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Opportunities for Organic Crop Production

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Overview of CRP Impacts

As the 1985 Conservation Reserve Program (CRP) draws to an end, discussion about future uses of those acres steadily increases. A substantial number of acres will be coming out of CRP very soon, and many farmers/landowners are considering using the land for crop production. One option for ex-CRP lands is organic crop production. Land to be used for organic food production needs to be synthetic chemical-free for three years, as first established by independent organic growers and buyers and then made federal law in the 1990 Organic Foods Production Act. Most CRP land has passed right through

the transition period and is ready to be in full organic production.

Today's agricultural markets are relatively stable and predictable. The arena of high growth and increasing profits is organic food production. An article in the May 17, 1995 *New York Times* discusses organic farming's growth. According to the article, "Sales of organic food in the United States have soared 23 percent each year for five years, to \$2.2 billion in 1994." This growing organic food market demands a variety of products from fruits and vegetables, to soybeans and corn, to organic livestock fed with organic grains. The limiting factor in satisfying these growing markets is synthetic chemical-free land on which to grow organic crops. Ex-CRP lands fit this need, and organic farming can provide for new production opportunities as well as compliance with conservation goals.

This publication discusses some of the issues Indiana farmers should be aware of as they consider organic food production. Sections on "Regulating Organic Crop Production," "Marketing Organic Crops," and "Producing Organic Crops" outline the potential pitfalls and promise of this new production opportunity.

Regulating Organic Crop Production

Regulation of organic crop or food production is a complex but important matter currently being addressed at the federal and state level. Issues such as standardization of organic rules, methods for certifying organic products, procedures for "certifying the certifiers," and definitions of organic food and organic food production are in the process of being resolved. Farmers and landowners considering the option of organic food production should be aware of these issues and their ramifications.

Organic Law: States and Federal

While numerous private organizations have formed among organic growers (see list), the first state to pass legislation aimed at organic agricultural products was Connecticut in 1979. Since then, many states have enacted organic legislation, including Indiana in 1993.¹

Organizations for Organic Growers

Organic Crop Improvement Association, Inc.
 Organic Growers and Buyers Association
 Farm Verified Organic
 Demeter Association, Inc.
 Northeast Organic Farming Association
 Organic Verification Organization of North
 America/ U.S. and Canadian divisions
 International Federation of Organic Agriculture
 Movements

In 1990, as part of the Farm Bill, the Organic Foods Production Act of 1990 was passed. With it came the National Organic Standards Board and the beginning of regulations that could standardize organic rules from the federal level. A stipulation to the legislation, however, was that the federal rules were not in effect in a state until it had its own organic laws. At that point the federal standards became the minimum. The states could require more stringent standards, but not less.

The Organic Foods Production Act of 1990 (OFPA) was directed at establishing methods to certify organic products as well as methods to certify the people and organizations who would be accomplishing the certifying of organic products. Realizing the limitations of accomplishing such a large task in a single document, Congress instructed the Secretary of Agriculture to create the National Organic Standards

Board, which would be responsible for designing and implementing the rules.

The National Organic Standards Board (NOSB) is composed of 15 members² of which

- "(1) Four are individuals who own or operate an organic farming operation;
- (2) Two are individuals who own or operate an organic handling operation;
- (3) One is an individual who owns or operates a retail establishment with significant trade in organic products;
- (4) Three are individuals with expertise in areas of environmental protection and resource conservation;
- (5) Three are individuals who represent public interest or consumer interest groups;
- (6) One is an individual with expertise in the fields of toxicology, ecology, or biochemistry; and
- (7) One is an individual who is a certifying agent as identified under section 2116."

The Board has worked on the arduous task of defining and interpreting the Organic Foods and Production Act. In June 1994, it finished the *Final Recommendations*, and the process of preparing the Proposed Rule for the Federal Register began. According to the USDA, publication is anticipated for early to mid-1996.

Indiana Laws and Practices

The federal law does not require states to have an organic agriculture policy. However, if a state does pass legislation pertaining to organic production, the federal requirements have to be satisfied as well. As noted earlier, Indiana passed its Indiana Organic Certification Accreditation law in 1993.³ Essentially, Indiana's law states an intent to use the national standards for now and to create an "Organic Peer Review Panel."

The panel will establish standards to review certifying agents, review all applicants every three years, report to the Commissioner of Agriculture in Indiana on the applicant, assist the commissioner in evaluating applicants, and establish fees to be paid by applicants. The panel will have nine members "who have knowledge in techniques involving the growing of organic products and have experience in the field of organic agriculture." As of May 1995, Gov. Evan Bayh had not yet appointed the members of the panel.

