCTIVE CAPACITY ('000 TREES) | TREES SHIPPED | | | PLANNED PRODUCTION 1983-1986 | | MAJOR SPECIES GROWN | |
|-----------|---|--|---|---|-----------------------|-------|-------|--|---------------|---------------------------|--|
| | | | | | 1980 ('000 TREES) | 1981 | 1982 | ('000 TREES) | ('000 TREES) | | |
| PROVINCE | ALBERTA TREE NURSERY AND HORTICULTURE CENTRE, DEPT. OF AGRICULTURE, R.R. 6, EDMONTON, ALTA., T5B 4K3 403-973-3351 G. GRAINGER | 113 | 65 | 3 200 | 2 700 | 2 700 | 2 700 | 1983 - 5 000 1984 - 5 000 1985 - 5 000 1986 - 5 000 | DEC X(*) | 30% 70% | |
| PROVINCE | PINE RIDGE FOREST NURSERY, ALBERTA FOREST SERVICE, DEPT. OF ENERGY & NATURAL RESOURCES, BOX 750, SMOKEY LAKE, ALTA., T0A 3C0 403-656-4130 R. WINN | 80 | 43 | 16 000 | 929 | 6 188 | 7 060 | 1983 - 9 516 1984 - 7 368 1985 - 19 530 1986 - 15 000 | WS LP | 90% 10% | |

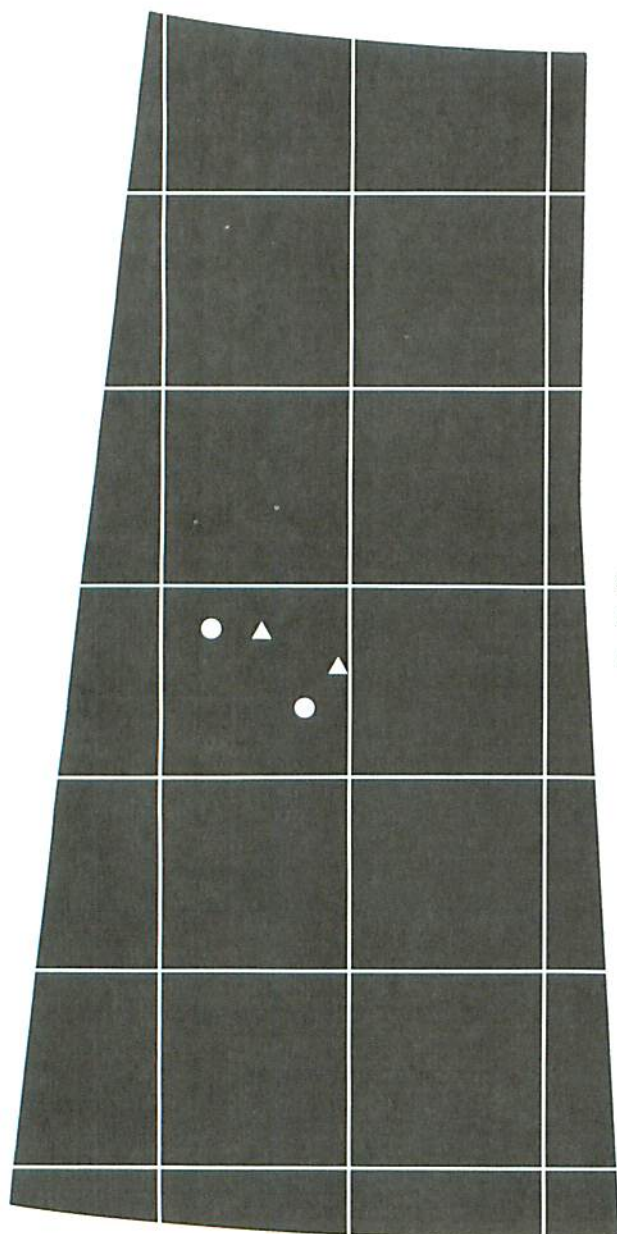
(*) INCLUDES CARAGANA 30%

PROVINCE OF ALBERTA
CONTAINER STOCK PRODUCTION CENTRES

| OWNERSHIP | MAILING ADDRESS PHONE NUMBER SUPERVISOR | PRODUCTION AREA (TYPE) | AREA AVAILABLE FOR PRODUCTION (SQ. M.) | SHIPPABLE TREES | | | PLANNED PRODUCTION 1983-1986 ('000 TREES) | CONTAINER TYPE | MAJOR SPECIES GROWN | |
|-----------|---|------------------------------|--|-----------------|-----------------------|--------|--|-------------------|---------------------------|------------------|
| | | | | 1980 | 1981 ('000 TREES) | 1982 | | | | |
| INDUSTRY | BLUE RIDGE LUMBER (1981) LTD., BOX 1079, WHITCOURT, ALTA., TOE 2L0 403-648-3733 D. CURREY | HEATED UNHEATED | 610 750 | 1 100 | 1 100 | 1 100 | 1983 - 1 100 1984 - 1 100 1985 - 1 100 1986 - 1 100 | SP/LE 4,5, 6 | WS LP X | 75% 20% 5% |
| INDUSTRY | ST. REGIS (ALBERTA) LTD., BAG SERVICE 8000 HINTON, ALTA. TOE 1B0 403-865-2251 EXT.497 S. TORNBLOM | HEATED | 1 068 | -2 500 | 3 000 | 2 750 | 1983 - 1 750 1984 - 2 500 1985 - 2 000 1986 - 2 000 | SP/LE 6 | LP WS | 75% 25% |
| PROVINCE | ALBERTA TREE NURSERY AND HORTICULTURE CENTRE, DEPT. OF AGRICULTURE, R.R. 6, EDMONTON, ALTA., T5B 4K3 403-973-3351 G. GRAINGER | HEATED | 1 365 | 2 700 | 2 700 | 2 700 | 1983 - 5 000 1984 - 5 000 1985 - 5 000 1986 - 5 000 | SP/LE 6 | CON DEC | 50% 50% |
| PROVINCE | PINE RIDGE FOREST NURSERY, ALBERTA FOREST SERVICE, DEPT. OF ENERGY & NATURAL RESOURCES, BOX 750 SMOKY LAKE, ALTA., TOA 3C0 403-656-4130 R. WINN | HEATED | 14 040 | 12 446 | 8 701 | 14 247 | 1983 - 21 247 1984 - 18 000 1985 - 18 000 1986 - 18 000 | SP/LE 6 | WS LP | 90% 10% |

CONTAINER TYPE : SP/LE = SPENCER-LEMAIRE "ROOTTRAINERS".

Saskatchewan



- ▲ bare-root/container production centre
- bare-root production centre
- container production centre

PROVINCIAL SUMMARY

| | bare-root | container |
|----------------------------------|-----------|----------------------|
| Number of production centres | 4 | 2 |
| Area available for production | 157.6 ha | 1 401 m ² |
| Area currently in production | 88.8 ha | - |
| 1982 Shippable production ('000) | 10 520 | 872 |
| 1983 Targeted production ('000) | 16 442 | (*) |

(*) no production planned

PROVINCE OF SASKATCHEWAN
BARE-ROOT PRODUCTION CENTRES

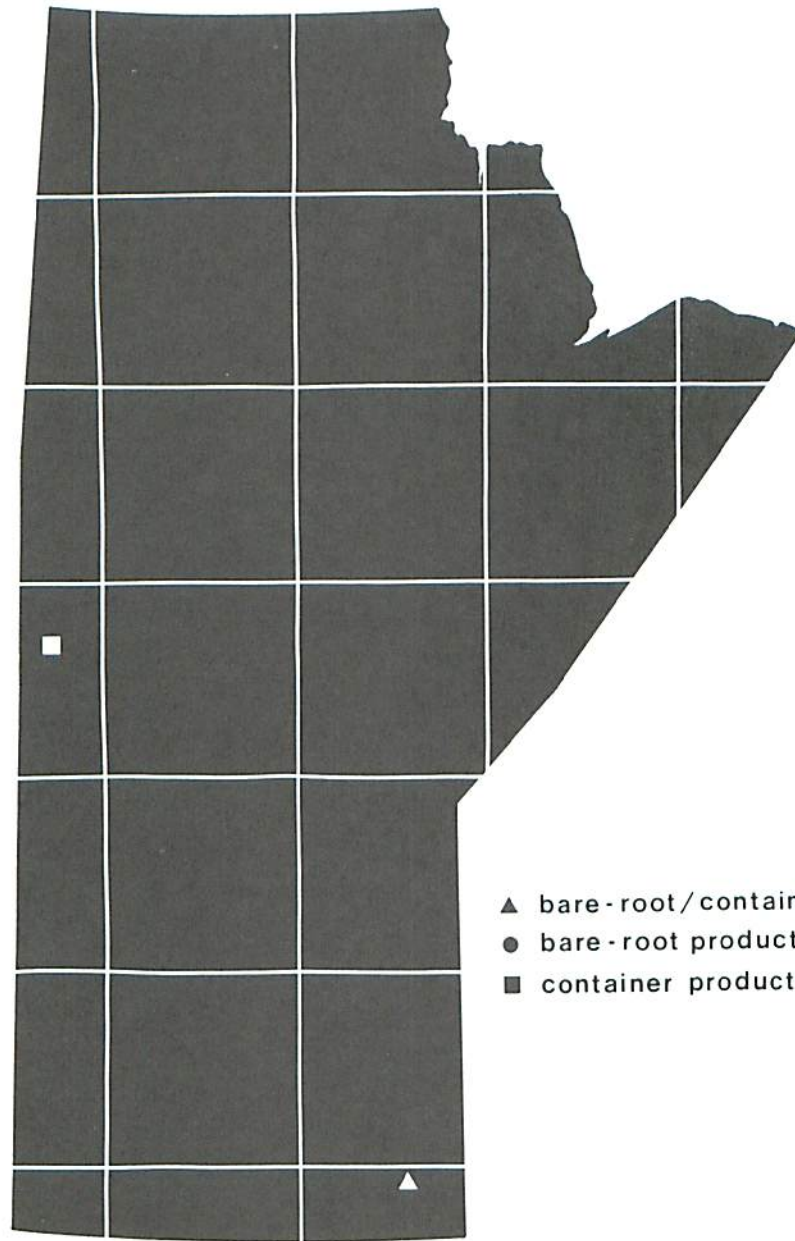
| OWNERSHIP | MAILING ADDRESS PHONE NUMBER SUPERVISOR | AREA AVAILABLE FOR PRODUCTION (HA) | AREA CURRENTLY IN PRODUCTION (HA) | PRODUCTIVE CAPACITY ('000 TREES) | TREES SHIPPED | | | PLANNED PRODUCTION 1983-1986 ('000 TREES) | | MAJOR SPECIES GROWN | |
|-----------|---|--|---|---|---------------|-------|-------|--|----------|---------------------------|--|
| | | | | | 1980 | 1981 | 1982 | | | | |
| PROVINCE | BIG RIVER FOREST NURSERY, DEPT. OF PARKS AND RENEWABLE RESOURCES, BIG RIVER, SASK., S0J 0E0 306-469-2180 J. McCUTCHEON | 28 | 13 | 15 000 | 2 341 | 2 924 | 3 438 | 1983 - 4 500 1984 - 4 500 1985 - 4 500 1986 - 4 500 | WS JP | 52% 48% | |
| PROVINCE | CHITEK LAKE FOREST NURSERY, DEPT. OF PARKS AND RENEWABLE RESOURCES, BOX 3003, PRINCE ALBERT, SASK., S6V 6G1 306-984-2157 J. CHERNYSH | 9.3 | 7.4 | 2 000 | - | 210 | 307 | 1983 - 1 538 1984 - 1 538 1985 - 1 538 1986 - 1 538 | WS JP | 70% 30% | |
| PROVINCE | PRINCE ALBERT FOREST NURSERY, DEPT. OF PARKS AND RENEWABLE RESOURCES, BOX 3003, PRINCE ALBERT, SASK., S6V 6G1 306-764-9119 L. REMPEL | 111 | 61 | 30 000 | 8 300 | 4 258 | 6 613 | 1983 - 9 192 1984 - 9 192 1985 - 9 192 1986 - 9 192 | WS JP | 80% 20% | |
| PROVINCE | SOUTHBRANCH FOREST NURSERY, DEPT. OF PARKS AND RENEWABLE RESOURCES, BOX 3003, PRINCE ALBERT, SASK., S6V 6G1 306-467-4461 J. CHERNYSH | 9.3 | 7.4 | 2 000 | - | 217 | 162 | 1983 - 1 212 1984 - 1 212 1985 - 1 212 1986 - 1 212 | JP WS | 75% 25% | |

PROVINCE OF SASKATCHEWAN
CONTAINER STOCK PRODUCTION CENTRES

| OWNERSHIP | MAILING ADDRESS PHONE NUMBER SUPERVISOR | PRODUCTION AREA (TYPE) | AREA AVAILABLE FOR PRODUCTION (SQ. M.) | SHIPPABLE TREES | | | PLANNED PRODUCTION 1983-1986 | | CONTAINER TYPE | MAJOR SPECIES GROWN | |
|-----------|---|------------------------------|--|-----------------|------|------|------------------------------------|-------|-------------------|---------------------------|------|
| | | | | 1980 | 1981 | 1982 | ('000 TREES) | | | | |
| PROVINCE | BIG RIVER FOREST NURSERY, DEPT. OF PARKS AND RENEWABLE RESOURCES, BIG RIVER, SASK., S0J 0E0 306-469-2180 J. McCUTCHEON | HEATED | 267 | 21 | 154 | 100 | 1983 - | - | MULTI 2 | RP | 60% |
| | | | | | | | 1984 - | - | | LP | 40% |
| | | | | | | | 1985 - | 200 | | | |
| | | | | | | | 1986 - | 200 | | | |
| PROVINCE | PRINCE ALBERT FOREST NURSERY, DEPT. OF PARKS AND RENEWABLE RESOURCES, BOX 3003, PRINCE ALBERT, SASK., S6V 6G1 306-764-9119 L. REMPEL | HEATED | 1 134 | 956 | 821 | 772 | 1983 - | - | MULTI 2 | JP | 100% |
| | | | | | | | 1984 - | - | | | |
| | | | | | | | 1985 - | 1 542 | | | |
| | | | | | | | 1986 - | 1 542 | | | |

CONTAINER TYPE : MULTI = CAN-AM MULTIPOT.

