

**AN OVERVIEW OF PINE  
MANAGEMENT**

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**MAJOR SOUTHERN PINES**

- LOBLOLLY
- LONGLEAF
- SLASH
- SHORTLEAF

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**TRIVIA QUESTION**

AFTER LOBLOLLY, WHICH OF THE  
OTHER THREE SOUTHERN PINES HAS  
THE MOST STANDING VOLUME IN  
THE SOUTH?

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**MANAGEMENT ACTIVITIES**

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| <b><u>REGENERATION</u></b>  | <b>INTERMEDIATE</b>   |
| <ul style="list-style-type: none"><li>• PREPARING THE SITE</li><li>• SEEDLING ESTABLISHMENT</li></ul> | <b><u>TREATMENTS</u></b> <ul style="list-style-type: none"><li>• CONTROLLING SPACING</li><li>• CONTROLLING COMPETETING VEGETATION</li></ul> |

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**REGENERATION QUESTIONS**

- WHEN SHOULD I REGENERATE?
- WHICH SPECIES SHOULD I USE?
- WHICH METHOD SHOULD I USE?
- WHAT SHOULD I BE DOING TO PREPARE FOR REGENERATION?

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**WHEN SHOULD I REGENERATE?**

- WHEN ECONOMIC MATURITY IS REACHED
- WHEN THE STAND STOCKING IS INCAPABLE OF REACHING ECONOMIC MATURITY IN A REASONABLE TIME

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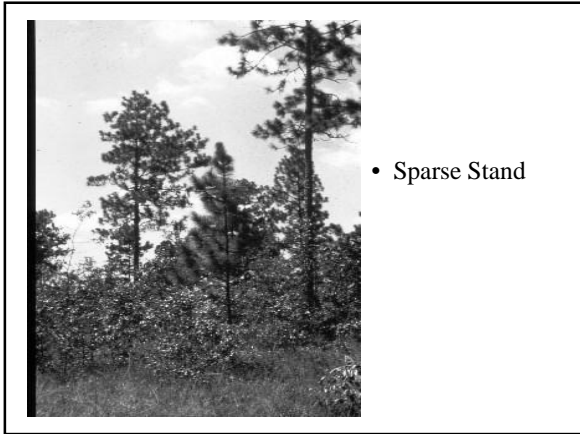
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• Sparse Stand

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**ECONOMIC MATURITY OF  
LOBLOLLY PINE**

- AGE 25 to 40
- DBH 14 to 18-INCHES
- PER ACRE VOLUME 8 to 12 MBF

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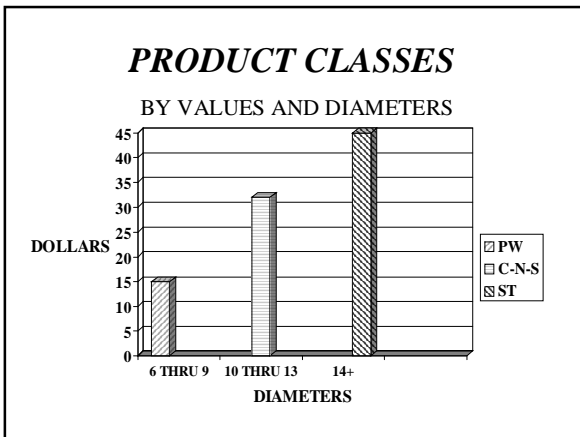
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- Over mature stand.



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- Saw timber stand with 9MBF/ac



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**WHICH SPECIES?**

- WITHIN NATIVE RANGE OF SPECIES
- USE SOILS MAPS
- WHAT IS DOING WELL LOCALLY?
- PRODUCT OBJECTIVES
- FIRE, DISEASE, INSECTS

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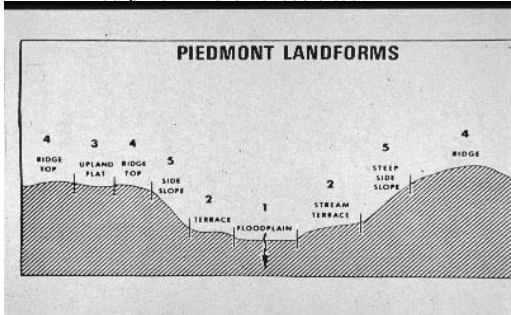
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- Piedmont slope profile- How far down the slope to manage for hwd- what about mixed pine- hwd on these sites?




