

**SURVEY FOR A REGIONAL AQUACULTURE CO-OP AND MARKETING IN THE NORTH  
CENTRAL REGION**

**Principal Investigator:** Susan T. Kohler, Southern Illinois University Carbondale

**Industry Advisory Council Liaison:** Russ Allen, Okemos, Michigan

**Extension Liaison:** Laura Tiu, Ohio State University

**Funding Request:** \$50,000

**Duration:** 1 Year (September 1, 2003 - August 31, 2004)

**Objectives:**

1. Investigate the pros/cons of alternative forms and scopes of a marketing organization, i.e., species; market information, marketing, or market development.
2. Survey aquaculture growers and existing co-ops in the North Central Region to assess interest and willingness to commit and invest in a grower-owned marketing organization.

**Proposed Budgets:**

<b>Institution/Company</b>	<b>Principal Investigator(s)</b>	<b>Objective(s)</b>	<b>Year 1</b>	<b>Total</b>
Southern Illinois University- Carbondale	Susan T. Kohler	1 & 2	\$50,000	\$50,000
<b>Totals</b>			<b>\$50,000</b>	<b>\$50,000</b>

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## JUSTIFICATION

The Industry Advisory Council of the North Central Regional Aquaculture Center (NCRAC) has identified the need to conduct a survey pertaining to a regional cooperative and marketing project. This one-year project is a preliminary assessment of the pros and cons of alternative forms and scopes of a marketing cooperative/organization, as well as an initial assessment of the willingness of producers to commit to, and invest in, a grower-owned marketing cooperative/organization.

Marketing cooperatives are farmer-owned businesses that collectively sell products. Cooperatives differ from other businesses in that they are member-owned and operate for the benefit of members, rather than earning profits for outside investors. Cooperatives allow producers to collectively accomplish functions they would not typically be able to achieve individually. Most agricultural producers have relatively little power or influence within the marketplace due to pressures from large agribusiness or food companies that purchase their commodities. Joining resources with other producers in a cooperative can provide greater bargaining power to more effectively and profitably compete. In addition, cooperatives give producers more control over their products as they make their way to consumers by allowing them to bypass one or more middlemen in the market channel. Producers are then able to capture more of the returns that would otherwise be distributed further down the value-chain. Additionally, marketing cooperatives enable producers to: (1) improve bargaining power by collectively controlling a larger portion of supply, (2) spread risks and costs, (3) have sufficient volume to operate a processing plant efficiently, (4) gain access to greater markets due to sufficient supply, (5) have access to a larger investment pool to pursue value-added activities, and (6) have access to a network of other producers to share better farm practices to improve on-farm productivity.

Marketing cooperatives are an important aspect of farming. They operate in every region of the U.S. and handle most types of farm products. In the U.S. there are more than 40,000 cooperatives serving one out of every four citizens (USDA 1995). Cooperatives account for 86% of total farm value of all milk marketed in the U.S., 41% of the cotton, 40% of the grains and oilseeds, and 20% of the farm value of all fruits and vegetables (Warman and Kennedy 1998).

The objectives that most farmer cooperatives try to achieve include: (1) increasing the net income and standard of living of members by minimizing their costs of farm inputs and maximizing their returns from marketing the farm products they produce; (2) providing the needed services or improving existing services involved in marketing products or obtaining specialized business services; (3) encouraging the production and marketing of high quality products; and (4) procuring for members the type and quality of supplies that will produce maximum crop yields or livestock.

As the aquaculture industry becomes less fragmented and larger companies control larger portions of market share, it becomes more important that small producers take proactive steps to protect their livelihood. By joining a marketing cooperative, the smaller producer may be better armed to protect his or her investment and succeed in the marketplace. Through a survey of aquaculture producers in the NCRAC region, it will be determined whether a marketing cooperative is perceived as beneficial to these producers/operations and, if so, the types of services desired.

## RELATED CURRENT AND PREVIOUS WORK

The U.S. fishing industry has used cooperatives for many years. Approximately 9% of the 1980 U.S. fish landings were marketed by cooperatives (Garland and Brown 1985). During 1980, there were 102 fishery cooperatives ranging in age from five to 67 years. Marketing was found to be the major activity undertaken followed by the provision of supplies and services. Marketing cooperatives receive and market the catch, locate buyers, and/or negotiate terms of trade. Services provided by the supply and service cooperatives were determined to include the provision of ice, fuel, fishing gear, boat repair, insurance, and/or representational functions.

