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video

shelterwood

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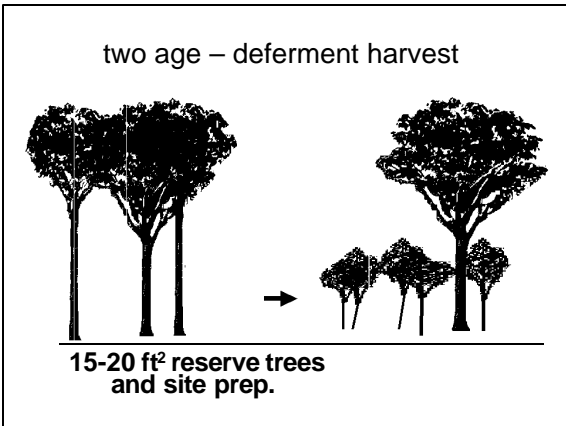
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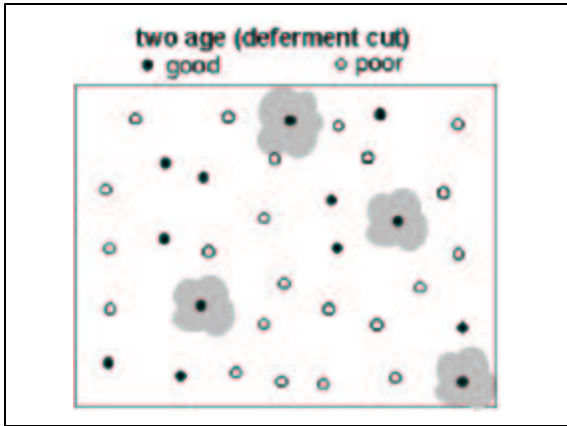
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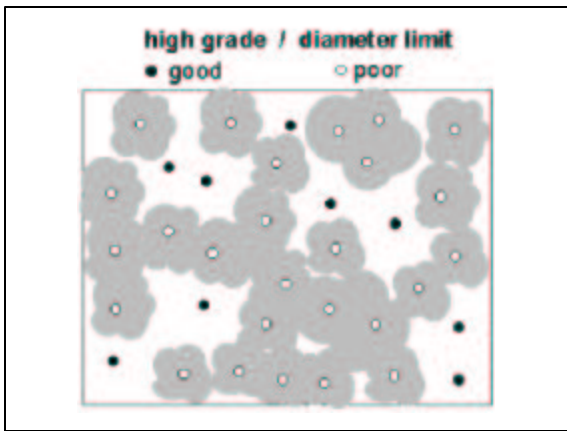
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	light	density
high grade	shade	low
group selection	sun	high
clearcut	sun	high
shelterwood	intermediate	high
two age	sun	high
individual tree	shade	moderate

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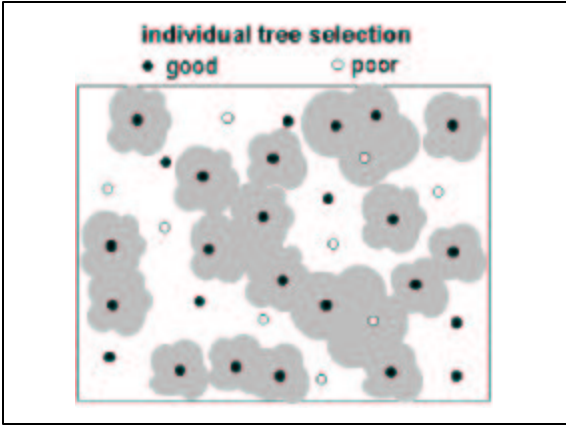
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**Layout of Silvicultural Prescriptions**

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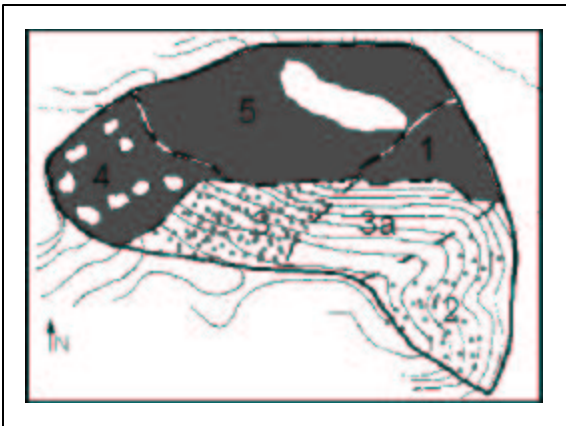
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## Planting Hardwoods

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## Why Plant?

