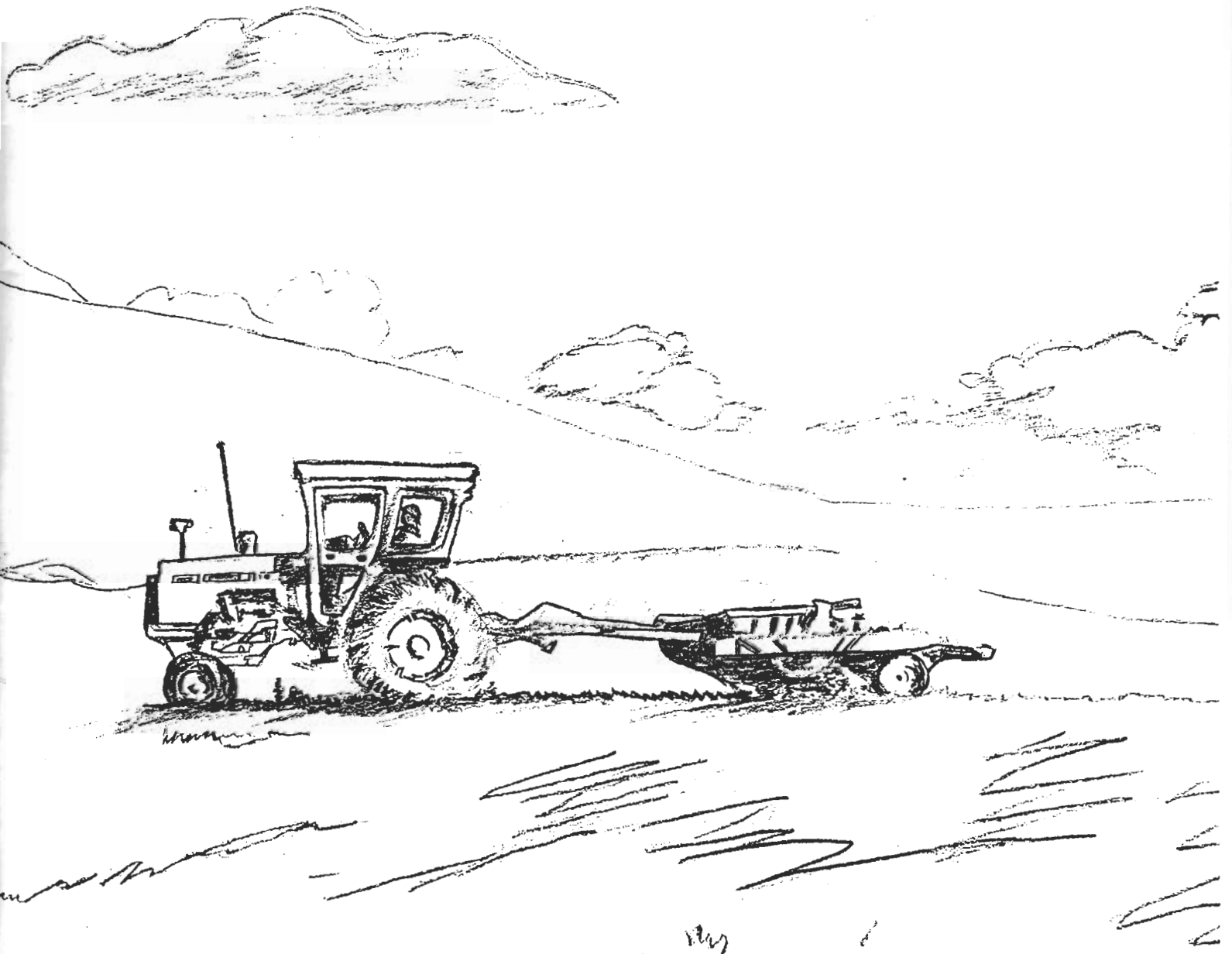


# Organic Dairy Farming

Kickapoo Organic Resource Network



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### Kickapoo Organic Resource Network

K.O.R.N.

