

EDITORIAL: ORGANIC PRODUCTION AND GLOBAL FOOD SECURITY

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“Agroecology outperforms large-scale industrial farming for global food security,” was the headline of a recent news release on the findings from an international meeting on agroecology in Brussels, 21-22 June 2010. It was held under the auspices of the UN Special Rapporteur on the Right to Food, Olivier De Schutter, and it featured many international experts on this subject. One conclusion was that “agroecological farming, which improves food production and farmers’ incomes while at the same time protecting the soil, water and climate, could feed an estimated world population of nine billion people by 2050 and go a long way to save the climate, if implemented now.”

We are heartened, not only with the findings from this meeting, but that we again see more evidence on the real relevance of organic and ecological farming in a global sense – it’s not just for the well-off who can afford to pay premium prices! Organic farming is an important way forward for alleviating global food insecurity, and for addressing a diverse range of interrelated issues from health and wellbeing to sustainability and climate change.

However, the industrial chemical-based agriculture proponents continue to fight this notion – their arguments are summarised by Robert Paarlberg, a political scientist, who writes that the organic community’s wishes for farmers to abandon the use of synthetic chemicals would force farmers to use not only more labour, but also much more land. Such a change would, in effect, push “them back into 19th century practices.” He dismisses such “all-natural” approaches as the products of romanticised views of old agrarian lifestyles. The principal objections to the proposition that organic agriculture can contribute significantly to global food security are low yields and insufficient quantities of organically acceptable fertilizers. These are tired arguments promulgated by Dennis Avery of the Hudson Institute back in the early 1990s.

Such arguments ignore at least three crucial elements: the environmental damage caused by our industrial agricultural systems, the considerable external subsidies used to support high-input farming (e.g. energy, research and funding), and that organic systems are not merely substitution systems, but are systems that have been redesigned to meet goals of wellbeing and sustainability, while also preventing problems. Their arguments also ignore the growing body of evidence that shows that organic farming systems can be as productive as their conventional counterparts, particularly in developing countries; and that organic sources of nitrogen are more than adequate to replace synthetic sources (Badgley *et al.*, 2007, Pretty *et al.*, 2006). Parrott and Marsden (2002) and Pretty and Hine (2001) have also identified many examples of increased yields following the application of sustainable agricultural practices (cited in Li Ching, 2008).

Badgley *et al.* (2007) estimated average yield ratios (organic:non-organic) of various food categories for the developed and the developing world, and found that in most cases the average yield ratio was slightly less than one for the developed world and greater than one for the developing world. Their research further suggests that organic methods could produce enough food globally to sustain the current human population; and potentially an even larger population, without increasing the agricultural land base. Pretty *et al.* (2006) found that by adopting resource-conserving, sustainable agricultural technologies, farmers were able to not only reduce adverse effects on the environment and contribute to important environmental goods and services, but also increase yields.

Furthermore, food production is only one part of the food insecurity crisis; availability, access, stability and utilisation are the four main dimensions of food security, and actual food production is only one of many factors that impact on these dimensions. Key attributes of organic and ecological farming – use of local resources, local control of production and distribution processes, and more benign impacts on the environment – positively affect all four of the dimensions of food security.

The worthy goal of feeding the world is not being achieved currently by mainstream agricultural methods. Today, at least one billion people go hungry in the world; and, according to the UN Food and Agriculture Organization (FAO), at least two billion people suffer from micronutrient deficiencies. While many don’t get enough to eat, even more don’t get enough good quality food. This has been exacerbated by the recent financial crisis and continued high food prices; people ate less, and ate less well, as they switched to cheaper, less nutritious food. A shift to local, ecologically-based organic food systems would better address

this poor-quality food issue, which currently affects nearly one-third of the world population. This shift also would be consistent with the growing emphasis on a 'right to food' approach to addressing world hunger.

As part of the key principles of the 'right to food' approach, the UN Special Rapporteur argues that "Sustainable modes of production based upon agro-ecology and smallholder farming should be supported as a matter of priority" (De Schutter, 2010). This argument arises out of a recognition that the key obligations to respect, protect and fulfil (facilitate and provide) people's right to food must be preserved. Sustainable ecologically-based agriculture can contribute to all three of these obligations, and help to make small farm families self-sufficient in food, or even net food sellers instead of net buyers, at the mercy of price shocks and shrinking affordable food supplies. Reliance on local inputs such as manure, compost, and organic fertilisers, and on techniques such as rainwater harvesting, biological control, and the use of leguminous trees to fertilize the soils are particularly well suited to the needs of farmers who have little access to credit, work on the poorest soils, and who have limited or no access to basic infrastructure.

In the previous issue of the *Journal of Organic Systems*, we noted that organic systems can ameliorate the effects of climate change. The smaller environmental footprint of organically produced food and fibre is already well appreciated. Add to these positive features the potential for organic systems to feed a growing world population, and it becomes even more obvious that ecologically-based organic systems offer an important way forward in addressing food insecurity, poverty, and environmental impacts in the world.

References

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