Manitoba



PROVINCIAL SUMMARY

| | bare - root | container |
|----------------------------------|-------------|----------------------|
| Number of production centres | 1 | 2 |
| Area available for production | 46 ha | 1 977 m ² |
| Area currently in production | 24 ha | - |
| 1982 Shippable production ('000) | 4 071 | 981 |
| 1983 Targeted production ('000) | 5 483 | 2 051 |

PROVINCE OF MANITOBA
BARE-ROOT PRODUCTION CENTRES

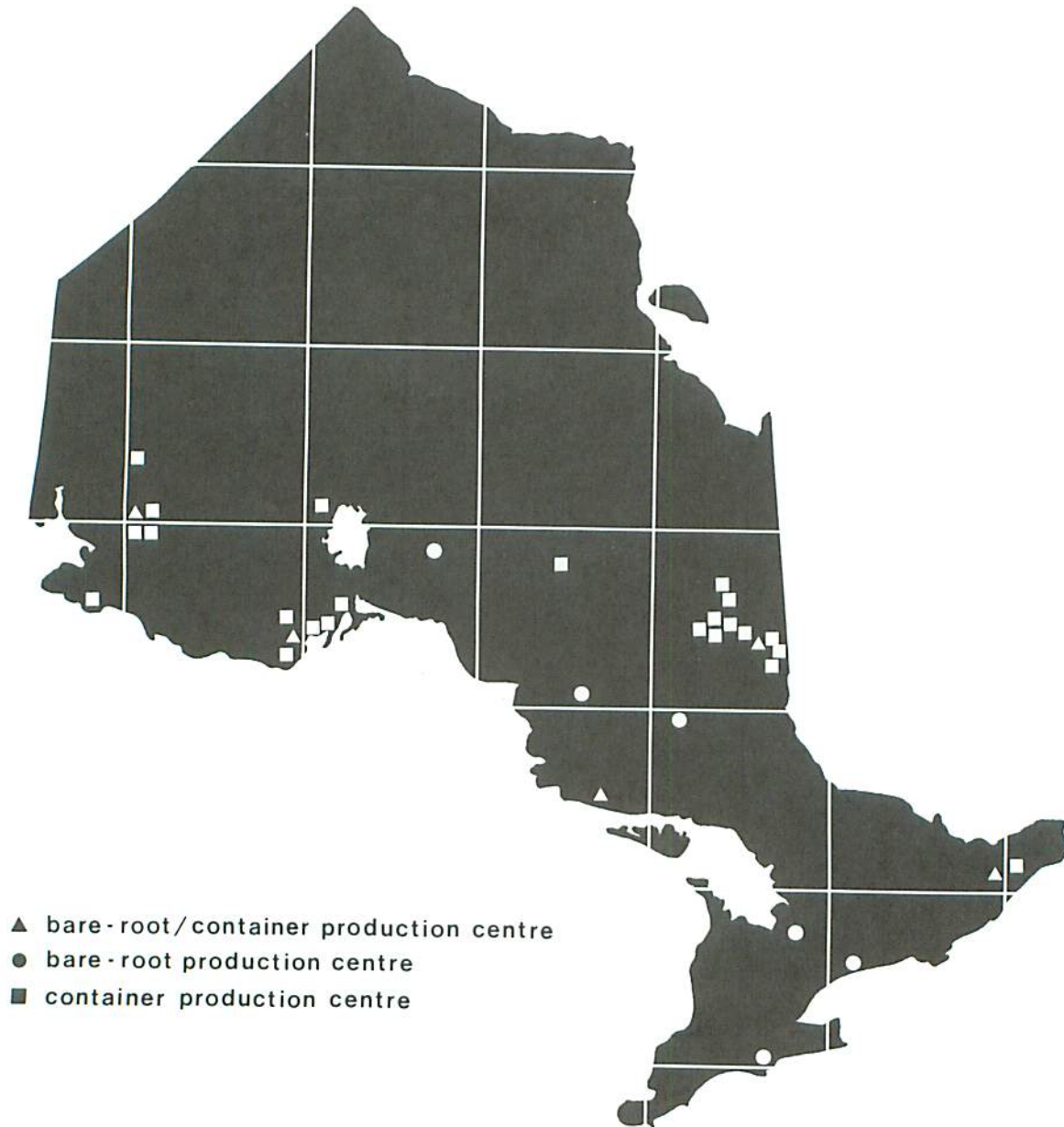
| OWNERSHIP | MAILING ADDRESS PHONE NUMBER SUPERVISOR | AREA AVAILABLE FOR PRODUCTION (HA) | AREA CURRENTLY IN PRODUCTION (HA) | PRODUCTIVE CAPACITY ('000 TREES) | TREES SHIPPED | | | PLANNED PRODUCTION 1983-1986 ('000 TREES) | MAJOR SPECIES GROWN |
|-----------|---|--|---|---|---------------|-------|-------|--|---|
| | | | | | 1980 | 1981 | 1982 | | |
| PROVINCE | PINELAND PROVINCIAL FOREST NURSERY, BOX 45, HADASHVILLE, MAN., ROE OXO 204-426-5235 H.C. TIRSCHMANN | 46 | 24 | 23 000 | 1 518 | 3 518 | 4 071 | 1983 - 5 483 1984 - 5 483 1985 - 5 483 1986 - 5 483 | JP 45% WS 29% RP 21% SP 4% L 1% |

PROVINCE OF MANITOBA
CONTAINER STOCK PRODUCTION CENTRES

| OWNERSHIP | MAILING ADDRESS PHONE NUMBER SUPERVISOR | PRODUCTION AREA (TYPE) | AREA AVAILABLE FOR PRODUCTION (SQ. M.) | SHIPPABLE TREES | | | PLANNED PRODUCTION 1983-1986 ('000 TREES) | CONTAINER TYPE | MAJOR SPECIES GROWN | |
|-----------|--|------------------------------|--|-----------------|------|------|--|-------------------|---------------------------|------------|
| | | | | 1980 | 1981 | 1982 | | | | |
| PROVINCE | CLEARWATER PROVINCIAL FOREST NURSERY, DEPT. OF NATURAL RESOURCES, BOX 2550, THE PAS, MAN., 204-624-5769 (POSITION VACANT) | HEATED | 1 355 | - | - | - | 1983 - 400 1984 - 1 200 1985 - 2 000 1986 - 2 800 | PAPPT 408 | BS JP | 83% 17% |
| PROVINCE | PINELAND PROVINCIAL TREE NURSERY, DEPT. OF NATURAL RESOURCES, BOX 45, HADASHVILLE, MAN., ROE 0X0 204-426-5235 H.C. TIRSCHMANN | HEATED | 622 | 502 | 939 | 981 | 1983 - 1 651 1984 - 2 477 1985 - 3 990 1986 - 5 642 | PAPPT 408 | BS WS | 92% 8% |

CONTAINER TYPE : PAPPT = PAPERPOT

Ontario



- ▲ bare-root/container production centre
- bare-root production centre
- container production centre

PROVINCIAL SUMMARY

| | bare-root | container |
|----------------------------------|-----------|-----------------------|
| Number of production centres | 11 | 28 |
| Area available for production | 743 ha | 61 792 m ² |
| Area currently in production | 560 ha | - |
| 1982 Shippable production ('000) | 63 018 | 32 593 |
| 1983 Targeted production ('000) | 77 700 | 67 134 |

PROVINCE OF ONTARIO
BARE-ROOT PRODUCTION CENTRES

| OWNERSHIP | MAILING ADDRESS PHONE NUMBER SUPERVISOR | AREA AVAILABLE FOR PRODUCTION (HA) | AREA CURRENTLY IN PRODUCTION (HA) | PRODUCTIVE CAPACITY ('000 TREES) | TREES SHIPPED | | | PLANNED PRODUCTION 1983-1986 ('000 TREES) | MAJOR SPECIES GROWN | |
|-----------|--|--|---|---|---------------|-------|-------|---|---|--|
| | | | | | 1980 | 1981 | 1982 | | | |
| INDUSTRY | KIMBERLY-CLARK OF CANADA LIMITED, WOODLANDS DIVISION, LONGLAC, ONT., POT 2A0 807-876-2221 H.T. STANLEY | 16 | 12 | 1 250 | 1 119 | 550 | 743 | 1983 - 1 000 1984 - 1 000 1985 - 1 000 1986 - 1 000 | BS JP WS | 60% 23% 17% |
| PROVINCE | CHAPLEAU NURSERY MINISTRY OF NATURAL RESOURCES, 190 CHERRY ST., CHAPLEAU, ONT., POM 1K0 705-864-1717 M.E. HAWKINS | 8 | 7 | 3 300 | 1 900 | 2 400 | 1 100 | 1983 - 2 200 1984 - 3 300 1985 - 3 300 1986 - 3 300 | JP | 100% |
| PROVINCE | DRYDEN FOREST STATION, MINISTRY OF NATURAL RESOURCES, BOX 90, WABIGOON, ONT., POV 2W0 807-938-6326 T.R. MYLAND | 36 | 25 | 12 000 | 2 500 | 5 800 | 2 500 | 1983 - 6 000 1984 - 6 000 1985 - 6 000 1986 - 6 000 | BS WS | 80% 20% |
| PROVINCE | G. HOWARD FERGUSON FOREST STATION, MINISTRY OF NATURAL RESOURCES, R.R. 4, KEMPTVILLE, ONT., KOG 1G0 613-258-3413 A.J. CAMPBELL | 141 | 115 | 12 000 | 8 500 | 9 100 | 7 900 | 1983 - 9 200 1984 - 10 000 1985 - 11 500 1986 - 11 500 | EWP WS JP RP SP EWC L OCON ODEC | 28% 28% 12% 10% 6% 6% 4% 2% 4% |
| PROVINCE | GOGAMA FOREST STATION, MINISTRY OF NATURAL RESOURCES, BOX 129, GOGAMA, ONT., POM 1W0 705-894-2075 B. CASSIDY | 7 | 3 | 3 200 | 1 200 | 3 200 | 3 100 | 1983 - 3 200 1984 - 2 500 1985 - 3 200 1986 - 3 200 | JP | 100% |
| PROVINCE | KIRKWOOD FOREST STATION, MINISTRY OF NATURAL RESOURCES, BOX 310, THESSALON, ONT., POR 1L0 705-842-3912 I.E. SEABROOK | 15 | 4 | 1 500 | 888 | 898 | 482 | 1983 - 700 1984 - 1 500 1985 - 1 500 1986 - 1 000 | JP RP EWP | 75% 24% 1% |

