

High fertilizer and protein costs left behind

Stanley Bridge, PEI - During the period from 1966-85, Alfred Fyfe doubled his use of fertilizer on cereal crops. As he grew more and more alfalfa, the fertilizer costs increased further as more and more potash was used. In 1985 his fertilizer bill peaked at \$ 8000. This was the major factor in stimulating Fyfe to search for alternatives.

Fyfe owns and operates Valley Farm Holsteins, a fourth generation family farm that is now in transition to organic production. He started in 1966 with a mixed farm consisting of dairy, pigs, and beef on 160 acres. In 1983 he added some more land and the farm is now evolving into a dairy operation with some sale of organic cash crops.

Major changes to ecological farming practices began in 1986. Manure management needed to be improved so Fyfe started composting and adding a small amount of rock phosphate in the gutter. With the manure managed more as a resource, he dropped potash from his alfalfa fertilizer program and applied only compost and limestone to the hayfields. Other practices have also been adopted; mechanical weeding was initiated in the grain crops and in 1990 rotational grazing of the dairy herd began, replacing the former free-range system.

New crops

Fyfe recognized early the problems trying to make red clover hay, so in 1967 he was one of the first farmers in PEI to try alfalfa. He had to learn the hard way that MCPA killed alfalfa but he soon became proficient at establishing and growing alfalfa on the sandy loam soil. Until 1980 Fyfe grew mixed grain, but following recommendations he switched to monoculture barley. His general cropping scheme became simplified, growing barley for several years and then direct seeding the land to alfalfa.

Overall his yields have not suffered during the transition to organic methods, which is still on-going. "What I did notice was the variation in the fields, the fertilizer seemed to help the poor areas but I don't know if it helped the fertile parts very much" says Fyfe.

He also had to change his rotation since he was not getting nitrogen from a bag anymore and had to produce his own. He began by adding peas to the mixed grain and overall has been pleased with the results.

Whose sure produce nitrogen. This past year I seeded the peas a little heavy and a field with only barley and peas went flat. I'm going to reduce my pea seeding rate to about 14 kg per acre and keep the oats in the mixture next year" says Fyfe.

Trials

In 1989 Fyfe had the privilege of having David Patriquin of Dalhousie University in Nova Scotia carry out ecological research on his farm. Through the on-farm research program Fyfe was introduced to fababeans which he has since added to his rotation.

A trial on 1/3 of an acre produced 1/3 tonne, a yield that Fyfe was sufficiently pleased with as well as finding the crop very easy to combine. "Fababeans are terrific to harvest. They stand right up with the pods starting half way up. You don't have to scrub them off the ground like soybeans" says Fyfe.

Encouraged by the fababean results, Fyfe took a long, hard look over the past winter at his \$5000 soybean meal-bill from 1989. "I was selling 90 tonnes of hay off of 40 acres, which made about \$5000 after labour and fuel costs. I could save \$5000 on my soybean bill and still have 20 acres of hay left to sell if I grew a home grown protein for my ration on half that land."

In 1990 he planted 12 acres of fababeans and 8 acres of lupines. The fababeans were seeded in mid May at 72 kg/acre. They were harrowed once when about 3 inches in height. In the 1989 test strips the lupines grew well but didn't mature on time. He made sure that this was the first crop to be planted in 1990 and they appear to be drying down all right this year.

In 1989 Fyfe grew wheat for the first time and found it to be a good crop following alfalfa. The spring wheat averaged 1.13 tonnes an acre on 38 acres this year, which was quite good for 1990 in his area. This fall he seeded winter rye on a piece of ploughed up sod. "I'd like to keep this red soil covered over the winter more if possible" states Fyfe.

The ecological progression on the Fyfe farm is evolving into the following rotation:

Year 1 - Spring wheat or winter rye

Year 2 - Mixed grain (barley, oats and peas)

Year 3 - Fababeans or lupines

Year 4 - Mixed grain undersown to alfalfa

Year 5-8 Alfalfa and timothy hay

Positive results

Ideally Fyfe would like to have half the farm in forages and the other half in cereals. Fyfe is also saving his own seed now and this has substantially reduced another off-farm input.

This season, part of the farm was OCIA certified with the rest still in transition. The fertility bill which peaked at \$8000 in 1985 dropped to \$2400 in 1988, \$1700 in 1989 and this past cropping year no chemical fertilizer was used.

"I am firmly convinced I can grow crops without chemicals. The more interesting parts are learning about the natural processes. It is more fun to farm now. The one drawback to organic farming is you have to be more involved. With chemicals there is more tolerance, you can get away with more things" says Fyfe.

Fyfe is having success with his organic farming and will continue to experiment on developing the farming system. This fall he planted oilseed radish for cover going into the winter for the first time.

He is the first to admit he does not have all the answers but he certainly has more money in his pocket at the seasons' close and a healthier soil as a bonus.

Now if I could just get that interest rate down at the bank, I'd have it made" concludes Fyfe.

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