

Agricultural Education Research Summary Report

**OPPORTUNITIES FOR AGRICULTURAL EDUCATORS TO TEACH
ABOUT SUSTAINABLE AGRICULTURE AND BUSINESS
THROUGH *FARM BEGINNINGS***

prepared by

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Abstract

The researchers of this study sought to discover opportunities for agriculture educators to teach about sustainable agriculture and business through study of an Extension program of similar purpose. The sample included sixteen adults who were either farming or who wished to become farmers and three program facilitators. There were three findings from this study. First, Farm Beginnings was expected to be a tool that participants could use to further their understanding of the business side of farming. Second, Farm Beginnings participants, as a whole, believe strongly in the importance of educating others about sustainable agriculture practices. Finally, Farm Beginnings facilitators and guest speakers believe strongly in the benefit of this information for others.

Introduction

Farming has typically been thought of a trade that is passed through the generations, rather than an industry that requires knowledge, continued education, and informed experimentation to succeed. However, this has changed, and today's farmer is more likely to be educated, aware of changes, and experimenting with new practices on his farm. The prevalence of farmer education programs is increasing (Feder, Murgai, & Quizon, 2003). With the changes occurring in agriculture production, information has become priceless: the person with the latest information has an advantage over his peers (Reisenberg & Gor, 1989). Because of this, adult education, though perceived difficult by many agriculture teachers, has grown in importance over the years (Martin, 1987). Many farmers and educators consider continuing education an important part of farming and rely heavily on parents, siblings, relatives, Extension, and consultants for information (Trede & Whitaker, 2000). Preferred methods used to gain information from these individuals include field trips, guest speakers, group discussions, workshops, on-farm demonstrations, audio-visual materials, printed matter, and telecommunications (Reisenberg & Gor, 1989).

Because of changes in the farming population—a decreased overall number of farmers with increases in the number of large scale and hobby farmers, an increased number of non-farmers living in rural areas increasing the amount of farming at the rural-urban interface—and changes in popular farming practices, the need for farmer education has increased (Martin, 1987). Education is necessary for farmers to compete and maintain their farming enterprises. Most education focuses on how to perform new methods of production (Feder, Murgai, & Quizon, 2003). However, farmers also need to be made aware of the differences between alternative and traditional agriculture production methods.

They need to know the differences in terms of business and production. In addition, awareness needs to be made at the level of the social and natural environment. Social and environmental impacts have forced agriculture to take responsibility and do what it can to protect the natural environment, so that future generations will be able to use the nation's natural resources to meet their production needs. With the recent surge in interest in sustainability in terms of production and living, the agriculture community needs to be made aware of this term and how it impacts them in the agriculture industry.

Although the concept of sustainability has gained importance over the past twenty or so years, a relatively small number of farmers have taken sustainable practices (Gamon, Harrold, & Creswell, 1994). The suggested reason for this is the lack of dissemination of clear and reliable information. Research has been conducted, but not taken to the individuals who can put it into practice. Because of this, most farmers have stuck to their traditional ways of production and not adopted sustainable practices such as crop rotation, integrated pest management, tillage practices, and animal health maintenance (Gamon, et al., 1994).

Typical farmer education programs have been packaged in as a series of recommended practices; however, this is perceived less effective than more hands-on methods of educating the farming population (Feder, Murgai, & Quizon, 2003). Current practices have focused on teaching farmers, via hands-on practices, to use their skills to make better, more informed decisions. Using this method, farmers are encouraged to share their skills with others, thereby creating a farming community and honing individual skills (Feder, Murgai, & Quizon, 2003). Results of the study conducted by Feder and colleagues (2003) suggest that farmer training programs, in addition to being interactive, should also be narrow and specific in topic in order to obtain desired outcomes (in this case, the use of integrated pest management).