A committee of the  
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Main Street  
Gays Mills, WI 54631

Compiled and written by Laura Benson and Robert Zirkel  
Layout by Gloria Derksen  
Illustrations by Pam Taliaferro



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RD 1, Box 96

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tel. (608) 735-4717

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**This booklet is dedicated to the organic and conventional farmers who spent hours working with the authors to tell us how it's done.**



ORGANIC DAIRY FARMING

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# Chapter 1

## Going Organic

### *Definitions of organic and sustainable*

We are nearing the end of a century during which agriculture has undergone an incredible transformation. Traditional methods of fertilization and pest control, which developed over several thousand years, have been replaced in mere decades by the “Green Revolution.” Unfortunately, it is becoming increasingly obvious that the “green” refers more accurately to the profits of agribusiness and chemical companies than to any improvements in either crop quality or to the profitability of the individual farmer. Increased yields in the short term are a paltry trade-off for a steady decline in the number of farmers able to continue farming, a decline in water quality for both rural and urban dwellers, decreased soil tilth, as well as health problems for farm families due to chemical exposure. The recognition of these factors is behind the decision of an increasing number of farmers to begin making the transition to a more sustainable method of agricultural production.

The easiest way to describe organic farming is to tell what it is not. It is not using anhydrous ammonia for nitrogen fertility. It is not using atrazine for weed control in corn. Both farmers and consumers have a general understanding that organic food comes from fields that have not used synthetic fertilizers or pesticides for three years. The three year transition time corresponds to observations made by many farmers that after prolonged agricultural chemical use, it usually takes about three years to rebuild and recover soil health and “no-spray” yield potential.

But the easy description doesn’t adequately explain a way of farming that emphasizes working with natural systems instead of trying to fight nature with technology, and that utilizes

on-farm resources instead of purchased inputs. Organic farming also supports and embodies the traditional concept of farmers as stewards of the land, conserving resources to preserve clean water and clean air, and keeping the soil where it belongs—in the farmers’ fields.

A common definition of sustainable agriculture is a system of food and fiber production that does not deplete the earth or other resources. Sustainable agriculture does not wear out or use up any resource, including the labor resource of the people who produce the food. One way to view the difference between sustainable farming and current conventional methods is to think of all the people who have been used up and worn out by farming. Organic agricultural systems promote and enhance sustainability in all aspects of “agri”-culture.

The people who are writing this book are biased. We believe that organic farming is the best, most logical, and quickest way to achieve sustainability. Reducing the use of synthetic chemicals is certainly a worthy goal, but organic farmers know that it is both possible and practical to eliminate them altogether. Not using synthetic chemicals at all is the best way to prevent herbicide contaminated groundwater, insecticide-poisoned wildlife, depleted and degraded soil, and farm worker exposure to hazardous chemical compounds. A big problem with pesticides is that they work too well. Their impact on non-target species is just too great a risk to justify their use. If you’ve already decided that you need herbicides or fly bombs to run a dairy farm, we invite you to re-evaluate what those products do for you and how much they cost in money and environmental damage.

### ***Why Do Farmers Choose Organic Farming?***

While there are nearly as many reasons for deciding to farm organically as there are organic farmers, some dominant themes become apparent. An important factor for many farmers is a distrust and dislike of agricultural chemicals. Some farmers have had unpleasant experiences with chemicals, from herbicide drift to triazine-resistant lambsquarters. Others came to believe that reliance on synthetic fertilizers and controls threatened their independence. Jim Wedeberg of Gays Mills, Wisconsin, puts it succinctly, "I don't like chemicals."