PROVINCE OF ONTARIO
BARE-ROOT PRODUCTION CENTRES

| OWNERSHIP | MAILING ADDRESS PHONE NUMBER SUPERVISOR | AREA AVAILABLE FOR PRODUCTION (HA) | AREA CURRENTLY IN PRODUCTION (HA) | PRODUCTIVE CAPACITY ('000 TREES) | TREES SHIPPED | | | PLANNED PRODUCTION 1983-1986 ('000 TREES) | MAJOR SPECIES GROWN |
|-----------|--|--|---|---|---------------|--------|--------|--|--|
| | | | | | 1980 | 1981 | 1982 | | |
| PROVINCE | MIDHURST FOREST STATION, MINISTRY OF NATURAL RESOURCES, MIDHURST, ONT., LOL 1X0 705-728-2900 C.R. GROVES | 114 | 94 | 12 000 | 9 100 | 8 200 | 8 600 | 1983 - 8 200 1984 - 9 500 1985 - 10 200 1986 - 10 500 | EWP 24% WS 22% RP 16% BS 15% EWC 9% SP 5% OCON 5% ODEC 4% |
| PROVINCE | ORONO FOREST STATION, MINISTRY OF NATURAL RESOURCES, BOX 119, ORONO, ONT., LOB 1M0 416-983-9147 B.J. PHILLION | 85 | 58 | 8 300 | 5 992 | 4 918 | 5 075 | 1983 - 6 000 1984 - 6 000 1985 - 6 000 1986 - 6 000 | WS 32% RP 31% EWP 14% EWC 9% SP 4% NS 2% ODEC 8% |
| PROVINCE | ST. WILLIAMS FOREST STATION, MINISTRY OF NATURAL RESOURCES, R.R. 1 ST. WILLIAMS, ONT., NOE 1P0 519-586-3576 G.R. McLEOD | 85 | 80 | 8 100 | 8 031 | 7 968 | 7 239 | 1983 - 7 200 1984 - 7 200 1985 - 7 200 1986 - 7 200 | EWP 40% EWC 21% WS 9% NS 9% WA 6% X 15% |
| PROVINCE | SWASTIKA FOREST STATION, MINISTRY OF NATURAL RESOURCES, BOX 129, SWASTIKA, ONT., POK 1T0 705-642-3255 L. FORCIER | 114 | 114 | 22 000 | 19 350 | 19 200 | 15 325 | 1983 - 19 000 1984 - 19 000 1985 - 19 000 1986 - 19 000 | BS 64% WS 20% JP 16% |
| PROVINCE | THUNDER BAY FOREST STATION, MINISTRY OF NATURAL RESOURCES, R.R. 1 THUNDER BAY, ONT., P7C 4T9 807-939-2558 R. KLAPPRAT | 122 | 48 | 19 000 | 8 604 | 11 028 | 10 954 | 1983 - 15 000 1984 - 16 000 1985 - 17 000 1986 - 19 000 | BS 45% WS 37% JP 14% RP 3% X 1% |

PROVINCE OF ONTARIO
CONTAINER STOCK PRODUCTION CENTRES

| OWNERSHIP | MAILING ADDRESS PHONE NUMBER SUPERVISOR | PRODUCTION AREA (TYPE) | AREA AVAILABLE FOR PRODUCTION (SQ. M.) | SHIPPABLE TREES | | | PLANNED PRODUCTION 1983-1986 ('000 TREES) | CONTAINER TYPE | MAJOR SPECIES GROWN |
|-----------|--|------------------------------|--|-----------------|------|-------|--|--------------------|---------------------------|
| | | | | 1980 | 1981 | 1982 | | | |
| PRIVATE | A & R GREENHOUSES LTD., R.R. 1, HURKETT, ONT., PO BOX 100 807-857-2471 F. RAUER, J. ASPERJAN | HEATED | 1 605 | - | - | 1 750 | 1983 - 1 000 1984 - 1 000 1985 - 1 000 1986 - 1 000 | PAPPT 408 JP | 100% |
| PRIVATE | AIDIE CREEK GARDENS, R.R. 3, ENGLEHART, ONT., PO BOX 110 705-544-2474 C. WARNER | HEATED UNHEATED | 1 084 1 365 | - | - | 1 814 | 1983 - 2 735 1984 - 2 735 1985 - 2 735 1986 - 2 735 | PAPPT 408 BS JP | 71% 29% |
| PRIVATE | BIRCHILL NURSERIES INC., R.R. 2, COCHRANE, ONT., PO BOX 100 705-272-3944 J.R. SKIDMORE | HEATED | 2 890 | - | - | - | 1983 - 1 935 1984 - 1 935 1985 - 1 935 1986 - 1 935 | PAPPT 408 BS | 100% |
| PRIVATE | BLAZECKA'S GREENHOUSES, R.R. 2, COCHRANE, ONT., PO BOX 100 705-272-3915 J. BLAZECKA | HEATED | 1 204 | - | - | - | 1983 - 800 1984 - 800 1985 - 800 1986 - 800 | PAPPT 408 BS | 100% |
| PRIVATE | COOK LAKE NURSERIES LTD., R.R. 1, DRYDEN, ONT., P.O. BOX 24 W. SCHNEIDER | HEATED | 669 | - | - | - | 1983 - 1 200 1984 - 1 200 1985 - 1 200 1986 - 1 200 | SP/LE 6 JP BS | 50% 50% |
| PRIVATE | CREEKSIDE NURSERY LTD., R.R. 11, THUNDER BAY, ONT., P.O. BOX 5E2 807-767-3437 D. TREVISANUTTO | HEATED | 3 211 | - | - | 1 736 | 1983 - 2 146 1984 - 2 146 1985 - 2 146 1986 - 2 146 | PAPPT 408 BS | 100% |
| PRIVATE | ENERGREEN ENTERPRISES INC., BOX 329, SWASTIKA, ONT., PO BOX 100 705-236-4311 G. LEVANGIE | HEATED | 5 619 | - | - | 3 180 | 1983 - 6 388 1984 - 6 388 1985 - 6 388 1986 - 6 388 | PAPPT 408 BS JP | 50% 50% |

PROVINCE OF ONTARIO
CONTAINER STOCK PRODUCTION CENTRES

| OWNERSHIP | MAILING ADDRESS PHONE NUMBER SUPERVISOR | PRODUCTION AREA (TYPE) | AREA AVAILABLE FOR PRODUCTION (SQ. M.) | SHIPPABLE TREES | | | PLANNED PRODUCTION 1983-1986 ('000 TREES) | CONTAINER TYPE | MAJOR SPECIES GROWN | |
|-----------|---|------------------------------|--|-----------------|-----------------------|-------|--|-------------------|---------------------------|------------|
| | | | | 1980 | 1981 ('000 TREES) | 1982 | | | | |
| PRIVATE | EVERGREEN FARMS, 48 PRINCESS ST., DRYDEN, ONT., PBN 1C7 807-937-5239 K. SCHMIDT C. QUEAU | HEATED | 1 212 | - | - | 1 391 | 1983 - 2 200 1984 - 2 200 1985 - 2 200 1986 - 2 200 | SP/LE 6 | JP BS | 50% 50% |
| PRIVATE | GRUNDY'S NURSERIES LTD., PASS LAKE, ONT., POT 2M0 807-577-2832 E. GRUNDY | HEATED | 1 605 | - | - | - | 1983 - 1 000 1984 - 1 000 1985 - 1 000 1986 - 1 000 | PAPPT 408 | BS | 100% |
| PRIVATE | HILLS GREENHOUSES LTD., OLIVER RD. MURILLO, ONT., POT 2G0 807-935-2626 H. VANDUYN R. MEEMS | HEATED | 3 612 | - | - | 2 912 | 1983 - 3 000 1984 - 3 000 1985 - 3 000 1986 - 3 000 | PAPPT 408 | BS | 100% |
| PRIVATE | HODWITZ ENTERPRISES LTD., R.R. 6, THUNDER BAY, ONT., P7C 5N5 807-939-6027 J. HODWITZ D. HODWITZ | HEATED | 4 631 | - | - | 2 024 | 1983 - 2 820 1984 - 2 820 1985 - 2 820 1986 - 2 820 | PAPPT 408 | BS | 100% |
| PRIVATE | JELLIEN NURSERIES (ARMSTRONG) LTD., BOX 164, ARMSTRONG, ONT., POT 1A0 807-583-2055 T. NEILL J. NEILL | HEATED | 1 605 | - | - | - | 1983 - - 1984 - 1 000 1985 - 1 000 1986 - 1 000 | PAPPT 408 | BS | 100% |
| PRIVATE | LA MAISON VERTE, BOX 1868, HEARST, ONT., POL 1N0 705-362-7040 M. LAMY | HEATED | 1 906 | - | - | - | 1983 - 2 000 1984 - 2 000 1985 - 2 000 1986 - 2 000 | PAPPT 408 | BS | 100% |
| PRIVATE | LAFLEUR GARDENS LTD, R.R. 2, TIMMINS, ONT., P4N 7C3 705-267-2972 R. LAFLEUR | HEATED | 2 185 | - | - | 1 750 | 1983 - 6 794 1984 - 6 794 1985 - 6 794 1986 - 6 794 | PAPPT 408 | BS JP | 50% 50% |
| PRIVATE | LAVA MOUNTAIN LTD., BOX 10, RAMORE, ONT., POK 1R0 705-236-4286 D.E. BOOTHE | HEATED | 2 984 | - | - | - | 1983 - 4 000 1984 - 4 000 1985 - 4 000 1986 - 4 000 | PAPPT 408 | BS | 100% |

PROVINCE OF ONTARIO
CONTAINER STOCK PRODUCTION CENTRES

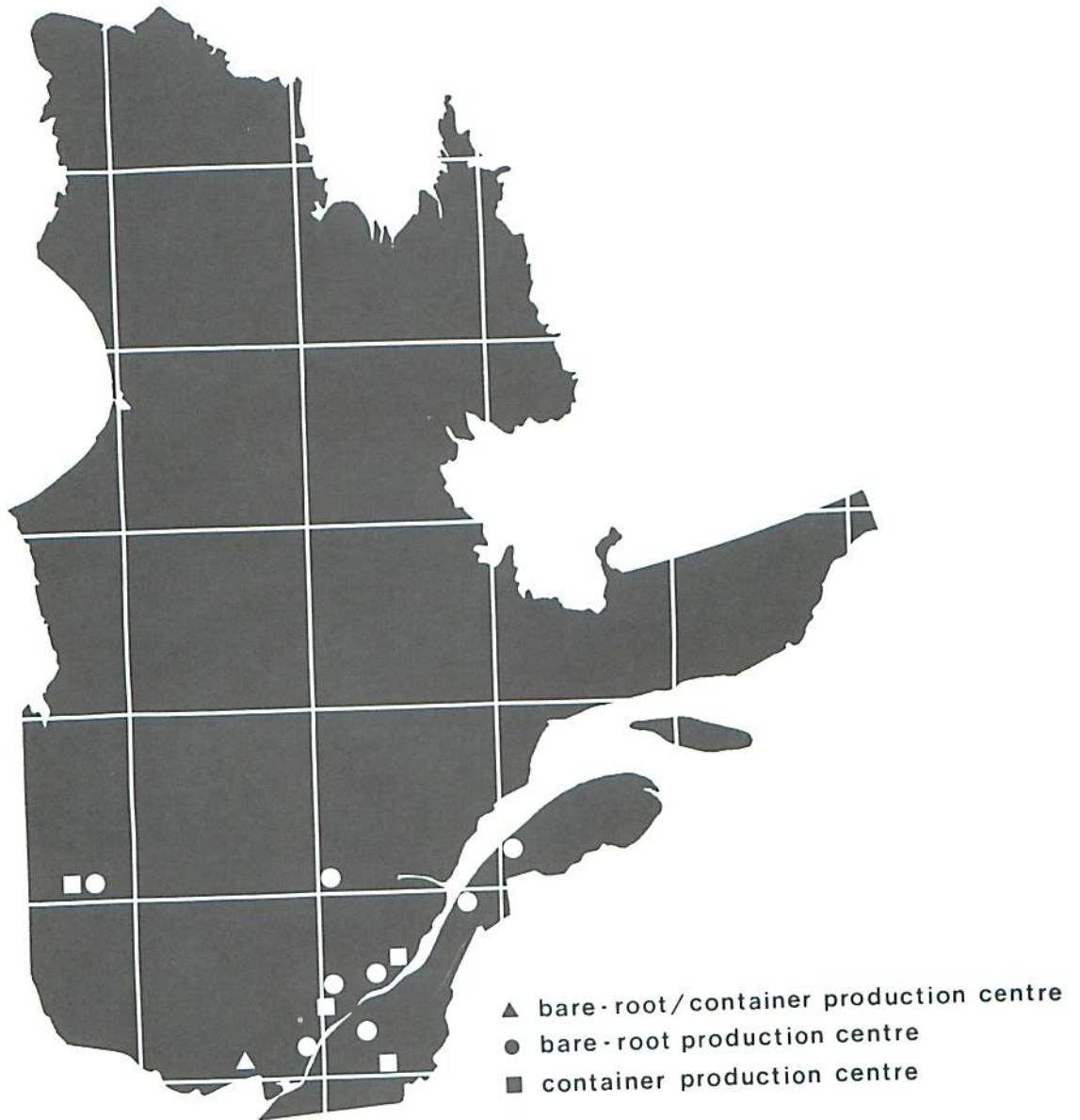
| OWNERSHIP | MAILING ADDRESS PHONE NUMBER SUPERVISOR | PRODUCTION AREA (TYPE) | AREA AVAILABLE FOR PRODUCTION (SQ. M.) | SHIPPABLE TREES | | | PLANNED PRODUCTION 1983-1986 ('000 TREES) | CONTAINER TYPE | MAJOR SPECIES GROWN | |
|-----------|---|------------------------------|--|-----------------|------|------|--|-------------------|---------------------------|------------|
| | | | | 1980 | 1981 | 1982 | | | | |
| PRIVATE | M. KEAN RESOURCES, 624 CEDAR ST. NORTH, TIMMINS, ONT., P4N 6K4 705-264-2049/8634 M. KEAN | HEATED | 401 | - | - | - | 1983 - 400 1984 - 400 1985 - 400 1986 - 400 | PAPPT 408 | JP | 100% |
| PRIVATE | MILLSON FORESTRY SERVICE, R.R. 1, TIMMINS, ONT., P4N 7C2 705-232-4836 D. MILLSON | HEATED | 1 605 | - | - | 498 | 1983 - 405 1984 - 405 1985 - 405 1986 - 405 | PAPPT 408 | JP | 100% |
| PRIVATE | NORTH GRO DEVELOPMENT LTD., 75 GOVERNMENT ROAD WEST, KIRKLAND LAKE, ONT., P2N 2E6 705-567-5646 A.S. AIDELBAUM | HEATED | 2 890 | - | - | - | 1983 - 1 693 1984 - 1 935 1985 - 1 935 1986 - 1 935 | PAPPT 408 | BS | 100% |
| PRIVATE | NORTHERN GREENHOUSE FARMS LTD., BOX 1160, TIMMINS, ONT., P4N 5X4 705-264-9521 R.J. DELUCE | HEATED | 2 669 | - | - | - | 1983 - 3 568 1984 - 3 568 1985 - 3 568 1986 - 3 568 | PAPPT 408 | BS JP | 50% 50% |
| PRIVATE | RIVERSIDE NURSERY, (*) R.R. 2, DEVLIN, ONT., POW 1C0 807-486-3421 N. MUTZ (*) NOT CONTRACTED FOR 1983 - 1986. | HEATED | 371 | - | - | 407 | 1983 - 1984 - 1985 - 1986 - | SP/LE 6 | JP | 100% |
| PRIVATE | TAMARAC NURSERIES, R.R. 2, DRYDEN, ONT., P8N 2V5 807-937-6621 D. LICK S. LICK D. LICK | HEATED | 722 | - | - | 598 | 1983 - 1 200 1984 - 1 200 1985 - 1 200 1986 - 1 200 | SP/LE 6 | JP BS | 50% 50% |
| PRIVATE | WALSH NURSERY LTD., KEMPTVILLE, ONT., KOG 1J0 613-258-2383 I. WALSH | HEATED UNHEATED | 280 280 | - | - | 400 | 1983 - 600 1984 - 600 1985 - 600 1986 - 600 | MULTI 1 | EWP | 100% |
| PRIVATE | WELLAIR CONCEPTS INC., BOX 339, EAR FALLS, ONT., POV 1T0 204-489-2604 F. WIESINGER | HEATED | 1 649 | - | - | 984 | 1983 - 3 150 1984 - 3 150 1985 - 3 150 1986 - 3 150 | SP/LE 6 | JP BS | 50% 50% |

