

Hands-on approach to ecological farming

"Vulgarisation" is the French term for popularizing or expounding an idea. Sadly its' anglicized version has acquired a less attractive connotation, because it is every appropriate word for the activities that Denis Lafrance and colleagues carry out at the Centre de développement d'agrobiologie de Québec (CDAQ) in Ste-Elizabeth-de-Warwick, Quebec.

Lafrance was a visitor to the annual meeting of Resource Efficient Agricultural Production - Canada (REAP) in Woodstock, Ontario on January 30, 1992, and he took a few minutes to explain what his group does.

The centre is located on the north-eastern fringe of what is known as the Eastern Townships of Quebec. CDAQ is a non-profit group that functions on the membership dues of its 400 members, 80% of whom are dairy farmers and the balance agronomists and other agricultural professionals. "Most of our members are not certified organic farmers but are just interested in biological systems," says Lafrance. Numerous research grants also keep up to nine people busy in various aspects of "agrobiological," examination and testing.

Lafrance equates the French term "agrobiologie" with ecological farming and the centre's mandate is to act as a demonstration site for "vulgarizing"the most advanced work in sustainable and biological agriculture. Extension in the most practical sense of the word.

Opening up

The CDAQ becomes an open-house during the summer months, entertaining 2,000 people a year that come by the bus-load to tour the farm. The centre's "specialty" is compost and associated techniques, but a lot of work is also done with soil profiles and compaction, green manures, cover crops and non-chemical weed control.

"The CDAQ is more involved with technical development than with research," says Lafrance about the centre's focus on taking promising research results and putting them to practical use. The centre is Running a machinery rental service on an experimental basis so that farmers can try out new types of equipment before deciding on a final purchase.

The current emphasis is working out the weak points of compost use, such as the leaching of nutrients, particularly potash, from compost piles during wet summers. They have tried

approaches such as lowering the pH of the compost in the early phases and adding gypsum and lime later.

Current efforts involve mixing in high quality clay to build the humus-clay complex, and they have also tried composting grain screenings as an addendum to the pile. Even though heat germination shows that weed seeds are killed in the heat of the compost pile, says Lafrance, "We haven't had the guts to spread that stuff on the fields yet!~'

New approaches

Lafrance has some reservations about the use of green manures, particularly the expectation that the approach is an ecological cure-all. "It's not a miracle, it's a technique that has benefits and dangers," he says.

He points out that green manure is not a humus builder because there is little fibre in the short, green plant matter that becomes the plowdown. "Soils are so compacted in places that residue doesn't breakdown when plowed under," Lafrance notes, and he suggests that chisel plowing and sub-soiling may be necessary to get the soil re-building process underway.

Farmers are looking at spreading smaller amounts of manure over a longer period, according to Lafrance, as well as using new equipment such as wide-swath spreaders. Large quantities of manure favor weed growth due to the high amounts of nutrients that are suddenly released into the soil.

He says that this is just another indication that the mentality of farmers is changing, as demonstrated by the 30% drop in sales of agricultural chemicals in Quebec in the last few years. "It's both ecological and economic," he notes.

Other signs of change that Lafrance sees are farmers spreading one quarter of the government recommendations for lime and getting good results. If they hire custom manure applicators they are instructing them to spread only 1,500 gal/ac; spreading more may be slightly cheaper in the fee to the custom service operator, but is a waste of nutrients due to nu n-off that has to be made up for eventually with commercial fertilizer.

. Farmers are beginning to realize the benefits of investing a few extra dollars in order to save lots of money later on," Lafrance concluded.

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