

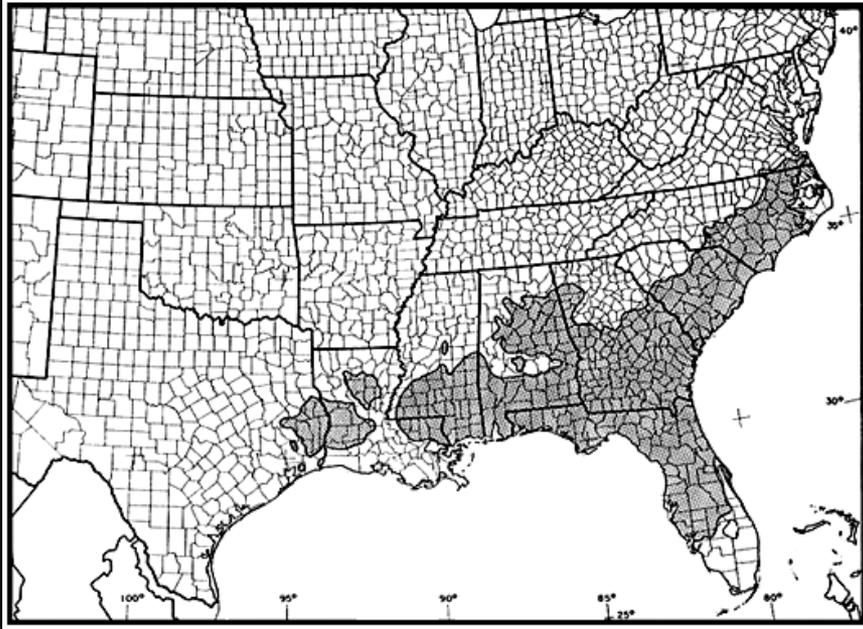


Loblolly or Longleaf Pine ?

Bill Pickens - NC Forest Service

Longleaf Pine

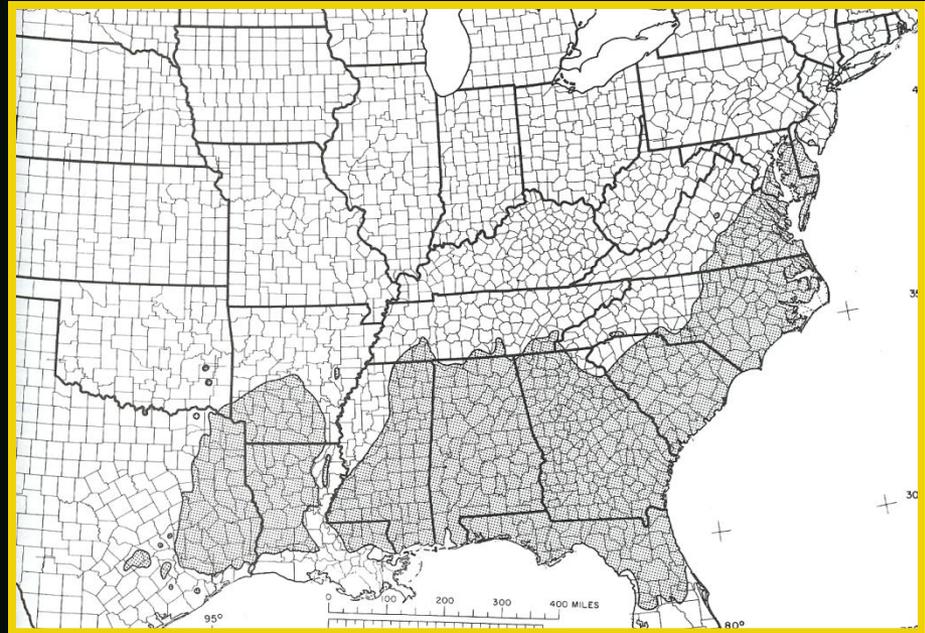
Pinus palustris



- Longstraw, heart, pitch, and yellow pine
- 60 million acres to < 3 million

Loblolly Pine

Pinus taeda



- Old field pine, shortstraw pine, NC pine,
- Over half the standing pine volume





UGA9000031

Longleaf Pine

the good &the not so good

- Better taper
- Higher specific gravity
- More resistant to SPB
- Fire resistant
- Less prone to windthrow
- Better suited for long rotations
- More susceptible to ice damage
- More difficult to establish
- Slow early growth.
- Less responsive to management

