Agroforestry Workshop
Pilot Silvopasture Establishment with Multi-Species Grazing

March 19, 2018
Jacob James Marty

GREEN FIRE FARM
A SIXTH reGENERATION

Monticello, WI
www.greenfirefarmllc.com
What I’m Doing

► Mimicking natural communities
  ► Grasslands
    ► Savannas

► Results
  ► Healthy Soil
  ► Nutrient and Energy Cycling
  ► Water cycle and utilization
  ► Habitat
  ► Diversity
  ► Communities
    ► Vibrant and Beautiful
    ► Resilient and Robust
    ► Happy and Fulfilling
NRCS Cost-Share

- Environmental Quality Incentives Program (EQIP)
  - Honey Bee and Pollinator Initiative
    - Fences
    - Seeding
    - Water Line
    - Water Tanks
    - 3 Years Prescribed Grazing
  - Erosion concerns
NRCS Cost-Share

- Conservation Stewardship Program (CSP)
  - 2 Contracts
    - Host a Field Day
    - Calving Season
    - N-fixing cover
    - Water tank ramps
    - Pollinator Planting
Silvopasture Lessons
Establishment

- 8 acres, 1000 trees in April
  - Pasture seeded and grazed 3x previous year
- Pseudo Keyline
- 45’ row spacing
  - Furrow (tree planter) > shovel and hand plant
- 10’ tree spacing within row
- Modified NAP Pattern
  - Permaculture Orchard DVD
    - Nitrogen-rich Tree > Apple > Pear
  - Savanna Modified
    - Chestnut/Pecan/Oak/Basswood (Canopy) > Apple/Pear > Redbud > Apple/Pear > Canopy Tree
- Tree Tubes
  - Miracle Pro, Blue-X, Arborshield
- Root Dip
  - Arbuscular Mycorrhizae (Endo) *better than ectomycorrhizae
Tree Upkeep

- No Irrigation
- No Regular Mowing or Weed Management
  - Long forage matured and created a mat eventually
    - Got away with it
  - Mow fencelines for electric netting
- Low Labor Availability
- Constant Standing Up
- Fill in Pig Wallows
- Seed Muddied Areas
Lessons Learned

• **Wider Alleys**
  • 45’ -> 60’ (20% less trees) up to 200’
    • Depends on livestock and group size
      • Cattle (5 ac/day)
      • Pigs and shee (1 acre/wk)
  • Mowing area

• **Linear or curved?**
  • Shelters
    • Layers

• **Sporadic Plantings?**
  • With Arborshield
    • Mandatory for Cattle/Pigs

• **Tree Tubes**

• **Stakes/Post**
<table>
<thead>
<tr>
<th></th>
<th>Miracle Pro</th>
<th>Blue-X</th>
<th>Arborshield</th>
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<tbody>
<tr>
<td>Costs</td>
<td>$3-4</td>
<td>$4</td>
<td>$0-5</td>
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<tr>
<td>Sturdy?</td>
<td>Mostly</td>
<td>No</td>
<td>Yes!</td>
</tr>
<tr>
<td>Install Time</td>
<td>Quick!</td>
<td>Slow</td>
<td>Very slow</td>
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<tr>
<td>Reusable?</td>
<td>Maybe?</td>
<td>No</td>
<td>Yes!</td>
</tr>
<tr>
<td>Concerns</td>
<td>Flimsy, Rough top</td>
<td>Injury to livestock</td>
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**MIRACLE TUBE TREE SHELTERS**

Miracle Tube tree tubes were introduced in 1999 to compete with the tube-type tree shelter. However, Tree Pro designers took great pains to make sure the problems associated with tree tubes were avoided.

**WHAT ARE TREE GROW TUBES?**

**PRICING FOR GROW TUBES**

<table>
<thead>
<tr>
<th>Size</th>
<th>1 x Units</th>
<th>50 x Units</th>
<th>250+ Unit</th>
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<tbody>
<tr>
<td>12&quot;</td>
<td>$1.20</td>
<td>$0.99</td>
<td>$0.86</td>
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<tr>
<td>18&quot;</td>
<td>$1.60</td>
<td>$1.40</td>
<td>$1.25</td>
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<tr>
<td>24&quot;</td>
<td>$1.99</td>
<td>$1.80</td>
<td>$1.65</td>
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<tr>
<td>30&quot;</td>
<td>$2.74</td>
<td>$2.60</td>
<td>$2.45</td>
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<tr>
<td>36&quot;</td>
<td>$2.99</td>
<td>$2.80</td>
<td>$2.65</td>
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<tr>
<td>48&quot;</td>
<td>$3.90</td>
<td>$3.75</td>
<td>$3.50</td>
</tr>
<tr>
<td>60&quot;</td>
<td>$4.60</td>
<td>$4.40</td>
<td>$4.25</td>
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<tr>
<td>72&quot;</td>
<td>$5.50</td>
<td>$5.00</td>
<td>$4.75</td>
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**WEED PRO WEED MATS**

SOIL DECOMPOSITION

INSTALLATION GUIDE

FREE SHIPPING ISN'T FREE
**FiberRod 2/3" - SunGuard - 6'**

Sunguard Fiberglass Posts have a protective coating to prevent yellowing and splintering. They are lightweight yet durable and flex upon impact. Eliminate replacing damaged insulators and tracking down shorts at the fence post.

- Self-insulating
- Flexes upon impact
- Will not rot or rust
- Ideal for rotational grazing

**Specifications**

- Item #: F23-65G
- Weight: 1.76 lbs
- Catalog page: 52

**Price**

$5.28 EACH

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<thead>
<tr>
<th>Wood</th>
<th>Fiber Glass</th>
<th>Rebar</th>
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<tr>
<td>Costs</td>
<td>$1.25-$2</td>
<td>$5</td>
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<tr>
<td>Sturdy?</td>
<td>No</td>
<td>Yes</td>
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<tr>
<td>Reusable?</td>
<td>Probably No</td>
<td>Yes</td>
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<td>Concerns</td>
<td>Landfill</td>
<td>Heavy</td>
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