Farmer and agricultural education programs focusing on the development and implementation of sustainable agriculture have been developed in several states. One such program, *Farm Beginnings*, originated in Minnesota and is based in Allan Savory's holistic resource management. This program has been designed to aid those interested in farming and education about farming practices to develop their entrepreneurship skills to develop a business plan, incorporating sustainable agriculture. This type of information, including the areas of marketing, farm business analysis, profitable decision making, enterprise analysis, risk management, personal and family financial management, estate planning, land use, production of safe food, and global economic impacts in the rural-urban interface, is important to those in Agricultural Education, because it is what young and adult students and their educators are requesting (Bruening & Radhakrishna, 1993; Haynes, 1984; Martin & Omer, 1988).

Throughout the twentieth and into the twenty-first centuries, education has been under reform in the United States (Hall, & Resnick, 1998). However, little education has been introduced about the importance of sustainability and sustainable agriculture methods (Illinois State Board of Education, 2003). If the concept of sustainability were introduced and discussed throughout middle and secondary schools, students will be made aware of the importance of sustainable agriculture education and opportunities to learn how to be sustainable farmers. An investigation into agriculture teaching practices in secondary education revealed that conservation practices and environmental education are taught to youth (Ubadigbo, & Gamon, 1988); however, the topic of sustainability was not found. It is believed that this topic must be introduced and discussed before methods of sustainability can be discussed. This should be necessary to frame, in students' minds, what sustainability is, its importance, and how to practice it. Once developed and presented to educators and youth, this information can better be used to serve the agriculture industry. Because of the impacts on agriculture educator knowledge and their intent to transfer that knowledge to their students, this study addresses the FY06 Mini-Research Project Topic #1, "Teacher Development."

Purpose & Research Questions

The purpose of this study is to assess participants' experiences in the *Farm Beginnings* program and share opportunities on how to improve agricultural educators' and students' knowledge about sustainable agriculture and business practices used when implementing sustainable practices. Assessment of this objective will occur through a survey given to *Farm Beginnings* participants at the beginning of the program, through evaluations at the end of each session throughout the program, through discussions with participants throughout the program, and through discussions with the three program facilitators. Specific questions the researcher hopes to answer are as follows:

1. What effect does *Farm Beginnings* have on its participants?
2. Do *Farm Beginnings* participants see benefits in teaching this information to youth?
3. Do *Farm Beginnings* facilitators see benefits in teaching this information to youth?

Methods & Procedures

The following procedures were conducted to complete the research project.

1. On October 22, 2005 the researcher introduced herself to the participants, discussed the study briefly, asked if any other participants would like to

- join the study, observed the meeting, and discussed the study in greater detail with willing participants.
2. On November 5, 2005, Questionnaire 1 was distributed at the beginning of the class session and collected before the next meeting. This questionnaire assessed beginning levels of knowledge about sustainability and sustainable business practices. Demographic questions were used to determine each individual's experience in education about farming and specifically with sustainable agriculture and business operations.
 3. Classes between November 17, 2005 and February 16, 2006, the researcher attended class; listened to discussions among participants, instructors, and facilitators; and discussed questions and ideas with participants.
 4. Between November 28 and December 15, 2005, the researcher conducted interviews with Farm Beginnings participants in their homes and at meeting places around Illinois. Interviews ranged in length from one-half our to two and one half hours in length.

Farm Beginnings class meetings were from 10 a.m. to 4:00 p.m. on for the first two meetings, then moved to 6:30 p.m. to 9:30 p.m. for the rest of the sessions. Meeting topics and presenters are listed in Table 1 below.