Wayne, Roger, and Rory Peters milk 80 Holsteins and raise 100 acres of corn on their organic farm near Coon Valley, Wisconsin. Wayne says, "I was never big into chemicals. I only used atrazine, probably because I was cheap. We just quit. You know how it is, you just use it because everyone else does." Wayne further explains that he came to think that

"using chemicals weakens something else." Organic farmers tend to view herbicides and insecticides within a broader context as "biocides," which eliminate both beneficial predator insects and soil organisms necessary for healthy, productive soil. Family health concerns related to chemical use are another important consideration for many organic farmers.

For some farmers, organic production was the only option from the beginning. Dave Engel, who farms 340 acres and milks 35 Jerseys, says he started farming organically "because I didn't know any better." Ten years later, Dave still doesn't know of any better way to farm. While some farmers mention environmental issues as the primary reason for "going organic," others will say economic and farm profitability considerations were paramount in their decision.

For many farmers, "organic" represents a point-of-view as much as a certain production

## **Organic Trade Association ( Formerly OFPANA)**

### **Definition of Organic**

Organic food production systems are based on farm management practices that replenish and maintain soil fertility by providing optimal conditions for soil biological activity; and reduce the use of synthetic fertility and pest control materials and reliance on non-renewable resources.

Such systems seek to emulate natural ecosystems which achieve stability through diversity and the recycling of energy and nutrients.

Ecological farm management relies on building soil humus through crop rotations, recycling organic wastes and applying balanced mineral amendments. Along with the use of resistant varieties, this minimizes problems associated with pests and disease. As necessary, mechanical, botanical and/or biological controls with minimum impact on health and environment are implemented.

Organic foods are processed, packaged, transported and stored to retain maximum nutritional value, without the use of artificial preservatives, coloring or other additives; irradiation or synthetic pesticides.

## Going Organic

system. This point-of-view regards the soil and its health as the foundation of the farming enterprise. The organic farmer feeds the soil and lets the soil feed the plants, rather than merely using soil as a medium for transferring nutrients from factories to plants. The organic perspective emphasizes the interrelationship of biological processes and attempts to balance potential results with possible consequences.

Like any cross-section of the agricultural population, organic farmers represent diverse

backgrounds and disparate philosophies. But they are united in their conviction that organic agriculture is the best alternative for farmers who want to ensure that future generations will still have the resources to feed themselves and that it also represents the best hope for the survival of the family farm. It is our hope that this booklet will provide some fodder-for-thought and some convincing reasons for further consideration of the organic alternatives.



*Healthy, alert cows are the product of good dairy management. This goal can be realized without the use of synthetic chemicals.*





*This large dairy in Idaho is organic. Is it also sustainable? The limited water resources in the arid western United States will probably define what types of agriculture can survive there.*

***As We Grow — David Bruce***

What is a family farm? Where is the line between family and corporate farms? These are hotly contested, emotional issues. We are not out to define that line, yet we have come to a point where we feel uncomfortable about what is on the other side of that line.

We have deep concerns about the emergence of huge, thousand-cow dairy farms that are qualifying as organic primarily because of the feed they are buying. We believe—and the consumer feedback we get supports our belief—that organic farming also has a basis in appropriate scale, that organic farms are whole systems based on the healthy balance of all the internal and external pieces, where the owners are the farmers, and they spend time shoveling organic fertilizer with the rest of the family.

... We object to the industrialization of agriculture, the attempt to mandate large scale farming in order to be economically viable. We object to forcing the farmer and

the cows, hormonally or otherwise, into being nothing more than production units. We feel strongly that organic farming is more than just a set of rules. Sustainable farming must be reflected in a sustainable life for the soil and farmer. Cost of goods and the lowest possible price on the shelf are what has pushed out so many farmers already. We refuse to follow along playing someone else's game. Our hope is that the people consuming our products will support us in our beliefs and our efforts, and that we will send a message to organic and conventional farmers that we don't need to be swayed from what is obvious from behind the working end of a shovel: there is only so much of this stuff anyone can pitch in a day. And every bit of it is a valuable resource.

Excerpt from an article originally published in the September, 1994 edition of the *CROPP Report*. Reprinted with permission.

