

Farming Organically: Insights from the front line.

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Farming in Illinois

Farming has always been a competitive business with tight profit margins and significant risks. Today's business is no different and as per-bushel returns to management get smaller, as seen in Figure 1, farmers seek for ways to maintain a sufficient level of income. Over the last 15 years, only the severe drought of 1988 rivals the low management margins faced today. According to the Illinois Farm Business Farm Management records, the average return to management per bushel of corn between 1994 and 1998 was a negative twenty-two cents, while soybeans had a negative sixty-seven cent return per bushel to management during the same time period.

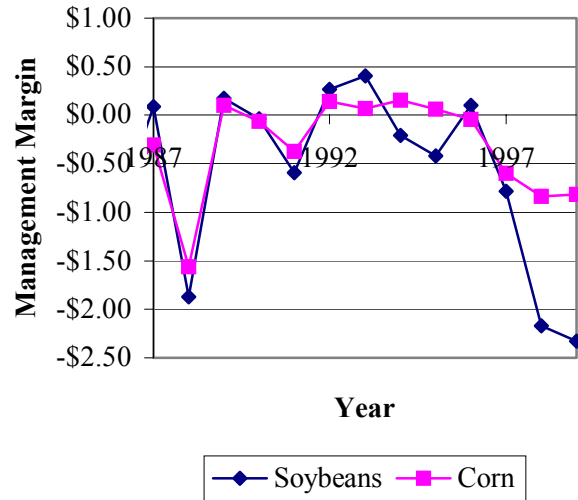


Figure 1. Per bushel returns to management. Source: Illinois FBFM.

Many producers have supplemented their farm income with off-farm sources of income, others have increased the size of their operation, while others have left farming as a profession. In examining the statistics from the Census of Agriculture, two significant trends are prevalent in agriculture: many farmers increased the size of their operation while others left the business. As seen in Figure 2, since 1964, the number of farm operations in Illinois has fallen by over 59,000 while the average farm size has increased from 226 acres to 372 acres.

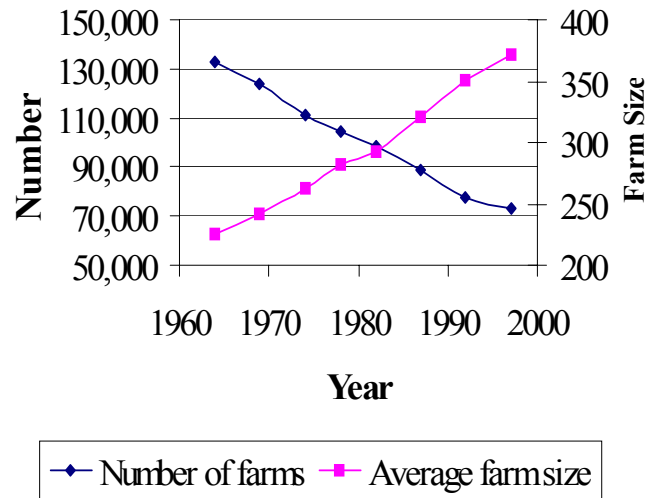


Figure 2. Number of farms and average farm size in Illinois. Source: U.S. Department of Agriculture, NASS.

An alternative to the “big or bust trend” is to seek other enterprises that will provide the needed income. Some producers are finding such an alternative in organics!

To gain additional insights to the pros and cons of farming organically interviews and surveys were conducted with a selected number of producers and handlers. All of the farmers surveyed are certified or are in the certification process by the Organic Crop Improvement Association (OCIA).

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Producer Profiles

Twenty-two of the 145 organic farmers mailed the survey responded, resulting in a 15 percent response rate. The crop rotations utilized varied widely depending on geographic region, however, all producers met the rotation requirements of the OCIA. These results are based upon the 22 producers responding and the interviews with the handlers. The number of acres that producers farm organically ranges from 46 to 850 with an average of 200 acres farmed organically. Forty-five percent of the producers strictly farm organically, while the other 55% farm both organically and conventionally.

In assessing producers' reasons for producing organically, they were asked to rank each factor on its' importance in their decision to produce organically. These items included: concern for the environment, lower input costs, diversifying the farming operation, and premiums for organic crops. The responses were quite varied, however, over half of the respondents ranked concern for the environment as the most important reason for the switch.