Table 1: Farm Beginnings Program Topic and Presenter

	<i>Topic</i>	<i>Presenter</i>
<i>Week 1 (10/22)</i>	<i>Building Networks, Values Clarification, & Goal Setting</i>	<i>Laura Paine, Columbia Co. Extension Deborah Cavanaugh-Grant</i>
<i>Week 2 (11/05)</i>	<i>Whole Farm Planning</i>	<i>Laura Paine, Columbia Co. Extension Bruce Condill, Great Pumpkin Patch</i>
<i>Week 3 (11/17)</i>	<i>Plan for Profit</i>	<i>David Cleverdon, Kinnikinnick Farm Ruth Hableton, UI Extension</i>
<i>Week 4 (12/01)</i>	<i>Creating the Plan—Nuts & Bolts</i>	
<i>Week 5 (12/15)</i>	<i>Building Your Business Plan</i>	<i>Ken Klotz, Bradley University John & Pat Sondgeroth, Hartland Meats Leslie Cooperband & Wes Jarrell, Prairie Fruits Farm</i>
<i>Week 6 (01/05)</i>	<i>Intro to Marketing</i>	<i>Robin Mather Jenkins, Chicago Tribune Rich Schell, Attorney</i>
<i>Week 7 (01/19)</i>	<i>Marketing 101</i>	<i>Add presenters here</i>
<i>Week 8 (02/02)</i>	<i>Connecting with Resources and Class Presentations</i>	<i>Add Presenters here</i>
<i>Week 9</i>	<i>Resources Presentations, & Next</i>	<i>Add Presenters here</i>

(02/16)	<i>Steps</i>	
Week 10 (03/02)	<i>Class Presentations</i>	
Week 11 (03/16)	<i>Mentor/Mentee Meeting</i>	<i>Deborah Cavanaugh-Grant</i>

Results

Of the twenty Farm Beginnings participants, nine were male, and eleven were female. The average age was 34 years, with a range between 20 and 56 years. The majority (17) were not currently farming. Only 4 of the twenty had had previous agriculture education, and six had previous farming experience. From the pre-Farm Beginnings survey, most participants were hoping to get land use ideas, planning information, financial management ideas, and marketing information.

In response to research question one, “What effect does *Farm Beginnings* have on its participants?” researchers found that most participants found the networking and business information to be most useful. Many Farm Beginnings participants felt reassured that they are not alone because others in the group had the same thoughts, feelings, and ideas as they do. This networking and idea sharing is invaluable to most participants.

In response to research question two, “Do *Farm Beginnings* participants see benefits in teaching this information to youth?” researchers found the answer to be a resounding yes. Most participants mentioned, within the first day of class, the importance of teaching sustainability to others, especially reaching out to school children and classrooms. The reason for this, upon further investigation, stemmed from a larger, wholistic thinking. Individuals in this group did not solely think about themselves and their own farming and economic livelihoods. Rather, they were concerned with community and environmental issues, much larger than themselves. It was reasoned that if this information were taught to youth, they could help make the changes required to make the world a more sustainable place, capable of surviving and thriving well into the future.

In response to research question three, “Do *Farm Beginnings* facilitators see benefits in teaching this information to youth?” researchers found that facilitators and guest speakers believe strongly in the benefit of this education for others.

<i>Table 2. Farm Beginnings effects on participants</i>
1) Financial business planning
2) Support network
3) Increased understanding of sustainable agriculture practices
4) Greater understanding of skills, “from excitement to panic and back again”
5) Greater understanding of practical issues

Table 3. Thoughts on what should be taught to youth in agricultural education
1) Holistic management, holism
2) Business education and planning
3) Broad understanding of sustainability and sustainable agriculture
4) Human capital and human capital development
5) Ecological paradigms and interdependence

Conclusions, Implications & Recommendations

Farm Beginnings participants gain business skills and form networks based upon their interests. This is a key finding because it stresses the importance of information acquisition besides information directly related to production in agriculture. The adult participants commonly asked the question, “I’ve grown it, now what do I do with it?” This question can be answered through increased business education, including the specific skills of goal setting, accounting, business planning, and marketing. In addition, Farm Beginnings participants repeatedly stressed the importance of networking throughout the course. This networking, done through causal visits and sharing of farming and life experiences, was found by many participants to be one of the most valuable portions of the course. It served many purposes, but most notably, networking made participants feel at ease, like they were one of a group of similar mindset, rather than someone off trying something that no one else believed. Networking with facilitators, instructors, and other participants also helped participants solve problems they were experiencing throughout the journey to sustainable agriculture.

