

General Discussion

Comment: I have a comment to make. I just noticed that all the farmers here have talked about the system approach to organic, whereas with what we heard this morning and this afternoon, it was not the main aspect. I think that's the way to go. We cannot just focus on problems. We have to look into developing systems for organic, and it's the same for potatoes. So thanks to the farmers.

Q: Has anyone ever heard of growing potatoes on the flat rather than in hills?

Robert: I did trials for a couple of years by growing potatoes perfectly flat and planting them at different depths. No matter how deep we planted them when we grew them on the flat, we always ended up with more sunburn than when we had hills. But the yield sometimes would be higher on the flat because we weren't in there cultivating...

Q: What kinds of varieties?

A: Shepody and Russet Burbank. Some varieties have a propensity to set their tubers close to the surface, and it may be more important to cover them over because that's the limitation of some varieties—they set their tubers very close to the surface. If you get a variety that sets the tubers deep, you might be able to get away with growing them flat.

Q: I just wonder how much about farming has to do with the convenience of (inaudible) and how much is really biological.

Karen: When you asked the question, what immediately came to my mind was not just flat soil only. There has been research done on this, and there are growers that are putting their seed on the surface of the prepared soil and covering with other products, whether it's straw or seaweed. There are various things that have been used. I don't know to what degree of acreage it's been done successfully, but apparently it has been done quite successfully and you end up with a very clean potato. To comment on hilling and not hilling... We do hilling at our farm, but over the years we had moved, for other vegetable crops, from hilled systems to flat systems, whether it's carrot production, beans, peas, that sort of thing. We started doing this before we started seeing these massive degrees of climate uncertainty here in the Maritimes, and we've seen that in increased numbers of extended dry periods, by not using hill systems we retain more moisture in the soil and we can bring off a more successful crop in the organic system because there's a higher organic matter content in the soil. Also, if you're using some mulching products other than plastics, it lends itself well.

Q: One of the things that our visitor from England talked about was trials...

A: Carlos, I think you mentioned that you're very fortunate to have some sites where you can test different fungicides and test the reaction of different varieties to different strains of late blight. We used to have trials done here in PEI at the Agriculture Canada station, and some of the growers near the research station expressed concern, and Agriculture Canada stopped doing those trials. So right now we don't have any trials done in Atlantic Canada to assess the reaction of the different potato varieties to some of the new strains of late blight. There's a challenge here. Maybe you could have done it at Truro. You've got an isolated area in Nova Scotia where you could do these trials. But it is a very important issue. Late blight is a very

serious disease. It's important that we keep current on this and be able to assess the reactions of the different varieties and assess some of the new chemical tools that may be helpful. Going "by guess and by gosh" is not going to keep us right up to speed. There are a lot of federal politicians looking for votes. Maybe you can get them to promise you a site.

Comment: I have a comment about weeds. We are working in Ontario. We also grow some potatoes, and we learned from the insect people that even if you have flesh-eating insects like lady beetles and spined soldier bugs and so on, they still need pollen in their diet, I guess. So we made a point of taking the pigweed, but we don't take all of the wild mustard because it has a lot of pollen over a long period of time to help these insects like lady beetles and spined soldier beetles in their job in the potato field and other crops. We put them out over the last 3 or 4 years, and it has been working successfully. And if you cannot get Novodor, you should be talking to the insect people out in BC to make sure they raise enough spine soldier beetles, because they do work. Also, in the spring when you put them out, they hang around, so over the years you have them. We had great success over the last 3 years without any problem with the potato beetles.

Q: I have a question for Pirmin. You talked about using some varieties of potatoes that are lower in their N requirements. What is your program for getting the N or nutrients to your potatoes, and compare Fabula with some of the varieties we're using.

Pirmin: (inaudible) ...got away from the red clover because of *Rhizoctonia* problems, but we mix the different rye grasses with timothy and white and sweet clover. Last year I added sweet clover onto it. So I always figured there's at least 100 lb of N available through the soil. As I said, for the Fabulas, for example, we usually fertilize them differently. Last year we actually used some of that manure compost coming out of Quebec—it was in one of the presentations here. There's another plant in New Brunswick too. It's pretty much conventionally fertilized, but probably 70% of what the average conventional farmer would use on the same variety on PEI.

Q: I'd like to throw something out. I'm a bit naive when it comes to potatoes, I have to admit. I've worked a lot with other crops, but I keep wondering why it is that we have to be growing big potatoes, and we have to throw a lot of N onto them to get the big potatoes. I think it's because they're easier to process, but who's telling who what to do, and if it has such a big impact on our environment, maybe we should just tell the processors to back off. So I want to hear somebody comment on that.