Yields & Prices

Yields of organic commodities varied greatly among the organic producers. The factors affecting yield include weather, location, varieties and hybrids planted, tillage practices, soil fertility, and weed management techniques. Average yield differences between organic and conventional crops can be significant. For organic soybeans, producers indicated an average yield difference of 0 to 20 bushels lower than conventional yields. For organic corn, the average yield difference ranged from 10 to 45 bushels lower than conventional yields. Those farmers who utilize small grains in an organic rotation indicated an average yield difference of 5 to 30 bushels lower than conventional yields. These lower yields are largely due to the different varieties that they must plant to receive a price premium (i.e. food grade soybeans).

Organic crops receive a premium, provided that they meet the quality standards. The price premiums help to offset the lower crop yields. Soybeans have the largest premium and their premium is determined by both supply and demand factors. These factors include the percent of clean out for split seeds, seed stain, and foreign material; the number of suppliers; and the availability of contracts. The average cleanout for soybeans ranges from 15 to 25 percent. Figure 3 highlights the premiums

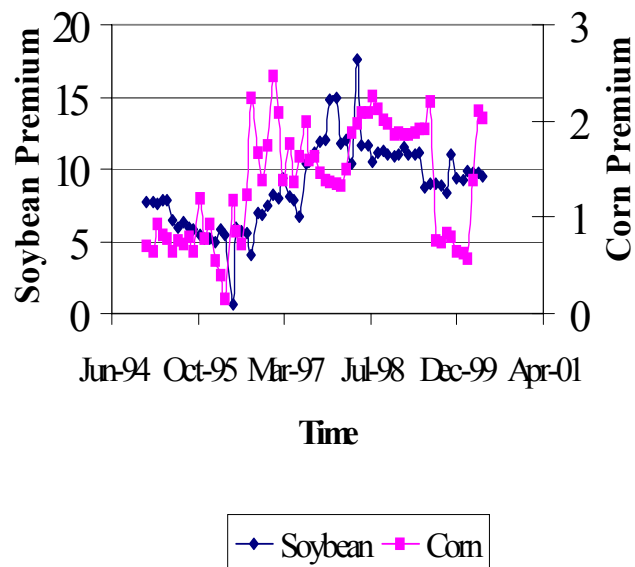


Figure 3. Organic Premiums, based on cleaned Clear Hilum soybeans and yellow corn. Source: Organic Food Business News

of organic soybeans and corn over conventional production.

Production Costs of Farming Organically

While organic producers do not pay for synthetic fertilizers and herbicides, they still incur similar if not greater costs in maintaining soil fertility. Weed control costs are in the form of mechanical tillage and crop rotation expenses rather than herbicides. Producers must take a proactive approach in maintaining soil fertility and weed control. If weeds get out of control, additional tillage passes are required and in severe cases manual labor may be required with costs running into the hundreds of dollars per acre. An additional factor to consider when producing is the amount of labor available. Survey results indicate the average acreage of organic producers is below the average farm size in Illinois. This is likely due in part to the added labor requirements for organic production.

All of the producers indicate that they utilize rotary hoeing, row cultivation, and delayed planting to control weeds. In addition, producers indicated that the most number of times that they have rotary hoed and row cultivated in a single growing season was 3 times, while the average number of times per year is typically twice for both rotary hoe and row cultivate.

Fifty-nine percent of the survey respondents utilize animal manure (swine, cattle) for soil fertility. The manure used is from the producers' operations, with the exception of two producers, one of which trades hay for manure with a neighbor. Only four farmers indicated that the manure used on their operations is derived from livestock that are certified organic. The average cost to maintain soil fertility on corn is \$16 per acre, and \$14.50 per acre on soybeans, based on those who entered a soil fertility cost. The techniques to maintain soil fertility included: green manure crops in rotation, animal manure, multiple rotations, subsoiling, and the purchase of dry organic fertilizers.