*David Bruce is an organic farmer and the vegetable and egg pool coordinator at Coulee Region Organic Produce Pool.*

## Chapter Two

# Obstacles to Conversion

There are many farmers interested in sustainable agriculture who haven't switched to organic production. Some people believe the organic option is unrealistic. They have relied on synthetic inputs for various components of their operation and find it hard to consider cultural controls that will keep insects below economic thresholds rather than pesticides that will "kill bugs dead." Economic constraints prevent others from trying out new ideas. There are many potential barriers to organic farming, but none of them are insurmountable. When a family decides to make an organic system work on their farm, the largest obstacle to conversion has already been overcome. As organic farmer Bill Warner of Dodgeville, Wisconsin, says, "If you do what you like, you're going to find a way to make it work."

### *Soil Health*

Every farm has a specific management history, so every farmer has a different starting point in converting to an organic system. Farms with good soil health need not experience yield losses. Farmers who are working fields with poor tilth will see reduced yields at the beginning of an organic program. This is especially true for fields that have received multiple applications of anhydrous ammonia instead of manure or legume plow downs. Farmers talk about anhydrous ammonia making the soil hard. Soil scientists talk about decreased organic matter levels. The remedy is to start adding organic matter with standard farming techniques: manure applications, green manure plow downs, and rotations including soil conserving crops.

The three-year waiting period from the last use of synthetic inputs is an arbitrary standard

for possible certification, but numerous farmers have needed that much time for organic crop yields to come back to "conventional" levels. The best advice is to use common sense. Converting one field at a time or one part of the farm may cushion crop losses until tilth is recovered. Split certification is allowed with these circumstances in mind. Organic conversion field trials at the Rodale Research Center near Kutztown, Pennsylvania, showed that starting the organic rotation with a legume or small grain showed the least yield reduction. Beginning an organic rotation with corn was the poorest choice, with severely reduced yields.

Organic farming is not a euphemism for weedy, infertile fields and thin cows. Certification committees don't want to see farms that are organic by neglect. The nutrients that field crops need can be provided by organic soil amendments. Weed control and pest control can be achieved through rotation, tillage, grazing management, and practical farming. If there is a failure in some part of the farm management, an organic farmer needs to be ingenious enough to fix the problem without pouring chemicals on it.

Continuous corn deserves its own sub-heading as an obstacle to conversion. If the soil is packed with plant pathogens and insect pests for the succeeding crop, the soil isn't healthy. As organic farmer Ray Hass says, "We've just got to get back to rotation."

A cropping systems trial at the University of Wisconsin showed corn yields following soybeans were 15 to 20 percent higher than continuous corn, even though soil tests indicated both rotations had adequate nutrients.

Some producers have decided they need to keep up their corn base for eligibility in commodity programs. Without a subsidy, rotating corn gives a better margin of return.

When a dairy farm is trapped into continuous corn because the herd is not sized to the available tillable land, something will have to change before organic production is a serious option. This can be approached from any side: finding more acreage, making feed purchasing arrangements, or downsizing the herd. Sizing the herd to the available land is the most desirable option. It will also assure adequate land for manure disposal.

### *Marketing*

“Try to take control of your markets. I think the farm marketing system is a shambles. It’s a scam, really,” says organic beef farmer and direct marketer Gordon Reisgraf. In conventional marketing, consumers barely have a connection to the farms where their food is produced. Consumers don’t recognize their purchases as the economic force driving a certain system of farming, processing, and sales.

The people selling certified organic products ask consumers to pay a premium for the organic label and the farming system it represents. The farmers need to pass on the added costs of inspections and record keeping. Just how many consumers are willing to spend their grocery dollars in support of an alternative farming system? No one can accurately predict future market trends, but the Organic Trade Association (formerly OFPANA) has tracked 30% increases in organic sales in the past two years. Organic production accounts for somewhat less than 1% of U.S. food sales, so it is obvious that there’s a lot of progress yet to be made. The magnitude of the changes needed in consumer education and marketing seems overwhelming at times. Dairy farmers usually never meet or talk to the people who drink their milk, but this may be the time to start making those

connections. City people who have never hung a milker on a cow will help determine the level of organic milk production in this country.

