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Diversifying Agricultural Systems: An External Analysis of State Value-Added Programs

Tim Woods and Heath Hoagland

An increasing number of farmers in the United States are finding more opportunity to participate in value-added activities beyond their commodity production. Issues—such as low farm income, increasing marketing margins, and a desire to enhance demand for local commodities—generate more interest in identifying suitable value-added activities. Many states are providing programs to help promote and support farmers interested in leading the development of new food products.

This paper examines the objectives and development strategies of several value-added state programs. Special attention is paid to the extent to which the programs create opportunities for farmers in different income groups. Programs profiled in this research include Iowa's Rural Economic Value-Added Mentoring Program (REVAMP), North Dakota's Agricultural Utilization Research Institute (AURI), Minnesota's Agricultural Products Utilization Commission (APUC), and other centers and programs in Colorado, Tennessee, Mississippi, and Oklahoma.

A survey is conducted of the center directors to provide a profile of each program's scope and state's objectives, development strategy, and performance measures. This paper assesses the effectiveness of variously structured value-added programs as stated by the survey; it also summarizes recommended strategies for improvement. Cost considerations and long-term justification of these value-added centers is also considered. Institutional design, recommendations, central policy issues, and program performance measures are discussed. States considering the implementation or expansion of such programs will want to evaluate their design based on these findings.

Many state-level initiatives are taking place to help farmers cope with low commodity prices. One of the most popular policy approaches being employed around the country is the development of state value-added programs and centers. The centers and programs are quite diverse and provide a wide range of development assistance to farmers and agribusinesses. This paper examines some of the value-added programs throughout the country, investigating issues, such as state objectives, development strategies, and performance measures. The states included in the study are Colorado, Tennessee, Mississippi, Oklahoma, Iowa, Minnesota, and North Dakota.

Introduction

More and more farmers are looking to participate more in the growing value-added sector of the markets for their commodities. Worstel (1999) suggests that some marketing margins are as large as

74 percent in many agricultural sectors.¹ Commodity prices are relatively flat. Many view farm incomes as chronically low. Value-added activities are intended to allow farmers to capture some of the marketing margin—the difference between prices that farmers receive for their commodities and the that prices retailers receive from consumers. Farmers' interest in value-added activities is understandable. Any commitment to value-added activities must be made with understanding of markets, the economics of specialization, product differentiation, and marketing strategy.

There is also a sense of unique innovation attending these initiatives that goes beyond the zero-sum game. There is also a sense of expanding derived demand for locally produced commodities as new local value-added efforts are launched. North Dakota Pasta Growers come to mind as an example of the latter. The waste product utilization initiative with Agricultural Utilization Research Institute (AURI) is a good example of the former.

Risks for farmer involvement in new products are tremendous. Risks include product safety, product management, and business financial risks. The

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¹For more information, see Worstel (1999).

Tennessee Extension Service says that one of every four new businesses are closing its doors within the first four years of operation. It is understandable that financial institutions are tentative in lending money for such farmer-initiated entrepreneurial enterprises.

There are many definitions for value-added. One definition of value-added is the increase in time, form, and space value in transformation of a commodity. By this definition, value-added can be viewed as new production technologies, new ideas in processing, new ideas in packaging, and new concepts in shipping products. The products do not necessarily have to be new. Once a market is found, any product that adds revenues above and beyond the commodity value is deemed to add value (for example, making preserves from strawberries).

Kraybill and Johnson (1989) define value-added according to three levels in economic literature. At firm level, "value-added is the difference between the sale of a firm and its purchases from all other firms." In the sector level, "value-added is the difference between the outside sales of a sector and its purchases from all other sectors." At the geographic region level, "value-added is the difference between the outside sales of a region and its purchases from all other regions." Finally, a region-based definition of value-added is "any activity which increases the value of raw materials indigenous to a region." The discussion of value-added centers focuses on the region-based definition (state) and the firm-level definition. This distinction is important to understand because the term "value-added" can portray a variety of meanings.

Several states have identified the need to provide support to develop new value-added initiatives for their agricultural sector. The goal of the programs is to help increase farm incomes through the expansion of their marketing opportunities and demand for locally produced commodities.

