

FRA Steps 4&5

Tree Species, Planting Techniques and Future Economic Benefits

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Step 4 – Plant Two Types of Trees

- Early Succession Species for Wildlife and Soil Stability
- Commercially Valuable Crop Trees



Early Succession Trees and Shrubs

- Soil Stability
- Nurse plants for higher quality trees
- Wildlife food and cover

Black locust

Common apple

Wild plum

Redbud

Hawthorn

Sumac

Dogwood

Black Alder











Commercially Valuable Crop Trees

- Plant a variety of tree species
- Plant the right species in the right site
- Pay attention to aspect and position on slope



Commercially valuable Crop Trees

- Plant a variety of tree species
- Plant the right species in the right site
- Pay attention to aspect and position on slope

Yellow poplar

White oaks

Sugar maple

Hickories

Pines

Black cherry

Sycamore

Red oaks



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Using FRA – Native Seeds Invade Adding to Species Diversity

- Red maple
- Birch
- Sycamore
- Yellow poplar









Step 5 – Use Proper Planting Techniques

- Plant best stock available
- Maintain in cold storage until planting
- Minimal root exposure to air
- Avoid root pruning
- Keep seedlings moist







10-26 10-27 10-28 10-29

DATE	PLANT	HEIGHT	DIA
10-26			
10-27			
10-28			
10-29			



Planting techniques

- Planting hole – deep as possible
- Plant entire root system
- Completely close hole – tamp in







Use Reputable, Professional Tree Planting Crew

- Check the planting plan in the mine permit for species and number of seedlings/ac.
- Discuss planting with contractor ahead of time
- Frequent inspections to planting area









FRA - Future Economic Benefits

- Faster growth of trees
- Higher volume yields per acre
- Higher market values for hardwood timber
- Better returns - \$\$\$ - to the timber owner



