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APPROPRIATIONS TO TRANSFERRING SUSTAINABLE AGRIBULTURE RESEARCH

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Introduction

Iowa is a national leader in sustainable agriculture research and education. Although many states have made verbal commitments to natural resource and environmental issues, Iowa passed the landmark 1987 Iowa Groundwater Protection Act, which established the Leopold Center for Sustainable Agriculture. Although the Leopold Center is known primarily for funding research to develop profitable farming systems that conserve Iowa’s natural resources, it also has a mandate to develop with the Iowa Cooperative Extension Service and other organizations an educational framework to deliver research findings to Iowa citizens.

The Leopold Center currently funds 39 competitive research and demonstration projects in the state of Iowa that study water quality, nutrient management, alternative pest management, livestock grazing systems, cropping systems, agroforestry, horticulture, and socioeconomic implications. More specifically, high priority issues such as nitrogen management, the conservation reserve program, soybean cyst nematode, and animal waste management are being addressed both through the Leopold Center’s competitive grants program and as research issue team projects.

To be effective, sustainable agriculture research must be widely applicable to Iowa agriculture. Creating awareness of alternative practices and profitable farming systems is only the first step in building the bridge between sustainable agriculture research findings and farmer experimentation and adoption. Many questions must be asked and decisions made to develop successful approaches to make sustainable agriculture research work for Iowa farms.

The first hurdle: Understanding sustainable agriculture

In creating the Leopold Center, the Iowa legislature defined sustainable agriculture as: "...the appropriate use of crop and livestock systems and agricultural inputs supporting those activities which maintain economic and social viability while preserving the high productivity and quality of Iowa’s land." Even with this and other similar definitions, confusion about and misunderstanding of agricultural sustainability terms are prevalent among many sectors of agriculture and have inhibited progress and cooperation in achieving sustainability’s goals (Keeney, 1990). Leopold Center sponsored surveys of farmers, information providers, and
agricultural input suppliers show there is uncertainty about what sustainable agriculture means and its impact on farmers, agricultural businesses, and society (Bultena, 1991; Lasley and Padgitt, 1991; Williams and Ginder, 1991).

Perhaps part of the confusion stems from the number of terms used interchangeably with sustainable agriculture and the incorrect assumption that sustainable agriculture means the drastic reduction of all farm-related inputs. Clearly, a starting point in the education process is explaining what sustainable agriculture is, and more importantly for some, what it is not. But in order to move further along the path to a sustainable agriculture, more emphasis must be placed on demonstrating sustainable practices and profitable farming systems, and less on the definition.

**Defining the research and identifying the educators**

It has always been clear that farmers must benefit in some way from agricultural research for it to be meaningful. But should farmers be the only force in driving that research? Lockeretz and Anderson (1990) state that although farmers should be key partners in bringing focus to sustainable agriculture research, other groups must be involved to add the right mix of basic, component, system-level, and other types of studies to develop functional, viable systems.

Traditionally, the university land-grant system through the cooperative extension service has been recognized as the group primarily responsible for educating farmers. Changes in technology, rural community structure, state and federal budgets, and the infrastructure of the agricultural industry has increased the number of groups directly involved in the agricultural education process. These groups include agricultural cooperatives and farm dealers, seed, chemical, and machinery company representatives, commodity groups, farm organizations, non-profit organizations, community and private colleges, farmer-based groups, and state and federal agencies.

**Using sustainable agriculture information**

What do farmers do with the mountain of agricultural information provided by the groups mentioned above? Who influences farmers the most? Do farmers exercise quality control and use selection processes as they sort through this information? In a recent Leopold-sponsored study, Big Spring Basin farmers were asked which source of farm information was most trustworthy and knowledgeable. The cooperative extension service received higher marks than farm-related businesses. But when asked which information source was most available, farm-related businesses came out well ahead of extension (Contant, 1991).

Agricultural chemical dealers and related farm businesses in rural communities are essential to extending a sustainable agriculture to Iowa farmers. But the belief that sustainable
agriculture will reduce profits by reducing product sales has kept many dealers and farm businesses from using and recommending sustainable practices in their everyday operations.

Can a possible decrease in product sales be offset by an increase in service? This fundamental question must be answered for all segments of the agricultural community to forward sustainability's goals. In a recent study funded by the Leopold Center, only about one-fourth of Iowa cooperatives surveyed offered integrated crop management services (scouting or pest management services, variety and crop selection, crop nutrient management, etc.). A major reason mentioned for not offering these services is that farmers do not seem willing to pay for them (Williams and Ginder, 1991).

Developing the educational framework and delivering the programs

It is clear that all groups involved with Iowa agriculture must play a role in this never-ending education process. One or two groups alone cannot be successful in developing educational programs to bring sustainable practices to a majority of Iowa farmers. Farmers must not only receive consistent information from the various information provider groups and organizations; they must be convinced of the profitability of sustainable practices and be shown the "hidden" economic losses inherent in practices that do not conserve Iowa's natural resources.

Cooperation is and always will be the key for success in the Leopold Center's educational programs. A significant portion of the Center's educational programs are implemented through competitive grant and research issue team investigators, who deliver research findings to audiences in different settings. Several of the research projects presented at this conference were funded in part by the Leopold Center. The Iowa Cooperative Extension Service, Practical Farmers of Iowa, and many other groups committed to sustainable agriculture education play key roles in demonstrating and disseminating research funded by the Leopold Center and other sources to those involved in Iowa agriculture.

Although much progress has been made along Iowa's path to a sustainable agriculture, there is still a long way to go. The agricultural input suppliers, agricultural lenders, crop consultants, farm managers, and other groups must be willing partners in a sustainable agriculture education process that benefits them as well as the farmers they serve.

Toward this end, the Leopold Center has initiated a pilot education delivery team in both central and east-central Iowa. Each team, led by an area extension specialist, includes farmers, agricultural lenders, youth educators, agricultural input suppliers, and other community leaders interested in sustainable agriculture. In 1992, the central team will focus on a nitrogen management education program. The east-central team is planning a training and demonstration program to determine the feasibility of agricultural chemical dealers making shifts from selling products to services. In addition to this pilot program, the 1992 Leopold Center conference,
scheduled for February 18 and 19 in Ames, will address the roles of all the critical groups mentioned above in advancing a sustainable agriculture for Iowa.

References


Contant, C. 1991. Big Spring Basin: Results of 1991 farm operator surveys and interviews. Public Policy Center, University of Iowa (funded in part by the Leopold Center).