PROVINCE OF ONTARIO
CONTAINER STOCK PRODUCTION CENTRES

| OWNERSHIP | MAILING ADDRESS PHONE NUMBER SUPERVISOR | PRODUCTION AREA (TYPE) | AREA AVAILABLE FOR PRODUCTION (SQ. M.) | SHIPPABLE TREES | | | PLANNED PRODUCTION 1983-1986 ('000 TREES) | CONTAINER TYPE | MAJOR SPECIES GROWN | |
|-----------|---|------------------------------------|--|-----------------|-----------------------|-------|--|----------------------|---------------------------|------------------------|
| | | | | 1980 | 1981 ('000 TREES) | 1982 | | | | |
| PROVINCE | DRYDEN TREE NURSERY, BOX 90, WABIGOON, ONT., POV 2W0 807-938-6326 T. MYLAND | HEATED | 2 233 | 4 000 | 4 000 | 4 251 | 1983 - 4 000 1984 - 4 000 1985 - 4 000 1986 - 4 000 | SP/LE 6 | BS JP | 86% 14% |
| PROVINCE | G. HOWARD FERGUSON FOREST STN., MINISTRY OF NATURAL RESOURCES, R.R. 4, KEMPTVILLE, ONT., K0G 1G0 613-258-3413 A.J. CAMPBELL | HEATED UNHEATED SHELTERHOUSE | 900 300 1 200 | 350 | 400 | 400 | 1983 - 600 1984 - 600 1985 - 600 1986 - 600 | MULTI 1 | EWP L RP OCON | 63% 28% 5% 4% |
| PROVINCE | SWASTIKA FOREST STATION, MINISTRY OF NATURAL RESOURCES, BOX 129, SWASTIKA, ONT., P0K 1T0 705-642-3255 L.J. FORCIER | HEATED | 4 250 | 4 503 | 4 948 | 4 494 | 1983 - 6 000 1984 - 6 000 1985 - 6 000 1986 - 6 000 | PAPPT 308, BS 408 | | 100% |
| PROVINCE | THESSALON NURSERY MINISTRY OF NATURAL RESOURCES, BOX 310, THESSALON, ONT., P0R 1L0 705-842-3914 I.E. SEABROOK | HEATED UNHEATED SHADE HOUSES | 1 552 2 900 4 783 | 2 285 | 3 120 | 2 845 | 1983 - 5 000 1984 - 5 000 1985 - 5 000 1986 - 5 000 | PAPPT 408 | JP EWP RP | 80% 10% 10% |
| PROVINCE | THUNDER BAY FOREST STATION, R.R. 1, THUNDER BAY, ONT., P7C 4T9 807-939-2558 R. KLAPPRAT | HEATED | 1 403 | 400 | 960 | 1 159 | 1983 - 2 500 1984 - 2 500 1985 - 2 500 1986 - 2 500 | SP/LE 6 | BS JP | 50% 50% |

CONTAINER TYPES: SP/LE = SPENCER-LEMAIRE "ROOTTRAINERS"; PAPPT = PAPERPOT; MULTI = CAN-AM MULTIPOT.

Quebec



PROVINCIAL SUMMARY

| | bare-root | container |
|----------------------------------|-----------|-----------------------|
| Number of production centres | 9 | 5 |
| Area available for production | 283.5 ha | 10 999 m ² |
| Area currently in production | 249.9 ha | - |
| 1982 Shippable production ('000) | 34 604 | 5 718 |
| 1983 Targeted production ('000) | 62 549 | 13 318 |

PROVINCE OF QUEBEC
BARE-ROOT PRODUCTION CENTRES

| OWNERSHIP | MAILING ADDRESS PHONE NUMBER SUPERVISOR | AREA AVAILABLE FOR PRODUCTION (HA) | AREA CURRENTLY IN PRODUCTION (HA) | PRODUCTIVE CAPACITY ('000 TREES) | TREES SHIPPED ('000 TREES) | | | PLANNED PRODUCTION 1983-1986 ('000 TREES) | MAJOR SPECIES GROWN |
|-----------|---|--|---|---|--------------------------------|--------|-------|--|--|
| | | | | | 1980 | 1981 | 1982 | | |
| INDUSTRY | COMPAGNIE INTERNATIONALE DE PAPIER DU CANADA, HARRINGTON, QUE., J0V 1J0 819-242-6066 M. RICHARD | 4.7 | 3.1 | 1 300 | 470 | 585 | 600 | 1983 - 525 1984 - 525 1985 - 525 1986 - 525 | JP 60% RP 31% NS 9% |
| PROVINCE | BERTHIERVILLE PEPINIERE FORESTIERE, MINISTERE DE L'ENERGIE ET DES RESSOURCES, C.P. 540, BERTHIERVILLE, QUE., J0K 1A0 514-836-3788 J.P. CAMPAGNA | 40(*) | 40 | 6 000 | 6 012 | 4 252 | 7 623 | 1983 - 8 000 1984 - 8 000 1985 - 8 000 1986 - 8 000 | JP 35% BF 19% WS 12% BS 9% SP 9% L 5% RP 5% OCON 6% |
| PROVINCE | DUCHESNAY PEPINIERE FORESTIERE, MINISTERE DE L'ENERGIE ET DES RESSOURCES, DUCHESNAY, QUE., G0A 3M0 418-875-1352 P. MARINEAU | 15 | 11.4 | 6 000 | 1 420 | 1 205 | 2 100 | 1983 - 4 650 1984 - 4 650 1985 - 4 650 1986 - 4 650 | NS 33% WS 30% RS 29% BS 4% BF 4% |
| PROVINCE | GRANDES-PILES PEPINIERE FORESTIERE, MINISTERE DE L'ENERGIE ET DES RESSOURCES, GRANDES-PILES, QUE., G0X 1H0 819-538-2055 J.M. FORTIN | 47 | 36 | 9 000 | 5 255 | 2 825 | 2 285 | 1983 - 7 650 1984 - 7 650 1985 - 7 650 1986 - 7 650 | RS 60% JP 38% OCON 2% |
| PROVINCE | NORMANDIN PEPINIERE FORESTIERE, MINISTERE DE L'ENERGIE ET DES RESSOURCES, NORMANDIN, QUE., G0W 2E0 418-274-2420 J. TREMBLAY | 32.3 | 32.3 | 9 200 | 1 717 | 2 051 | 1 372 | 1983 - 7 200 1984 - 7 200 1985 - 7 200 1986 - 7 200 | BS 49% WS 25% JP 24% OCON 2% |
| PROVINCE | STE-LUCE PEPINIERE FORESTIERE, MINISTERE DE L'ENERGIE ET DES RESSOURCES, C.P. 100, LUCÉVILLE, QUE., G0K 1E0 418-739-4819 R. HENLEY | 60 | 60 | 15 400 | 5 075 | 10 983 | 9 084 | 1983 - 14 050 1984 - 14 050 1985 - 14 050 1986 - 14 050 | BS 66% WS 28% NS 3% RP 2% EWP 1% |

PROVINCE OF QUEBEC
BARE-ROOT PRODUCTION CENTRES

| OWNERSHIP | MAILING ADDRESS PHONE NUMBER SUPERVISOR | AREA AVAILABLE FOR PRODUCTION (HA) | AREA CURRENTLY IN PRODUCTION (HA) | PRODUCTIVE CAPACITY ('000 TREES) | TREES SHIPPED | | | PLANNED PRODUCTION 1983-1986 ('000 TREES) | MAJOR SPECIES GROWN |
|-----------|--|--|---|---|---------------|--------|-------|--|---|
| | | | | | 1980 | 1981 | 1982 | | |
| PROVINCE | ST-MODESTE PEPINIERE FORESTIERE, MINISTERE DE L'ENERGIE ET DES RESSOURCES, ST-MODESTE, QUÉ., G0L 3W0 418-862-5511 L. GODBOUT | 34(**) | 34 | 11 000 | 7 857 | 10 773 | 9 919 | 1983 - 11 918 1984 - 11 918 1985 - 11 918 1986 - 11 918 | BS 54% NS 22% WS 9% JP 5% RP 4% BF 3% L 2% SP 1% |
| PROVINCE | TRECESSON PEPINIERE FORESTIERE, MINISTERE DE L'ENERGIE ET DES RESSOURCES, C.P. 368, AMOS, QUÉ., J9T 3A7 819-732-9349 A. ROY | 43.4 | 26 | 10 500 | 1 549 | 1 427 | 559 | 1983 - 7 450 1984 - 7 450 1985 - 7 450 1986 - 7 450 | JP 96% BS 2% WS 1% L 1% |
| PROVINCE | VICTORIAVILLE PEPINIERE FORESTIERE, MINISTERE DE L'ENERGIE ET DES RESSOURCES, 505 RUE CARTIER, VICTORIAVILLE, QUÉ., G6P 6R8 819-752-9754 E. PROVENCHER | 7.1 | 7.1 | 1 800 | 934 | 446 | 1 062 | 1983 - 1 106 1984 - 1 106 1985 - 1 106 1986 - 1 106 | BF 100% |

(*) 72 HA. PURCHASE CURRENTLY BEING NEGOTIATED.
(**) 40 HA. PURCHASE CURRENTLY BEING NEGOTIATED.

