

Bramble Trellising Options and Economics

North American Raspberry & Blackberry
Conference

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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

Labor Cost	Amount per Hour
Wage Rate	\$7.00
Employer share of SSN (5.65%)	\$0.40
Unemployment Insurance, Fed. & State (2.0%)	\$0.11
Workman' s Comp, (\$3.79/\$100)	\$0.26
Other Benefits	<u>\$0.00</u>
Total Cost per Hour	\$7.77

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

- ✓ $\approx 16 \frac{2}{3}$ Hours for 200 posts/acre

❖ Labor Crew

- ✓ 2 People

- ✓ 5 min/post

- ✓ $33 \frac{1}{3}$ 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

Trellis System	Equipment Costs	Material Costs	Labor Costs	Total Costs
T-Bar Trellis	\$3.86	\$1,689	\$190	\$1,885
V-Trellis (Metal Posts)	\$3.86	\$3,503	\$351	\$3,860
T-Trellis (Wood Posts)	\$258	\$3,416	\$947	\$4,623
Shift Trellis	\$223	\$4,220	\$1,181	\$5,740

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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