SILVICS - Early GROWTH

Longleaf Pine
Pinus palustris

- Grass stage slows early growth
- Nutrient sipper
- Responds to manipulation but not as dramatic



Loblolly Pine
Pinus taeda

- Express dominance early.
- Growth - fast 2-3 ft/year
- Nutrient user
- Responds to manipulation

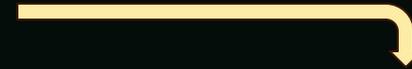




“Grass stage”



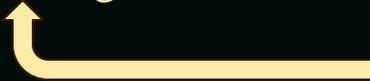
“candles”
height growth starts



seedling



LL seed – fall germination



4 year old “bottle brush”

SILVICS - Tree Characteristics

Longleaf Pine

Pinus palustris

- Intolerant of competition
- Inconsistent cone crop
- Fall germination
- Large seed - limits dispersal(50ft.) and hinders germination success



Loblolly Pine

Pinus taeda

- Tolerates competition early
- Prolific and consistent cone production.
- Germinates in spring (65F)
- Seed disperses 100-300 ft.
- Responds well to release.



SILVICS - FIRE

Longleaf Pine
Pinus palustris

- Evolved with Fire
- Fire resistant in grass stage
- Fire damage likely once height growth begins until sapling is ????? Feet tall.

Loblolly Pine
Pinus taeda

- Seedlings susceptible to Fire
- Fire resistant at maturity



Longleaf and fire



2 years later





LONGLEAF

- Fire Driven
- Higher Risk
 - Clay
 - Saturated
 - Shallow root zone
 - High Quality

LOBLOLLY

- Less productive on dry soils

Site Selection



Longleaf is more resistant to damage or value loss ...

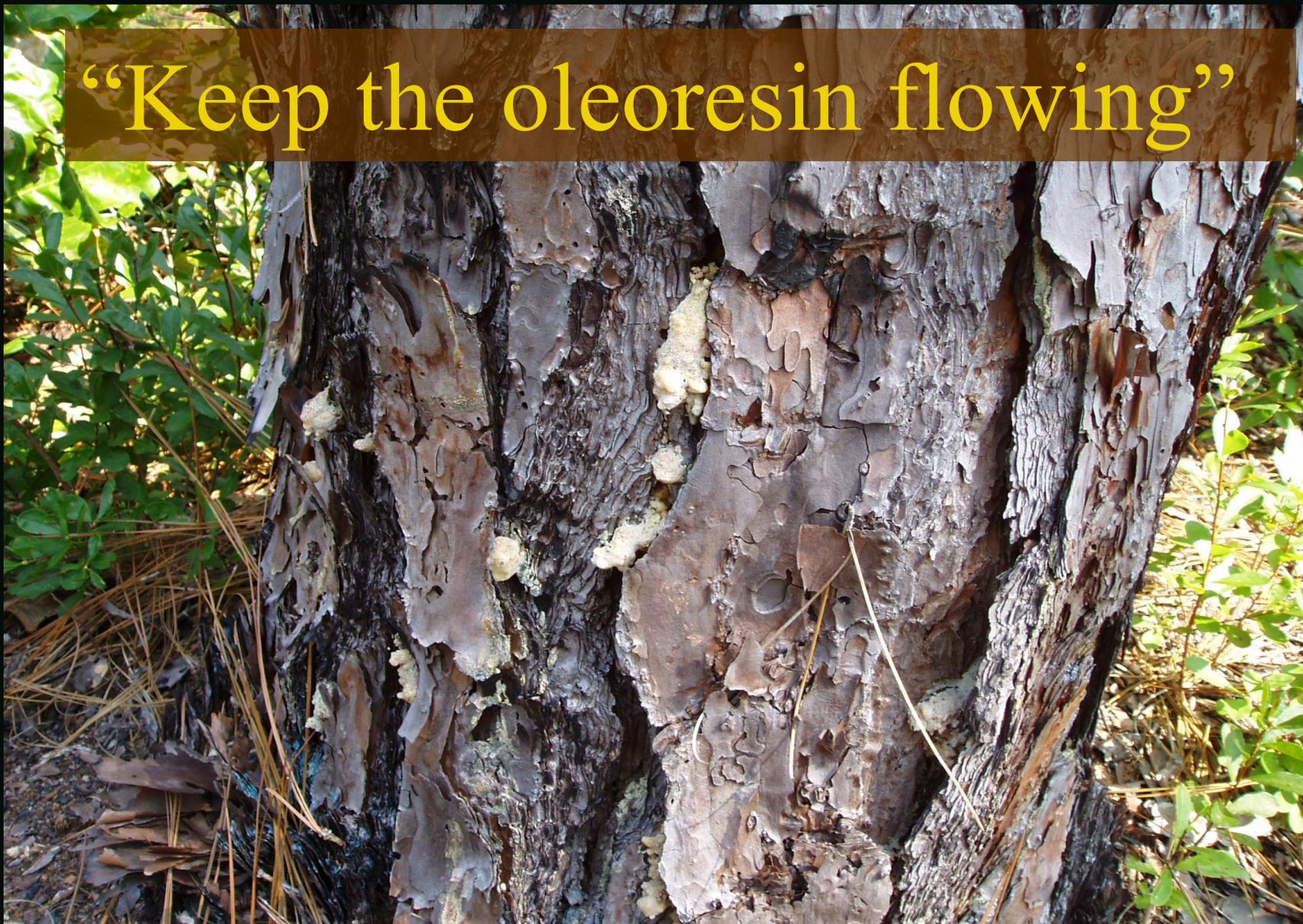
- Wildfire
- Insects and disease
- Hurricanes



