



CURRENTS

Greg Mason

The Farmer as SCIENTIST

The successful farms of the next century will be run by producers who respect science.

A fascinating part of my job is being able to meet with growers. Recently I was in Saskatoon focus testing advertising copy with canola growers for a major chemical company. A focus test involves a small group of people who are involved in a structured conversation. A group leader guides the discussion through a series of questions designed to obtain feedback on specific points.

Over years of talking to farmers, both individually and in such groups, I have come to appreciate how this industry is evolving. Firstly, unlike many businesses, farmers are still cooperative. They compare notes and offer advice freely to their colleagues and neighbours. Because the industry still has many growers, and because one farmer's success does not adversely influence another's, greater openness exists. Sure, there are some who are closed, preferring not to share their experiences, but this is still a remarkably open and cooperative business.

The second interesting feature is the growing divide or "class" structure in farming. Emerging from the prairie-wide droughts of the late eighties and the decade of softening prices, only those producers who were able to stay ahead of the profit squeeze have survived. Typically, they are larger and more diversified. The growers I met in Saskatoon fell into two groups:

- The first, and still representative of the majority in Canada, resembled traditional farmers. As canola growers, they tend to be more aware of their direct participation in a highly dynamic market process. Farmers that draw most of their income from growing "Board"

grains are typically more traditional in their approach to the business compared to those who need to market and time sales in response to price cycles.

- The second group of farmers typified an emerging breed of business, usually well above 2,000 acres and often diversified into activities such as custom operations, trucking and retailing. These growers treat the farming part of their operations as a profit centre and make decisions more centered on the basis of cost and revenue. For them, whether their sons and daughters take over the farm is less important than whether their entire operation increases in value. These large business farmers are still a minority, but in terms of share of output, they are becoming a significant force in the industry.

But there's a third trend that is affecting all farmers. At the turn of the century, farming still looked like the process of biblical times. Seed was culled from the harvest and preserved for the next season. Over time, this process developed a few seed varieties that were known to be productive and have certain features such as drought and disease resistance. Very little science was involved in farming.

Through the green revolution, with the development of new seed varieties and herbicides, especially after the second world war, farming became more technological. In the eighties, conservation farming was developed and has now been widely adopted. These new developments were introduced through research paid out of taxes and performed largely at uni-

versities and in government labs. The grower merely applied the new research.

Now things are shifting. A small number of the growers I talked to in Saskatoon participated with the chemical company in testing a herbicide tolerant canola system. The word "system" is important. The seed is genetically engineered to tolerate a specific brand of herbicide. This greatly expands productivity of the crop and reduces cost. These growers were participating in controlled experiments.

Throughout the prairies, farmers are experimenting. Each year these farmer scientists set aside a small area of land to try options, carefully record results and use these in making future planning decisions. More farmers are developing the skills for scientifically evaluating what is best for their land and the particular micro-environment of their operation. Even though industry is offering many new chemical and seed systems, each producer must test and evaluate what approach works best for them.

Sons and daughters go to colleges to learn business and science. Bringing these skills back to the farm lays the foundation for the next generation of farming. Farming in the 21st century will be an increasingly scientific business. Certainly risk will be always there, droughts will occur and herbicide tolerant weeds will emerge. The successful farm business will use science as one of the tools to manage these risks. ■



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