Indiana growers can still become certified, however, through some of the nationally accredited organic groups. There are two major active organic groups in Indiana: Organic Crop Improvement Association and Indiana Organic Growers Association Inc. (See the last section of this publication, "Steps to Becoming a Certified Organic Producer," for additional information.) Both groups have informative packages ready to send to prospective organic producers with information and forms to become certified. Following these steps should prepare a grower for the coming Indiana and federal regulations.

Certifying Agents in Organic Agriculture

Organic growers are certified by certifying agents who have been approved by the state in which they operate and by the USDA. These agents are the representatives who enforce organic legislation on a

case-by-case basis. Production standards that growers and handlers need to comply with are interpreted by the certifying agent.

This responsibility of the certifying agent is illustrated in the National Organic Standards Board's *Final Recommendations*, which interprets the Organic Foods Production Act of 1990. For example, the certifying agent has to determine economic responsibility for drift or misapplied chemicals that affect organic crops. The responsibility for that decision is enormous, since it also includes boundaries surrounding an organic field. According to the law, physical boundaries separating traditional and organic agriculture are needed to prevent chemical drift. The law also states that the same machinery cannot be used for traditional and organic agriculture without being cleaned in an approved manner. There is no feasible way for the law to completely describe what is acceptable in every situation; it is the responsibility of the certifying agent to make those decisions. Thus, selecting a certifying agent is an extremely important task, and potential growers should discuss their production plans with several potential certifying agents and organizations.

What Is Organic?

Organic farming is often described as synthetic chemical-free, but as with most rules, sometimes there are exceptions. At this time, the National Organic Standards Board has not completed its review of products that are eligible for the National List of allowed and disallowed synthetic chemicals. Everything from treated seeds to fungicides to pesticides is to be determined. This obviously is important, particularly for certain types of seed which are currently unavailable without pretreatments. If a grower is trying to convert to purely organic production, transition may be difficult, to say the least. The National List is due in 1996. The publication of this list should clarify the federal definition of organic and speed the development of the organic industry.

Another area under debate concerning potential exceptions is the ongoing issue of government-authorized spraying for infestations. Such occurrences are infrequent these days, but they have been quite common in the past, as examples from Carson's *Silent Spring* can attest. For instance, in efforts to eradicate the Japanese beetle in eastern Illinois in 1954, dieldrin was sprayed every year until 1961 at a rate of up to three pounds an acre. Time has taught us the ill effects of this particular chemical in those quantities, but eradication efforts still occur. A present-day example is attempts to eliminate danger from killer bees. How these actions affect an organic grower's standing and quality has not been given any clear interpretation.

One other question that conventional farmer-operators considering some organic production will ask, or should ask, is: "Does the law expect us to convert quickly and completely to organic production?" The answer is described in the National Organic Standards Board's *Final Recommendations* (p.16): "In a farming operation where both organic and nonorganic fields, crops, or livestock are managed, the time table and level of transition to organic production is at the discretion of the producer.... Organic certification should be determined solely on the basis of the farm's compliance with the OFPA." The interpretation is that as long as what is grown organic stays within the rules, no pressure will be given by the law to quickly convert the producer's entire operation to organic

Marketing Organic Crops

An important question is where to sell organic grain. The law dictates that organic grain needs to be handled, processed, and stored in facilities separate from conventionally grown and handled grain.

Obviously, the local grain elevators don't have the necessary facilities. However, this is not an insurmountable obstacle. Organically produced crops can gather a higher premium than conventional crops, and a little more trouble in getting the crop to market may be worth it in the end financially.

Market Potential for Organic Crops

Markets do exist for organic products. While farm gate sales and U-picks may seem to be the obvious markets, they may not be the best choices, particularly for products that are not marketable to the public unprocessed. Niche markets do exist for organic products, but it is up to growers to find the buyer. Fortunately, increasing numbers of resources are available to help find the markets. Two are listed here:

Organic Market News
Farmers Information Network
P.O. Box 2067
Santa Clara, CA 95055-2067
Ph. 408-247-6778 ext 3
Fax 408-247-5823

National Organic Directory (current ed.)
Community Alliance with Family Farmers
P.O. Box 464
Davis, CA 95617
Ph. 800~852-3832

The Farmers Information Network already publishes the *Organic Market News*, which is "comprehensive wholesale price report for over 120 varieties of organically grown fresh fruit, herbs, and vegetables 21 times per year." In January 1995 it announced that it would expand its delivery system and "develop a new monthly price report publication on organic beans and grains."

The Organic Directory provides "1,000 cross referenced listing of commodities bought and sold, as well as organic business contacts." It is an excellent reference guide to organic farmers and wholesalers and services customized to organic production.

While not specifically designed toward Indiana crops, publications like *Northern Plains Organic Crops Marketing Analysis: Wheat Oats Sunflower*⁴ provide a great deal of general information about how the organic market works. The topics they focus on include: supply and demand analysis, producer perceptions, suggestions to enhance demand, buyer/processor responses, and distributors' and retailers' responses.