Aquaculture in the North Central Region is not well developed and few cooperative efforts have been attempted. The North American Fish Farmers Cooperative is located in Binford, North Dakota. The cooperative is a not-for-profit, closed cooperative, originating in 1993. Membership stands at 35. Services

of this cooperative include education, processing, live hauling, and marketing of tilapia. The cooperative's range includes the Midwest, east coast, and Canada. It markets to groceries and up-scale markets in Toronto, New York City, and other cities with large Asian populations. The cooperative is planning to expand operations and is a successful model for marketing (M. Willows, North American Fish Farmers Cooperative, Binford, North Dakota, personal communication). Sources of capital are member investment where shares of common stock sell \$0.05/lb (based on projected annual production) and shares in "outside product" are sold to members for \$0.10/lb. The biggest problem to date is that not enough members have been able to secure financing to get their own operations up and running so they can commit capital and fish to the cooperative. The cooperative adheres to the new generation approach in the following ways: (1) the cooperative has a target niche market that offers a strong demand for their product, and (2) members provide "up front" capital in proportion to their projected use of the cooperative. However, failure to secure supply from established producers-members has restricted growth ([http://www.wisc.edu/uwcc/info/i\\_pages/aquacul.html](http://www.wisc.edu/uwcc/info/i_pages/aquacul.html)).

The Illinois Fish Farmers' Cooperative originated in November 1999 as a private, for-profit cooperative. Membership approximates 100. Services of the cooperative include education, processing, and marketing. The processing plant processes catfish, hybrid striped bass, tilapia, and freshwater prawns and markets them in the Midwest. The cooperative reached a million pounds processed in June 2002. Sources of capital for the cooperative are a grant from the State of Illinois and nominal membership fees (S. Killian, Illinois Fish Farmers Cooperative, Pinckneyville, Illinois, personal communication).

Fresh water prawn (*Macrobrachium rosenbergii*) production began in southern Illinois in 2000, with two farmers stocking one acre. In 2001, nine farmers stocked approximately 14 acres. That year, the Shawnee Freshwater Prawn Grower's Association was organized with a mission to develop and promote high quality freshwater prawns in southern Illinois. Services of the organization include marketing, education, and sharing of knowledge among members. In 2002 the grower's association consisted of 32 farmers with approximately 40 acres in production (B. Boyd, Shawnee Prawn Producers, Ullin, Illinois, personal communication).

Delta Pride Catfish, Inc. is an aquaculture marketing cooperative located in Indianola, Mississippi. The farmer-owned cooperative originated in 1981 and now consists of approximately 115 members. Services of the cooperative include research, education, live hauling, processing, and marketing. The cooperative, with 600 employees, owns two processing plants that process 1.5 million pounds of catfish per week that are marketed globally ([www.deltapride.com](http://www.deltapride.com)).

The Purchase Area Cooperative, organized in 1999, is located in Mayfield, Kentucky. The cooperative, with 50 members, offers the services of education, processing, and marketing. It processes approximately 16,000 pounds of catfish per week that are marketed in Kentucky and Tennessee. Sources of capital include state grants, private bank loans, and membership fees. Expansion plans are being considered (T. French, Purchase Area Cooperative, Mayfield, Kentucky, personal communication).

The Mountain Aquaculture and Producers Cooperative markets trout and arctic char for its 10 members. The cooperative originated in 1991 and provides the services of processing, smoking, marketing, and purchasing of supplies in bulk. Products are marketed primarily to east coast restaurants. Sources of capital are a private foundation, Farmers Home Administrator, long-term low interest notes from community supporters, proceeds from sales, and nominal membership fees. Problems with the cooperative include competition from low-priced Idaho trout, lack of members' commitment (market of last resort), insufficient member investment, and limited support for aquaculture and cooperatives in West Virginia ([http://www.wisc.edu/uwcc/info/i\\_pages/aquacul.html](http://www.wisc.edu/uwcc/info/i_pages/aquacul.html)).

Southern States is a large cooperative in Woodstock, Georgia, specializing in tilapia. Members purchase from the cooperative turn-key indoor aquaculture systems, fingerlings, and feed. Technical service is provided by the cooperative and fish are purchased by the cooperative. Information on this cooperative is not freely distributed and is largely limited to news articles.

## **ANTICIPATED BENEFITS**

The overall expected benefits of creating a producer-owned fish farmer cooperative include: (1) increased market share and access to markets, (2) improved quality standards, (3) higher profit margins, and (4) control over the value-added process. By pooling funds, knowledge, and production capabilities, fish growers will be able to focus their efforts cooperatively, rather than competitively.