### *Infrastructure*

Farmers who choose certified organic production are restricted to purchasing certified feeds and inputs. The infrastructure for exchanging organic products is immature, and farmers are feeling those growing pains. Grazer and dairy farmer Dan Patenaude says, “We were certified—let me see, it’s been a few years back now—partly to try out the process. There wasn’t any market, so we dropped it for a year, mostly to save certification costs. Then we joined the CROPP dairy pool. We’re considering dropping out of the pool now. The feed supply is expensive and difficult. At the moment the organic grain industry is still developing, but it’s not anything like what’s available to the conventional dairy operator. You are limited to corn and soybeans. The conventional operator has all manner of dealers with supplements, cottonseed meal, concentrates, and more.” Until Patenaude switched to his current supplier, he would buy organic feed by the semi-load. The feed needed to be stored separately and ground separately at the feed mill. Then Patenaude would pick up the load. Patenaude says, “We feed two tons per cow per year, so it took four months to get through a semi-load. There was a big quality problem [with one load]. By the time we got through the load we had a lot of sick cattle. It’s a function of the supply system. Normally, quality is variable in an odd year. But you only get a batch of it.” Although his new supplier is delivering three ton batches of a 14% protein complete feed, Patenaude thinks that time off the milk truck may be necessary to allow a new group of heifers to reach the milking string. In 1993, organic 14% protein feed cost Patenaude \$200 per ton.

Does he miss antibiotics? “Not really,” Patenaude says. “We never did have much

## Obstacles to Conversion

success with that sort of thing. Mastitis is far easier to prevent than it is to treat. Animal health and feed are closely related. With 30,000 dairy herds in Wisconsin and a long history of dairying, there is a huge supply infrastructure. It's also true in terms of animal health. If we have a spot problem with an animal we can call three or four vets, but none of them knows anything about organic. We don't have an inventory of organic treatments that we can use on a spot basis. You can call someone else and ask what they do for mastitis or call Marta Engel. [A veterinarian who practices holistic medicine.] It's not like the conventional producer who picks up a phone, calls a vet, and gets a treatment. There really isn't any magic bullet. You've got to manage to prevent problems. It's been good for me and I think it would be good for the dairy industry [to go without antibiotics]. There's a tendency to look for some solution that we can buy off the shelf. Antibiotics are greatly overblown. It's an 'emperor's clothes' kind of deal."

As organic dairy farmers grow in number, forming feed pools may help some of the supply problems. Farmer networks may also serve as a source of information for herd health issues and problem solving. Instead of being chemical intensive, organic farming is information intensive. Traditional sources of agricultural information, such as extension or the local vet, may not be inclined to search for a different answer when an antibiotic or an insecticide would do the job. The bright part of the picture is that increased emphasis is being put on preventive medicine and more farm publications are being directed towards a low-input approach.

### *What Will the Neighbors Think?*

The stigma attached to going organic usually doesn't last. The best public relations tool for organic agriculture is a thriving farm that doesn't need chemicals. Neighbors were skeptical when Ray and Allen Hass quit using

herbicides in the late 1970's. Then came the drought of 1988. According to the Wisconsin Agricultural Statistics Service, corn harvested for grain averaged 74.3 bu/acre in Vernon County that year. At the Hass farm the best field yielded 180 bu/acre of corn while the lowest field yielded 120 bu/acre of corn. Allen Hass recalls, "We had a field day that year. The neighbors that did come were impressed."