The centers typically give farmers and agribusinesses tools to use before starting a new business. Key phases of business development—such as feasibility studies, marketing plans, business plans, dealing with regulatory agencies and financial institutions, and handling growth issues—are conducted by the new value-added centers and programs. Thinking through key issues is very important before starting a new venture. With the help of the value-added centers, individuals are better able to understand the necessary components of owning and operating a new business.

The researched centers are very similar in their development objectives and activities, yet they differ in institutional design and development strategies. The centers differ in their funding sources and controlling organization. The funding available to the programs and the centers determines the scope of activities that are performed.

Center and Program Descriptions

A detailed background on the scope, development objectives and strategies, and performance measures employed by a sample of state-level value-added centers was assembled through personal interviews with program directors or staff and secondary printed material from each program, such as annual reports, brochures, and Internet sites.

Progressive efforts are under way in a number of states. The state programs selected here represent a cross-section illustrating a range of institutional design. An overview of these programs is presented in Table 1.

A discussion of each program includes reflection on the extent to which they evaluate the progress toward the center's stated goals. Most programs depend on state funds and provide annual reports that give an account of their activities. Still, objective performance measures are difficult to determine, especially as failure is common and inherent to these centers.

Tennessee

The University of Tennessee Cooperative Extension Service started the Agricultural Development Center (ADC) in January 1998.² The establishment of the ADC was Recommendation 1.5, published in the Governor's Council on Agriculture and Forestry Report in 1996. Current resources within the CES were used to establish the center. The center's focus is to help Tennessee-based agricultural and rural firms. The ADC provides assistance to value-added projects in agriculture, aquaculture, forestry products, and home-based industries. The Development Center focuses on business expansion, feasibility studies, and marketing plans.

²This discussion draws on a personal interview with Rob Holland (1999) and the University of Tennessee, Cooperative Extension Service website (1999).

Table 1. State-Level Value-Added Support Programs-Funding and Activity.

State	Name of Program	Inception Date	Activities	Annual Funding	Activity Level	Performance Measures
Tennessee	Agricultural Development Ctr., University of Tennessee	January 1998	feasibility studies, business expansion, marketing plans for agriculture, aquaculture, forestry products, home-based businesses	\$310,000; money reallocated from existing sources	last 12 months; completed 13 projects, accepted 11 additional projects; no direct funding provided	(1) client surveys (2) quarterly progress reports by center
Mississippi	Mississippi Food and Fiber Ctr., Mississippi State University	1974	feasibility studies, business expansion, marketing plans, food safety, product development, helping agriculture, marine, aquaculture, forest products, bakery goods	\$750,000 annually	Number of projects not available at this time; no direct funding provided	(1) client evaluations of center (2) providing enough information to clients to make a sound decision
Oklahoma	Food and Agricultural Products Research and Technology Ctr., Oklahoma State University	1997	business plan, market plan, product pricing, promotion, financing options, identification of co-processors, meeting state and federal regulations	\$2.3 million annually; covers all food research, equipment, and bldg. expenses	61 completed projects since 1997; 112 ongoing projects; no direct funding provided	(1) new jobs and businesses (2) savings to new processors (research) (3) gains in new processors

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Table 1. State-Level Value-Added Support Programs-Funding and Activity (continued).

State	Name of Program	Inception Date	Activities	Annual Funding Level	Activity Level	Performance Measures
Colorado	Agricultural Processing and Feasibility Grant, Colorado Dept. of Agriculture	1984	feasibility studies, business plans, marketing plans, food safety, packaging, promoting specifically value-added food processors	Not Available	5 projects awarded full or partial grants up to \$15,000 in 1999	(1) client reports
Iowa	Rural Economic Value Added Mentoring Program (REVAMP); Value-Added Agricultural Products and Processes Financial Assistance Program (VAAPFAP)	1991, expanded in 1994	technical and business planning; aimed at fostering business growth to increase demand for raw commodities and livestock; loan program (VAAPFAP)	REVAMP budget \$365,000; VAAPFAP over \$4,000,000 in loans	worked with 121 applicants in FY 1998-1999; funded 45 projects in FY 1998-99	(1) job creation (2) increase in tax base
Minnesota	Agricultural Utilization Research Institute (AURI)	1987	product feasibility testing, product development, business plans, financing options, marketing plans, resource links	Not Available	supported 373 different projects, 190 new products with 122 products commercialized since beginning in 1987 (1997 numbers)	(1) quarterly reports by clients to report progress of project
North Dakota	Agricultural Products Utilization Commission (APUC)	1979	feasibility studies, business plans, grant programs	\$2.5 million per biennium	185 projects funded since existence (1995 figures)	(1) client evaluations (2) interim reports to evaluate client progress (3) jobs and wealth creation

