

ILLINOIS STATE FOREST NURSERY  
PROGRAM STUDY

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REPORT PREPARED  
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## ILLINOIS STATE FOREST NURSERY PROGRAM STUDY

**WHY:** Director of the Dept of Conservation wanted an unbiased, outside opinion.

**METHODOLOGY:** Team members visited each nursery and gathered information about the operation. They then evaluated the operation and formulated recommendations.

- OBJECTIVES:**
1. Evaluate practices and determine the most efficient alternatives to carry out the day to day operations of the nursery program.
  2. Determine the most efficient alternatives for expanding and up-dating the nursery operation to meet future production requirements.

ALTERNATIVES FOR IMPROVING  
NURSERY EFFICIENCY

ALTERNATIVE #1

Existing or increased production levels, do nothing.

ALTERNATIVE #2

Improving existing growing area and physical facilities to satisfy current production levels.

GROWING AREA

PHYSICAL FACILITIES

BOTH NURSERIES

Increase organic matter  
Land leveling  
Drainage  
    Surface  
    Subsurface  
Soil Nutrient Monitoring  
Erosion Control

BOTH NURSERIES

Provide refrigerated pre-cooling area for lifted seedlings  
Controls and alarms  
    Temperature  
    Humidity  
Sorting, packaging, seedling storage area  
Provide  
    - Forklift access  
    - Pallet system with Jarke racks or similar system  
    - Improve product flow better utilization of  
        - personnel  
        - space  
    - Consider standard package size (quantity)  
    - Deliver seedling to graders/sorters  
Computers  
Computerize each nursery with a network: headquarters to each nursery and nursery to nursery  
    - inventories  
    - stock records & orders  
    - seed records  
    - cultural activities  
    - cost accounting  
    - time keeping  
    - word processing and  
    - much, much more

- I. Continue to investigate container production.
- II. Continue to investigate contracting for containerized and bareroot seedlings.

Improve existing growing area and physical plant to satisfy increased production levels. Includes improvements in Alternative #2.

GROWING AREA

PHYSICAL FACILITIES

MASON NURSERY

MASON NURSERY

Redesign of existing fields to maximize production in light of soil capabilities

- longer seed beds
- lower road grade to collect surface water from growing area.
- widen turn area between growing areas
- investigate the need for subsurface drainage utilizing tile system

- A. "State of the Art" seedling processing facility includes
- refrigerated pre-cooling storage for lifted seedlings
  - refrigerated packaged seedling storage
  - mechanical product handling forklifts, pallets, Jarke racks
  - new seedling sorting/processing system
  - seedling quality control with RGC (Root Growth Capacity) testing facility

Both Nurseries  
Intensify soil nutrient monitoring and establish optimum levels for all species

- B. Nursery Administration Office integral part of new seedling processing and storage facility.

UNION NURSERY

- A. Major production of conifers
- B. Grow seedlings at Union with major processing at Mason Nursery with new facilities as above.
- refrigerated transport
  - increased refrigerated storage at Mason Nursery

- I. Continue to investigate container production.
- II. Continue to investigate contracting for containerized and barefoot seedlings.

#### ALTERNATIVE #4

Replace both Nurseries with single southern Illinois nursery and maintain the Mason Nursery as a Seed Production Center.

- Eliminate undesirable/inefficient conditions at present nurseries
- Extended growing season
- Extended lifting season
- Economy of scale
  - Less budget
  - Less equipment
  - Fewer personnel
- Sandy soil, mechanical lifting
- Central shipping point
- Capitalize on current favorable budget situation

Continue to investigate container production and pursue contracting minor species.

#### IN SUMMATION

#### I. We are using parts of Alternatives II & III.

- A. Mason Nursery is getting new processing buildings which will contain new offices, pre-cooling and cold storage, shop room, and employee lunch room.
- B. Union Nursery will get additional material storage, employee lunch room, and new conveyor belts.
- C. We have become computerized this summer.

#### II. Production up at both nurseries.

- A. Production in 1987
  - 1. 2.4 million
- B. Production in 1988
  - 2. 5+ million