Farm Beginnings participants believed strongly in the importance of educating youth. Most participants wanted to create an educational component to their farm enterprise, whether it be an organic kitchen used to teach students about cooking and organic produce, an organic farm producing crops for students to learn about, or a livestock facility. Although the farm was believed to be an important area of education, most participants also held strong beliefs in the importance of sustainability in the community and the world. In addition to information specifically about sustainable agriculture, education about sustainability and holistic thinking were deemed important.

Farm Beginnings facilitators and instructors believed strongly in the importance of education about sustainable agriculture. Their knowledge and understanding about the matters involved in sustainable agriculture, from production aspects to business and philosophical aspects, as well as their passion about the subject shown through their discussions and lectures during each class session. If this material were presented to youth beginning in middle school and continuing to secondary education, sustainability and the concepts

associated with it would be easier to understand and implement, as the students became adults.

In conclusion, the results of this study show the positive effects of the Farm Beginnings program as well as the specific areas where the program could be implemented with youth. If sustainability, holistic thinking, and human capital development were taught to youth and associated with agriculture, future education could focus on more specific and intricate areas of production and business organization.

References

- Feder, G., Murgai, R., & Quizon, J. B. (2003). Sending farmers back to school: the impact of farmer field schools in Indonesia. *Review of Agricultural Economics*, 26(1): 45-62.
- Fraas, W. (1995). Beginning Farmer Sustainable Agriculture Project. Retrieved June 6, 2005, from http://www.sare.org/reporting/report_viewer.asp?pn=LNC93-059&ry=1995&rf=1
- Francis, C. A., & Carter, H. C. (2001). Participatory Education for Sustainable Agriculture: Everyone a Teacher, Everyone a Learner. *Journal of Sustainable Agriculture*, 18(1): 71-83.
- Gamon, J., Harrold, N., & Creswell, J. (1994). Educational delivery methods to encourage adoption of sustainable agriculture practices. *Journal of Agricultural Education*, 35(1): 38-42.
- Hall, M. W., & Resnick, L. B. (1998). Learning organizations for sustainable education reform. *Daedalus*, 27.
- Hinrichs C. C., Gillespie G. W., Feenstra G. W. (2004). Social Learning and Innovation at Retail Farmers' Markets. *Rural Sociology*. 69(1):31-58.
- Hornbaker, R. (1995). Participatory Research and Education Network for Sustainable Agriculture in Illinois. Retrieved June 6, 2005, from http://www.sare.org/reporting/report_viewer.asp?pn=LNC91-040&ry=1995&rf=1
- Martin, R. A. (1987). Analysis of Needs: Educational Programs for Young and Adult Farmers. *Journal of Agricultural Education*, 56-64.
- Martin, R. A., & Omer M. H. (1988). Factors Associated with Participation of Iowa Young Farmers in Agricultural Extension Programs. *Journal of Agricultural Education*, 45-52.
- Meares A. C. (1997). Making the Transition from Conventional to Sustainable Agriculture: Gender, Social Movement Participation, and Quality of Life on the Family Farm. *Rural Sociology*. 62(1): 21-47
- Reindl (1996) Reindl, L. (1996). Future Farmers in Sustainable Agriculture. Retrieved June 6, 2005, from http://www.sare.org/reporting/report_viewer.asp?pn=LNC94-067&ry=1996&rf=1

Riesenberg, L. E., & Gor, C. O. (Fall 1989). Farmers' Preferences for Methods of Receiving Information on New or Innovative Farming Practices. *Journal of Agricultural Education*, 7-13.

Saltiel J., Bauder J. W., Palakorich S. (1994). Adoption of Sustainable Agricultural Practices: Diffusion, Farm Structure, and Profitability. *Rural Sociology*. 59(2):333-349

Trede, L. D., & Whitaker, B. S. (2000). Educational Needs and Perceptions of Iowa Beginning Farmers toward their Education. *Journal of Agricultural Education*, 41(1): 39-48.

Ubadigbo, F. N., & Gamon, J. A. (1988). Agribusiness educational methods and cooperation with agri-educators. *Journal of the AATEA, Winter*, 40-48.