Faculty and specialists at the ADC have expertise in marketing, economic analysis, process engineering, business management, and food technology. These experts work with other state agencies, including the Tennessee Department of Agriculture, economic development districts, the Small Business Development Center (SBDC), the Tennessee Department of Economic and Community Development, and the Tennessee Department of Tourism Development.

The projects carried out by the ADC require primary and secondary criteria for working with projects. Primary criteria include:

- Tennessee-based projects focusing on agriculture, aquaculture, or forestry projects;
- Tennessee-produced products;
- projects must be within the realm and capabilities of the Center; and
- products or services must be value-added.

Secondary criteria include:

- adequate information in the application for proper project evaluation;
- project must be deemed technically feasible (from preliminary investigations);
- proper project financing/technical resources must be available to complete the project; and
- project must offer economic impact potential.

The ADC assists projects encompassing a wide range of products, including hot sauce and salsa marketing, poultry waste compost, adding value to sweet potatoes, and a working-farm vacation business.

The program does not offer direct financial assistance for projects. The ADC sometimes guides project organizers to financial sources, but overall, the ADC encourages its clientele to find outside funding. The ADC applies for numerous grants for funding, and recently, a new market development study was awarded. Other planning involves workshops that address adding value to Tennessee agriculture. The one-day workshops provide information on financial, production/regulatory, and marketing issues. The workshops feature extension specialists, successful entrepreneurs, as well as representatives

from the Tennessee Department of Agriculture, the FDA, and the Department of Health.

All extension specialists and extension agents send a one-page, five-question application to the ADC. The ADC evaluates their performance on the basis of questionnaires sent to previous entrepreneurs that have used the ADC. Additional questionnaires are sent to evaluate workshops. Every two weeks the center publishes an updated list of new projects, projects under review, and accepted projects.

The ADC is currently at 20 percent operating capacity, with two full-time employees, six partial appointments, and one secretary. Currently, the University of Tennessee is the sole sponsor, but the scope and design of the Center is intended to expand, based on the perceived demand for these programs expressed by clients from around the state. The future expansion of the ADC depends on support from the state government.

Mississippi

The Mississippi Food and Fiber Center is a unit of the Cooperative Extension Service. The center was created in 1974 by a state legislative action. The goal of the program is to increase value-added activity in Mississippi agriculture, marine, aquaculture, and forest products. Value-added activities include the expansion and improvement of the processing and marketing of businesses in Mississippi.³

The Center has a well-diverse task force including specialists in management, industrial and food process engineering, economics, food technology, wood and wood products processing, marketing, distribution, and business analysis.

The Food and Fiber Center only works with in-state companies in the production of food or fiber. This includes entrepreneurs involved with bakery goods. The Center provides help in business and product development. A weakness is the lack of a good mechanism to screen applicants, which leads to many problems with applicants not dedicated to pursuing their ventures. The Center does try to screen applicants by providing workshops to find the individuals most interested in pursuing their business.

³The discussion draws on a personal interview with Dr. Virgil Culver (1999) and the Mississippi State Extension Service, Food and Fiber Center website (1999).

Though no formula for success is specified, the Center measures its performance by:

- providing enough information for the company to make a sound decision for business start-up or expansion and
- having enough clients who say that the center helped them to get started or to expand.

