REFORESTATION TECHNIQUES

- Seedling Planting
  - VS
- Direct Seeding
REFORESTATION TECHNIQUES

- Seedling Planting

VS

- Direct Seeding
PLANNING

- Management Plan – Road Map to a Successful Planting Project
  - Addresses your objectives
  - Describes site (soils, drainage, aspect etc.)
  - Provides site preparation instructions (mowing, spraying, seeding, disking, etc)
  - Provides information on what and how to plant (species, spacing, location, etc.)
  - Provides maintenance information (mowing, spraying)
Seedling Planting
Seedling Site Preparation
Seeding

- 10 pounds perennial rye per acre
- 3-4 pounds timothy and ½ bushel oats per acre
- Want only enough cover to prevent soil erosion. Seeding too heavy creates unwanted competition
Layout
Site Prep Spraying

- **Crop ground**
  - Princep & Pendulum at 3-4 quarts per treated acre

- **Pasture/Brome**
  - Add 2 quarts Roundup per treated acre
  - Mow grass prior to spraying and allow at least a week to regrow
Tree Planting Stock

- Seedlings
- Transplants
- Potted
- Container Grown
Seedling Care
Tree Planting

- All tree planters are not created equal
Spacing

- Between row spacing will vary depending on equipment
- Plant 550 to 800 seedlings per acre
  - Nine or ten feet between rows and six to ten feet between plants within the row.
Maintenance

- Most common mistake landowners make in tree planting is failure to maintain the planting.
- Weed control is critical for the first 3 to 5 years of the planting.
Spray maintenance will depend upon the type of weed control problem you have.

Common maintenance herbicides are Oust, Princep, and Pendulum.

Your goal is weed suppression not total eradication.
Advantages of Seedlings

- Wider diversity of species
- Seedlings are generally always available from somewhere
- If a species does poorly it can be replanted or replaced
- Less Site Disturbance (Flood plain/Steep slope)
Disadvantages of Seedlings

- Predation form deer, rabbits and rodents.
- Lumber quality may not be as good as with high density direct seeding.
- Does not canopy as quickly as a direct seeding.
- Maintenance costs may be higher (mowing, spraying, pruning).
Direct Seeding
Site Prep For Direct Seeding

- Expose mineral soil
- If in grass: mow, spray, plow, disk
  - Roundup grass
  - 2, 4-D legumes
- If in crop stubble:
  - Corn - chop stalks & disk once or twice.
  - Beans - seed right over stubble
How Much Seed

- Oak – 0 to 3 bushel/acre
- Black Walnut – 5 to 10 bushel/acre
- Ash – ½ to 1 bushel/acre
- Black Cherry – ¼ to ½ pound/acre
Where Do You Get Seed?

- Seed Dealers
- Forestry Consultants
- Collect it yourself – Seed Drop Late August to Late November
Seed Handling

- Collect as soon as possible after seed drop
- Store acorns in breathable bags (onion bags, burlap sacks, or woven poly seed sacks)
- Immerse acorns in water for 12-14 hours immediately after harvest, drain bags, store in cool dark place
- Ash – Air dry and store in cool dry place
Weed Control

- Year One (Fall or early Spring)
  - Pendulum 2 quarts per acre
  - Goal 2-quarts per acre (Fall only)

Other Options

- Mid-June
  - Transline/Fusilade ½ - ¾ pint/acre for broadleaves and ¾ pint/acre for grasses (can be applied over germinating seedlings)
    - Weeds should be less than 12” tall
- **Year Two – Fall or early Spring**
  - 3 quarts Princep + 3 quarts Pendulum per acre

- **Year Three – Fall or early Spring**
  - ½ Ounce Oust per acre
  - 3 quarts Princep + 3 quarts Pendulum per acre
Lack of Weed Control = Lack of Success
Advantages of Direct Seeding

- Quicker canopy closure
- Higher quality lumber
- More natural appearance
- Better use of natural selection
Disadvantage of Direct Seeding

- Inconsistent seed availability
- Exposure of mineral soil on steep slopes
- May not be suitable for flood plain
- Lack of species diversity
Give Your Oaks a Name
What Have We Learned?

1. Know your site!
   - soils
   - critters

2. Plan on using shelters.
   - Cages
   - Tubes
- Reforestation advice and planning is available through your IDNR District Forester or through private forestry consultants.