

**Eckerton Hill Farm, Lobachsville, PA****Transplant Production**

*I visited Eckerton Hill Farm on April 1<sup>st</sup> 2010 and the greenhouse was already overflowing with transplants and scrumptious greens. Tim Stark, the farm owner was gracious enough to show me his greenhouse and transplant system before he headed into New York for deliveries including 52 lbs of baby radishes for his restaurant customers.*

*At Eckerton Hill Farm Tim and his crew have been growing a wide variety of vegetables with an emphasis on heirlooms since 1995. This includes over 100 varieties of tomatoes and 40-60 varieties of chili peppers every year. Until recently all growing took place on leased land and was directly marketed to New York's Union Square Greenmarket. 2009 was a milestone year for Tim with the purchase of the historic Angstadt farm, a beautiful 57 acre farm sitting atop the Oley valley in Lobachsville, PA.*

**Seed Selection**

Tim buys many, many varieties of tomatoes and peppers every year. He concentrates on heirloom varieties. A few of his favorite seed companies include Johnny's Selected Seeds, Fedco and Seed Savers Exchange.

**Propagation Facility/ System**

Tim starts most of his transplants in a tunnel that is heated starting in late February. The plastic tunnel is covered in two layers of greenhouse plastic. Air blown between the layers of plastic creates a layer of insulation. He keeps the tunnel just above freezing to start at about 35 F and soon the tunnel is maintained above 50 F. He ends up using less than one 500 gallon propane tank to heat the tunnel most years.

**Seeding and Pricking Out**

The tomato and pepper seeds are started in 1020 trays (rectangular, flat bottomed trays) on heat mats that provide bottom heat. The trays are on shelved benches. This allows for more space in the greenhouse and keeps mice out of the germinating seedlings.

The tomatoes are pricked out into 72 count trays.

They also grow baby greens and radishes for early season production in 8" high raised beds. These beds run down the center of the greenhouse.

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## Soil Mix

Most of their transplants are grown in Pro-Mix with biofungicide. The biofungicide is bacillus subtilus a naturally occurring soil bacterium. This soil mix is NOT allowed for certified organic production. (Remember you cannot call your business organic if it is not certified if you make over \$5,000 per year.)

They use a shrouder mix for raised beds in the greenhouse used to produce baby greens and radishes. The mix is made of topsoil and mushroom soil (compost). They add about an inch of new material per year to top off the beds.

## Propagation Trays

They start their tomato and pepper seedlings in flat bottomed 1020 trays and prick them out into square 72 count flats.

## Greenhouse pest management/ Sanitation

During the winter they open the entire greenhouse for around 3 weeks to allow mother-nature to come in and clean things out. They like to have things freeze pretty thoroughly during this time in order to help with this process.

In order to keep fungal problems at a minimum they sanitize their trays. They also use Pro-Mix which has a biofungicide – bacillus subtilus.



Aphids are their most common insect problem in the greenhouse. They order biological controls every year and have them on hand. As soon as aphids begin to appear they release lady bugs and parasitic wasps. They used *A. colemani* wasps this year. The wasps lay their eggs inside the bodies of the aphids and when the eggs hatch the larvae kill the aphids leaving a hollowed out husk behind.

Once it gets warm enough to pull the sides up, allowing air flow and natural predators to enter, aphids seem to be much less of a problem.

Rodents can also be a problem in the greenhouse. It is best to keep your seedlings on high benches Tim warned and make sure there is not something they can jump off of onto your bench near-by. Wire netting reaching up 2-3 feet on the sides of the greenhouse is essential to keep the groundhogs out when you start lifting up the plastic sides for ventilation.

## Greenhouse irrigation

The greenhouse is irrigated using a simple hose and fine holed sprinkler head which is soft on the seedlings.

**Eckerton Hill Farm, Lobachville, PA****Transplant Production****Planning**

Tim tries to push his plants as early as he can. This helps him deliver early greens and tomatoes to his restaurant customers. You may not be making money at that point, but it keeps your customers happy and buying from you instead of your competitors early in the season. Because he is not aiming for a set date for harvest he has the flexibility to plant as soon as there is a window.

**Advice to new farmers**

Radishes are a nice early crop for greenhouses and tunnels. The French breakfast radish seems to do better than the round varieties and can give you a cash crop in 28 days. They plant them every 7-9 days in early spring for a continuous harvest. Micro radish greens can also work well. In eleven days you have micro-greens. They seed into trays of used potting mix and mushroom soil. Anything with a little juice seems to do well he says.



Spinach often will over winter in the tunnels and give you a nice early crop.



It is best to harden off your transplants for a week before you plant outside. Tim hardens off his plants on tables made from saw horses and hard wire cloth. Make sure your tables are distant from any structure to keep rodents from jumping onto them.

*Farm Profiles are designed to give new producers ideas and advice from experienced producers. Individual products are mentioned as examples not as an endorsement. Prepared by Tianna DuPont, Sustainable Agriculture Educator, Penn State Extension, 2010.*