Many other agencies are involved throughout the state. The Department of Economic and Community Development, Mississippi Technology Extension Partnership, and the SBDC offices are all used to facilitate the needs of entrepreneurs within the state. The Center and agencies continually try to improve the way they work with the agencies. Currently, the Center is focusing more on business expansion through feasibility studies, business planning, cost projecting, and technical assistance. These activities are performed with a consulting team. The Center is not doing as much with start-up entrepreneurs because the SBDC provides much of the help that entrepreneurs need.

The Food and Fiber Center does not directly provide any type of project financing. Its \$750,000 budget primarily pays salaries and benefits for the full-time staff. The Center does try to locate grants and loan-guarantee programs through other state agencies for businesses that they assist.

The center is not seeking to expand at this time. In the next few years, the program may not be state-funded, leaving the Center to find alternative resources in order to keep going.

Oklahoma

The Food and Agricultural Products Research and Technology Center (FAPC) bridges the gap between academics and the private sector.⁴ The FAPC offers a qualified staff with training in business and technical disciplines to large and small businesses, producers, and entrepreneurs. The overriding goal is to "help producers, processors, and entrepreneurs add value to the food and agricultural processing industries in Oklahoma." The FAPC

provides assistance in business and marketing areas, such as business plan development, market identification and evaluation, product pricing and promotion advice, evaluation of financing options, identification of co-processors, and meeting state and federal regulations.

The FAPC, created three years ago, is funded on a line-item budget as part of appropriations from the state of Oklahoma. It is designed to assist with in-state companies. In-state companies are not charged a fee for information, but the use of lab time (for example, testing for food safety) does entail a fee. The FAPC will help out-of-state companies, but they are charged for any time logged by Center personnel. The FAPC does not try to compete with other organizations in the state, such as SBDCs, the Department of Health, and others.

The FAPC houses 24 full-time faculty and staff members with expertise in a variety of technical areas in food science. Many graduate students and undergraduates assist with research projects in the center. Most of the facility is fully operational.

The FAPC provides a variety of workshops, short courses, and seminars throughout the year. The activities topics include topics such as business development, food safety, agricultural opportunities, and trademark acquisitions. The FAPC may direct some applicants to local SBDC offices for additional business planning help. After individuals complete a business-planning seminar, the Center will help the applicant with product development. The FAPC tries to perform up to 49 percent of the work to get the business started, but the entrepreneur must dedicate at least half of the time to demonstrate a high level of commitment to the project.

The FAPC faculty and staff have been involved with 29 new businesses since January 1997. The companies collectively have created more than 109 new full-time jobs, 37 part-time jobs, 11 new processing facilities, and new co-packing contracts for 16 existing processors. Additionally, 10 existing processors in Oklahoma have expanded into new product lines. The FAPC staff and value-added faculty and staff at OSU are involved in the Food Research Initiative Program. This program provided more than \$268,000 in seed funding during 1999. This funding is generally targeted for preliminary exploratory experiments. All of the money is dedicated to strengthening Oklahoma's programs and businesses, focusing on processing and marketing of value-added agricultural products. Additionally, the

⁴The material presented here draws on a personal interview with Dr. Rodney Holcomb (1999), the Oklahoma Food and Agricultural Products Research and Technology Center's (FAPC) *Annual Report* (1999), and the FAPC website (1999).

program has completed 61 value-added projects with Oklahoma processors since 1997. They currently have 112 ongoing projects. The FAPC is currently working with a diverse group of projects, with companies and entrepreneurs, such as Ames Cooperative, Coco to Gogo, Excel Corporation, Oklahoma Peanut Commission, Quail Project, Uncle Max's Famous Fudge, and numerous other clients.

The FAPC works with many other Oklahoma organizations, including the Oklahoma Department of Agriculture. The FAPC also works with the "Made in Oklahoma" program. This program is geared to getting Oklahoma-made products into stores. The Oklahoma State Department of Health organizes and promotes workshops for the FAPC scientists. The Department of Environmental Equality also uses the FAPC for recommendations concerning engineering issues. Working with these other organizations stimulates cooperation throughout the state.

