

Construction of a Bench Plastic Cover for Maintaining High Relative Humidity[©]

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Fall Creek Farm and Nursery is a wholesale grower of blueberry plants. Most of our plants are derived from tissue culture. The plants we grow are made from Stage 2 in vitro plants. This means the plant is a microcutting without roots. In order to acclimate these plants to life outside the test tube they are planted into trays that are then kept in incubation tents inside the greenhouse (Fig. 1). These tents are basically a small greenhouse that can be sealed to keep the humidity high and the temperature warm mimicking the in vitro environment.

There are many different styles of tents that can be used for this process, from simple to elaborate. Since we grow so many plants in this manner I looked for a repeatable, simple-to-access, and easy-to-sanitize system. I found that portable outdoor canopy makers have a straightforward system utilizing pre-made connections that can be used to assemble these incubator tents. I use electrical metallic tubing (EMT) to attach the canopy connectors to form the structure of the tents (Fig. 2).

I have sourced the canopy connectors through a vendor I found on the Internet. Their name is “Yuma’s Bargain Warehouse”. I found the people there very easy to work with and was able to make my purchases with them over the phone.

To connect poly film to the EMT pipe I have been using a plastic PVC clip called a “Snap Clamp”. The clamps are an easy solution for attaching poly film to pipe. These clamps are available through a website called the “Greenhouse Megastore”. This company is a source for many hard-to-find tools and equipment for the nursery trade.

The benches in our greenhouses are 6 ft. wide by 25 ft. Long. To make a tent that covers these benches requires about \$100 in parts. These canopy parts and snap clamps have simplified a process that in the past had required much more time and effort.

Figure 3 shows a finished plastic tent and how the top can be rolled back to slowly increase the relative humidity inside.

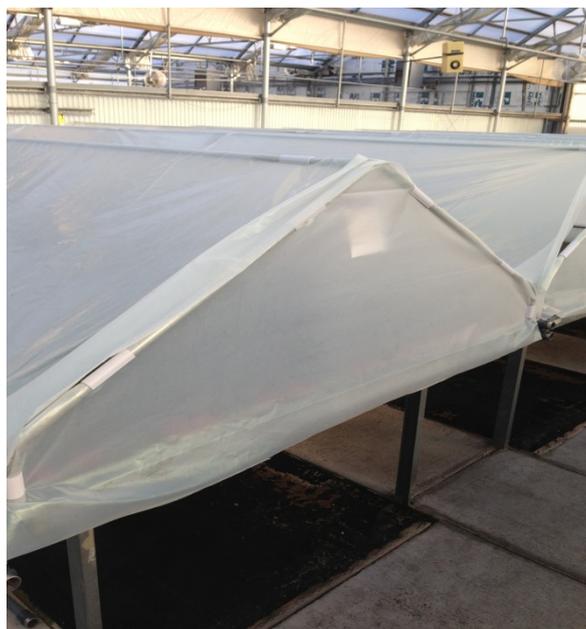


Fig. 1. Completed plastic tent cover for a greenhouse bench.



Fig. 2. Conduit electrical metallic tubing connectors used for the construction of the plastic tent.

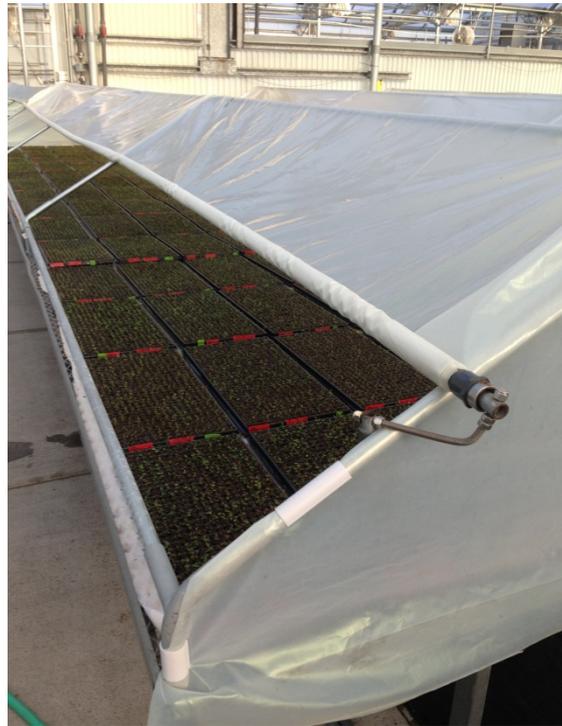


Fig. 3. Finished plastic tent in use showing how the top can be rolled back to slowly increase the relative humidity inside.