NOTE: THREE PRIVATE NURSERIES ARE TO BEGIN PRODUCING BAREROOT STOCK: FOR-ESTRIE(1984), BECHEDOR, PLANFOR(1985).

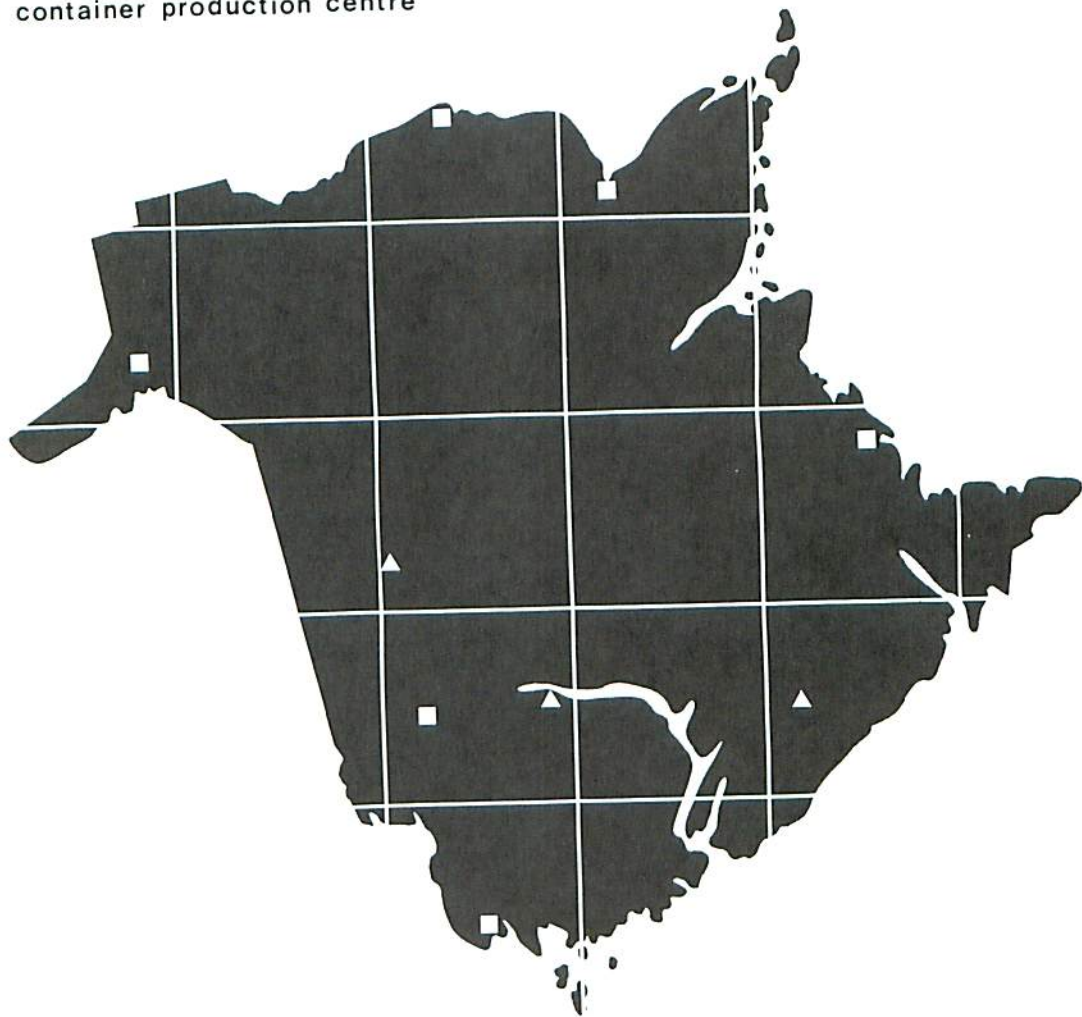
PROVINCE OF QUEBEC
CONTAINER STOCK PRODUCTION CENTRES

| OWNERSHIP | MAILING ADDRESS PHONE NUMBER SUPERVISOR | PRODUCTION AREA (TYPE) | AREA AVAILABLE FOR PRODUCTION (SQ. M.) | SHIPPABLE TREES | | | PLANNED PRODUCTION 1983-1986 ('000 TREES) | CONTAINER TYPE | MAJOR SPECIES GROWN |
|-----------|--|------------------------------|--|-----------------|-------|-------|--|---------------------|--|
| | | | | 1980 | 1981 | 1982 | | | |
| INDUSTRY | CIE INTERNATIONAL DE PAPIER DU CANADA, HARRINGTON, QUE., JOB 1J0 819-242-6066 M. RICHARD | HEATED | 1 058 | 915 | 1 420 | 2 340 | 1983 - 2 500 1984 - 2 500 1985 - 2 500 1986 - 2 500 | MULTI 2 STYRO 2A | JP 74% BS 26% |
| INDUSTRY | CONSOLIDATED-BATHURST INC., C.P. 500, GRAND'MERE, QUE., G9T 5L2 819-538-3341 J. CONWAY | HEATED | 230 | 320 | 320 | 320 | 1983 - 275 1984 - 275 1985 - 275 1986 - 275 | PAPPT 408 | BS 70% JP 14% SP 8% NS 8% |
| PRIVATE | LES SERRES DE GUYENNE INC. GUYENNE, QUE., JOB 1L0 819-746-3121 F. MIRON | HEATED | 3 438 | - | 341 | 2 687 | 1983 - 3 125 1984 - 3 125 1985 - 3 125 1986 - 3 125 | STYRO | BS 66% JP 34% |
| PRIVATE | CENTRE DE PRODUCTION DE PLANTS FORESTIERS DE QUEBEC INC., 239A, COTE STE-ANNE, STE-ANNE DE BEAUPRE, QUE., COA 3C0 418-827-4696 R. GOHIER | HEATED | - | - | - | - | 1983 - - 1984 2 200 1985 - 1986 - | IPLCO 45, 67 | RS 30% BS 25% NS 15% JP 10% WS 5% EWP 5% RP 5% L 5% |
| PROVINCE | LE CENTRE DE CULTURE PLANTES RECIPIENTS, MINISTERE DE L'ENERGIE ET DES RESSOURCES, C.P. 819, EAST ANGUS, QUE., JOB 1R0 819-832-3431 C. CARRIER | HEATED | 6 273 | - | 2 854 | 371 | 1983 - 7 418 1984 - 7 418 1985 - 7 418 1986 - 7 418 | MERQU IPLCO | BS 100% |

CONTAINER TYPES: MERQU = QUEBEC TUBE; IPLCO = IPL CONTAINER; MULTI = CAN-AM MULTIPOT; STYRO = BC/CFS STYROBLOCK; PAPPT = PAPERPOT.
NOTE: FIVE PROVINCIAL NURSERIES ARE PLANNING TO PRODUCE OUTDOOR-GROWN CONTAINER STOCK. PRODUCTION FOR 1985 WILL BE 3 MILLION AND
FOR 1986 PRODUCTION WILL BE AN ADDITIONAL 7 MILLION.

New Brunswick

- ▲ bare-root/container production centre
- bare-root production centre
- container production centre



PROVINCIAL SUMMARY

| | bare-root | container |
|----------------------------------|-----------|-----------------------|
| Number of production centres | 3 | 9 |
| Area available for production | 128 ha | 27 164 m ² |
| Area currently in production | 91.5 ha | - |
| 1982 Shippable production ('000) | 20 550 | 27 363 |
| 1983 Targeted production ('000) | 15 120 | 37 305 |

PROVINCE OF NEW BRUNSWICK
BARE-ROOT PRODUCTION CENTRES

| OWNERSHIP | MAILING ADDRESS PHONE NUMBER SUPERVISOR | AREA AVAILABLE FOR PRODUCTION (HA) | AREA CURRENTLY IN PRODUCTION (HA) | PRODUCTIVE CAPACITY ('000 TREES) | TREES SHIPPED | | | PLANNED PRODUCTION 1983-1986 ('000 TREES) | MAJOR SPECIES GROWN |
|-----------|--|--|---|---|---------------|-------|--------|--|--|
| | | | | | 1980 | 1981 | 1982 | | |
| INDUSTRY | J.D. IRVING LTD., BOX 150, JUNIPER, N.B., E0J 1P0 506-246-5268 M. DIONNE J. BEVELER | 100 | 65 | 15 000 | 11 840 | 9 445 | 10 250 | 1983 - 10 000 1984 - 10 000 1985 - 10 000 1986 - 10 000 | BS 50% WS 25% JP 15% RP 5% EL 3% EWP 2% |
| INDUSTRY | J.D. IRVING LTD., R.R. 4, SUSSEX, N.B., E0E 1P0 506-433-4253/5844 H. KUNZE | 2 | .5 | 2 000 | - | 576 | - | 1983 - 120 1984 - 200 1985 - 1986 - | JP 40% RP 40% L 20% |
| PROVINCE | PROVINCIAL FOREST NURSERY, N.B. NATURAL RESOURCES, R.R. 6, FREDERICTON, N.B., E3B 4X7 506-455-6989 P.A. CLARK N.H. KREIBERG | 26 | 26 | 7 000 | 10 500 | 6 700 | 10 300 | 1983 - 5 000 1984 - 5 000 1985 - 5 000 1986 - 5 000 | BS 55% RP 15% WS 10% BP 10% JP 10% |

