UK COOPERATIVE EXTENSION SERVICE
UNIVERSITY OF KENTUCKY — COLLEGE OF AGRICULTURE

Transitioning to Organic Crop Production

Introduction

The process of converting fields previously in conventional production to certified organic production is known as "transitioning." It is an extended, often challenging process that includes regulatory, production, and marketing components. Careful planning is important to a smooth, successful transition.

This profile provides an overview of various transition strategies, as well as the regulatory and economic aspects of transitioning. It is one in a series of introductory information sheets concerning organic crop production in Kentucky.

Regulatory Considerations

The USDA National Organic Program (NOP) is responsible for overseeing the process of organic certification. While any NOP-authorized certifying agency can provide organic certification, the Kentucky Department of Agriculture (KDA) offers this service to in-state farmers at a price below the national average.

Organic growers must comply with all NOP regulations to obtain certification. There is, however, one particular iron-clad rule that transitioning farmers need to keep in mind: organically managed fields must be free of prohibited materials for three years (36 months) prior to the harvest of the certified crop. The definition of prohibited materials covers a wide variety of substances that are used in commercial agriculture, including almost all synthetic pesticides and fertilizers.

The certifying agency is responsible for working with the producer to develop an approved Organic System Plan (OSP), in which the grower outlines the procedures that will be used to achieve, document and comply with NOP standards. The OSP should be implemented on all areas of the farm being transitioned to organic production. Producers are strongly encouraged to consult with their certifying agency at the beginning of the transition process, and not wait until it is nearly complete. A transitioning farmer is sure to have many questions, and consulting with an authorized certifying agent is the best way to obtain conclusive answers.

Marketing Considerations

Organic crop production is one of the fastest growing segments of agriculture today. U.S. sales of organic products have increased 20 percent annually for the past

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decade. Greater consumer interest in food quality and nutrition, public awareness of environmental concerns, and an increased desire for the preservation of local agricultural economies are all issues that will likely continue to fuel the demand for organic products.

Identifying markets for organic produce generally requires more time and effort than locating markets for conventionally produced crops. Marketing should always begin well before the first seed is planted. Organic growers need to locate a reliable market or markets, not only for their products once they are certified organic, but also for crops produced during the transition period.

Products harvested during the conversion to organic production cannot be labeled or marketed as "organic," "certified organic," or "100% organic." However, alternative labels, such as "in transition," "sustainable," and "naturally grown" may help convey the idea that the crops were produced under environmentally friendly management practices. Fresh market options include roadside stands, farmers markets, CSAs, local grocery stores, produce wholesalers, and produce auctions. Restaurants and health food stores may also be interested in locally produced transitional organic products.

Transition Strategies

Converting any portion of a farm from an established management system to an organic system will mean increased economic uncertainty. When deciding what transition approach to use, producers should determine the amount of time and effort that they can invest in the organic system, and how great an economic loss – if any – they can sustain during the transition.

Gradual approach

This approach involves progressively converting to organic production by temporarily combining conventional and organic practices before shifting exclusively to organic management. Because prohibited materials are used during this "pre-transition" period, the producer will still face an additional three-year wait before harvesting organic commodities. However, the gradual approach can minimize yield losses during the overall transition period and allow the producer to experiment with a variety of organic practices.

The gradual approach can mean employing organic pest management strategies while also using limited herbicides and pesticides in order to more effectively reduce pest populations going into the transition period. This approach can be particularly effective in fields with high weed and pest pressure. Similarly, producers can start adding compost and manure to fields to increase organic matter while cutting back on synthetic fertilizers. In other cases, the grower may choose to gradually withdraw one type of synthetic input at a time.

One field at a time

Transitioning selected fields of a farm allows growers to begin making the switch to organic production while still maintaining a portion of the enterprise in conventional agriculture. This practice, known as a "split operation," is allowed in organic certification if the producer establishes protocols to prevent contact between organic and non-organic produce from seed to market.

Transitioning only designated fields can help to minimize economic risk. The conventional fields should provide a reliable source of income while transitioning other fields. It can also provide the grower with the opportunity to gain experience in organic production on a manageable scale before converting the entire farm to organic production. Fields selected for transitioning should already have good fertility, healthy soil structure and low disease/pest pressure to allow for the best chance of success.

Whole farm

Often referred to as the "cold turkey" approach, transitioning the whole farm at once provides a quicker avenue to becoming fully organic. Carefully selecting crops and cover crops that can help build soil health, as well as varieties that are

pest-resistant, can help minimize yield declines that can occur during the transition period.

Immediate certification
Land that has been fallow or that has recently been cleared may be eligible for immediate certification. Conservation Reserve Program land may also meet the criteria for immediate certification. In order to qualify, a signed affidavit is required from the owner and/or previous owner(s) stating that the land has been free of prohibited substances for the previous three years.

