Timber Management 101

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Why care about woodlands?
Forage, shade, income, retirement, legacy

• Some timber species at all time high $
  – **Active** timber theft at all time high!
    • Neighbor sells timber and the buyer “mistakenly” cuts trees across the fence

• Night logging is popular!
Passive Theft - Undervalued timber sales!

• **90%** of all sales never pass across a forester’s desk!

• **Timber** buyers know what you have before they knock on the door

• **Logging** the neighbors property and they “can offer more because their equipment is close by”

• **Rush sale** - “price is going to fall” timber sales are a multi-year event don’t feel rushed (standard contract is 2 years)
Existing timber or
Start from bare field conditions?

1. Dealing with invasive species
2. Timber stand improvement (TSI)
3. Timber regeneration period (10-15 years prior to harvest)
   - Prescribed Fire (increase oak seedling density – 3 burns in 10 years)
4. Timber Sale

*Steps vary by site
Starting with a Bare Field

- Cover crop and then plant seedlings or seed into it.
- Direct seed the entire area with desired tree seed
Direct Seeding
Site Prep For Direct Seeding

• Expose mineral soil
• If in grass: mow, spray, plow, disk
• 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)

– 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
Starting with a Grass Field: 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
1. Dealing with invasive species

(for more info Click Here)

- Multiflora rose, honeysuckle, autumn olive, etc.
- Challenges to Invasive Species Management
  - Rapid spread
  - High densities
  - Cost of management (Wildlife EQIP $)
  - Multiple invaders at one site
  - Reinvasion from neighboring lands
  - Seed bank longevity
Remember to calibrate your sprayers often. Follow the label rates and application methods suggested. Use a combination of mechanical, chemical, and burning. Remember overspray and be good neighbors! 

Follow-up treatments might be needed. 

Seed Bank Longevity 

- Oriental bittersweet 
- Tree of heaven 
- Teasel 
- Japanese hops 
- Autumn olive 
- Bush honeysuckle 
- Garlic mustard 
- Japanese stiltgrass 
- Musk thistle 
- Multiflora rose 
- Sericea lespedeza 

Years 

Chris Evans
1. Dealing with invasive species

(for more info Click Here)

• Mechanical
• Foliar Sprays
• Cut Stump
• Girdle and Treat
Multiflora rose – *Rosa multiflora*

Foliar – 2-4% glyphosate or 1-2% triclopyr (3’s) in water. triclopyr + 2,4,D (Crossbow) is highly effective just after flower drop

Cut stem – 25-50% glyphosate or 20-25% triclopyr (4’s) in oil

Basal bark – 20% triclopyr (4’s) in oil.
Thin Line Spray (undiluted triclopyr + 2,4,D) on canes <1/2 inch in caliper
Spot Concentration – Banvel or Krenite directly on root crown
2. Timber Stand Improvement

CTR = Crop Tree Release  (for more info Click Here)

• Improves the growth rate and form of desired species
• Controls species composition
  • Honey locust, black locust, hedge, buckeye
10-year Diameter Growth in Inches for 20 Best Crop Trees/Acre in 54 Year-Old Stand
3. Timber regeneration period

(for more info Click Here)

• 10-15 years prior to harvest
  – Control unwanted species, increase sun light
  – Prescribed Fire (increase oak seedling density – 3 burns in 10 years)
    (for more info on Basic Prescribed Fire – Click Here)
    (for more info on Beyond the Basics of Prescribed Fire – Click Here)
  – Exclude cattle, reduce numbers, delay grazing
  – Plant seedlings
4. Timber Sales

• Initiate the process
  – Call a Professional Forester
    • They know the markets
    • They know good loggers
    • They know the process

They can make sure the process works towards your Goals and Objectives!
How do I pick a forester

– IDNR District Forester (Free Service)
  • Write a management plan
  • Mark and tally trees
  • Assist with bid notice
  • You do the rest

– Consulting Forester (Commission on Sale)
  • Write a management plan
  • Mark and tally trees
  • Prepare, Send and Receive bids
  • Prepare and administer contract
  • Coordinate pre and post logging walk through
  • Be on site multiple times / week
  • Halt logging if conditions are not right
  • Expert witness if troubles arise
Mark and scale standing timber

