Paul C. And Edna H. Warner Endowment Fund for Sustainable Agriculture
Report Form

Community Supported Agriculture Integrates Sustainable Agriculture

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Summary, Objectives, and Expected Contributions to Sustainable Ag:

- Expand the potential for the CSA program in Hardin County to better serve consumers with products that are grown with sustainable farming practices
- Collaborate with other growers around the country and in Ohio to improve the production practices in hydroponic production. This will make farming more sustainable by broadening produces views of alternative agriculture and creative problem solving.
- Support the family farm by making farming an economically viable option at VanScoy farms by diversifying the crops produced for sale to the public.
- Collaborate with the local FFA chapter to research crops that can expand the CSA's diversity. Teach teenagers about the following topics: sustainable agriculture, diversification of farming for profitability, and statistical analysis through production practices.

What was done?

a. The experimental design will be comprised of determining if the vertical production of strawberries can out produce the traditional horizontal hydroponic production. The variables to be measured and how they will be measured are:

- Yield – measured in grams of production and number of berries produced
- Yield per plant – grams and berries of production will be divided by the number of plants in production
- Labor management income (LMI) per square foot – LMI will be measured in grams and number of berries produced and divided by the square feet of floor space utilized
- Mean fruit weight – strawberries will be weighed in grams and divided by the number of berries

FFA members and VanScoy Farm will collaborate on the analysis and interpretation of results. Students will graph the data for statistical analysis.

What were the results?

Prior to grant funds being released in June the strawberry production model had to be done linearly instead of vertical since the plants came in before the stacker units. This did allow us to fine tune the fertilizer mix and collect data on production inside versus outside. We were able to conclude that hydroponic strawberries grown inside will yield almost double that of outside soil produced berries with less total nutrient cost. The hydroponic berries made up most of the production in total size of the berries plus a higher numbers of sellable fruit. That being said, linear production of strawberries in a greenhouse is at best a break-even venture. The overhead cost of greenhouse production is still too great for strawberries. It is our hope that the 2010 season of vertical strawberry production will be a more profitable and sustainable enterprise. Our research is ongoing in this area. The greenhouse is now set up for the use of the stackers for the 2010 season so we plan on having a full season of production in 2010 instead of the short season in 2009.

At VanScoy Farms documented the following:

1. Hydroponic strawberry crops yields:
    a. yield per plant – 2.46 pounds
    b. labor management income (LMI) per square foot – $0.24
    c. mean fruit weight – 0.11 pounds
    d. We netted just over $775.00 which was not great, but not a loss. The neat part about this project that has not been told is the gross dollars needed to run the crop and labor to get to fruit is dramatically less the most other crops. We look forward to cubic feet production this next year for a strong comparison.
2. At Ridgemont schools an infestation of inchworms destroyed the first crop at mid production. Documented of experimental crop yields will be completed in early 2010 as a part of the Agricultural Science Two classes. Educational competencies were achieved in spite of the lack of production data.