

## Four Season Harvest: Getting Started with Organic Greenhouse Production with David Blanchard, Pleasant Hill Farm

### *Intro*

The average age of farmers is 55 or over. Most of my farming friends are either my age or older. From the mid 80's–mid 2000's – it seemed very few people were getting into farming, but now, (and by the looks of this room!) the tide is turning – and that's great! Interest rates are low, food prices are going up, and the local food movement is getting stronger.

I am from the US, and immigrated to Canada in 2007 with partner Cindy Rubinfine. Currently we have a certified organic veggie farm in NS (Pleasant Hill Farm), growing year round vegetables between the field and six greenhouses. We retail everything we produce and sell weekly at the Hubbards and Lunenburg Farmers Markets. My interest in farming began back in 1960's, and in the 70's I began working on other people's dairy and vegetable farms. Went to Ag School at Ohio State University, though at the time organic farming wasn't very accepted. I welded pipes to make money for a down payment on a farm.

My goal: To provide a system of farming that is as sustainable as possible. We rely on biological nitrogen fixation and biological pest control as part of the system that allows us to make a living farming.

### *Main Talk*

**Greenhouses help mitigate the effects of climate change.** Weather is becoming more challenging as we go; we're seeing more extremes. In 2011, there was a 2-week period that rained 25% of expected annual rainfall. Carbon emissions are going up.

In future months/years we should expect: Heavier precipitation, generally warmer, more droughts, more wind, and more big storms due to climate change.

**Greenhouses extend the growing season.** They are more useful in the winter than a caterpillar tunnel, and are capable of handling amazing loads of snow (less chance of damage to the structure itself). You can use them for a lot of other things (i.e. Storage buildings, livestock housing). On a per square foot basis, they're about the cheapest building you can put up.

**They are a great place to start your own transplants.** If you want to make a living at farming, there aren't enough sunny windows in a house to do being enough seedlings to fill an acre! Using a greenhouse allows you to do this "in bulk".

**Help your Farm stand out in the marketplace.** All start-up farms are essentially selling the same thing that is dictated by weather. If everybody is trying to sell the same thing there's a limit on how much one farm can sell. Greenhouses can let you produce different stuff from everyone else. Either different plants completely, or simply just at different times of years. You need a volume of sales, and one way of doing that is by differentiating your farm from other people's.—in style and scale of production/delivery. Also good for the whole market. Incentive for people to make that extra bit of trouble to come to the farmer's market as opposed to the super market.

**Even out cash flow, limit risk.** Extending your growing season with greenhouse production equals more income producing months in the year. A longer growing season means more opportunities to make up for crop failures and unanticipated expenses. Some people don't want to work in the winter, some people do. In the Maritimes, there's very little winter growing going on (or 'four season production'), so there's low competition.

**Greenhouses protect crops from sudden disastrous weather events.** For example, hail, wind, rain/snow storms, which are becoming more prominent with climate change.

**Greenhouse production helps retain customers.** Establishing a strong consumer base of folks that will regularly buy from you is key to your success. The benefits of greenhouse production offers season extension (longer length of available produce) that will keep them buying from you for more of the year, possibly all year. Also growing unique and interesting products will keep them coming back.

You don't want to disappear off your customer's radar for over half a year, as in the meantime they might find somebody else to buy from.

**Greenhouse Production can be useful in the battle against pests and diseases.** Keeping your plants (tomatoes especially) dry will greatly help prevent diseases and pests. Prevention is the way to go rather than having to treat the effects. You can easily keep the biggest pests away with a window screen over the doors and vents in your greenhouse. For smaller pests, you can use smaller mesh.

**Greenhouses provide an ideal environment to implement biological pest control.**

Essentially this refers to breeding good organisms to keep the bad ones away. This strategy eliminates the need to purchase inputs that cost money and sometimes have adverse effects. Most organic approved pesticides have a very broad spectrum – they can kill most organisms they come in contact with. After you spray, it can kill all the bugs except a few of the invading bugs, then they can come back with an open playing field and the problem can be even worse than before. Formerly insignificant pests can also rise up due to lack of natural predators. Parasitoids can eliminate all sorts of pests. (Example: Parasitic Wasps eliminating aphids)

**You can use a greenhouse to rear your own bio control agents.** With the right conditions and a couple cheap pieces of equipment you can breed your bio control agents and eliminate costs of pest management almost completely as well as for the use of inputs.

*Advice:*

**If you decide to become a farmer, decide that you're going to be a knowledgeable farmer.** It's useful and it's also fun. Get to where you not only know how to fix and put up things, but also what's going on in your soil (biologically), understand the nutrient cycle in soil, and understand insect interaction. It will help you figure out solutions to problems; preventative strategies, as well as new and hopefully better ways of doing things. Practical & theoretical knowledge is equally important too.

**Once you've acquired knowledge, be generous with it.** Don't hoard it to yourself. You can establish a network of friends and colleagues with whom you can collaborate. This is the best resource you can have.

Greenhouses are all about trade-offs; there is no one perfect answer. What you want to do, what you want to spend? Greenhouses can be great in some aspects and less great in others.

Plastic loses transparency after several years, which disrupts the light infiltration. The plastic used on greenhouses at Pleasant Hill Farm lasts 6 years. A 30x90 foot glass greenhouse= 75,000\$. A 30x96 foot plastic greenhouse= 16,000\$.