

Written Testimony for the Hearing on Economic Impacts of Production, Processing, and Marketing Organic Agriculture Products, 4/18/07.

Honorable Members of the Subcommittee on Horticulture and Organic Agriculture,

My name is Atina Diffley. My husband and I operate the Gardens of Eagan Organic Vegetable Farm in Farmington, MN, which has been producing certified organic produce for the local Twin Cities market since 1973. We market directly to Twin Cities natural food stores and co-ops, and conventional grocers.

The changes that we have seen in the organic market and in organic production since 1973 are huge. Markets were not developed; now we have had 16-21 percent annual growth in sales from 1997-2004. High growth is forecasted to continue. Consumers did not know what organic meant; now 54% have tried organic foods. We did not have reciprocity on standards between states. Now we have a Federal National Organic Program.

When we started there were no Universities with organic education or research programs. We had little support developing healthy, high yielding organic systems for our farm. We started with systems we learned from old-timer neighbors who had farmed without chemicals before the world wars. While we were able to use these systems to grow food without chemicals they were not highly developed systems. They lacked the research information we needed to build soils and obtain equivalent yields without chemical inputs. Educators and extension agents who advised farmers did not have the organic experience nor the information to be able to assist us. Developing our successful organic system over these decades has required a great deal of experimentation, observation, risk-taking, communicating with other organic farmers and consumer education.

It is important to understand that organic farming is a completely different paradigm. It is not just input substitution. Organic systems are based on creating ecosystems of biological diversity and soil health. Since organic systems are knowledge and management based systems, without research, success can be evasive. We need well-staffed, qualified research universities to deepen our understanding of organic ecosystems. We need extensive seed and breed development aimed at the goal of serving local and organic production needs. For beginning and conventional farmers wishing to transition to organic production, adequate research and education will make the difference between the long and difficult experimental process which we experienced and an informed short path to successful production and quality product for this high demand market.

Organic farming has different research needs than conventional and it is not applicable to simply apply conventional research information and developed products to organic systems. Recent research at the Rodale Institute is a good example of different types of research needs. USDA soil microbiologist David Douds is studying mycorrhizae fungi.

He has found that some crop species have increased yields of 50% when rotations include winter cover crops which provide year round hosts to this highly beneficial fungi. Rodale is presently studying how farmers can best produce these fungi on their own farms for low cost, non-toxic, soil building fertility. This type of research helps not only organic farmers but also any farmer wishing to reduce chemical fertilizer inputs. This type of research also benefits all Americans by helping to protect our air and water. We need MUCH more of this type of research.

I am very excited when I think of how rapidly organic systems will advance when we have more research to study and develop biologically based agriculture. When we have seed varieties developed specifically for organic systems instead of the few untreated varieties available to us from conventional development; when we have better understandings of nutrient cycling, microbial life and the effects of agricultural practices on it.

Now that we have developed a soil building system for our farm, we find that our yields and cosmetic quality are equivalent to our conventional neighbors in an average year and we have higher yield and better quality in a stressful year. This is because our soil building system increases soil biological life and organic matter while also protecting against erosion and reducing nutrient leaching. Our experience has been confirmed by research at the Rodale institute, which has had similar results in research on organic vs. conventional commodity crop production.

Another important issue to recognize at this time of global warming concerns is: Organic farming IS an alternative energy system.

In healthy organic systems, the majority of the energy to feed the plants comes from soil building practices rather than fossil fuel based fertilizers. The Rodale Institute conventional/organic field trials document that organic systems use 1/3 less fossil fuel, largely because of the massive amount of energy required to synthesize nitrogen fertilizer. The other really exciting energy related research finding is that organic systems carbon sequester 15-28% more carbon. Because soil organic matter is primarily carbon, increases in soil organic matter levels directly correlate with carbon sequestration. While conventional farming typically depletes soil organic matter, organic farming builds it through the use of compost and cover crops. That translates into more than 1000 lbs of captured carbon (or about 3,670 lbs of CO₂) per acre-foot per year, or 1- 320 acre farm taking the carbon from 117 cars out of the air < and that's not even counting the reductions in CO₂ emissions represented by the organic systems' lower energy requirements.

As water issues become increasingly pressing, organic systems will be increasingly valuable. It has been shown in USDA funded research that organic systems drastically reducing nitrate leaching. Other research findings show lower water requirements and better performance in drought conditions.

It is absolutely crucial that we develop the organic research and educational systems to make the how-to knowledge of these highly beneficial organic systems available to any farmer who wishes to learn them and in the process to every American resident who wishes to support and consume domestically produced organic food.

Please, support funding for organic research, seed and breed development, organic cost-share funding and full funding and implementation of the Conservation Security Program.

Thank you for your consideration of this crucial matter,

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