

# Implementing Sustainable Organic Practices

## Final Report for FNC95-099

Project Type: Farmer/Rancher

Funds awarded in 1995: \$3,620.00

Projected End Date: 12/31/1995

Region: North Central

State: Illinois

Project Coordinator:

[Larry Kennel](#)

## Project Information

### Summary:

#### PROJECT BACKGROUND

The 270acre farm (known as the Blue Heron Farm) has been is sustainable and organic operation for five years and was certified organic in the year of (1994). No fertilizers or chemicals have been used since June of 1991. The farming practice is a four crop rotation (alfalfa, corn, soybean, wheat). This farm has marginal soil types (sand and clay) and we hope to reduce crop stress through the use of strip farming.

#### PROJECT DESCRIPTION AND RESULTS

The goal was to adapt a tillage system to farm in 30ft. strips with a four crop rotation without chemicals or fertilizers.

Process- In order to make the sustainable and organic operation work, we felt we could eliminate the stress on the crop by farming in 30ft. strips to allow more sunlight and air to the corn and bean plants. If we would plant corn and beans in strips, the corn planted in 30 ft strips would yield about 15% more. We divided the farm into two halves, one half stripped with wheat and corn and the other half stripped with alfalfa and soybeans.

When the wheat was mature the corn was the same height so it didn't shade the wheat. The alfalfa never outgrows the beans so the beans were never shaded. Next year the corn and wheat will be planted where the alfalfa and beans were and the beans and alfalfa will be planted where the corn and wheat was.

We used a 15 ft. power take off driven rotary tiller to plant corn and beans and a no-till drill to plant alfalfa, wheat and rye. The old alfalfa was rotary tilled in the spring as early as the ground could be worked. This allowed the soil to warm up and the first crop of weeds to germinate. Later (May 10) we tilled the ground to kill the weeds and then planted the corn. We rotary hoed the corn four days after planting, then again eight days after. This allowed the corn to grow ahead of the weeds. We cultivated the corn two times after that.

The wheat was planted last fall with a no-till drill and the corn was planted in alternating strips with the wheat. The new strips of alfalfa were planted in early April with a no-till drill in alternating strips with rye. The rye was rotary tilled May 1, and the beans were planted in alternating strips where the rye was.

People- Tom Miller from the Marshall- Putnam county soil and water conservation district advertised the project in their newsletter. The Sun Foundation provided the meeting facility and advertised the project in the sun foundation journal. Pro-Ag did the soil test in 3.3 acre grids.

Results- The 3 year, (1994-95-96) average for corn was 134 bushels per acre and for beans it was 41 bushels per acre. The 3 year average for wheat was 42 bushels per acre. These yields were as good as conventional farming practices for soil ratings of 56 - 85 SPR. The three year income comparison results showed that conventional profit after expenses were \$164.29 per acre. The project showed a profit of \$274.75 per acre. The big difference in profit was from the premiums received for the organic grain. The premium for yellow corn this year is \$1.25 per bushel and for beans it is \$11.00. The soil tests after 5 years in the organic operation with no fertilizers applied showed improvements in both P and K. The soil was tested in 1991 and showed P levels at 142 and K levels at 232. We tested the soil in 1996 and P levels were 175 and K levels were 395.

Discussion- The results were much better than expected. Weed control in corn was outstanding and very good in soybeans with a few velvet leaf coming through in the season. The advantage to this program is reduced investment risk with better than average returns. We learned that we can be more profitable farming with rotations than by depending on expensive chemicals and fertilizers and at the same time control erosion and protect our environment.

#### OUTREACH

The Peoria Journal Star advertised the Sept. 7 1996 meeting. WMBD radio interviewed us and invited the general public to the meeting on their noon farm shows. The Sun Foundation Journal, (with 30,000 circulations) ran an article about the farming operation and advertised the meeting. The Sun Foundation has developed a class to teach area school teachers about organic sustainable agriculture. My son Jeff teaches the class.

At the meeting we explained our operation and what we were trying to achieve. We had 36 people in attendance. We showed the results of the project, (yields and profit), and Chris Bebl from Pro- AG explained the soil tests.

#### PROGRAM EVALUATION

We were doing this project with or without the grant. But what the grant has provided was money to help us with the project and show other people what we are doing. This is a very expensive part of the project and we would not have spent our own money to do this. Because of this grant many more people are talking about and some are trying sustainable agriculture ideas of their own.

#### Project Objectives:

Organic crop production presents a unique set of problems when applied to corn/soybean/wheat production on marginal soils.

Objective: To develop a strip corpping system (30-foot strips) to maintain fertility, reduce soil erosion, protect water quality, reduce costs, control weeds and enhance production on marginal soils without chemicals or commercial fertilizers.

## Research

### **Participation Summary**

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