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## REGENERATION METHODS

### ARTIFICIAL

- PLANTING
- DIRECT SEEDING

### NATURAL

- SEEDTREE
- SHELTERWOOD
- CC IN STRIPS
- SEED OR SEEDLING IN PLACE
- SELECTION

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- Releasing seedling from overhead hwd compet.




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**ADVANTAGES OF PLANTING**

- BETTER STOCKING CONTROL
- SHORTER ROTATIONS/HIGHER YIELD
- HIGHER PRESENT NET WORTH
- GENETICALLY IMPROVED STOCK
- NO SEEDTREE LOSSES

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**ADVANTAGES OF PLANTING**  
**(cont.)**

- NO PRECOMMERCIAL THINNING
- PULPWOOD ROTATION POSSIBLE
- BETTER FIRE EQUIPMENT ACCESS
- HIGHER STUMPAGE PRICES

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**TRIVIA QUESTION ANSWER**

AFTER LOBLOLLY, WHICH SOUTHERN PINE HAS THE MOST STANDING VOLUME?

MILLION BF

- LOBLOLLY-----150,948-----47%
- **SHORTLEAF**-----61,022-----19%
- SLASH-----35,328-----11%
- LONGLEAF-----19,270-----6%

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**SUCCESSFUL PLANTING**

- COMPETITION FREE SITES
- HEALTHY, FRESH, TOP QUALITY SEEDLINGS
- METICULOUS CARE & HANDLING OF SEEDLINGS
- PRECISION PLANTING
- PROPER POST-PLANTING CARE

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**COMPETITION CONTROL**

- FIRE, CHEMICAL, MECHANICAL

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**Drum Chopper**



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**Aerial application of Herbicides**



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**Prescribed Fire**



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- COMBINATIONS OF ABOVE
- MOST COST-EFFECTIVE TO USE FIRE TO KEEP HARDWOODS UNDER CONTROL THROUGHOUT ROTATION

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**Whole tree chopper operations**



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**Clean site after chipping operation**



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**SEEDLING SPACINGS**

- PLAN FOR SUCCESS-NOT FAILURE
- GOAL: 500 1ST YEAR SURVIVING SEEDLINGS (MORE FOR LONGLEAF)
- USE A RECTANGULAR SPACING, e.g.
- 7 X 12 = 519 TPA

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**CONTAINER SEEDLINGS**

- EXPANDS PLANTING SEASON
- MORE EXPENSIVE
- MORE DIFFICULT TO HANDLE
- BETTER ROOT SYSTEM
- SURVIVAL EQUAL OR BETTER

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**NATURAL REGENERATION  
ADVANTAGES**

- LOWER ESTABLISHMENT COST
- EQUAL OR HIGHER RATE OF RETURN
- LESS VISUAL IMPACTS
- LESS SOILS IMPACTS
- BETTER SEEDLING ROOT SYSTEM
- REDUCED TIP MOTH DAMAGE

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**NATURAL REGENERATION  
REQUIREMENTS**

- *ADEQUATE* SEED SUPPLY
- *RECEPTIVE* SEEDBED
- *FREEDOM* FROM COMPETING VEGETATION
- *AMPLE* SOIL MOISTURE

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**ADEQUATE SEED SUPPLY**

NUMBER OF 14-INCH SEEDTREES/ACRE

LOBLOLLY-----6  
SLASH-----6  
SHORTLEAF-----12  
LONGLEAF-----28

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**20 TPA of seed trees**



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**SEEDTREES SHOULD BE:**

- 30 YEARS OR OLDER
- 14-INCHES DBH OR LARGER
- ABOVE AVERAGE IN HEIGHT, FORM, DISEASE RESISTANCE AND CROWN SIZE
- SHOW EVIDENCE OF FRUITFULNESS
- FAIRLY WELL DISTRIBUTED

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**Cones on ground under seed tree**



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**Prescribed fire to CUS  
& prepare a receptive  
seed bed**



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**Monitoring  
seed crop**



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**On hands and knees checking what's on the ground**



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**PRECOMMERCIAL THIN**

- WHEN TPA EXCEEDS 1500 @ AGE 3
- SEEDTREE REMOVAL MAY DO IT
- DRUM CHOPPER, HEAVY DUTY BRUSH CUTTERS

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**Dense saplings  
in need of PCT**

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