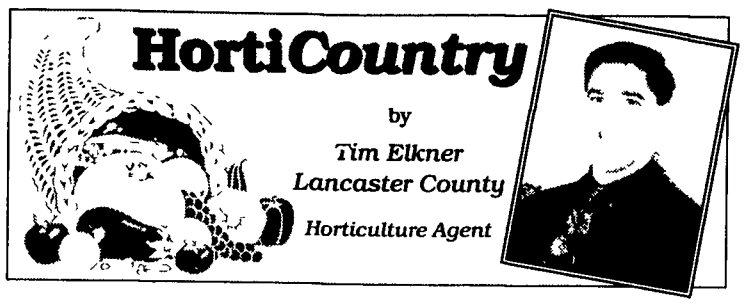

FOOD SAFETY STARTS ON YOUR FARM

There has been an increase in the amount of fresh fruits and vegetables consumed by people in the U.S. since 1970. The average person ate 564 pounds of fresh produce in 1970 and, by 1996, the average person was eating 696 pounds, an increase of 23 percent.

While this is good news for folks such as you who are growing fresh produce, there has also been another recent trend that is not good news.

The number of outbreaks of foodborne illness related to produce has more than doubled from 1987 to 1998. The number of people affected by these outbreaks has also more than doubled.

Contrary to what many people believe, the cause of these outbreaks is not mostly from contaminated fruits and vegetables imported into this country. More than 75 percent of these foodborne illness outbreaks were actually traced to produce grown here in the U.S.

There was a wide variety of fruits and vegetables involved, including raspberries, strawberries, tomatoes, lettuce, cabbage, carrots, and sprouts. Two bacteria — Salmonella and E.coli — caused most of the outbreaks.

Outbreaks of foodborne illness can result in major financial losses to producers of the crop causing with any outbreak as well as associated business interests. The outbreak of illness in 1996 first thought to be caused by strawberries from California resulted in an estimated $50 million loss to the strawberry industry of that state. The outbreak was later traced to imported raspberries, but it was too late for the strawberry growers.

A recent outbreak of illness caused by contaminated apple juice cost investors in the company an estimated $12.4 million when stock values dropped. And lawsuits and attorney and court fees will surely cost the company additional money.

What would a case of foodborne illness traced to a Lancaster County farm cost the farmer? What would it cost our fresh produce industry?

One of my major concerns for our produce industry has to do with the nature of agriculture in the county. Dairy, beef, hog and poultry producers are found throughout Lancaster County. Unfortunately, many of the organisms that cause foodborne illness are associated with animals and animal manure. This is not to say that animals are the only source of harmful organisms — foodborne illness can also be caused by poor worker hygiene — but growers with animal operations need to be especially careful.

Following are some ways to reduce the chances of produce contamination on the farm that I gathered at a recent workshop. Fortunately, many of these practices will not cause you to have to spend additional money in your operation and some of them can improve crop yields and quality.

• First — manage your manure carefully, since it can be a primary source of harmful organisms. Ideally, only use manure on fields that will produce agronomic crops, not vegetable crops, the year of application. Apply manure to vegetable fields after the final harvest is complete and incorporate as soon as possible. Never sidedress fruits and vegetables with manure. Keep manure storage areas and produce fields as far apart as you can. Whenever possible, actively compost manure (hot piles) before application to the field. Prevent any runoff from your barnyard and manure storage areas from entering produce fields. A rule of thumb is that you should not harvest vegetables or fruit crops from a field treated with manure for at least 120 days after application. If you must grow vegetables in a field where manure was applied, avoid growing root crops and leafy vegetables.

• Second — start with clean water. Avoid overhead irrigation whenever possible, especially if your water source is a stream or pond. The use of trickle irrigation will both conserve water and reduce the chances of contamination since the edible portions of the crop are not wetted. If you must use overhead irrigation, then use water that is safe to drink. Well water is generally safe (if the wellhead is protected from manure runoff and the casing is intact) and you can have it tested to be sure. Streams and ponds are easily contaminated by runoff that could contain harmful organisms. Consider a drip irrigation system if you are using surface water. You may also want to consider periodic testing of your surface water source.

• Third — reduce the chances of contamination of produce by using good cultural practices. Start by using drinkable water for spraying to reduce your chances of applying harmful organisms along with your chemicals. Grow crops on plastic mulch to reduce the chances of rains splashing harmful organisms onto the crop. This is in addition to the many other benefits of plastic mulch (weed control, water conservation, etc.). Grow crops above the soil where possible. For example, stake tomatoes instead of letting them lay on the soil. Consider growing your crops in a no-till field. The mulch cover on the soil will again reduce the chances of harmful organisms splashing onto your crop (in addition to the other benefits of no-till). You could also consider using mulch between the rows to accomplish the same thing. Try to minimize animal traffic in and near produce fields. This includes both domestic and wild animals. You should not graze livestock or allow poultry into fields during the year of harvest.

• Fourth — have field workers practice good hygiene. Hands should be washed carefully and thoroughly with soap and water before handling the crop. Clothing and shoes should be changed after working in any animal operation before entering a produce field. Obviously ill employees should not be handling produce at any time.

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