Bramble Trellising Options and Economics

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Bramble Trellis Systems

1. V-Trellis with Metal Posts
2. T-Trellis with Wood Posts
3. T-Bar Trellis (Prefabricated Rebar)
4. Shift Trellis
Bramble Trellis Systems

1. V-Trellis with Metal Posts
   - 400 - 6’ Heavy Duty Metal Posts

2. T-Trellis with Wood Posts
   - 200 – 8’ Wooden Posts
   - 200 – 3’ Crossarms
   - 200 – 2’ Crossarms

3. T-Bar Trellis
   - 250 – 5’ Prefabricated Rebar Posts
Materials: V-Trellis & T-Trellis with Wood Posts

❖ Wire:
  ➢ #9 Ga, Galvanized wire
  ➢ Need 16,000 feet/A

❖ Wire:
  ➢ In-line strainers
  ➢ Need 160 feet/A

❖ Hurricane Anchors
  ➢ Need 40 per Acre
Materials: T-Bar Trellis

- Twine:
  - 130 Lbs. Tensile Strength
  - Need 9,000 feet/A

- Hurricane Anchors
  - Need 40 per Acre
Materials: Shift Trellis

- 40 Tie-back post; wooden, round, 6" x 8’
- 140 Vertical post; wooden, round, 4" x 8’
- 140 Crossarms; wooden, round, 3" x 7.5’
- 140 Bolt, 1/2" x 9" (or 10") shaft, 3" thread length
- 40 Eyebolt, 1/2" x 7" shaft, 3" thread length
- 40 Eyebolt, 1/2" x 4" shaft, 3" thread length
- 220 Nut, 1/2" diameter
- 1,080 Flat-washer, 1/2" diameter
- 280 Lag bolt, 3 1/2" x 1/2", 2 1/2" thread length
- 280 Screw eye, size 0
- 840’ Aircraft cable, 1/8"diameter, 7x19 style
- 420 Nicopress crimping sleeve (or cable clamps)
- 600 Fence-wire crimping sleeve
- 80 In-line wire strainer
- 18,000’ Wire, 12.5 ga. hi-tensile, galvanized
- 140 Brace pin 9" x 3/8", zinc-coated
## Labor Costs

<table>
<thead>
<tr>
<th>Labor Cost</th>
<th>Amount per Hour</th>
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<tbody>
<tr>
<td>Wage Rate</td>
<td>$7.00</td>
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<tr>
<td>Employer share of SSN (5.65%)</td>
<td>$0.40</td>
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<tr>
<td>Unemployment Insurance, Fed. &amp; State (2.0%)</td>
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<td>Workman’s Comp, ($3.79/$100)</td>
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<td>Other Benefits</td>
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<tr>
<td><strong>Total Cost per Hour</strong></td>
<td><strong>$7.77</strong></td>
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Equipment Costs

- Tractor; 60hp
  - $24,300
  - $11.78/hour

- Pickup Truck; ½ Ton
  - $25,000
  - $0.39/mile

- Portable Generator; 3,250 watt
  - $720
  - $2.61/hour

- Post Driver & 3 Point Mounting Bracket
  - $1,850
  - $0.86/hour
Driving Trellis Posts

- **V-Trellis with Metal Posts**
  - 2 People
  - 2 min/post
  - 26.7 man-hours for 400 posts/acre

- **T-Bar Trellis**
  - 2 People
  - 1 min/post
  - 8.3 man-hours for 250 posts/acre
Driving Posts: T-Trellis with Wood Posts

- 60hp Tractor and Posthole Driver
  - 5 min/post
  - $\approx 16 \frac{2}{3}$ hours for 200 posts/acre

- Labor Crew
  - 3 People
  - 5 min/post
  - 50 man-hours for 200 posts/acre
Constructing Crossarms: V Trellis with Wood Posts

❖ Portable Generator w/Pick-up Truck
  ✔ 2 Crossarms/post
  ✔ 5 min/post
  ✔ ≈ 16 2/3 Hours for 200 posts/acre

❖ Labor Crew
  ✔ 2 People
  ✔ 5 min/post
  ✔ 33 1/3 man-hours for 200 posts/acre
Driving Posts: Shift Trellis

- 60 hp Tractor and Posthole Driver
  - 5 min/post
  - = 15 hours for 180 posts/acre

- Labor Crew
  - 3 People
  - 5 min/post
  - 45 man-hours for 180 posts/acre
Constructing Shift Trellis

- Labor Crew
  - 3 People
  - 100 man-hours
- Portable Generator w/Pick-up Truck
  - 9 hours
Stretching Trellis Wire

- V-Trellis with Medal Posts & T-Trellis with Wood Posts
  - 16,000 feet of wire/acre
  - 2 people
  - 12.5 man-hours

- Shift Trellis
  - 18,000 feet of wire/acre
  - 2 people
  - 14.0 man-hours
Stretching Trellis Twine

- T-Bar Trellis (9,000 ft/A)
  - 9,000 feet of twine/acre
  - 2 People
  - 10.0 man-hours
# Estimated Construction Costs by Trellis System

<table>
<thead>
<tr>
<th>Trellis System</th>
<th>Equipment Costs</th>
<th>Material Costs</th>
<th>Labor Costs</th>
<th>Total Costs</th>
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<tbody>
<tr>
<td>T-Bar Trellis</td>
<td>$3.86</td>
<td>$1,689</td>
<td>$190</td>
<td>$1,885</td>
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<tr>
<td>V-Trellis (Metal Posts)</td>
<td>$3.86</td>
<td>$3,503</td>
<td>$351</td>
<td>$3,860</td>
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<tr>
<td>T-Trellis (Wood Posts)</td>
<td>$258</td>
<td>$3,416</td>
<td>$947</td>
<td>$4,623</td>
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<td>Shift Trellis</td>
<td>$223</td>
<td>$4,220</td>
<td>$1,181</td>
<td>$5,740</td>
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</table>
Annual Maintenance Costs

V-Trellis, T-Trellis & T-Bar Trellis

- Repair Costs
  - 10 Hours/A
  - Costs: $77.70

Shift Trellis

- Position trellis 20° from horizontal
  - 40 Hours/A
  - $310.86
- Repair Costs
  - 20 Hours/A
  - $155.44
- Total Cost
  - 466.30
Estimated Costs of Four Bramble Trellis Systems
(EXCEL Budgeting Program)

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