PROVINCE OF NEW BRUNSWICK
CONTAINER STOCK PRODUCTION CENTRES

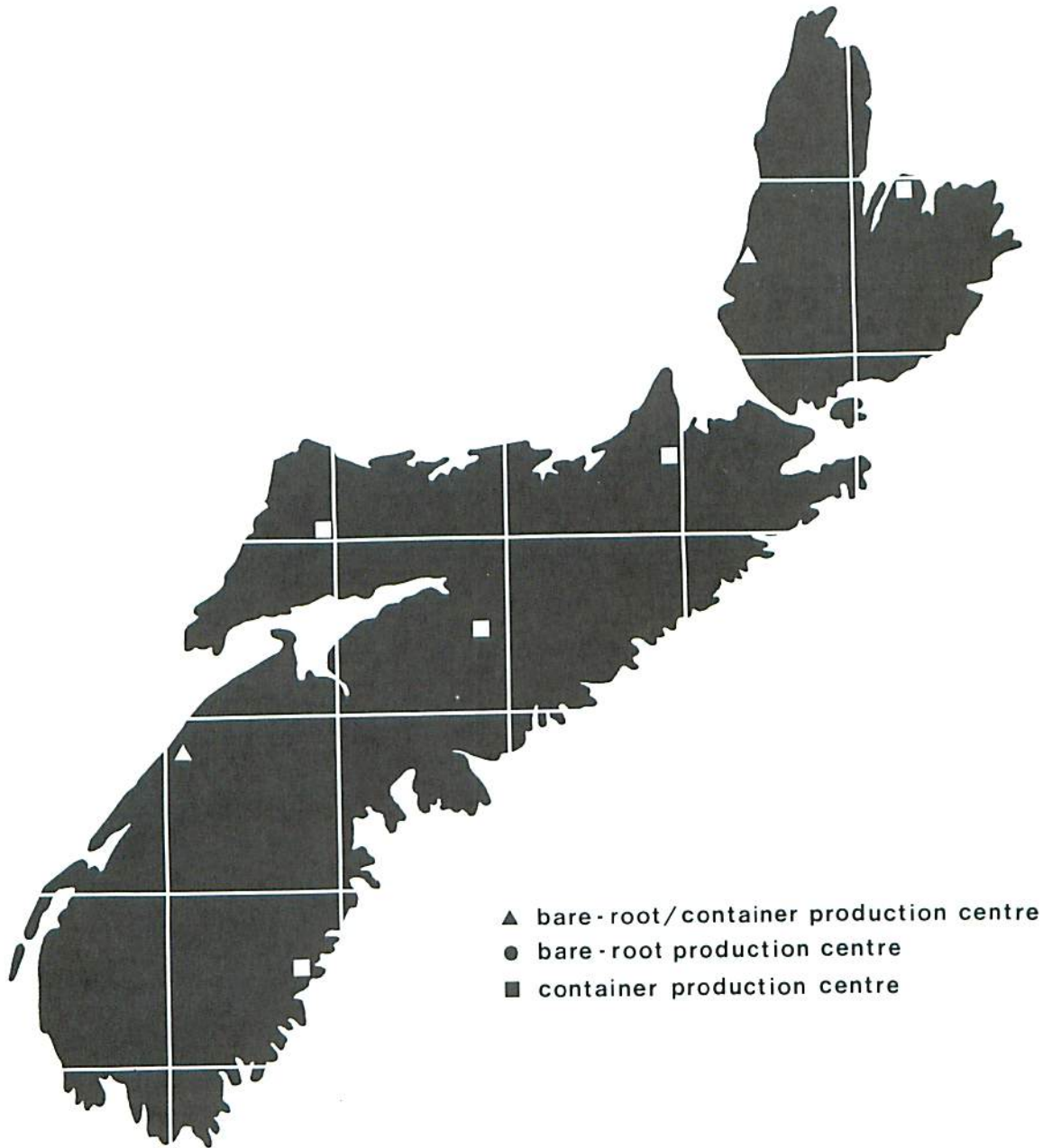
| OWNERSHIP | MAILING ADDRESS PHONE NUMBER SUPERVISOR | PRODUCTION AREA (TYPE) | AREA AVAILABLE FOR PRODUCTION (SQ. M.) | SHIPPABLE TREES | | | PLANNED PRODUCTION 1983-1986 ('000 TREES) | CONTAINER TYPE | MAJOR SPECIES GROWN | |
|-----------|---|--|--|-----------------|-------|-------|--|-----------------------------------|---------------------------|------------------------------|
| | | | | 1980 | 1981 | 1982 | | | | |
| INDUSTRY | FRASER INC., FOREST TREE NURSERY, R.R. # 1, ST. JOSEPH-DE-MADAWASKA, N.B., EOL 1L0 506-739-9092 E. DESCHESNES | UNHEATED SHADED UNSHADED | 3 600 7 200 10 800 | 6 500 | 6 400 | 6 100 | 1983 - 7 500 1984 - 7 500 1985 - 7 500 1986 - 7 500 | MULTI 1 | BS WS | 90% 10% |
| INDUSTRY | GEORGIA-PACIFIC CORP., R.R. 4, ST. STEPHEN, N.B., E3L 2Y2 506-466-2770 B. FRASER | HEATED OPEN HOLDING | 1 000 1 700 | 1 200 | 1 200 | 700 | 1983 - 750 1984 - 750 1985 - 750 1986 - 750 | STYRO 2,4 | L BS JP | 44% 28% 28% |
| INDUSTRY | J.D. IRVING LTD., JUNIPER TREE NURSERY, BOX 150, JUNIPER, N.B. E0J 1P0 506-246-5268 M. DIONNE J. BEYELER | HEATED UNHEATED OPEN HOLDING | 1 100 1 100 4 360 | 920 | 1 318 | 1 817 | 1983 - 2 000 1984 - 2 000 1985 - 2 000 1986 - 2 000 | STYRO 4,8 MULTI 2,8 | JP BS L | 90% 5% 5% |
| INDUSTRY | J.D. IRVING LTD., R.R. 4, SUSSEX, N.B., E0E 1P0 506-433-4253/5844 H. KUNZE | HEATED SHELTERHOUSE OPEN HOLDING | 1 000 3 100 10 000 | 666 | 1 703 | 1 566 | 1983 - 1 055 1984 - 1 356 1985 - 1 500 1986 - 2 000 | STYRO 4,8 MULTI 2 RIGIP 110 | JP BS L | 90% 5% 5% |
| INDUSTRY | NBIP LTD., BOX 1950 DALHOUSIE, N.B., E0K 1B0 506-684-5228 E. GOGUEN | HEATED SHADE AREA | 1 000 1 700 | 2 248 | 1 923 | 1 550 | 1983 - 1984 - 1985 - 1986 - | STYRO 2A, 4 MULTI 2 | BS JP RS WS X | 74% 11% 9% 4% 2% |
| INDUSTRY | VALLEY FOREST PRODUCTS, BOX 1000, NACKAWIC, N.B., E0H 1P0 506-455-8821 B. HIGGS | HEATED OPEN HOLDING | 640 300 | 500 | 500 | 500 | 1983 - 500 1984 - 500 1985 - 500 1986 - 500 | MULTI 2 | JP | 100% |
| PROVINCE | KENT FOREST NURSERY, N.B. NATURAL RESOURCES, BOX 69, BUCTOUÛCHE, N.B., E0A 1G0 506-955-3556 W. CORMIER | HEATED HOLDING (WITH WINDBREAK) | 2 652 1 490 | 5 000 | 7 700 | 5 230 | 1983 - 5 000 1984 - 7 500 1985 - 7 500 1986 - 7 500 | PAPPT 40B | JP BS | 50% 50% |

PROVINCE OF NEW BRUNSWICK
CONTAINER STOCK PRODUCTION CENTRES

| OWNERSHIP | MAILING ADDRESS PHONE NUMBER SUPERVISOR | PRODUCTION AREA (TYPE) | AREA AVAILABLE FOR PRODUCTION (SQ. M.) | SHIPPABLE TREES | | | PLANNED PRODUCTION 1983-1986 ('000 TREES) | CONTAINER TYPE | MAJOR SPECIES GROWN |
|-----------|--|---|--|-----------------|-------|-------|--|-------------------------------|---------------------------|
| | | | | 1980 | 1981 | 1982 | | | |
| PROVINCE | MADRAN FOREST NURSERY, N.B. NATURAL RESOURCES, BOX 170 BATHURST, N.B., E2A 3Z2 506-783-7235 V. CARRIER | HEATED HOLDING (WITH WINDBREAK) | 2 652 3 600 | 5 000 | 6 000 | 5 900 | 1983 - 7 500 1984 - 6 000 1985 - 6 000 1986 - 6 000 | PAPPT 408 | JP BS 50% 50% |
| PROVINCE | PROVINCIAL FOREST NURSERY, N.B. NATURAL RESOURCES, R.R. 6, FREDERICTON, N.B., E3B 4X7 506-455-6989 P.A. CLARK N.H. KREIBERG | HEATED UNHEATED OPEN HOLDING HOLDING (WITH WINDBREAK) | 6 420 6 000 12 100 18 500 | 7 000 | 6 300 | 4 000 | 1983 - 13 000 1984 - 13 000 1985 - 13 000 1986 - 13 000 | PAPPT 408 MULTI 3 STYRO | JP BS 50% 50% |

CONTAINER TYPE: MULTI = CAN-AM MULTIPOT; STYRO = BC/CFS STYROBLOCK; RIGIP = RIGIPOT; PAPPT = PAPERPOT.

Nova Scotia



PROVINCIAL SUMMARY

| | bare-root | container |
|----------------------------------|-----------|-----------------------|
| Number of production centres | 2 | 7 |
| Area available for production | 72 ha | 18 624 m ² |
| Area currently in production | 51 ha | - |
| 1982 Shippable production ('000) | 4 100 | 9 650 |
| 1983 Targeted production ('000) | 5 000 | 9 591 |

PROVINCE OF NOVA SCOTIA
BARE-ROOT PRODUCTION CENTRES

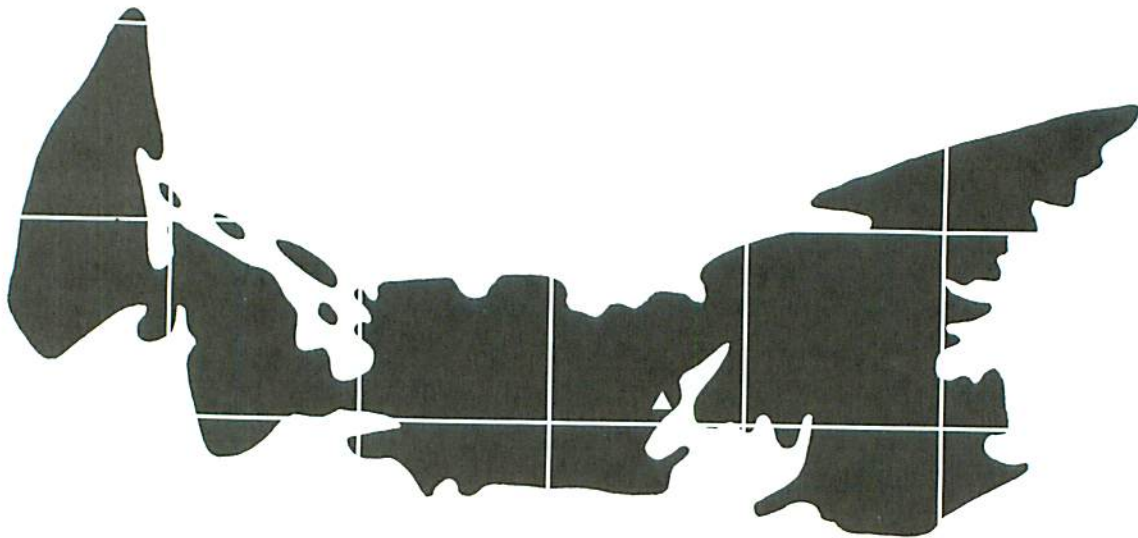
| OWNERSHIP | MAILING ADDRESS PHONE NUMBER SUPERVISOR | AREA AVAILABLE FOR PRODUCTION (HA) | AREA CURRENTLY IN PRODUCTION (HA) | PRODUCTIVE CAPACITY ('000 TREES) | TREES SHIPPED ('000 TREES) | | | PLANNED PRODUCTION 1983-1986 ('000 TREES) | MAJOR SPECIES GROWN |
|-----------|--|--|---|---|--------------------------------|-------|-------|--|---|
| | | | | | 1980 | 1981 | 1982 | | |
| PROVINCE | PROVINCIAL FOREST NURSERY, N.S. LANDS & FORESTS, BOX 130, LAWRENCETOWN, N.S., BOS 1M0 902-584-2234 R. MINARD | 27 | 27 | 8 000 | 2 700 | 6 500 | 4 100 | 1983 - 3 500 1984 - 3 500 1985 - 3 500 1986 - 3 500 | RP 28% RS 28% BF 14% NS 11% WS 9% BS 7% JP 3% |
| PROVINCE | STRATHLORNE FOREST NURSERY, N.S. LANDS & FORESTS, BOX 489, INVERNESS, N.S., BOE 1N0 902-258-2626 B.F. WHITE | 45 | 24 | 5 000 | - | - | - | 1983 - 1 500 1984 - 1 500 1985 - 1 500 1986 - 1 500 | BS 50% WS 25% RP 15% EWP 10% |

PROVINCE OF NOVA SCOTIA
CONTAINER STOCK PRODUCTION CENTRES

| OWNERSHIP | MAILING ADDRESS PHONE NUMBER SUPERVISOR | PRODUCTION AREA (TYPE) | AREA AVAILABLE FOR PRODUCTION (SQ. M.) | SHIPPABLE TREES | | | PLANNED PRODUCTION 1983-1986 ('000 TREES) | CONTAINER TYPE | MAJOR SPECIES GROWN |
|-----------|---|--|--|-----------------|-------|-------|--|-------------------|--|
| | | | | 1980 | 1981 | 1982 | | | |
| FEDERAL | SPRINGHILL TREE NURSERY, CORRECTION SERVICE, CANADA, BOX 2140, SPRINGHILL, N.S., BOM 1X0 902-597-3755 (EXT. 324) P. BOURQUE | HEATED UNHEATED OPEN HOLDING | 1 712 1 784 16 000 | 908 | 2 123 | 2 104 | 1983 - 1 561 1984 - 2 634 1985 - 3 125 1986 - N/A | MULTI 2 NISUL | BS 30% WS 25% RS 20% RP 15% BS 10% |
| INDUSTRY | BOWATER MERSEY PAPER CO. LTD., BOX 1150, LIVERPOOL, N.S., BOT 1K0 902-354-5962 W. JOURNEY | HEATED SHELTERHOUSE OPEN HOLDING | 500 500 250 | 30 | 450 | 450 | 1983 - 600 1984 - 600 1985 - 600 1986 - 600 | MULTI 2 | RS 100% |
| PRIVATE | MORRISON'S GREENHOUSES, R.R. 1, BRAS D'OR, N.S., BOC 1B0 902-736-9371 L. MORRISON | HEATED UNHEATED OPEN HOLDING | 1 395 1 395 4 600 | 1 905 | 1 910 | 1 930 | 1983 - 1 930 1984 - 1 930 1985 - 1 930 1986 - 1 930 | MULTI 2 | BS 98% BF 2% |
| PRIVATE | WESTENENK'S FOREST NURSERY, R.R. 1, ST. ANDREW'S, N.S., BOH 1X0 902-863-3588 G. WESTENENK | UNHEATED OPEN HOLDING | 2 403 4 806 | 2 000 | 2 000 | 2 000 | 1983 - 2 000 1984 - 2 000 1985 - 2 000 1986 - 2 000 | MULTI 2 | BS 70% NS 10% RP 10% BF 10% |
| PROVINCE | PROVINCIAL FOREST NURSERY, N.S. LANDS & FORESTS, BOX 130, LAWRENCETOWN, N.S., BOS 1M0 902-584-2234 R. MINARD | HEATED UNHEATED OPEN HOLDING | 620 270 10 000 | 100 | 100 | 500 | 1983 - 700 1984 - 700 1985 - 700 1986 - 700 | MULTI 2 | BS 50% BF 50% |
| PROVINCE | STRATHLORNE FOREST NURSERY, N.S. LANDS & FORESTS, BOX 489, INVERNESS, N.S., BOE 1N0 902-258-2626 B.F. WHITE | HEATED OPEN HOLDING | 4 700 10 000 | - | - | - | 1983 - 1 100 1984 - 1 600 1985 - 1986 - | MULTI 2 | BS 50% WS 50% |
| PROVINCE | WITTENBURG FOREST NURSERY, N.S. LANDS & FORESTS, BOX 250, STEWIACKE, N.S., BON 2J0 902-378-2152 L. PETERS | HEATED UNHEATED OPEN HOLDING | 2 445 1 400 10 000 | 1 000 | 500 | 2 666 | 1983 - 1 700 1984 - 1 500 1985 - 5 000 1986 - 5 000 | MULTI 2 | BS 100% |