• Define the area and take the worst first

Skinned by fallen branch

Dead/dying
Frost crack

Poor quality
Wind damage

Multiple-stemmed
Bid Notice

- Date & Time of opening
- Where trees are and 3 week window to look at trees
- How trees are marked
- Provide a map of the area
- Tally by species

NOTICE OF TIMBER FOR SALE

Sealed bids will be received by Geode Forestry, Inc., which will be opened on **Wednesday, February 21, 2007 at 1:00 pm** at the Geode Forestry Office. This notice refers to the following marked timber:

**Owner:** John Doe  
1500 Forest Rd.  
High Ridge, IA 50000

**Location:** Part of Sec. 13, T71 N / R5W & Part of Sec. 14, T71N / R5W  
Lee Co., Iowa

**Phone:** [Redacted]  
(See enclosed plat map)

**Table 1: Trees Marked for Sale**

<table>
<thead>
<tr>
<th>Species</th>
<th># of Trees</th>
<th>Bd. Ft. Average</th>
<th>Bd. Ft. Volume Doyle Scale</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black Walnut</td>
<td>42</td>
<td>180</td>
<td>7560</td>
</tr>
<tr>
<td>White Oak</td>
<td>179</td>
<td>150</td>
<td>26,880</td>
</tr>
<tr>
<td>Black Oak</td>
<td>125</td>
<td>120</td>
<td>15,020</td>
</tr>
<tr>
<td>Red Oak</td>
<td>82</td>
<td>160</td>
<td>13,140</td>
</tr>
<tr>
<td>Hickory</td>
<td>65</td>
<td>108</td>
<td>7,000</td>
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<tr>
<td>Black Cherry</td>
<td>35</td>
<td>91</td>
<td>3,160</td>
</tr>
<tr>
<td>Cottonwood</td>
<td>8</td>
<td>238</td>
<td>1,900</td>
</tr>
<tr>
<td>Bur Oak</td>
<td>12</td>
<td>138</td>
<td>1,660</td>
</tr>
<tr>
<td>Ash</td>
<td>15</td>
<td>109</td>
<td>1,640</td>
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<tr>
<td>Shingle Oak</td>
<td>11</td>
<td>116</td>
<td>1,280</td>
</tr>
<tr>
<td>Swamp White Oak</td>
<td>5</td>
<td>140</td>
<td>700</td>
</tr>
<tr>
<td>Silver Maple</td>
<td>2</td>
<td>170</td>
<td>340</td>
</tr>
<tr>
<td>White Elm</td>
<td>3</td>
<td>100</td>
<td>300</td>
</tr>
<tr>
<td>Red Elm</td>
<td>1</td>
<td>160</td>
<td>160</td>
</tr>
<tr>
<td>Honey Locust</td>
<td>1</td>
<td>80</td>
<td>80</td>
</tr>
<tr>
<td>Cull</td>
<td>6</td>
<td>0</td>
<td>0</td>
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<tr>
<td><strong>Total</strong></td>
<td><strong>552</strong></td>
<td></td>
<td><strong>80,840</strong></td>
</tr>
</tbody>
</table>
# Results of a Seven Sales!