Longleaf more resistant to SPB



“Keep the oleoresin flowing”





Less Risk to Hurricane Damage

Species	Type of Hurricane Damage (%)			
	None	Snapped	Leaning	Blown over
Loblolly	16.3	75.9	5.7	2.0
Longleaf	64.0	8.9	16.9	10.2



Longleaf is one of the most diverse ecosystem in the world. Second only to rainforest in species richness



Valued Ecosystem





Loblolly – Economic Advantages

- Short Rotations
- Fast Growth
- Intensive Management
 - Fertilization
 - Vegetative Competition Control
 - Thinning.

8 Year old P. Taeda - Loblolly Pine



Longleaf - Economic Advantages

A young longleaf pine tree stands prominently in the foreground on the right side of the image. The background is a dense forest of similar trees, shrouded in a thick mist or fog, creating a soft, atmospheric setting. The ground is covered in green grass and low-lying vegetation.

- **Superior Sawtimber**
 - **Strength of Wood**
 - **Specific Gravity**
 - **Stem Form & Taper**
- **Pole Yield**
- **Pine Straw**
- **Hunting Leases**
- **Low Risk**

Longleaf is heavier & stronger

- Denser - Higher specific gravity
- More rings per inch

47

2004

12" cns = \$18.85

2012

14" saw. = \$43.68



LL has better form ; Less taper

➤ Natural LL (40-50 yr old) = > 40 % poles

➤ Natural Lob (40-50 yr old) = 20 % poles

Longleaf Pole Quality

Longleaf lives longer



40

2004

9" cns = \$9.42

2012

11" pole = \$35.88

NC = \$62.34

Longleaf pinestraw provides extra income

- LL straw is superior
- Pay for management costs
- \$50 - \$100/acre





Regeneration

Importance of Site Preparation for Longleaf

“Much of the failure in (longleaf) plantations is due to submarginal nursery stock or inadequately prepared planting sites.”