A discussion of marketing organic crops like soybeans has to include a discussion of Japan. An advertisement for organic production published apparently for joint publication in Minnesota and Japan discusses in bilingual columns the demand in Japan for U.S. grown organic products. It includes statistics like: "In Japan, organic food sales grew 91% from 1984 to 1989, with Japan's imports of U.S. organic foods growing by more than 80% every year since 1987." The Minnesota organic growers are definitely trying to obtain a portion of that market, and it seems realistic to expect that Indiana could also achieve some success.

Michigan has also taken steps to control the marketing of organic products for the producers' benefit. In a May, 1995 *American Small Farm* article, Dick Lehnert discusses markets that Michigan organic producers have found. According to Lehnert, the Michigan organic producers have found numerous markets. In Michigan, Eden Foods and Ohio Processing, Inc. are listed by name as being "excellent local markets." The European market is considered good for spelt, as is Japan for clear-hilum soybeans.

Lehnert also included a table (Table 1) which came from the *Organic Farmers of Michigan*. The prices are what the organic producers in Michigan believe are realistic expectations for farm gate prices for organic growers. The list of prices is their attempt to tell the market what they expect for their goods; however, the prices are not what they actually receive.

As can easily be seen in Table 1, organic foods bring higher prices than conventionally grown foods. It can be surmised that the returns can be 15 percent to 50 percent more for field crops and as much as 200 percent more for fruits and vegetables. The two large food processors mentioned above as Michigan's local markets are also accessible here in Indiana.

Table 1. Target Prices for Organically Grown Commodities, FOB Farm Recommended by Organic Farmers of Michigan, February 1995.

Commodity	Cents per Pound	Commodity	Cents per Po
Navy beans	.50-.60	Barley (pearled)	.22
Great northern beans	.60-.65	Spelt	.16-.21
Black turtle beans	.65-.75	Spelt (hulled)	.50-.60
	.60-.65	Corn (soft market)	.10-.12
Mex. small red beans	.50-.60	Corn meal	.40
Dark red kidney beans	.70-.85	Corn meal (white)	.50
Adzuki bean	.90-1.20	Corn open pollinate	.12-.14
Pink beans	.65-.70	Flour: whole soft wheat	.40
Garbanzo beans	.60-.65	Flour: whole hard wheat	.40
Cranberry beans	.65-.70	Black soybeans	.40-.50
Hard red winter wheat	.14-.16	Clear soybeans	\$14-17/
Soft red winter wheat	.12-.14	Soybeans, general	\$9-11/k
Hard red spring wheat	.14-.16	Vinton, Beeson soybean	\$17-21/

Source: Lehnert, Dick. "The Two Food Streams of Agriculture," *American Small Farm* 4(5)(May 1995):27-29.

*The described target price is not defined in the Lehnert article, but is believed to referred to USDA's target prices for the commodity in question.

Potential Problems in Marketing Organic Crops

As with any crop, there are problems. In terms of selling an organic crop, there are two main issues. The greatest difficulty is maintaining quality, because there can be a certain amount of rejection of the commodity by wholesalers and retailers on those grounds. This is a loss that has to be accounted for in the budgeting process. However, in many cases even including such costs, the returns can still be higher than conventionally grown crops.

The other issue is an ethical one. In the *New York Times*⁵ for May 17, 1995, the ethics of organic producers and handlers came to the public's attention. In San Diego, California, a class-action lawsuit has been filed on behalf of organic-food consumers by Nina Hopkins Brothers, an organic-foods educator, charging that two produce companies and two certification associations sold some Mexican bananas that had been treated with a fungicide, as organic.

Although the case itself, about organic fruit in Mexico and California, seems hardly relevant to organic soybeans in Indiana, the impact that it can have on public opinion and support of the organic- foods market is worthy of concern. So far, the case appears to have had a very limited effect. However, if more such cases should occur, the consumer's willingness to pay a premium for food labeled organic may be eroded.

Producing Organic Crops

Cost of Production Estimates for Organic Crops

Demand for organic agricultural products is rapidly expanding in the United States. While the fast-growing demand has been for fresh fruits and vegetables, demand for field crops is developing. As can be seen from the expanding demand and the prices being received for organic field crops, it may be a good time to explore this opportunity. However, in comparing organic production to traditional production, farmers must take a few outstanding differences in management into consideration. Organic production is more labor-intensive, less chemical-intensive, under a different set of government regulations, and may yield higher profits at the market. The increased profits come from the greater demand than supply and the amount of risk assumed by the farmer to produce the crop.