The FAPC plans to develop a feedback assessment system to monitor the Center's performance and achievements. This includes impact surveys of the projects assisted and an internal performance review process, as well as program reviews using external evaluators.

Iowa

The Iowa Department of Agriculture and Land Stewardship's (IDALS) Office of Renewable Fuels and Co-Products (ORFAC) was established in 1991 to promote renewable fuels made from agriculture. Expanded in 1994 by House File 2337, \$350,000 was designated to the Renewable Fuels account to provide business planning and technical assistance to value-added industries and processes as well as renewable fuels and co-products processing facilities. The funding now provides for research, demonstration projects, advertising, promotion, and administrative costs.⁵

ORFAC developed the Rural Economic Value-Added Mentoring Program (REVAMP). REVAMP is a technical and business planning program aimed at helping businesses in early stages of development or expansion. REVAMP's stated goal is to "revital-

ize Iowa's economy by fostering business growth that will increase demand for raw agricultural commodities and livestock." REVAMP focuses on expanding value-added processing and on developing new uses for Iowa's agricultural commodities.

IDALS works in partnership with the SBDC throughout Iowa to receive business plan assistance. SBDC consultants are provided \$1,000 to review each initial business plan, to make recommendations on the project's viability, and to develop and refine the plan. Projects similar to previously funded projects receive \$500. An additional \$24,000 may be provided in additional assistance via contract.

After completing the business plan, financial assistance can be applied for through the Value-Added Agricultural Products and Processes Financial Assistance Program (VAAPFAP). This is a dual-loan program that provides loans and forgivable loans—loans for which repayment is eliminated in part or entirely if the borrower satisfies specified conditions. This funding is not, however, available for research and development. The loan program is run by Iowa's Department of Economic Development (IDED), but business plans are evaluated by the Agricultural Products Advisory Council (APAC). The APAC provides recommendations to the IDED director for final approval of funding. Then VAAPFAP will fund up to 50 percent of the project, providing a maximum of \$900,000. Up to \$200,000 is available to each applying organization in forgivable loans. Smaller projects can be funded approximately \$50,000 in forgivable loans at competitive interest rates. The advantages for these businesses is that private institutions will not fund most of the projects that VAAPFAP funds due to the riskiness of the projects.

REVAMP and VAAPFAP worked with 121 businesses through June of 1999, and they funded more than \$4,000,000 in forgivable loans. More than \$96,000 was spent for planning assistance, and \$61,500 was used to help businesses plan for growth. REVAMP also spent \$263,426 on educational, promotional, and advertising events, as well as two conferences on value-added activity in Iowa and on seeking financing for business. Additional money was spent on ethanol promotion and value-added promotions, research, and other activities. Total expenditures for the REVAMP program were more than \$470,000. The \$365,000 budget comes from a road-use tax fund. Additional funds were forwarded from the previous year's road-use tax and interest that was carried over.

⁵Information concerning the Iowa Rural Economic Value-Added Mentoring Program (REVAMP) was collected from a personal interview with Pat Paustian (1999). Additional information was provided by the ORFAC Annual Report (1999).

The REVAMP program is targeted to expire in 2000. Currently, the program is funded through the road-use tax, but some controversy persists with regard to the funding source. As the value-added products are generally not related to road usage (the renewable fuels are), different funding legislation with more explicit language, corresponding to the current activities, is expected to pass. There are three key points that the Iowa Department of Agriculture hopes their state legislators will consider in their decision to continue or expand the program.

- an estimated 518 percent increase in employment over four years;
- an increase in tax base; and
- the fact that Iowa is one of the few state programs to work with all commodity groups.

REVAMP and VAAPFAP assist with a wide range of products throughout Iowa. The funded projects include cornstalk processing, herb products, pie manufacturing, compost, fish farm, candles, ethanol products, and many more.

Colorado

The Colorado Department of Agriculture administers the Agricultural Processing Feasibility Grant program for the state of Colorado.⁶ The grant program is funded by the Colorado Economic Development Commission. The grant aims to assist local governments and local private enterprises in feasibility studies. The two qualifications that must be met are (1) that the facilities must be located within Colorado and (2) that the facilities must be used for further processing of agricultural commodities.

