

Organic Options Keep Growing

by Ralph C. Martin

Often I am asked if there would be enough food in the world, if every farmer was an organic farmer. My answer is down to four words: “possibly, but not probably.”

If everyone along the value chain from suppliers to farmers and other producers, processors, distributors, retailers and most importantly, consumers, committed to an organic system, I think it would be possible for organic agriculture to feed the world. In such a world, there would have to be much less than the current 40% food waste and more people would derive protein from low fat, high fibre pulses than from meat. Fewer food crops could be designated for quasi food such as sugar sweetened beverages.

Probably most people will continue not to choose organic sources of food. In Canada, about 98% of food purchases are non-organic.

Mainstream agriculture has been very successful at improving yields. In rural Ontario, it is well known that average corn yields quadrupled from about 40 bushels (bu) per acre to about 160 bu/acre over the last 100 years. It is still not clear how high average yields can reach. If growing conditions are excellent and all inputs are provided, corn can yield up to 429 bu/acre as shown by David Hula of Virginia in the U.S. National Corn Growers Association competition. Some Ontario farmers regularly exceed 200 bu/acre and 300 bu/acre is the new goal to beat.

Feed conversion ratios are also remarkable. It used to take more than 6 kilograms (kg) of feed to produce each kg of meat in a broiler chicken and now it takes less than 2 kg of feed for the same result. However, there is very little extra efficiency to be wrung from feed conversion.

The productivity of organic farmers has also evolved and some of them are growing 160 bu corn /acre too. Furthermore, the demand for organic products in Canada has grown by 300% since 2006 and by late 2012 was at \$3.7 billion, according to the Canadian Organic Trade Association (www.ota.com/otacanada/stats.html).

In Canada, organic agriculture is not as prominent as in some European countries like Denmark and Austria, but the national organic standard was implemented in 2009 and scientific research to support organic production has grown. The first Organic Science Cluster (oacc.info/OSC/osc_welcome.asp) sponsored by Agriculture and Agri-

Food Canada (AAFC) and by industry contributors topped \$8 million and the second Organic Science Cluster is expected to be larger.

Organic agriculture was guided by pioneers dedicated to lower input production and a keen sense of the precautionary principle. They have been slow to adopt some new technologies and yet science applies just as much to organic agriculture as it does to agriculture at large. Well designed research experiments based on sound research questions lead to useful scientific results for organic agriculture. Science can include respectful inquiries within the context of traditional and even indigenous systems.

When we set up the Organic Agriculture Centre of Canada in 2001, some advised that a focus on sustainable or ecological agriculture, rather than organic agriculture, would be more inclusive. Our decision to put university research and teaching efforts into organic agriculture in Canada was based on the organic system being well defined along the whole value chain. The definition and standards, backed up by the Canadian Food Inspection Agency, clarify and offer opportunities for system analysis. However the line circumscribing organic agriculture is dotted. It does not exclude organic agriculture from the overall economy and society, nor from mainstream agriculture.

Organic agriculture has far more in common than it has differences with non-organic agriculture. It is based on similar traditions and information flows both ways. Organic farmers were challenged by their neighbours about too much tillage and now, with research support, many of them practice reduced tillage while still incorporating manure and compost and maintaining forages and cover crops in crop rotations. On the other hand, to reduce costs, some mainstream farmers adopt typical organic weed control methods. All farmers cherish choices within their selected systems and understand that neighbours have a right to farm their way.

We are fortunate that AAFC, the Ontario Ministry of Agriculture and Food, the Organic Council of Ontario, scientists, innovative entrepreneurs and others are showing leadership in developing positive organic food options for Ontario citizens.

Customers in Toronto and other cities want organic food, with 58% of all Canadians buying some organic products every week (www.ota.com/otacanada/stats.html). Why should organic products come from outside

Canada, if we can grow them here? It makes sense for the value of this expanding market to accrue to farmers and others along our value chain at home.

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