(“Longleaf Pine Management”, USDA, Forest Service, Forestry Report R8-FR 3, December 1983)

“There is a strong, direct, and positive correlation between percent survival and initiation of height growth with intensity of site preparation”

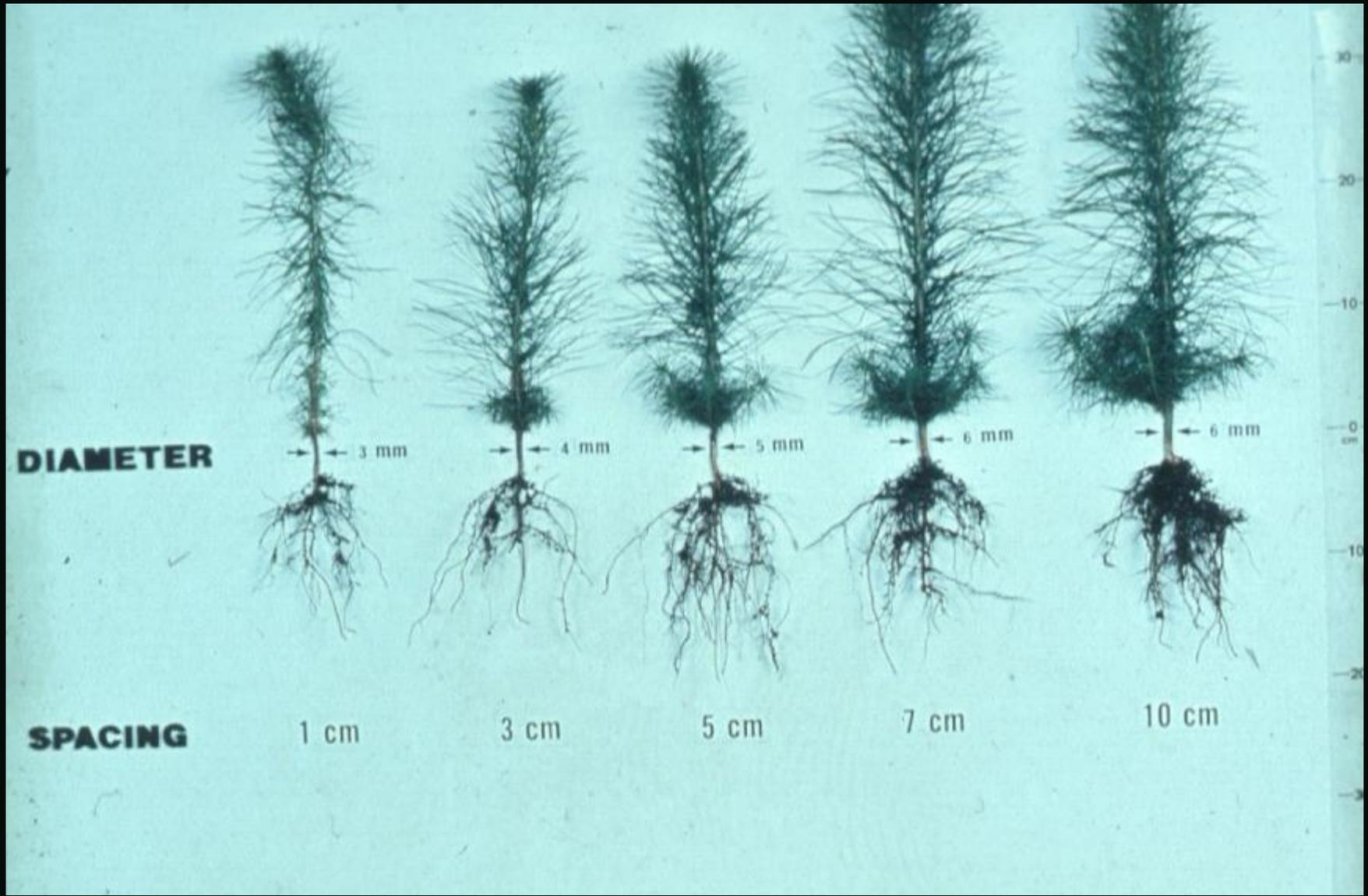
(NCFS Forestry Note No. 61, “Establishment and Growth of Longleaf Pine on Droughty Sites in North Carolina, May 1988)

