

Hops Trellis Construction

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Constructing a durable trellis is essential to hops production. This fact sheet will outline the basics of post selection and preparation, bracing, and construction of the trellis.

Equipment Needed:

- Chainsaw
- 12" auger
- Cordless drill
- 1/2" drill bit
- Ratchet or impact driver
- Cutting torch
- Come-along with havens grip
- Gripple tool
- Shovel
- Spud bar or other tool for tamping
- Loader tractor with safety cage (20' reach preferred)

Supplies Needed:

- 20' to 22' posts, 5" to 6" in diameter
- 4' screw-in anchors
- 1/2" X 9" turnbuckles
- 1/4" aircraft cable
- 1/4" cable clamps
- High-tensile wire
- Gripples
- Fence staples

Trellis Post Selection

When selecting posts for the hops yard, one needs to take into consideration the equipment you have to work the yard after installation. With a high trellis system, the posts are 5" to 6" in diameter and 20' to 22' long.



Hops yard at Ohio State University South Centers, Piketon, Ohio

Post Setting

Determine row width by the size of the equipment you will be using in the hop yard. The spacing of the line-posts should be 30-50' between posts, depending on the thickness/strength of the cable used for trellis wire.

Auger 12" holes for posts a minimum of 3' to 3' 6". Set post plumb in the hole and tamp.



Notching and Drilling Holes in Posts

Using a chainsaw, make a notch about 1/2" deep in all end posts, approximately 6" from the top of each post to prevent the brace wire from sliding on the post.



Notching and Drilling Holes, continued

Using a 1/2" drill bit, drill holes through the row-end posts (excluding the corner posts), above the notch about 4" from the end of the post, perpendicular to the rows.

In the center line-posts, about 6" from the end of the post, drill 1/2" holes parallel with the row. At about 4" from the end of the post, drill 1/2" holes perpendicular to the row.

Cutting Cable

Cutting of the aircraft cable is performed with a torch. By cutting the cable with a torch you melt the end of the cable together preventing it from fraying.



Bracing

Each perimeter post will have a brace wire attached in-line with the trellis wire. Additionally, the corner posts are also braced 90° from the trellis wire.

10' from each perimeter post, secure a 4' screw-in ground anchor with a turnbuckle attached. All four corner posts will be double-braced.



Bracing, continued

Bracing of the hops yard trellis is completed by stretching 1/4" aircraft cable from the notch cut into the top of the trellis post. Stretch the cable from the post through the turnbuckle, mark and cut the cable, leaving enough length to clamp with a cable clamp. Next, attach the cable to the turnbuckle. Both ends of the cable are secured using 1/4" cable clamps.



Trellis

1/4" aircraft cable is stretched between posts the length of the field. Start by looping the cable around the first end post and securing with cable clamps. Next, run the cable through the hole drilled in the center post. Continue with the cable running through all the posts in the row.

After reaching the final post, wrap the cable around the post and mark it to be cut. Once the cable is cut, attach a come-along to the end post, stretch out come-along cable with havens grip attached.



Attach the havens grip to the cut cable, then start to ratchet the come-along to tighten the aircraft cable. Once the cable is tight, loop around the post and secure with cable clamps.

Trellis, continued

Cable is also stretched perpendicular across the rows and at both ends of the hop yard by threading the cable through the drilled holes in the posts.



Everywhere the cable is passed through a post, cable clamps are placed on both sides of the post to help prevent the movement of the posts. Once cable is in place, add tension to the run of the cable by tightening the turnbuckles at each end of the hops yard.

Stabilizing guide wire

Use high-tensile wire to create a stabilizing guide wire approximately 10” from the ground, running the length of the rows. This wire can be used to attach drip irrigation and/or the twine used for training the hop bines.

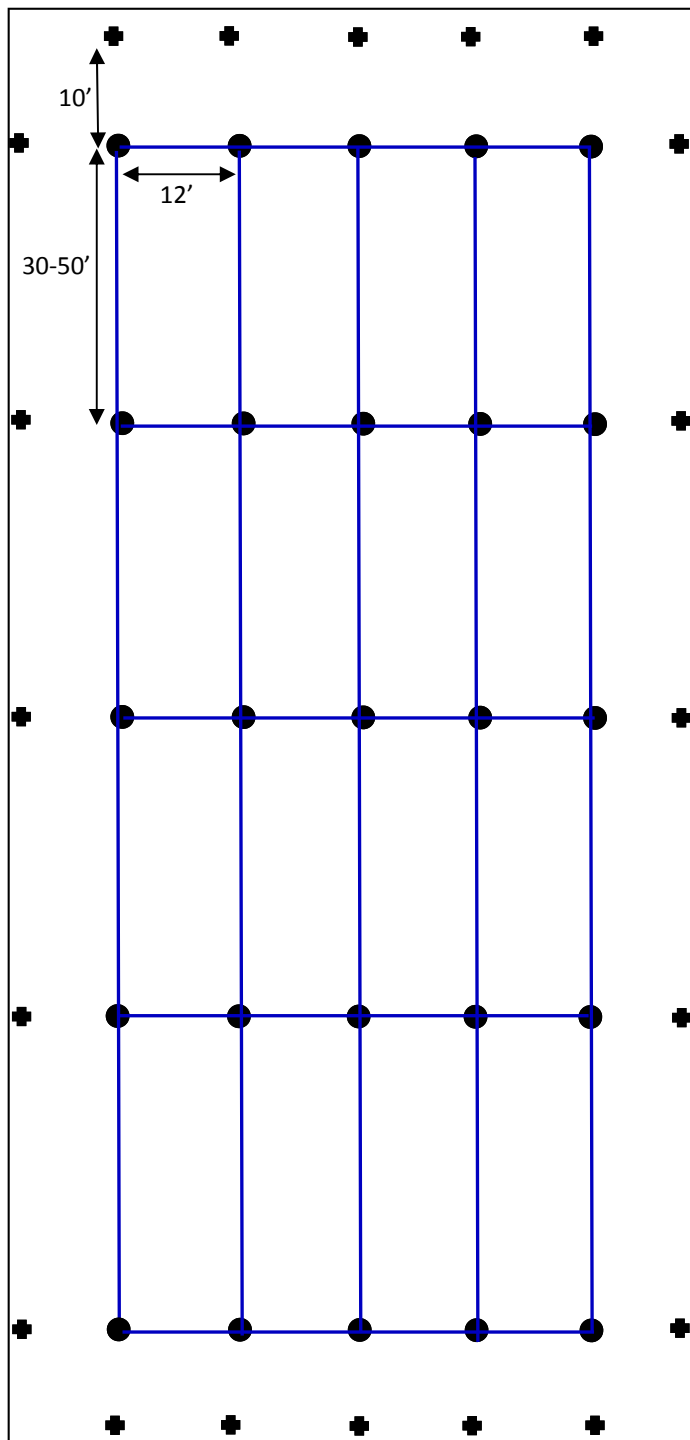


Stretch the high-tensile wire the length of the row and allow enough additional length to wrap around the end posts.



Slide a gripple onto the wire and then wrap the wire around the end post. Insert the end of the wire back through the gripple. On the opposite end, attach the gripple using the same technique, then tighten the wire using the gripple tool. Along the row, use fence staples to secure the stabilizing wire to the line posts.

Hop Yard Layout



- Poles
 - ⊕ Ground Anchors
 - Cables
- Layout is not to scale

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