The Colorado program will work with current start-up agricultural processors. Up to \$15,000 can be granted for value-added processing facilities. Applications must be coordinated through local governments in Colorado. Private enterprises present their projects to local governments, and the application is forwarded by the local government. Funds are then awarded to qualifying projects through local

governments or public non-profit organizations via contract. The contractor will then enter into a sub-contract with the private enterprise.

The grants are approved by the Agricultural Processing Feasibility Review Committee. Program money must be matched by the applicant by at least one-to-one and can be allocated through any form that may be assigned a monetary value (for example, travel, time, money, etc). First, appropriation is awarded after the plan of work is approved and the contract is signed (40 percent of the award). Additional funding is awarded (30 percent) after the acceptance of an interim report. The final 30 percent is awarded after the acceptance of the final report. All work must be completed within one year. Verbal progress reports are due throughout the study.

Grant recipients must meet with an advisory committee composed of individuals from the Colorado Department of Agriculture, Colorado Office of Business Development, Colorado Department of Local Affairs, Colorado State University, and the Colorado Housing and Finance Authority.

The Colorado Department of Agriculture also conducts business development assistance educational programs to assist in the growth and start-up of agricultural production and processing businesses. The educational programs include:

- Agricultural Business Review Program—business plan review;
- Company Consultation—one-on-one program;
- Existing Company visits—provide information on specific programs;
- HACCP for Small Food Processors—food safety conference;
- Marketing Your Food Product—one-day program for marketing plans, product introduction, advertising and promotions, packaging, and sales;
- Packaging Critique—one-on-one with graphics designer; and
- Starting a Food Processing Business—assist start-up food processors.

The Agricultural Processing Feasibility Grant Program tries not to compete with existing organizations in Colorado. For example, grant par-

⁶The discussion draws on a personal interview with Rosemary Biggins (1999) and printed materials from the Colorado Department of Agriculture.

ticipants are usually guided to local SBDC offices for additional help with business plans. Other entities directly involved or used by the grant program are universities, the Small Business Administration (SBA), and the health department.

Aside from grants for up to \$15,000, the program offers very little financing for business start-ups. Some funding is available for domestic and international trade shows. Additionally, the Colorado Agricultural Authority provides tax-exempt bonds for food processors.

There is little budget growth expected during the next few years for the Colorado value-added program. The state budget is relatively tight, and funding is restricted for programs such as the value-added program, though the private value-added efforts are expected to grow in the state for years to come.

North Dakota

The Agricultural Products Utilization Commission (APUC) was formed in 1979. The original appropriation was \$50,000, and the program now has a budget of more than \$2,500,000 per biannum.⁷ The primary focus of APUC is to create "new wealth and jobs in North Dakota's rural communities through the utilization of agricultural products." The commission consists of nine persons. Five are appointed by the governor for two-year terms. One is appointed by the Commissioner of Agriculture. Three statutory members include the director of the Department of Economic Development and Finance, the President of North Dakota State University, and the Commissioner of Agriculture.

Funding for the APUC program comes from three primary sources. The sources are general state fund dollars, federal grants, and an agricultural fuel-tax fund (\$0.02 of every \$1).

APUC emphasizes four important components to each application that seeks support from the program. First, a comprehensive feasibility study is conducted. Second, a thorough business plan is developed, and the applicant must clearly demonstrate access to adequate capital. Third, there must be evidence of a good management team. The APUC staff assist applicants in preparing and presenting applications that address each of these components.

The program includes five different grant programs with funding ranges from \$2,000 to \$154,000. The basic and applied research grant focuses on the uses and processing of agricultural products and by-products. The marketing and utilization grants are used for the development or implementation of a sound marketing plan for North Dakota agricultural products or by-products. Cooperative marketing grants are used to organize a cooperative for the purpose of marketing a product or for formulating or implementing a marketing plan if the cooperative is already in place. The farm diversification grants are used for the diversification of a family farm to nontraditional crops, livestock, or on-farm value-added processing of agricultural commodities. Finally, the North American marketing initiative funds are used to develop or to implement a sound marketing plan for North Dakota agricultural products and by-products being exported to Canada and/or Mexico.