Typical planting widths for both corn and soybeans are 30 inch rows with an average planting populations for corn of 28,400 seeds per acre and 188,000 seeds per acre for soybeans. All of the producers indicated that they perform clean tillage prior to planting. When asked how early they would plant corn and soybeans, the producers gave varying answers with the earliest corn planting dates from May 1 to May 20 and the earliest soybean planting date ranged from May 10 to May 20.

Managing Risk

Almost half of the survey respondents indicate they have some source of off farm income, ranging from 10% to 85% with an approximately one-third of the income coming from off-farm sources. Most of the organic producers require or recommend a contract prior to planting, but all agreed that this is typically not possible to achieve. Fifty-seven percent of the producers utilize forward contracting or hedging to sell their products, and three out of every four utilize crop insurance to protect their organic commodities, even though they can only obtain coverage at conventional levels. All producers store their harvested organic crops on farm, except one farmer who sells direct from the field.

Producers were asked to give an opinion on the number of acres a single producer could farm organically, given their present resources. The answers for this question varied greatly from 25 to 1000 with an average of 442 acres for a single producer.

Greatest Challenges

Producers were asked to list the greatest challenges of farming organically. Again the answers were widely varied but include the following: time to do job correctly; weather; weed and pest management practices; marketing; soil buildup and fertility; attitude changes about farming; increased paperwork; maintaining crop quality; maintaining cash flow; landlord's attitude; chemical drift; and contract agreements.

To help overcome these challenges producers were asked to identify the informational needs of organic producers. These information needs include: marketing information; a support system for organic producers with similar rotations in similar geographic areas; soil information; alternative insect and weed control practices; improvements in crop quality; information on seed sources; more research information on tillage and fertility practices; new crops/alternative crops for organic production; standards information; further economic information about organic production; websites and electronic bulletin boards where organic producers can post comments; and the need for proportionate funding and grant money to help establish a global market. Public institutions are and can continue to play an important role in helping producers to meet these challenges.

Recommendations to other organic producers

The survey asked producers to give recommendations to other organic producers. Their comments come from years of experience and deal with the challenges they faced. Advice includes the following: maintain balanced, active, and lively soils; focus on harvest operations and combine settings to help improve seed quality; don't plant too early; work hard to kill weeds prior to planting; try to improve soil health and fertility by planting cover crops within rotations; timely tillage practices will help weed control and fertility; have equipment ready when weather will allow you to proceed; ensure that equipment is properly set and maintained, and check settings often; scout fields more often than you would conventional cropping systems; try to perfect your communication skills and learn to ask questions to obtain the quality and markets that you want and need for your organic products; and become as diverse as possible.

Handler Survey

Handlers of organic commodities are looking for a win-win situation with producers. When producers are able to produce a quality product that fills the contract specifications, both parties benefit. The majority of commodities of handlers are still conventional crops, and the amount of organic commodities handled has been stable to about 15 percent growth per year.

The primary reasons for discounting the price of organic crops include: seed discoloration, splits, small beans, and damaged beans sometimes caused by an early frost. Although nature often dictates the outcome of the crop, the handlers had several

recommendations to improve crop quality. These suggestions include: maintaining good soil fertility and tilth, proper storage and cleaning, determining the best rotation and grow varieties that are adapted to the region, using cover crops, and further education. One handler suggested raising livestock to diversify the operation and provide a reliable source of manure.

Marketing continues to be an important dimension for organic operations. Factors in contracts include the number of acres, crop quality, and organic certification. Handlers pointed out that the market is demanding near perfect quality of food grade soybeans and that quality is the risks of the producer. This risk of producing quality crops includes both the production and the storage of the commodity.

According to the handlers, the northern and eastern portions of the state are better suited for food grade soybeans, while the south tends to produce more feed grade soybeans. Corn production tends to do best in the central part of the corn-belt, since the northern areas often must contend with an early frost. Small grains are not a large part of the states agriculture production, and organic producers in Illinois often have trouble growing food-grade grains that will meet the required heavy test weights.

Conclusions & Acknowledgments

While there is no magic formula for solving the struggles in agriculture, many organic producers have found that organics fits their farming philosophies and provides a way to stay in business. The suggestions outlined from organic producers and handlers provide insights to overcoming the challenges faced in organic production. Their advice is beneficial to organic producers, those considering organic production, and insights to how universities might focus their research efforts to help the organic market.

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