It is difficult to find cost-of-production estimates for organic field crops because the approach is relatively new and unexploited. However, a publication of the Minnesota Department of Agriculture made some of these statistics available. A project entitled "Making the Transition to Certified Organic Production"⁶ has a timetable of three years, January 1993 to December 1995, the required time to bring conventionally farmed ground into organic production. The results for 1993 were provided: "This year was extremely wet, which obviously had an effect on the outcome of the demonstration. No pesticides were used on any of the fields, and no-till and conventional planting methods were utilized. Yields for soybeans and sunflowers were good, but wheat yield was low due to wheat scab. A transitional market for soybeans was found that paid \$9.00/bushel. The conventional market for sunflowers was artificially high this year because of demand due to flooding-the price was \$.22/pound." Table 2 includes the costs of production and profits that were realized in this first year of transition.

Table 2. Yields and Returns For Transitional Organic Production.

	Field Size (acres)	Yield	Price(\$)	Gross Income	Total Input Costs (seeds, fuel, labor)	Net Income
Wheat	64.2	15bu/a	2.25/bu.	33.75/a	55.97/a	-22.22/a
Soybeans	73	28bu./a	9.00/bu.	248.69/a	50.94/a	197.75/a
Sunflowers	48	1100#/a	0.22/#	241.96/a	42.23/a	199.73/a

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Another study done by the Center for Alternative Agricultural Systems at Purdue University⁷ compared cropping systems and rotations. One of the options compared was, "a low-input system using no purchased fertilizer or pesticide inputs." The study included corn, wheat, canola, oat, and soybean production. Table 3, the soybean production table, illustrates the comparison.

Table 3. Average Soybean Yields (bu/acre).

Rotation	Low Management	Minimal Management	Standard Management	High Management
Corn/Soybean	41.375	43.063	45.063	45.938
Standard Deviation	20.575	22.101	14.888	16.434
Corn/Soybean/Wheat	42.375	46.500	49.250	52.375
Standard Deviation	14.142	15.427	9.943	11.436

As organic field cropping becomes more common, more studies will be done and more production figures will be available. In the meantime, low-input, sustainable agriculture statistics may help provide a picture of organic farming's financial feasibility. An example of low-input proximity to no-input production is also seen by comparing "low" and "minimal" in Table 3.

Steps to Becoming a Certified Organic Producer

Here are suggested steps you can follow in becoming a certified organic producer.

1. Determine if acres that you are considering for organic production have been synthetic chemical-free for at least three years, and have records to prove that the acres meet the requirement.
2. Learn about the current status of organic- agriculture regulation in state government. In Indiana, you can call the Commissioner of Agriculture's office for assistance.
3. Select a certifying agent. Knowing whether a certifying agent needs to be state certified will help you in evaluating credentials. Otherwise, begin with the Organic Crop Improvement Association, Indiana Chapter (current president: Cissy Bowman, 317/539-6935) or Indiana Organic Growers Association, Inc. (current president: Steve Beers, 812/597-4983). We are not endorsing either group, but they are both reputable and present in Indiana.
4. Work with the certifying agent you select to complete and submit the paperwork for becoming certified. He or she should also be able to help you locate the supplies you need to get started with your cropping.
5. Locate a market for your crop. For this step, go back to the "Marketing Organic Crops" section of this publication, and start working through your options. You may also contact the Commissioner of Agriculture's office, which has expressed interest in helping growers locate organic commodity markets.

In summary, any farmers considering production of organic commodities must carefully consider their access to certifiable acres, their skills at producing without many of the nutrients and pesticides they may be accustomed to, and their ability to market the crop at a premium sufficient to compensate for the additional costs, higher losses, and the paperwork complications.

Footnotes

1 Indiana Public Law 175-1993, Section 1, 15-4-12, *Chapter 12, Indiana Organic Certification Accreditation*

2 Title XXI - *Organic Certification*, P.L. 101-624, No. 28, 1990. 104 STAT. 3935.

3 Indiana Public Law 175-1993, Section 1, 15-4-12, Chapter 12. *Indiana Organic Certification Accreditation*.

4 Stearns, Larry D., and David L. Watt. *Northern Plains Organic Crops Marketing Analysis: Wheat Oats Sunflower*. Agricultural Economics Report No. 293, Jan. 1993. Fargo, ND: North Dakota State

University.

5 O'Neil, Molly, "A Question of Ethics Confronts Organic Food Industry," *New York Times*, May 17, 1995, pp. B1, B7.

6 *Greenbook '94*, Energy and Sustainable Agriculture Program. St. Paul, MN: Minnesota Department of Agriculture, June 1994.

7 *Alternative Agriculture: Cropping Systems Research*. West Lafayette, IN: Purdue University, Center for Alternative Agricultural Systems, Agricultural Experiment Station, 1993.

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