The projects are funded based on two important criteria:

- (1) industrial and other nonfood products and processes must utilize agricultural output and
- (2) food, feed, and fiber products and uses must be innovative and must add value to North Dakota agricultural products.

Projects are evaluated along six criteria by each member of the commission using a point scale that is based on presentations by the project spokesperson. Projects that have been assisted and funded in the past include a bison feeding study, Farmers Choice Pasta Company (wheat), marketing waxy corn, value-added bagel products, and elk production.

The grant recipient must sign a contract to ensure that the grant money is used as proposed in the project. Evaluations involve a series of interim reports written by the grant recipient. The reports are intended to evaluate the use of taxpayers' dollars with regards to the funded projects. Many other agencies complement the APUC program. APUC works closely with the State Bank of North Dakota. The bank provides many agricultural services, including agricultural investments, to the state. Local SBDC offices are utilized for their expertise. The North Dakota Associate of Rural Electric Cooperatives has a rural economic division that provides assistance when needed.

⁷This discussion draws from a personal interview with Russ Hanson (1999). Additional materials include 1995 legislative report and Department of Agriculture publications.

Minnesota

AURI was funded in 1987 through the state legislature with the objective of strengthening Minnesota's rural agricultural economy. The Program is available to private, for-profit businesses operating in Minnesota.⁸ The purpose of the program is to foster long-term economic benefits and to increase business and employment opportunities for rural Minnesota through:

- identification, expansion, and creation of new markets for agricultural commodities, ingredients, and products;
- development of more energy-efficient, natural resource-saving farm production practices; and
- development of new industrial uses and value-added food products from Minnesota agricultural commodities.

AURI is a non-profit corporation that coordinates government, university, and private resources to meet its objectives. It provides a wide range of programming in support of value-added enterprises, including business plan assistance, feasibility analyses, facilitating linkages to existing technologies, technical and financial assistance, and market development.

The top priority of AURI is to move new products and processes into the marketplace. Preference is given to projects that develop new industrial/food uses for Minnesota agricultural commodities that benefit rural Minnesota and are submitted by small rural Minnesota businesses.

AURI funding will provide up to 50 percent of the funding for approved projects. The funding is determined by the size of the business, with smaller businesses (50 or fewer employees) receiving 50 percent. Larger firms receive less funding. The funding is distributed through loans so that all funds through the Partnership Program are subject to repayment with interest under a contractual agreement. The Program operates four regional field offices as well as an administration office. AURI works extensively with the University of Minnesota, the Minnesota Department of Agriculture, SBDC offices, and other supporting institutions.

⁸The discussion from this section comes from the AURI (1997). Additional material is from the AURI website (1999).

Waste utilization is one value-added product that has been particularly successful so far in the AURI program. Prior to 1997, 21 waste utilization projects were funded. Other projects include the Minnesota Valley Alfalfa Producers, absorbent corn board, wheat cat litter, growing trees as crops, and hog odor research.

Conclusions

Value-added programs and centers throughout the country operate with similar value-added objectives but different institutional designs and approaches. Each program emphasizes different activities and supports entrepreneurs and agribusiness in different ways. Determining the most successful program is not relevant, but highlighting some key issues, objectives, strengths, and weaknesses is valuable for current and future value-added programs throughout the country.

Many of the programs are competing with traditional state government funding or university budgets. There are several qualitative ways to show the effectiveness of spending tax dollars for state-led value-added programs. Institutions that can coordinate all activities for clients, providing "one-stop-shopping," benefit the clients' need for comprehensive value-added programs. Clients are inclined to use the program again if an organized approach to information gathering is available. Additionally, working with numerous other state agencies and other organizations proves to be a strength for value-added centers. Using existing resources benefits the value-added center, the client, and other state organizations and businesses.

Being able to account for public funding quantitatively is very important for value-added agricultural centers. Iowa's REVAMP program provides a good example of evaluating its use of taxpayers' dollars, citing increased employment figures and tax-base increases. Value-added centers need a way to measure their economic impact within the state. Tools, such as IMPLAN, allow a benefit-cost analysis of value-added programs.