Karen: I just love that comment. It depends a lot certainly your focus on N levels in the size of your yields, and particularly the tuber size, depending on your type of market. Our market is for the consumer. We depend on the consumer, and they ultimately have the end say for everybody. If N levels are too high, it does affect things like flavour and other qualities. When you start getting weird shapes—sure, it goes through processing alright—but if you've got knobs coming out and you've got potatoes that are growing too fast and you have hollow heart and all that, my consumers don't like that. We shouldn't get into the comparison game. We should be focused on what we need to do to service our customers, whether we're in the organic industry or the conventional industry, to come up with the best quality product so that they want what we produce. So just really be careful on that one. I think that science has a long way to go yet. I know that potatoes and tree fruit are the hardest things to grow organically in eastern Canada, but we're learning faster and faster, and I think a lot of what we're assuming now is not going to hold five years down the road.

Q: I was wondering if someone would comment on how you manage the potatoes in storage, long-term storage.

Barb Daniels: I've been using ethylene to store potatoes long-term for several years, mostly processing potatoes. We see ethylene as a potential benefit for the organic growers because we can keep the potatoes sprout-free for a very long time. But the question that remains is whether ethylene will be accepted as something that can be applied in the organic milieu. It is, as Derek alluded to earlier, accepted for treatment of bananas and so forth, and some of the British growers are starting to use it on their organic and low-input potatoes as well. But as yet I'm not sure where it's going to go in Canada and the US. But it does have a great deal of potential, and I'm hoping that it will be useful, particularly for some of the processing varieties, as they start to look at organic french fries and/or chips, because they can't use cold temperature—they get too much cold temperature sweetening when they want to keep the potatoes long-term. But I think, for the most part, the organic long-term storage has been using temperature, and that would be mainly for table stock.

Q: (inaudible)

Pirmin: ...if you want to extend your season, do you have to choose a variety for the later part of the season, which has excellent storability—mainly speaking, not to sprout on you. But that's usually what determines the end of our season. You can still grade perfect potatoes in the middle of May, but once they hit the store, it takes two weeks and they sprout if they're not treated. So it's a problem to supply in between that and the next crop.

Fred: Well, I can't really say much more than what Pirmin said. That's the problem, and you can keep them as cold as you like in the warehouse, but once they hit the store shelf they're going to take off and sprout. But we have a system in our warehouse. As long as we have cold air on the outside, it's no problem to keep the warehouse cool. But I think we have to go one step further and put refrigeration in there so that we can keep them cool in the warehouse until whenever. But it's after they leave the warehouse and hit the store shelves—that's where the sprouting problem really occurs. We've already had a problem in February in a market; they tell us that the potatoes were sprouting when they hit the store shelves. So that tells me that they're keeping them too warm, and I probably have to train some of these retailers too that when they bring these potatoes into their storage, they have to keep them at 40° or below instead of at 45° and 50°, and that's where some of them are keeping the potatoes in their warehouses.

Comment: A number of people including myself have done some work with terpenes such as carvone and menthone. They have their limits for sure, but I was kind of interested to find that just caraway seeds, which make carvone, have some advantages.

Comment: I think about the roots of organics, and a lot of it is working within nature, and it seems like we're all trying to push the envelope and have things out of season. By having this chemical and that treatment and whatever, and eating last year's potatoes all the way into next summer...I don't know...it just seems like maybe we shouldn't be trying to extend shelf life. Forgive me if I'm stepping on any toes here, but if you run out of fresh potatoes, then you just wait for the next crop to come. I know that doesn't work with processors, and it's this whole line between biology and industry. Just some thoughts...

Fred: I'd like to comment on that. My experience is if you can keep the product on the grocery

store shelf year-round, you stop product from coming in from California or elsewhere, and if we can extend our season some way or another until we have a new crop of potatoes to put on the shelves, we eliminate importation of California product. I don't know where you shop, but I watched the mall last fall, and there were California potatoes in the Sobey's stores in Charlottetown and in Sussex. So, to me, if we're going to grow our organic industry, we have to try to eliminate product coming in from California.

Q: I couldn't help but notice today that there weren't any marketing people at all. So I'm just wondering if you have any problem marketing your goods, or do you see any barriers to marketing any organic produce? How do you sell it?