<table>
<thead>
<tr>
<th>TIMBER BUYERS</th>
<th>Seller 1</th>
<th>Seller 2</th>
<th>Seller 3</th>
<th>Seller 4</th>
<th>Seller 5</th>
<th>Seller 6</th>
<th>Seller 7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Timber Buyer 1</td>
<td>$22,356.00</td>
<td>$18,236.00</td>
<td>$8,100.00</td>
<td>$12,604.00</td>
<td>$22,354.00</td>
<td>$11,823.00</td>
<td>$14,200.00</td>
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<tr>
<td>Timber Buyer 2</td>
<td>$25,128.12</td>
<td>$13,210.12</td>
<td>$9,164.00</td>
<td>$17,020.50</td>
<td>$24,210.00</td>
<td>$9,800.00</td>
<td>$15,184.00</td>
</tr>
<tr>
<td>Timber Buyer 3</td>
<td>$34,171.00</td>
<td></td>
<td></td>
<td></td>
<td>$15,361.00</td>
<td></td>
<td>$15,515.00</td>
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<tr>
<td>Timber Buyer 4</td>
<td></td>
<td></td>
<td>$9,110.00</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>Timber Buyer 5</td>
<td>$32,410.00</td>
<td>$16,928.00</td>
<td>$10,100.00</td>
<td>$17,200.00</td>
<td>$25,410.00</td>
<td>$16,300.00</td>
<td>$17,850.00</td>
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<tr>
<td>Timber Buyer 6</td>
<td></td>
<td>$15,665.00</td>
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<td></td>
</tr>
<tr>
<td>Timber Buyer 7</td>
<td>$20,182.00</td>
<td>$10,001.00</td>
<td>$14,926.00</td>
<td>$29,654.00</td>
<td></td>
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<td></td>
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<tr>
<td>Timber Buyer 8</td>
<td>$32,010.00</td>
<td>$10,001.00</td>
<td>$14,926.00</td>
<td>$29,654.00</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Timber Buyer 9</td>
<td>$25,187.00</td>
<td>$6,540.00</td>
<td>$11,510.00</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Timber Buyer 10</td>
<td>$26,810.00</td>
<td>$10,176.00</td>
<td>$14,525.00</td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>Timber Buyer 11</td>
<td></td>
<td>$8,139.00</td>
<td>$11,044.00</td>
<td>$11,900.00</td>
<td>$13,825.00</td>
<td></td>
<td></td>
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<tr>
<td>Timber Buyer 12</td>
<td>$18,200.00</td>
<td>$15,880.00</td>
<td>$17,140.00</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>Timber Buyer 13</td>
<td>$24,000.00</td>
<td>$11,500.00</td>
<td>$6,000.00</td>
<td>$7,680.00</td>
<td>$27,000.00</td>
<td>$7,360.00</td>
<td>$8,700.00</td>
</tr>
</tbody>
</table>

Percent increase of winning bid over lowest bid:

| 52% | 58% | 68% | 123% | 32% | 121% | 105% |
Current stumpage prices / board foot.

<table>
<thead>
<tr>
<th>Species</th>
<th>$/Bd. Ft.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black Walnut</td>
<td>$1.50 - $1.75</td>
</tr>
<tr>
<td>White Oak</td>
<td>$0.50 - $0.65</td>
</tr>
<tr>
<td>Red Oak</td>
<td>$0.32 - $0.35</td>
</tr>
<tr>
<td>Black Oak</td>
<td>$0.12 - $0.16</td>
</tr>
<tr>
<td>Black Cherry</td>
<td>$0.20 - $0.25</td>
</tr>
<tr>
<td>Sugar (hard) Maple</td>
<td>$0.25 - $0.30</td>
</tr>
<tr>
<td>Silver (soft) Maple</td>
<td>$0.30 - $0.35</td>
</tr>
<tr>
<td>Hickory</td>
<td>$0.22 - $0.27</td>
</tr>
</tbody>
</table>

- Moderate to Heavy grazing reduces the price by 35%
- Light grazing by 10%
4. Timber Sale Take Home

– Ask a Forester
– Sealed Bid Process
  • Comparing Apples to Apples,
  • Competition is a wonderful thing!
– Protect yourself with a timber sale contract
– Know what to expect before, during, and after the sale
– What do I do with the aftermath of a logging job!
  • Normally only usable portions (logs) are taken – tops are left
Most Iowans:

• Are not always sure of their tree ID skills
• Can’t identify a grade log vs veneer
• Have no idea how valuable their woodlands are
  – In today's dollars and passing undetected to the next generation!
• Have multiple uses for their woodlands (grazing, hunting, wildcrafting, recreation, retirement) – proper management is proper management!
• Are trusting when a timber buyer knocks at the door
If you are thinking of selling timber or if you are approached to sell ask a forester first!

If you are thinking of planting a new forest ask a forester first!

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