CONTAINER TYPES: MULTI = CAN-AM MULTIPOT; NISUL = NISULA ROLL

Prince Edward Island



- ▲ bare-root/container production centre
- bare-root production centre
- container production centre

PROVINCIAL SUMMARY

| | bare-root | container |
|----------------------------------|-----------|----------------------|
| Number of production centres | 1 | 1 |
| Area available for production | 20 ha | 3 717 m ² |
| Area currently in production | 2 ha | - |
| 1982 Shippable production ('000) | 176 | 1 633 |
| 1983 Targeted production ('000) | 400 | 1 000 |

PROVINCE OF PRINCE EDWARD ISLAND
BARE-ROOT PRODUCTION CENTRES

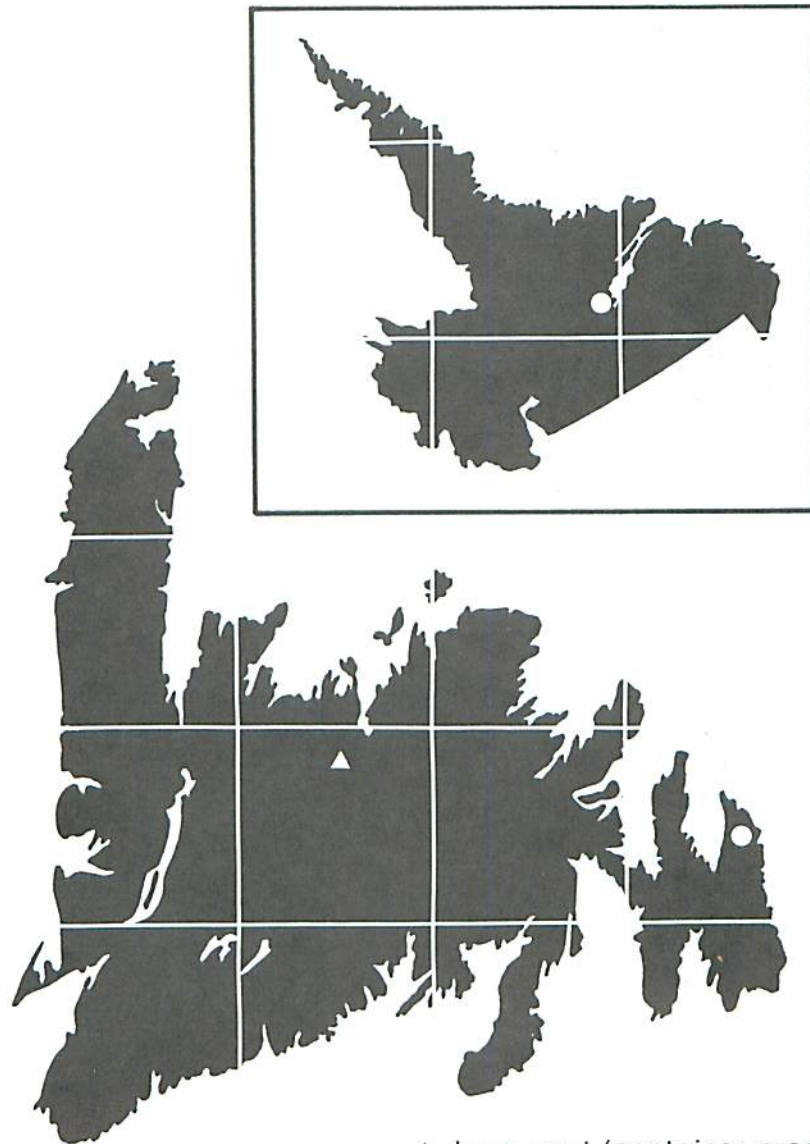
| OWNERSHIP | MAILING ADDRESS PHONE NUMBER SUPERVISOR | AREA AVAILABLE FOR PRODUCTION (HA) | AREA CURRENTLY IN PRODUCTION (HA) | PRODUCTIVE CAPACITY ('000 TREES) | TREES SHIPPED | | | PLANNED PRODUCTION 1983-1986 ('000 TREES) | MAJOR SPECIES GROWN |
|-----------|--|--|---|---|---------------|------|------|--|---|
| | | | | | 1980 | 1981 | 1982 | | |
| PROVINCE | J. F. GAUDET FOREST NURSERY, P. E. I. ENERGY & FORESTRY, BOX 2000, CHARLOTTETOWN, P. E. I., C1A 7N8 902-892-0228 W. BUTLER | 20 | 2 | 5 000 | - | 60 | 176 | 1983 - 400 1984 - 400 1985 - 400 1986 - 400 | RP 45% BS 35% WS 9% BF 9% PO 2% |

PROVINCE OF PRINCE EDWARD ISLAND
CONTAINER STOCK PRODUCTION CENTRES

| OWNERSHIP | MAILING ADDRESS PHONE NUMBER SUPERVISOR | PRODUCTION AREA (TYPE) | AREA AVAILABLE FOR PRODUCTION (SQ. M.) | SHIPPABLE TREES | | | PLANNED PRODUCTION 1983-1986 ('000 TREES) | CONTAINER TYPE | MAJOR SPECIES GROWN |
|-----------|---|------------------------------|--|-----------------|-----------------------|-------|--|----------------------|-------------------------------------|
| | | | | 1980 | 1981 ('000 TREES) | 1982 | | | |
| PROVINCE | J.F. GAUDET FOREST NURSERY, P.E.I. ENERGY & FORESTRY, BOX 2000, CHARLOTTETOWN, P.E.I., C1A 7N8 902-892-0228 W. BUTLER | HEATED SHADE AREA | 3 717 4 200 | 1 135 | 1 153 | 1 633 | 1983 - 1 000 1984 - 1 000 1985 - 1 000 1986 - 1 000 | SP/LE 5,6 MULTI 3 | BS 37% WS 24% JP 31% EL 8% |

CONTAINER TYPES: SP/LE = SPENCER-LEMAIRE "ROOTTRAINERS"; MULTI = CAN-AM MULTIPOT.

Newfoundland



- ▲ bare-root/container production centre
- bare-root production centre
- container production centre

PROVINCIAL SUMMARY

| | bare-root | container |
|----------------------------------|-----------|----------------------|
| Number of production centres | 1 | 3 |
| Area available for production | 40 ha | 3 204 m ² |
| Area currently in production | 40 ha | - |
| 1982 Shippable production ('000) | 2 243 | 1 627 |
| 1983 Targeted production ('000) | 2 300 | 3 800 |

PROVINCE OF NEWFOUNDLAND
BARE-ROOT PRODUCTION CENTRES

| OWNERSHIP | MAILING ADDRESS PHONE NUMBER SUPERVISOR | AREA AVAILABLE FOR PRODUCTION (HA) | AREA CURRENTLY IN PRODUCTION (HA) | PRODUCTIVE CAPACITY ('000 TREES) | TREES SHIPPED | | | PLANNED PRODUCTION 1983-1986 ('000 TREES) | MAJOR SPECIES GROWN |
|-----------|---|--|---|---|---------------|-------|-------|--|---------------------------|
| | | | | | 1980 | 1981 | 1982 | | |
| PROVINCE | DEPT. OF FOREST RESOURCES AND LANDS NURSERY, BOX 616, GRAND FALLS, NFLD., A0H 1C0 709-489-3012 T. McDONOUGH | 40 | 40 | 9 000 | 151 | 1 165 | 2 243 | 1983 - 2 300 1984 - 3 800 1985 - 9 000 1986 - 9 000 | BS 100% |

PROVINCE OF NEWFOUNDLAND
CONTAINER STOCK PRODUCTION CENTRES

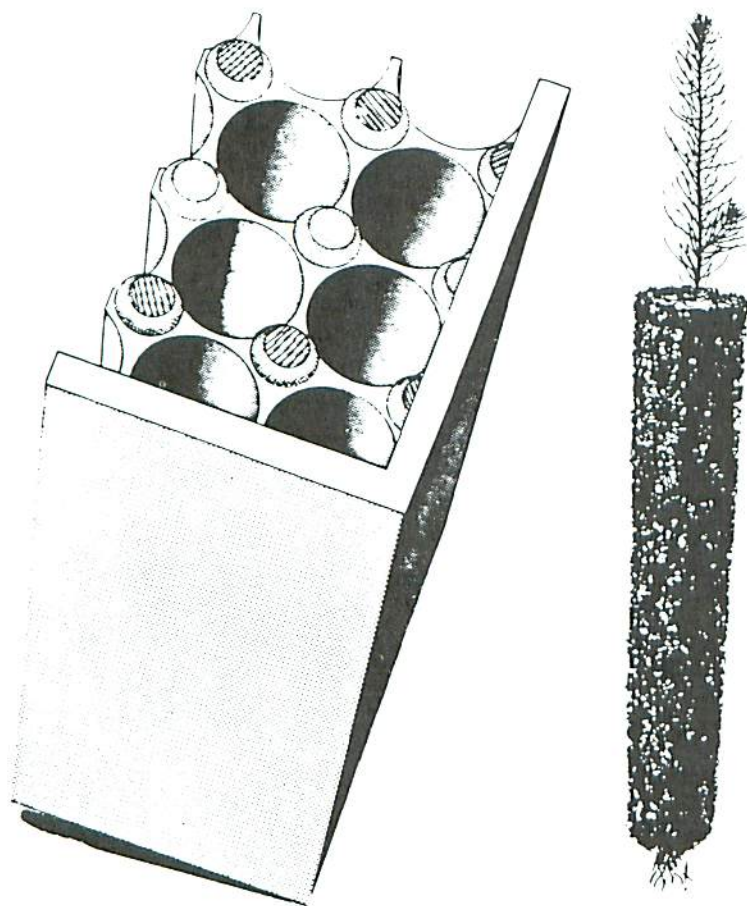
| OWNERSHIP | MAILING ADDRESS PHONE NUMBER SUPERVISOR | PRODUCTION AREA (TYPE) | AREA AVAILABLE FOR PRODUCTION (SQ. M.) | SHIPPABLE TREES | | | PLANNED PRODUCTION 1983-1986 | | CONTAINER TYPE | MAJOR SPECIES GROWN | |
|-----------|---|------------------------------|--|-----------------|-----------------------|-------|--|---------|-------------------|---------------------------|--|
| | | | | 1980 | 1981 ('000 TREES) | 1982 | ('000 TREES) | | | | |
| PROVINCE | DEPT. OF FOREST RESOURCES AND LANDS NURSERY, BOX 370, GOOSE BAY, NFLD., AOP 1C0 709-896-3405 B. ROBERTS | HEATED | 350 | 155 | 152 | 150 | 1983 - 600 1984 - 600 1985 - 600 1986 - 600 | MULTI 1 | BS WS | 50% 50% | |
| PROVINCE | DEPT. OF FOREST RESOURCES AND LANDS NURSERY, BOX 616, GRAND FALLS, NFLD., AOH 1C0 709-489-3012 T. McDONOUGH | HEATED | 2 296 | 470 | 944 | 1 277 | 1983 - 3 000 1984 - 3 000 1985 - 3 000 1986 - 3 000 | SP/LE 5 | BS | 100% | |
| PROVINCE | DEPT. OF FOREST RESOURCES AND LANDS NURSERY, BOX 127, MT. PEARL, NFLD., AIN 2C2 709-368-8334 N. BENSON | HEATED | 558 | 200 | 200 | 200 | 1983 - 200 1984 - 200 1985 - 200 1986 - 200 | MULTI 1 | WS | 100% | |

CONTAINER TYPES: MULTI = CAN-AM MULTIPOT; SP/LE = SPENCER-LEMAIRE "ROOTRAINERS"