Production Considerations

Building soil health
A healthy, biologically active soil is the foundation of successful organic production. Improving soil quality is one of the primary goals of the transition period. Depending on the initial condition of the soil, it can take several years of dedicated management to achieve significant results. Signs of improvement include an increase in organic matter content, enhanced water infiltration and retention (water does not exit soil too quickly or too slowly), greater soil aeration, and an increase in beneficial organisms such as earthworms.

Successfully incorporating new organic matter into the soil is the most effective approach for improving overall soil quality. This can be accomplished through the application of animal manures or compost, as well as skillful cover cropping. Generally, there are no restrictions on the source of the animal manure applied to transitioning fields so it is not necessary to obtain these materials from an organic operation.

Crop selection
Crop selection, including cropping sequence, is especially important during the transition period since it will set the stage for the certified organic years that follow. A well-planned rotation should result in enhanced soil health and fertility, disruption of insect and disease cycles, and weed suppression. While most crops that can be grown conventionally in Kentucky could also potentially be grown organically, some will require a higher level of knowledge and more intense management than others. Ease of production, natural pest levels, field conditions, soil type, grower expertise and available market should be considered when selecting suitable cash crops for the transition period.

Pest management
Transitioning from conventional to organic production can initially result in pest population shifts and temporary pest outbreaks. Prior to beginning the transition, some growers reduce pesticide applications and use low-toxicity pesticides to lessen the impact during the transition period. Over time, with proper management and with the increase of natural predators, organic producers can gain the upper hand. Even so, managing insect pests, plant diseases and weeds is generally considered to be the greatest challenge of organic farming.

Pest management in organic systems places a priority on prevention through good production and cultural practices. The goal is not necessarily the complete elimination of a pest, but rather to manage pests and diseases to keep crop damage within acceptable economic levels. Organic growers must closely monitor crops to stay ahead of pest problems since there are few, if any, organically approved “silver bullet” remedies available.

Harvest and storage
Products grown organically during the transition period can not be marketed as organic. Only those crops that have met NOP production and certification standards, including the three-year minimum transition period, can be marketed and sold as “certified organic” or “organic.”

Harvest equipment, storage areas and packaging materials used for transitional crops must comply with NOP standards. Growers with split operations must either use separate equipment and facilities for these operations, or decontamination protocol must be followed before use in the organic end of the enterprise. In addition, packaging materials

must be protected against potential contamination from prohibited substances.

Many growers have found that yields can decline during the conversion to organic production; however, yields often improve following this transition period. Yields for crops in full organic production may be 90 to 95 percent of conventional yields, depending on the cropping system.

Labor requirements

Organic systems are more labor intensive than conventional systems. This higher labor requirement is most often attributed to the increased time monitoring and managing pests. Washington State University research statistics indicate that labor hours per acre can be as much as 11 percent higher for agronomic crops. The increase can be much greater for horticultural crops.

Economic Considerations

The potential to benefit from the price premiums associated with certified organic production is a significant incentive for producers to consider transitioning. However, the higher price premiums that are frequently available for organic products generally do not exist for crops harvested during the conversion period. In addition, growers must be prepared to operate with the potential of a reduced income due to yield reductions typically encountered during the changeover to organics. Some farmers view the transition period as an investment in their education and the unavoidable cost of learning new skills and growing techniques.

Market opportunities and price premiums are variables that are difficult for a producer to predict, much less control. For this reason, growers should consider a broader range of economic factors, such as potential savings in their cost of production, when considering whether transitioning will pay for itself.

More Information

Electronic publications

- Eight Tips for Transitioning to Organic Production (Pennsylvania State University, 2004)
http://hortweb.cas.psu.edu/extension/vegcrops/vegetable_gazette/2004/february2004.htm#tips
- Organic Production Planning Through Transition (Saskatchewan Agriculture and Food, 2001)
http://www.agriculture.gov.sk.ca/Default.aspx?DN=f321f643-5a91-448d-8fcf-663e70339fe1
- Steps to a Successful Organic Transition (New Brunswick, Canada, 2005)
http://www.gnb.ca/0174/01740006-e.pdf
- Transition to Organic Farming (Ontario Ministry of Agriculture, Food and Rural Affairs, 2005)
http://www.omafra.gov.on.ca/english/crops/organic/transition.htm
- Transitioning to Organic Production (Sustainable Agriculture Network)
http://www.sare.org/publications/organic/organic.pdf

Web sites

- KDA Division of Value-added Plant Production: Organic Program
http://www.kyagr.com/marketing/plantmktg/organic/index.htm
- Alternative Farming Systems Information Center: Organic Food Production (USDA)
http://www.nal.usda.gov/afsic/ofp/
- Appropriate Technology Transfer for Rural Areas (ATTRA)
http://www.attra.org
- How to Go Organic (Organic Trade Association)
http://www.howtogoorganic.com/index.php
- National Organic Program (NOP)
http://www.ams.usda.gov/nop
- Organic Materials Review Institute (OMRI)
http://www.omri.org

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Pesticide applicator photo courtesy of Paul Vincelli, University of Kentucky *(Issued 2007)*