

Big River Farms Training: Greenhouse Propagation for New Farmers

Prepared by the Minnesota Food Association

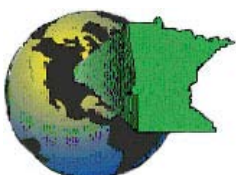
In April 2009, Melanie Timpano, Big River Farms Greenhouse Manager, led the class on the basics of greenhouse propagation and season extension options for small-scale organic growers. She was assisted by Jena Botte, the Farmer Coordinator. The training session was attended by farmer trainees in the Big River Farms Program. Six farms were represented, including principal operators and their families, for a total of ten participants.

Brimming with the deep green color of many tomato and pepper transplants, as well as herbs, lettuce and broccoli, the greenhouse setting was perfect for this class. Melanie explained and showed how that without this plastic-enclosed house and a propane-fueled heater, some of the tender starts, such as basil, tomatoes and peppers, would not have succeeded this March and April in our cold climate.

The greenhouse propagation training introduced new farmers to:

1. Organic propagation techniques;
2. Caring for organic transplants;
3. Season extension options to start plants early in the spring;
4. Basic operating procedures for hoophouses and greenhouses;
5. Cost of constructing hoophouses and greenhouses;
6. Differences between hoophouses and greenhouses.

The class began with Melanie asking the question, "Why would a grower want to construct a hoophouse or greenhouse?" The obvious answer is season extension: For both planting in the ground inside the hoophouse and/or starting transplants. She continued with a discussion on the differences between a hoophouse and a greenhouse. A hoophouse, also called a high tunnel, is a plastic-covered season extension structure that a person can stand up in and walk through, doesn't have built-in heating or mechanical



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ventilation, and is considered a temporary, semi permanent and/or movable structure. It relies on passive solar heating. A greenhouse is permanent or semi-permanent and has artificial heat and venting systems. Building a greenhouse or hoop house can extend the grower's season by weeks or months in the spring and into the fall.



For this class, Melanie focused on using greenhouses for propagating plants as opposed to planting directly into the ground. Many of the farmers start some plants at home, in a sunroom or in another sunny spot in their house. However, greenhouses and hoop houses can offer them more space (which they will ultimately need to operate their own farm businesses) and potentially more light and heat than in their home.

The cost of constructing a hoop house (a frame kit starting at around \$1,500) or a greenhouse (easily beginning at \$5,000), is bit out of the price range for most the Big River Farms farmers, but the profit made by early planted produce and growing directly in the ground in a hoop house for fall and spring harvests could offset the hefty upfront expenses. Farmers can begin to save now for a construction project after leaving the Big River Farms program.

Starting and Caring for Greenhouse Plants

Melanie then discussed the specifics of starting and caring for plants in the greenhouse. She demonstrated watering techniques, showed appropriate seedling trays for different sized seeds, and discussed organic potting mix ingredients.

She also talked about ways to prevent and remedy pest and disease problems in the greenhouse environment. Preventative measures include providing good air circulation, letting plant soil dry a bit between watering, noticing where spaces might allow pests in from the outside, and being aware of the presence of pests and diseases by monitoring plants regularly for problems. Remedies include removing any diseased or infested plants from the greenhouse to prevent spreading to other plants, introducing predatory insects, and as a last resort, using organically approved natural sprays.

Participant Feedback and Follow-up

The class was a success! The participant's feedback was enthusiastic and encouraging. All the participants said that this was new and useful information for them. "This was very exciting and new for us. It makes us want to get started with our own hoop house someday!" said Amy Doeun.

Follow up to this class will include a walk-through of and discussion about construction of the "Old Bones" hoop house on the farm on May 16 and watching a hoop house educational video with some follow up discussion.

Photo credits: Aileen L.C. Krzos for Leigh Cavalier Photography



Additional Resources:

- Minnesota Food Association, mnfoodassociation.org
- Institute for Agriculture and Trade Policy, iatp.org
- IATP Local Foods program, iatp.org/localFoods
- Sow the Seeds Fund, sowtheseedsfund.org