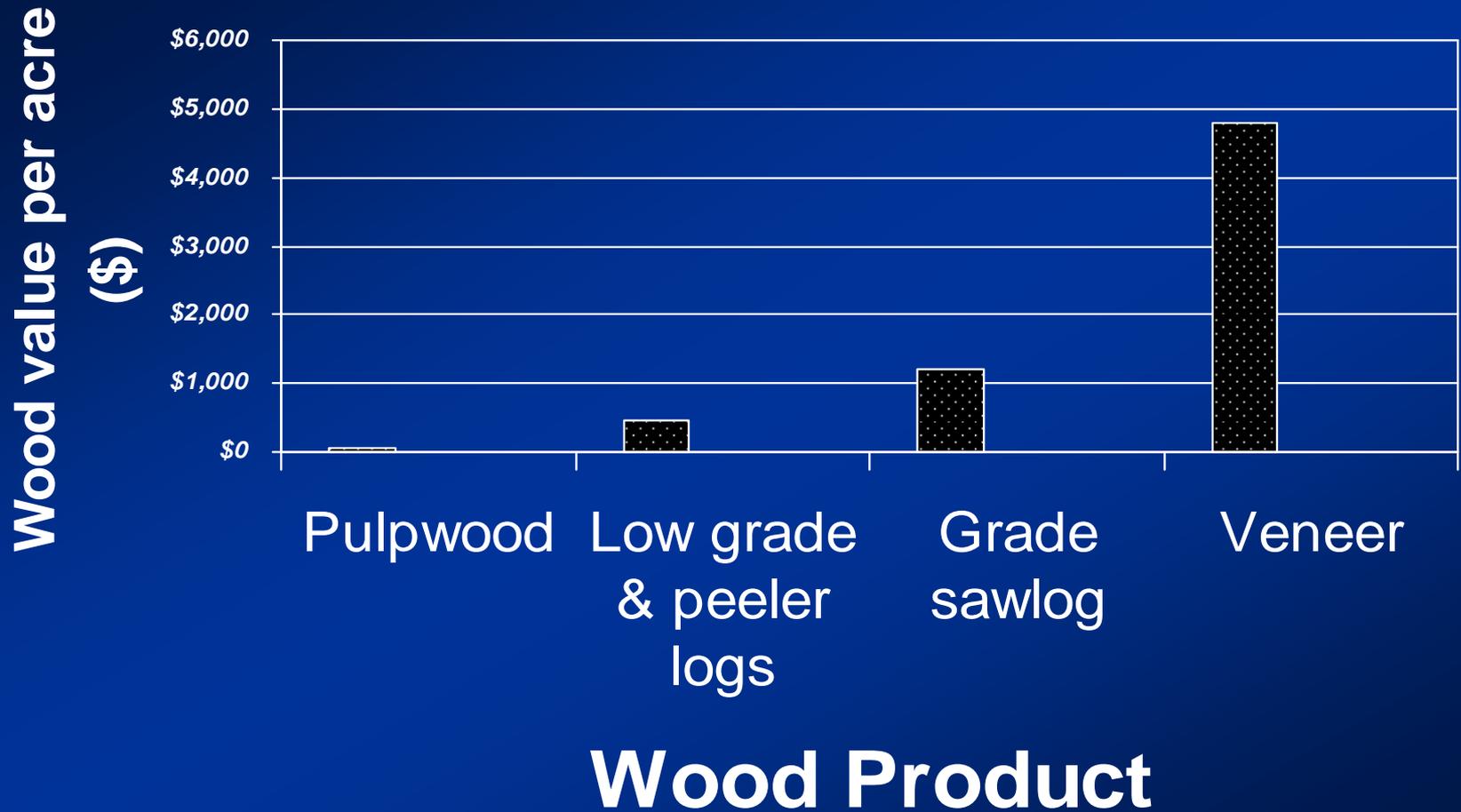




1 ft 30ft 2 STANLEY 3 Life Guard 4 5 6 7
1 in



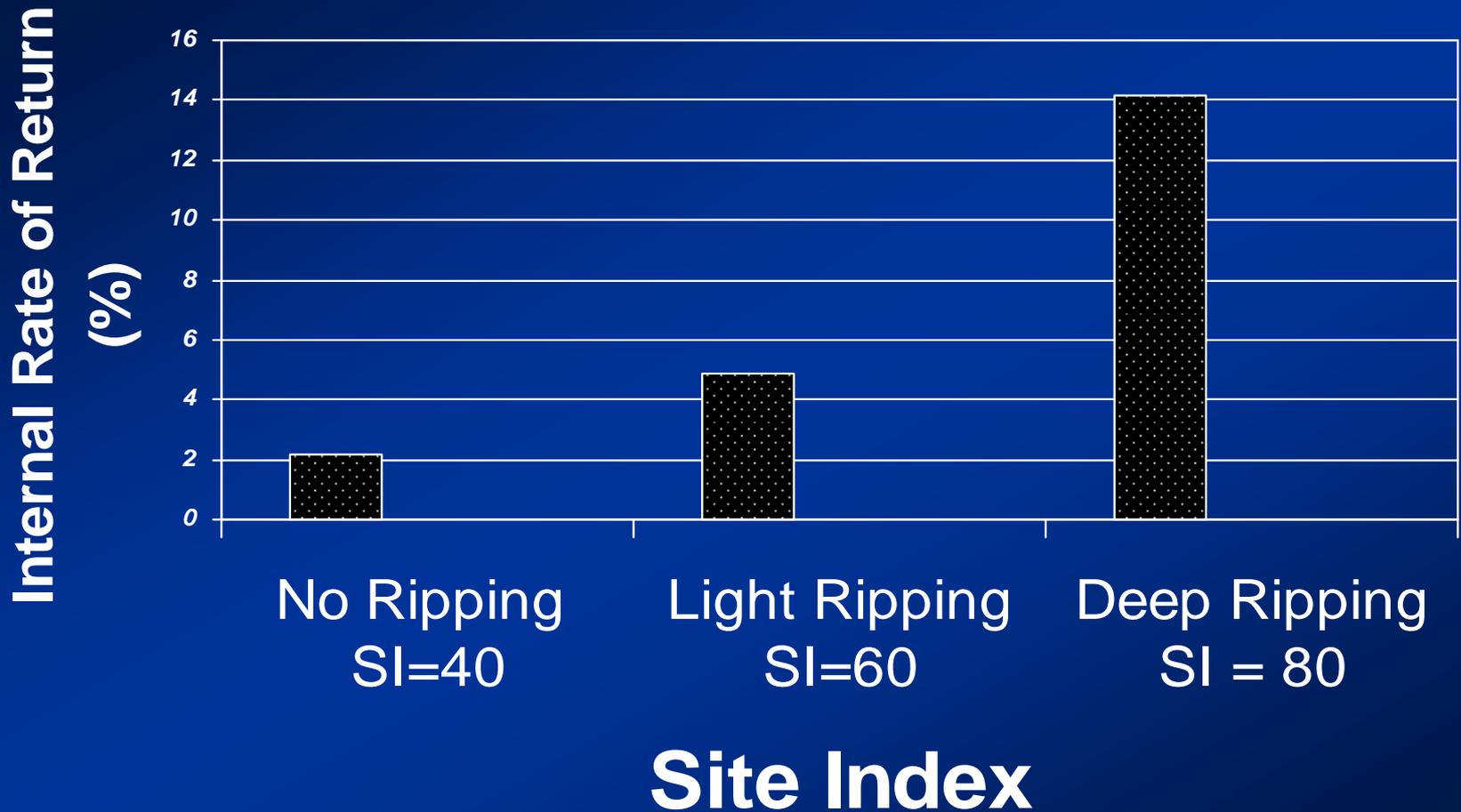
Effect of FRA to Value of Timber







Impact of Remediation on Internal Rate of Return ???







Questions????