- Supplement natural regeneration --- enrichment plantings
- Reforesting fields --- lack of seed source
- Fiber rotations
- Introducing genetically-improved stock
- Increasing species diversity

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## Guidelines for Planting

- Match the species to the site
- Plant large seedlings for best success
- Prepare the site
- Control competing vegetation
- Protect seedlings from animal predation

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### Planting Summary

- Artificial regeneration is a process, not an event
- A general prescription for success is that *large, healthy seedlings* should be *properly planted on appropriate sites* where competing woody and herbaceous *vegetation is controlled* for at least 2 to 3 years

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### Planting Recommendations

- *Augment* species composition
- Lack of seed source ---- field & pastures
- Control competition --- woody & herbaceous
- Planting success --- best and appropriate sites with adequate moisture throughout the growing season
- Use large planting stock

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### Mixed Species Plantings

- Information is sparse
- Different species
- Different growth rates and habits
- Variable site requirements
- Spacing??? More Research Needed

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### Bottomland Forests

- Bottomland forests are some of the most productive and diverse ecosystems in the United States
- Myriad of different species with different site requirements and growth habits makes management extremely complex and variable

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### Bottomland Hardwoods

- The silviculture is similar to upland forests except for:
- **Flooding** that is largely, unpredictable and uncontrollable, and
- **Site/Species** relationships

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### Bottomland Hardwoods

- Water
  - Depth
  - Frequency
  - Duration
  - Seasonal Timing

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## Bottomland Hardwoods

- Site/Species Relationships

- Landform
- Soil Drainage
- Soil Texture
- Deposition

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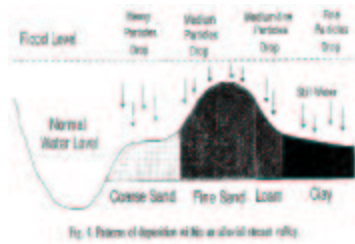
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## Patterns of Deposition



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## Bottomland Landforms Classification

- Gulf Coastal and Mississippi Alluvial Plains
- Atlantic Coastal Plain
- Major Bottoms
- Minor Bottoms
- Red River Bottoms
- Black River Bottoms

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### Mississippi Alluvial and Gulf Coastal Plains

- **Minor Bottoms** have soils of local origin
- **Major Bottoms** have soils that were transported for hundreds of miles that vary in mineralogy.

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### Atlantic Coastal Plain

- **Red River Bottoms** originate from sediments from the mountains and upper Piedmont
- **Black River Bottoms** originate in the lower Piedmont or the coastal plain
- **Muck Swamps** are highly organic areas where there is standing water for 10-12 months a year.

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### Species Composition in the Atlantic Coastal Plain

Red River Bottoms

Black River Bottoms

Sycamore  
Cottonwood  
Sweetgum  
Oaks  
Ash

Red Maple  
Ash  
Swamp Black Gum  
Water/Willow Oaks  
Elms/Hackberry

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Major and Minor Bottoms  
Landform and Species  
Schematics

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Major Bottoms

- **Bars and Fronts** --- willow, elm, cottonwood, sycamore
- **Flats** --- Nuttall oak, green ash, sugarberry, elm, red maple
- **Slough** --- overcup oak, water hickory
- **Swamp** --- water tupelo, bald cypress
- **Ridge** --- sweetgum, green ash, hickory, water/willow oaks

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Minor Bottoms

- **Bar** --- river birch
- **Levee** --- beech, sycamore, sweetgum, sycamore, yellow-poplar, oaks
- **Flat** --- sweetgum, oaks, hickories, blackgum
- **Slough** --- bald cypress, swamp tupelo
- **Terrace** --- white oaks, red oaks, hickory, yellow-poplar, sweetgum, loblolly pine

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## Bottomland Hardwoods Summary

- Know your sites
- Know the hydrology
- Know the ecological requirements of the species
- INTEGRATE ---- Match the species to the site conditions

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## Bottomland Systems are Dynamic!

Rapid change is part of the system.  
Sites and soils are in a constant state  
of change because of deposition and  
erosion. This in turn is reflected in the  
vegetational composition

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