CUTHBERT GA
LONGLEAF PINE
GROWTH IMPACT 7/9/81
CONTROL



CUTHBERT GA
LONGLEAF PINE
GROWTH IMPACT 7/9/81
BAND 2 YR

High Quality-Loblolly



Top Quality Seedlings - LONGLEAF

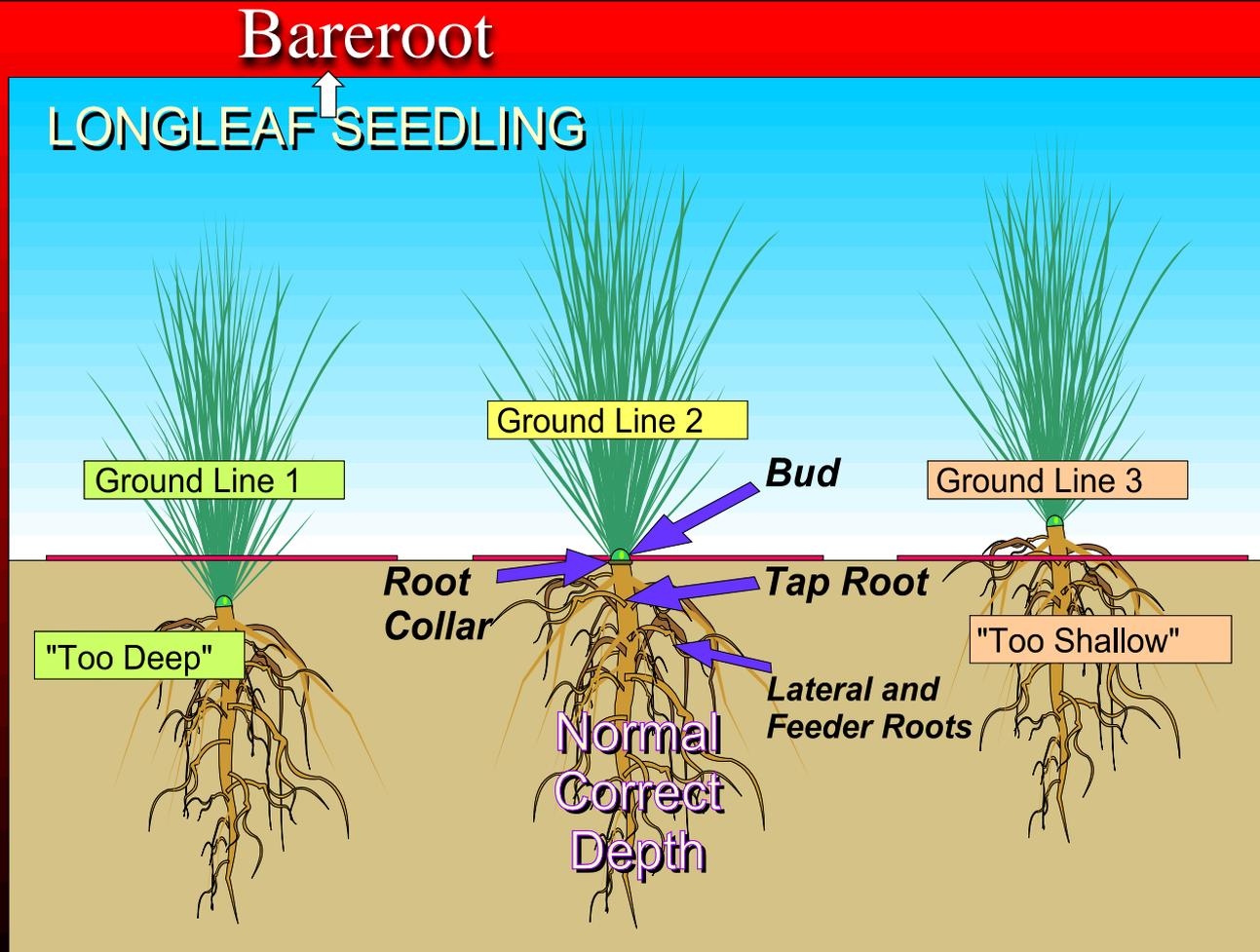


Longleaf Container or Bareroot?