Having other measurable performance goals that help to justify the investment of public dollars is also important. Some programs already have measurable goals to justify state funding. A few examples of measurable performance goals are listed below:

- new business starts;
- job creation;
- patents and trademarks;
- sales for new firms;
- positive client evaluations;
- application count; and
- growth in funded projects.

Other important performance measures may include a study that compares differences in business success rates of program participants and non-program participants. The identification of non-feasible projects is as important as the identification of feasible projects.

Performance goals need to be measurable. Most of the above goals only account for short-run performance measures involved with newly formed businesses. Value-added centers have less influence over the business' everyday operations and macro-economic cycles over the long term (greater than one year). Providing management training is important for value-added centers, but the success of many new ventures appears to rely on inspired, skilled leadership, qualities over which centers have limited control. Other business cycle fluctuations, such as changes in markets and new regulations, may affect value-added businesses in the long run, obscuring the impact of value-added programs.

Program coordinators may face conflicting incentives when setting performance goals. External evaluations of measurable performance criteria add credibility to a center's activities, but coordinators may be reluctant to specify possibly unattainable performance criteria that might jeopardize future funding. Conversely, external evaluators' goals and expectations may not coincide with the center's available resources.

References

- APUC (North Dakota Agricultural Products Utilization Commission). 1996. *Biennial Report 1993-1995*.
- AURI (Agricultural Utilization Research Institute). 1997. *Partnership Program: Guidelines and Application*.
- AURI (Agricultural Utilization Research Institute). 1999. "1998 Resource Guide." <<http://www.auri.org>>. September.
- Biggins, Rosemary. 1999. Telephone Interview, Business Development Specialist, Colorado Department of Agriculture. September.
- Culver, Virgil. 1999. Telephone Interview, Director, Mississippi Food and Fiber Center, Mississippi State University, Mississippi State, MS. September.
- FAPC (Oklahoma Food and Agricultural Products Research and Technology Center). 1999. *Annual Report*. May.
- Green, M.J. 1988. "Agricultural Diversification Initiatives: State Government Roles in Rural Revitalization." Technical Assistance Bulletin No. 2, Rural Economic Alternatives Series, Council of State Governments, Lexington, KY. January.
- Hanson, Russ. 1999. Telephone Interview, Program Coordinator, Agricultural Products Utilization Commission (APUC), ND. September.
- Holcomb, Rodney. 1999. Telephone Interview, Agricultural Economist, Oklahoma Food and Agricultural Products Research and Technology Center. September.
- Holland, Rob. 1999. Telephone Interview, Marketing Specialist, Tennessee Agricultural Development Center. September.
- Kraybill, David S. and Thomas G. Johnson. 1989. "Value-Added Activities as a Rural Development Strategy." *Southern Journal of Agricultural Economics*. July: 27-40.
- McGilberry, J.H. 1987a. "The Mississippi Cooperative Extension Service—Food and Fiber Center." Mississippi Cooperative Extension Service, Mississippi State University, Mississippi State, MS. December.
- _____. 1987b. "Food and Fiber Center: Origin and Mission and the Status of Agribusiness." Mississippi Cooperative Extension Service, Mississippi State University, Mississippi State, MS. December.
- Mississippi State Extension Service, Food and Fiber Center. 1999. <<http://ext.msstate.edu/ecrd/ffc/ffc.html>>. September.
- ORFAC (Office of Renewable Fuels and Co-Products). 1999. *Fifth Annual Report*. Iowa Department of Agriculture and Land Stewardship. 1 October.
- Paustian, Pat. 1999. Telephone Interview, Office of Renewable Fuels and Co-Products (ORFAC), Rural Economic Value-Added Mentoring Program (REVAMP). September.
- University of Tennessee, Cooperative Extension Service. 1999. "About the Center." <<http://www.utextension.utk.edu/adc/CenterInfor.htm>>. September.
- Worstel, James V. 1999. "Kentucky Farms and Markets: Emerging Policy Opportunities." Office of Environmental Outreach, Kentucky Department of Agriculture.