Karen: We're very fortunate—we can't meet the demand. But we're very closely tied to the consumer and have been for a long time, and we make a point of listening. We've discovered that a consumer wants to be educated. We have far more consumers that are realizing how they impact their local economy through their own food choices and that is growing and we can tap into it far better as producers. So our biggest problem is that we can't produce enough and we need more land base.

Raymond: Not to argue with Karen, but I think actually it's a really good point. I think that's maybe one of the biggest things facing organic farming, because we are figuring out how to grow them, and we are figuring out how we can handle blight and a lot of stuff, and I think there are going to be a whole bunch more people wanting to get involved. I think it's going to be a challenge for us to make sure that the market keeps growing at the same speed as the production does, because farmers can switch quite a few acres fairly quickly once they get their head around it, and it's going to be a challenge. I think something we really need to keep focused on in the next few years is to increase the market at the same speed as we increase production because we don't want to have cheap organic potatoes on the market and have a whole bunch of broke organic farmers along with the broke conventional farmers. So that's a big issue, I think.

Comment: I'd like to hear about the comment that organic food cannot feed the world.

Raymond: That's a pet peeve of mine, when people say that we can't feed the world. I heard a fellow say one time, "If I stop using pesticide my yield is going to drop to half, and there's six billion people in the world and three billion are going to starve and my conscience won't allow me to do that." That same year, we blew all the potatoes over the fields because of potato wart. The point is that we can produce a lot of food organically. Our yields are not that much less if we switch to some other varieties. Fabula produces a very high volume, and there are a lot of other things we can do to produce big yields. Right now it's not a shortage of food that's causing starvation in the world, it's actually a shortage of money and a whole bunch of political issues, so I think we can address them first before we worry about that.

Carlos: I can't add much to that, but if you look at where you have starvation in the world, it's not a question of not having enough food for those people—it's getting it there. There's usually political unrest involved. The other thing is where you have starvation in the world, the people can't buy the sort of inputs that you're using to get maximum yields here in conventional production. It's the sort of areas where people rely on organic production methods to produce the foods themselves, and that's pretty well established by the people who really know about third world production, people like the UN and UNESCO.

Comment: (inaudible)

Q: This is a question primarily for Fred or any of the other panelists too. What is the solution to keeping imports off the shelves?

Fred: Keep your last year's crop in storage until the new crop is available. That's the solution. Be able to hold potatoes into July from the previous year, and have a new crop ready to market in July. That keeps you in the marketplace and doesn't give the retailer a chance to come in there with imported product.

Pirmin: I just wanted to make a short comment on the question before. I was a grower in different countries and in all different areas—conventional, in between, and organic, and I get so tired of this whole question because really, and I can only speak for our societies, our societies work on supply and demand. If the consumers would demand organic food only, than that is what the farming community will produce. It's as simple as that. So the blame can't be put onto the farmer; it's the consumers themselves. Whatever they want on the shelves is what the farmers are going to produce.

Comment: I'd like to address the comment about organics feeding the world. I think one of the biggest myths in agriculture is that North American farmers feed the world. Obviously the world's poor can't afford North American food, so the question really is: Can the United States and Canada feed themselves organically? If you look at what we do with the food we grow, if you look at how much wheat gets turned into pastries and donuts and sugar-coated products, how much corn gets turned into corn syrup, the way we produce meat by raising beef, pork, and chicken in confinement and pumping them with grain—that's a protein factory in reverse. A whole lot more vegetable protein goes into them than comes out of them as meat protein. Then you look at all of the beef right now in Canada that's not getting sold—I don't hear about anyone in North America starving because of it. We're way overproducing, and we're destroying our soils doing it.

Comment: This had to do with marketing, and the question about why we can't keep US imports out of the country. I don't think we need to draw the border because in the eastern United States it's the same thing as here in Canada. A few very big farms in California are preferred suppliers of Canadian wholesalers, and if you are not a preferred supplier, it doesn't matter if you sit beside that company, they still prefer US imports. Canadians producing Canadian potatoes don't seem to be able to get on the preferred list of the wholesalers. There were three or four wholesalers in Canada and they were all bought up by the same big company, the last one just last week in Montreal. It's all bought up by one big company, and they buy everything out of the US. Every week throughout the year there's a trailerload of potatoes coming in from California. Look at our Canadian organic potato production. It wouldn't be big enough to supply the Canadian demand if the Canadian potatoes would go in there first. I don't know if that helps any, but that just gives you a bit of the picture of what's happening in Ontario, which supplies all around.