- 1995 Region-wide survey

	% Survival (first year)	% Height Growth (after 2nd year)
<u>Bareroot</u>	65 %	34 %
<u>Container</u>	83 %	62%

Plant longleaf pine carefully

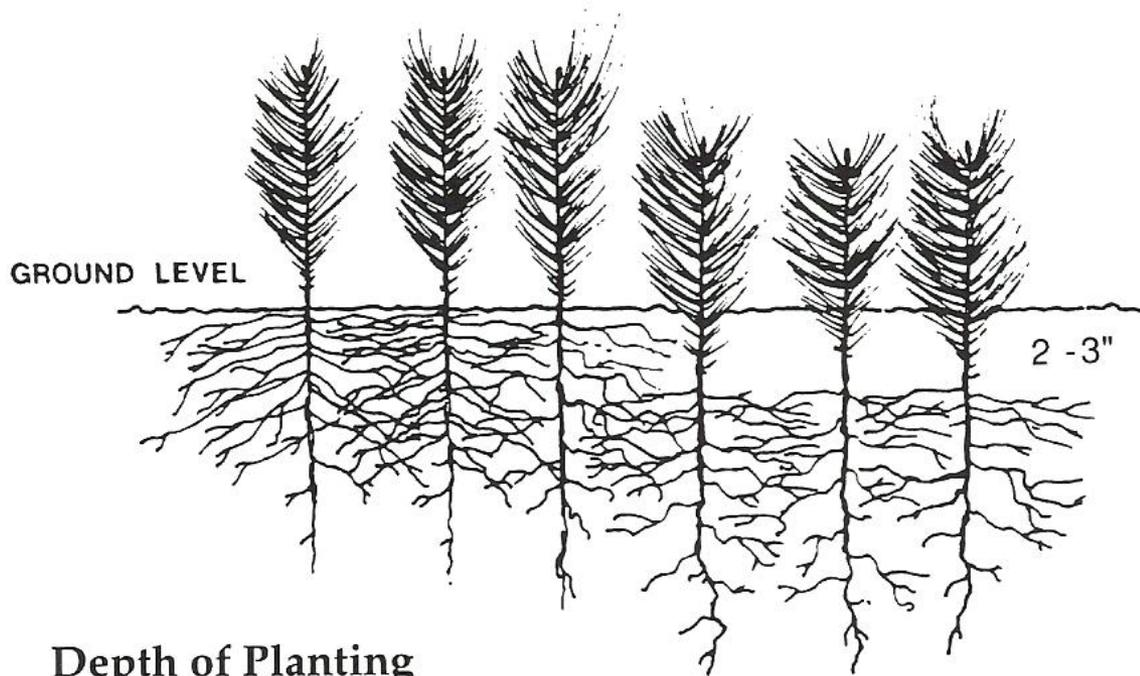


Container is different





Plant loblolly pine deep

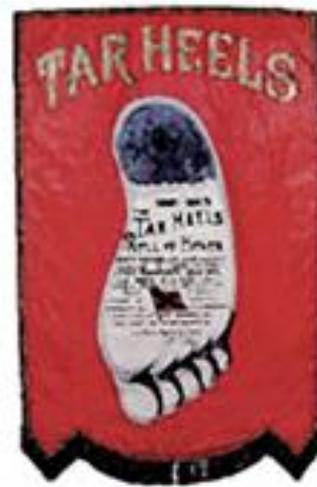


Virginia Division of Forestry

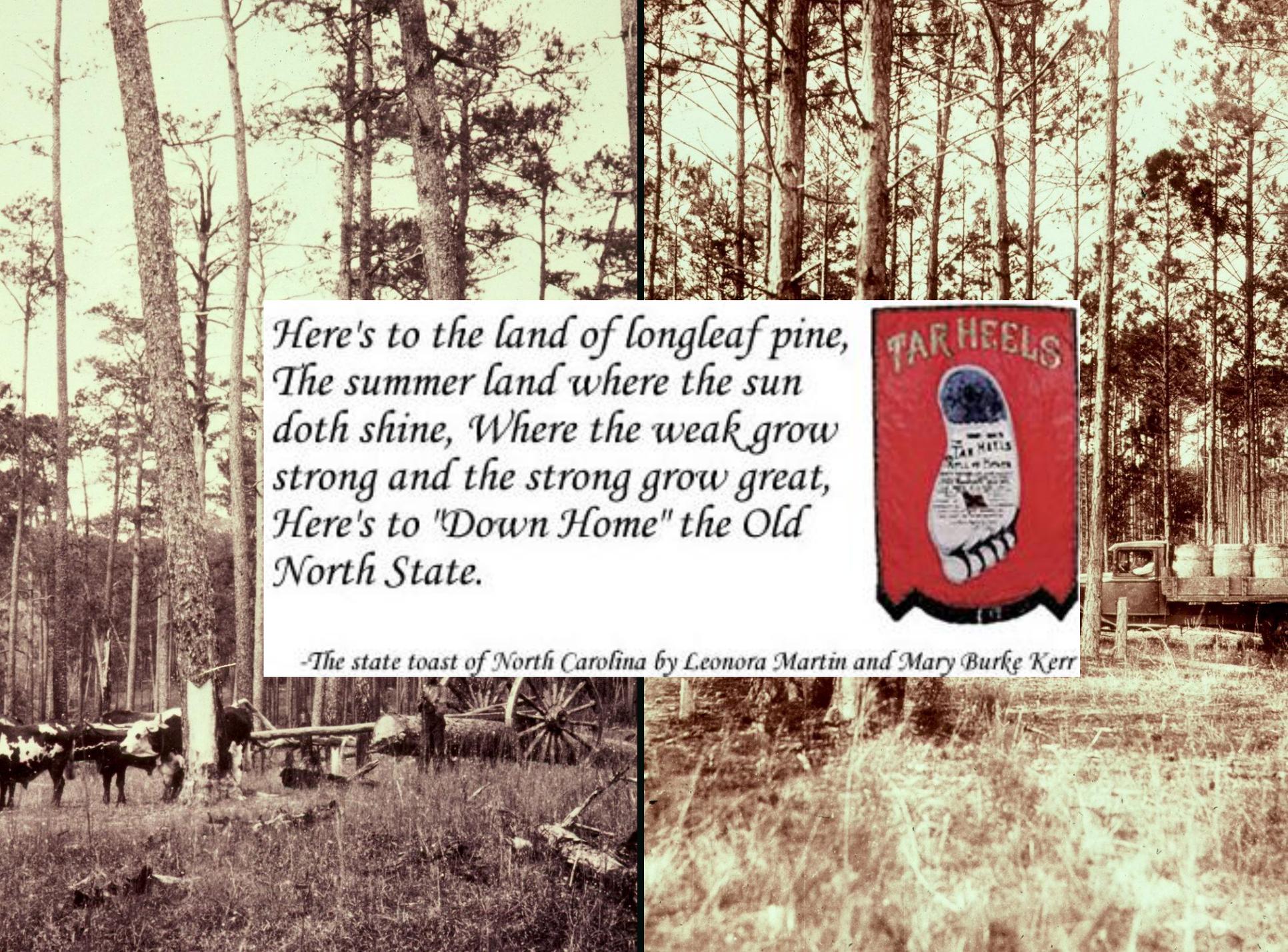
Depth of Planting

Plant slash, loblolly, shortleaf, and sand pine seedlings 2 to 3 inches deeper than they grew in the nursery.

*Here's to the land of longleaf pine,
The summer land where the sun
doth shine, Where the weak grow
strong and the strong grow great,
Here's to "Down Home" the Old
North State.*



-The state toast of North Carolina by Leonora Martin and Mary Burke Kerr



Loblolly or Longleaf ??



- Select the species to match your:
 - Objective
 - Management commitment
 - Desired Future Conditions
 - Site



QUESTIONS?

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