The neighbors' opinion can be more of a sore point when family members disagree about chemical use. Dairy farmer Francis Thicke related this story of conflict during an intergenerational farm transfer. He was farming with two of his brothers in southern Minnesota when they stopped using chemicals in 1976. Thicke says, "I grew up on the family farm. I have six brothers. With a lot of brothers there's always differences of opinion anyway. But when we started in the 70's, we quit chemicals cold turkey. We were trying to phase my dad out of the farm, frankly. He was old enough to let go of the reins, but he didn't want to. . . . We were constantly in battle with him about any kind of change. But he was worried about what the neighbors would think. Fortunately we were back in the sticks so no one saw too much. But some of our land was out a little more exposed and we had some failures. We tried to grow corn and tried different things, and sometimes we didn't do so well. So there were some conflicts there and the neighbors thought we were a little flaky. But eventually my father did let go of the reins and that helped a lot. . . . Ultimately he began to see that we were having success. The newspapers were writing us up sometimes and people were coming to see the farm. Then he started to be proud of what we were doing."

While Francis is now farming in Iowa, the Thicke home farm is still going strong. It has already begun the next round of intergenerational transfer as one brother pursues other interests and a nephew takes his place. Francis adds, "It's working out well."

## *Additional Resources*

### Publications

*Sustainable Agriculture Resources and Information Directory and Greenbook '93.* Minnesota Dept. of Agriculture, Energy and Sustainable Agriculture Program  
90 West Plato Boulevard  
St. Paul, MN 55107 Tel. (612) 296-7673

The Art of Natural Farming and Gardening. Ralph and Rita Engelken. 1981. Barrington Hall Press: Greeley, IA. [Rita and her late husband were pioneers in organic agriculture.]

An Agricultural Testament. Sir Albert Howard. 1940. Oxford University Press. [An influential and classic book arguing that chemical fertilizers are not the answer to fertility problems.]

Dr. Twisted Visits A Farm. 1994. Kamyar Enshayan. Self-published. Address: 1703 Washington St., Cedar Falls, IA 50613. [A light-hearted look at the serious topic of land grant university research and extension.]

"The Krusenbaum Farm: A Case Study in the Establishment of an Organic Dairy"  
Project updates available through:  
Center From Integrated Ag. Systems  
1450 Linden Drive, Room 146  
University of Wisconsin-Madison  
Madison, WI 53706  
Tel. (608) 262-5200

Information on sustainable, organic, and biodynamic farming available through:  
Micheal Fields Institute  
W2493 County Rd ES  
East Troy, WI 53120  
Tel. (414) 642-3303  
[Biodynamic farming is a system of agriculture based of the philosophy of Rudolf Steiner.]

### Organizations

The Land Stewardship Project  
14758 Ostlund Trail North  
Marine, MN 55047  
Tel. (612) 433-2770. FAX (612) 433-2704.  
[Publishes a newsletter and videos. Fee-based workshops on holistic resource management.]

The Wisconsin Rural Development Center  
1406 Bus. Hwy. 18/151 E.  
Mount Horeb, WI 53572  
Tel. (608) 437-5971  
[WRDC has worked in the areas of rotational grazing and farm credit. Publications include: *Profits or Production: The Economics of Low-Input and Conventional Dairy Management.*]

The Minnesota Food Association  
2395 University Avenue, Room 309  
St. Paul, MN 55114  
Tel. (612) 644-2038  
[Ag. policy organization with a newsletter. Works with urban-rural connections.]

Leopold Center for Sustainable Agriculture  
126 Soil Tilth Building, Iowa State University  
Ames, IA 50011  
Tel. (515) 294-3711. FAX (515) 294-9696.  
[The Leopold Center sends out a list of available publications including a newsletter. Numerous field days and workshops.]

Faye Jones, Education Outreach Coordinator  
WI Chapter Organic Crop Improvement Assn.  
N7834 County Road B  
Spring Valley, WI 5476  
Office Tel./FAX (715) 772-3153  
Home Tel. (715) 772-3104  
[The WI Chapter holds educational events and publishes a newsletter. Jones also coordinates the Upper Midwest Organic Farming Conference, a two day conference usually held the 1st weekend in March.]