APPENDICES

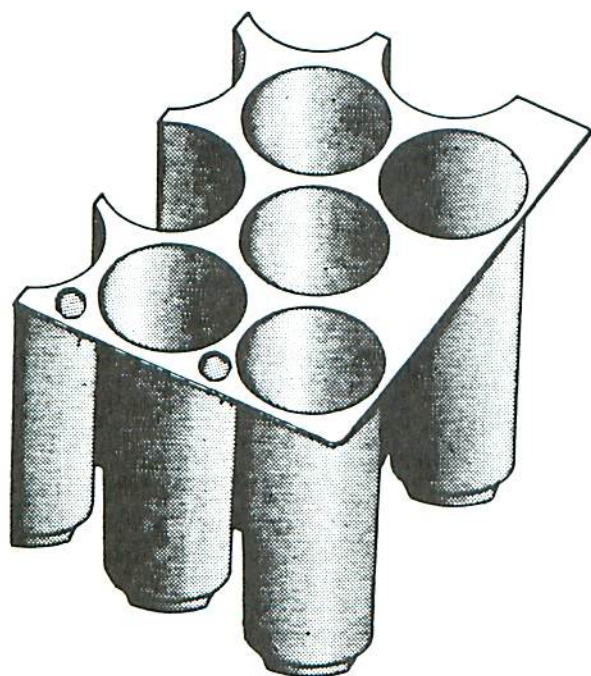
APPENDIX 1

MAJOR CONTAINER TYPES USED IN THE PRODUCTION OF FOREST TREE SEEDLINGS IN CANADA



BC/CFS STYROBLOCK (STYRO)

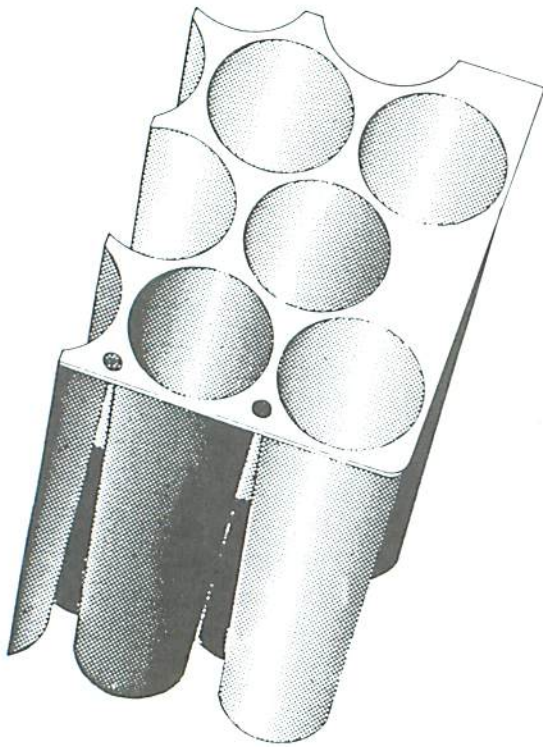
The BC/CFS Styroblock is a rectangular block, molded from expanded polystyrene beads, with round, tapered cavities and ribs to control root spiraling. A variety of sizes is available. The increasingly popular Styroblock 4 has 160 cavities, each with an approximate volume of 60 cm^3 (4 cu in.). Cavities are 4.9 cm (2 in.) in diameter at the top and are 12.5 cm (5 in.) in depth. The blocks are 60 x 35 cm (24 x 14 in.).



CAN-AM MULTIPOTS (MULTI)

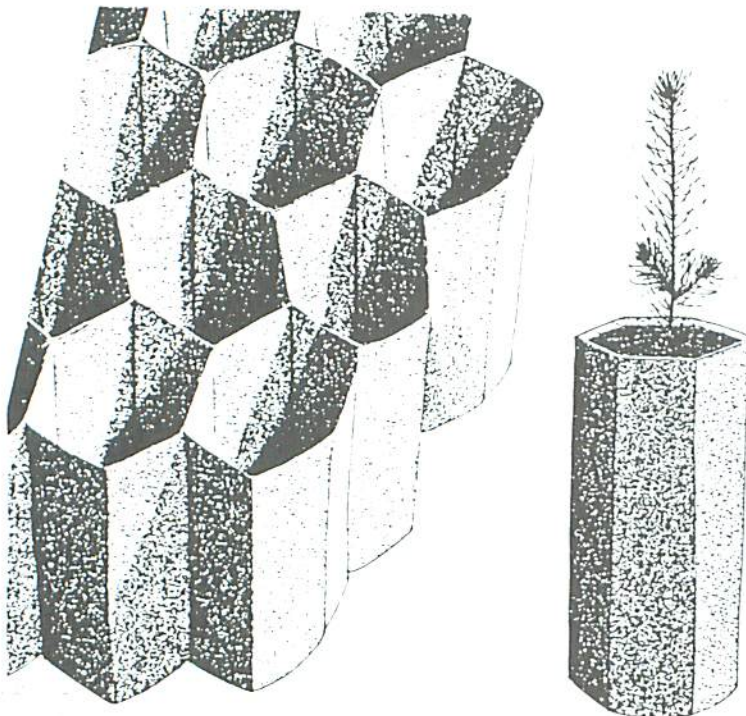
The Can-Am Multipot consists of a durable molded plastic tray available in a variety of sizes. The cavities are slightly tapered and have ribs to control root spiraling. The Multi-Pot #2 which is gaining wider acceptance has 67 cavities, each with a plug volume of 65 cm^3 (4 cu in.). The tray size is 355 x 222 x 120 mm (14 x 8.75 x 4.75 in.).

APPENDIX 1 (continued)



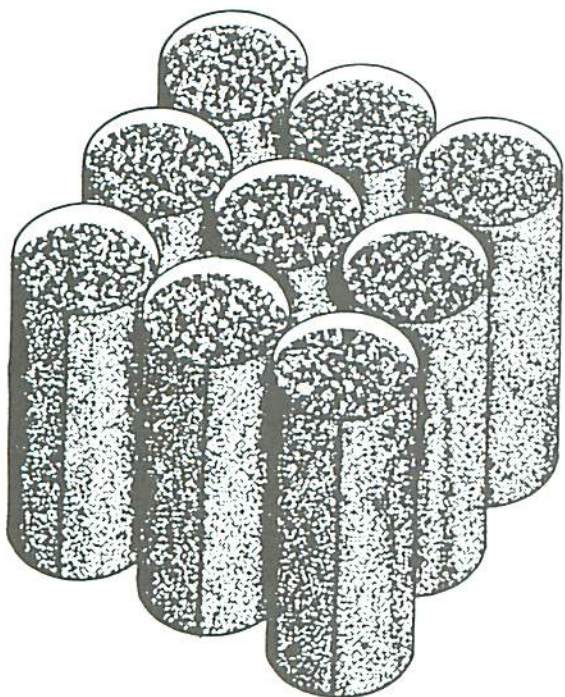
IPL CONTAINERS (IPLCO)

The IPL Rigi-Pots consist of multi-cavity trays of high-density polyethylene. In widest use is the 67-50 model which has 67 cavities, each with a plug volume of 55 cm^3 (3.4 cu in.) and overall dimensions of 354 x 218 x 89 mm (14 x 8.6 x 3.5 in.).



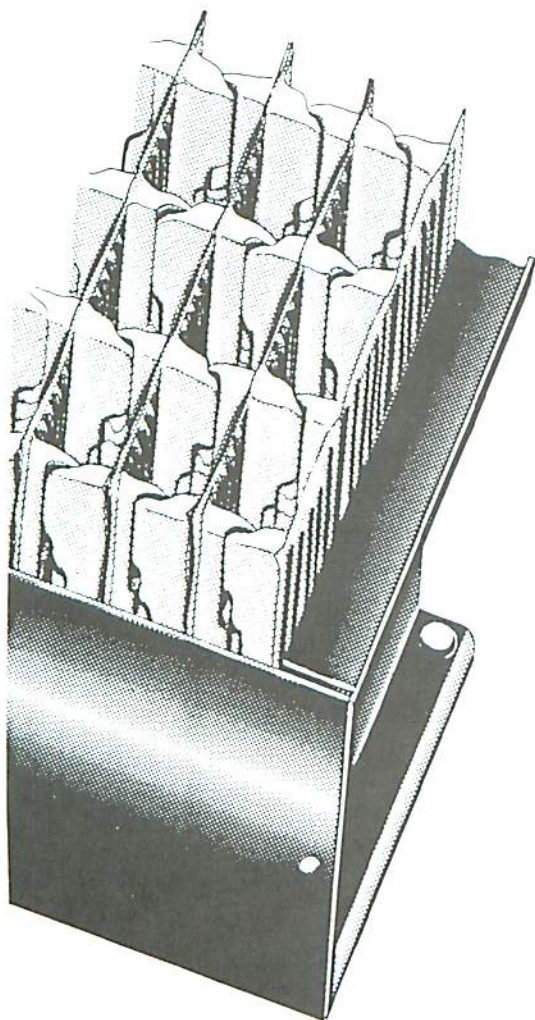
JAPANESE PAPERPOTS (PAPPT)

The biodegradable Japanese paperpot container is made from pulp and various quantities of the artificial fibre Vinylon. The breakdown time of the paper is determined by the percentage of the artificial fibre content. A water-insoluble glue bonds individual tubes which are laterally attached with a water-soluble adhesive to produce the characteristic "honeycomb" sets. Sets are available in a wide variety of sizes. The popular '408' set opens to fit a tray 35 x 94 cm (14 x 37 in.) and contains 336 cavities, each with a volume of 70 cm^3 (4.2 cu in.).



QUEBEC TUBES (MERQU)

This system, recently developed by the Ministère de l'Énergie et des Ressources du Québec, has containers wrapped with ordinary paper over a thin internal layer of polyethylene. The containers, packed into sets of 48, have a volume capacity of 115 cm³ (7 cu in.). Research is continuing to develop a paper with improved biodegradable properties.



SPENCER-LEMAIRE ROOTRAINERS (SP/LE)

The Spencer-Lemaire system produces several plug seedlings in a heat-molded plastic "book", the sides of which are ribbed to prevent root spiraling. The more popular "Ferdinand" tray size contains 17 "books", each with 6 cavities and an individual volume of 40 cm³ (2.4 cu in.). The overall tray size is 22 x 37 cm (8.7 in. x 14.6 in.). A variety of suitable sizes is available.

APPENDIX 2

MAJOR TREE SPECIES REARED IN CANADA'S FOREST TREE NURSERIES

| Common name | Botanical name | Symbol |
|--------------------------|---|--------|
| CONIFEROUS SPECIES | | CON |
| Pine | <i>Pinus</i> L. | P |
| Eastern white pine | <i>Pinus strobus</i> L. | EWP |
| Red pine | <i>Pinus resinosa</i> Ait. | RP |
| Jack pine | <i>Pinus banksiana</i> Lamb. | JP |
| Lodgepole pine | <i>Pinus contorta</i> Dougl. | LP |
| Scots pine | <i>Pinus sylvestris</i> L. | SP |
| Larch | <i>Larix</i> Mill. | L |
| Western larch | <i>Larix occidentalis</i> Nutt. | WL |
| European larch | <i>Larix decidua</i> Mill. | EL |
| Spruce | <i>Picea</i> A. Dietr. | S |
| White spruce | <i>Picea glauca</i> (Moench) Voss | WS |
| Engelmann spruce | <i>Picea engelmannii</i> Parry | ES |
| Red spruce | <i>Picea rubens</i> Sarg. | RS |
| Black spruce | <i>Picea mariana</i> (Mill.) B.S.P. | BS |
| Norway spruce | <i>Picea abies</i> (L.) Karst. | NS |
| Hemlock | <i>Tsuga</i> (Endl.) Carr. | H |
| Western hemlock | <i>Tsuga heterophylla</i> (Raf.) Sarg. | WH |
| Douglas-fir | <i>Pseudotsuga menziesii</i> (Mirb.) Franco | DF |
| Fir | <i>Abies</i> Mill. | F |
| Balsam fir | <i>Abies balsamea</i> (L.) Mill. | BF |
| Amabilis fir | <i>Abies amabilis</i> (Dougl.) Forbes | AF |
| Arbor-vitae | <i>Thuja</i> L. | C |
| Eastern white cedar | <i>Thuja occidentalis</i> L. | EWC |
| Western red cedar | <i>Thuja plicata</i> Donn | WRC |
| OTHER CONIFEROUS SPECIES | | OCON |
| DECIDUOUS SPECIES | | DEC |
| Poplar | <i>Populus</i> L. | PO |
| Black walnut | <i>Juglans nigra</i> L. | WA |
| OTHER DECIDUOUS SPECIES | | ODEC |
| MISCELLANEOUS SPECIES | | X |

Source: Bonnor, G.M. 1978. A guide to Canadian forest inventory terminology and usage. Dep. Environ., Can. For. Serv., Ottawa, Ont. 2nd ed.