As with other agriculture related cooperatives, such as Land O' Lakes, Ocean Spray, and Sunkist, a fish growers' cooperative could create value for itself in the following ways:

- (1) **Build or Maintain Market Share**—The use of pooled funds, centralized marketing, and other resources create synergies that enable a cooperative to expand the industry as a whole. This reduces competition and creates benefits for all members that would otherwise be unattainable on an individual basis.
- (2) **Quality Control**—A uniform quality standard and process design builds product distinction, promotes product continuity, and can increase efficiency and profit potential. Unified processes help to reduce the variances between products created by each individual producer, thereby reducing the costs associated with sorting, testing, and processing products of varying size, quality, etc.
- (3) **Unified Labeling**—Marketing products under a single label or brand name enables the group to build name recognition and product differentiation. Producing under a single label also allows the group to fulfill larger contracts than any one individual would be able to do alone. This creates opportunities to forge long-term relationships, promote stable markets, enhance price, and foster industry growth.
- (4) **Centralized Storage, Packaging, Distribution**—Organizing a cooperative is an initial step toward organizing a value-added processing plant in which fish of similar quality can be stored, processed, and distributed as a uniform finished product, thus allowing producers to retain a larger portion of each value-added dollar.
- (5) **Bulk Purchasing**—Purchasing raw inputs such as food, chemicals, and other supplies in bulk allows members to take advantage of economies of scale and reduce input costs. This is one of the oldest and most common cooperative functions. It is a simple and proven way of enabling small producers to compete with larger producers.
- (6) **Develop Member Knowledge Base**—By increasing the talent pool through membership, a cooperative creates a knowledge base that combines the strengths of their individual members and makes them available to the group as a whole. The combined talents and knowledge of an entire group would help to improve production processes, business practices, market share, and profit margins.

Overall, this analysis will provide the information necessary for producers to make educated decisions concerning the potential services and options available through a cooperative entity. They will be able to evaluate the perceived benefits against the risks and required resources. If sufficient interest is expressed by producers, the Southern Illinois University-Carbondale (SIUC) Rural Illinois Cooperative Development Center (RICDC) could provide assistance in all aspects of formation of a marketing organization/cooperative including bylaws creation, business planning, board training, and management consulting, to name a few.

## **OBJECTIVES**

1. Investigate the pros/cons of alternative forms and scopes of a marketing organization, i.e., species; market information, marketing, or market development.
2. Survey aquaculture growers and existing co-ops in the North Central Region to assess interest and willingness to commit and invest in a grower-owned marketing organization.

## PROCEDURES

To achieve Objective 1, a SWOT (strengths, weaknesses, opportunities, and threats) analysis will be employed to assess the pros/cons of the various options a marketing organization/cooperative could provide. A SWOT analysis is a tool for generating strategic alternatives and focuses on issues that potentially have the most impact. The SWOT will analyze the four services/options referred to in the call for statement of interest: species-specific assistance; market information, marketing or market development services; processing; and bulk purchasing of supplies and other inputs. Interviews with producers and operational cooperatives, and a literature search will generate the inputs and the key issues for the SWOT. Each service/option will be analyzed and characterized to identify and illustrate all of the positive and negative aspects related to it. For example, a processing facility may allow for an identifiable product that could more easily penetrate the market, but is a costly proposition. Bulk purchasing of supplies may lower production costs but may require a centralized warehouse for storage. In addition, a combination of services/options will be evaluated to determine their impact on further increases in efficiency. Preliminary cost analysis, where appropriate, of the various options will be included. The information gleaned from the SWOT analysis will be provided to all producers as part of Objective 2.

To achieve Objective 2, a mail survey, followed up with phone contacts for non-respondents, will be the primary method employed to ascertain the interest of aquaculture producers in the NCRAC region in forming a marketing organization/cooperative. A survey will be designed and pilot tested with the assistance of the NCRAC extension contacts in each state. The survey will be designed in a fashion similar to other surveys recently completed by the SIUC RICDC (e.g., Rural Water Providers Cooperative Survey, Hardwood Drying Cooperative Interest Assessment Survey, Western Illinois Grape Producer's Survey, and Midwest Organic Producer's Interest Survey). Producers will be assured of complete confidentiality. A mailing list will be created by contacting the NCRAC central office as well as the NCRAC extension contact in each state for the names and addresses of producers. All active producers will receive questionnaires. General information on the benefits of forming a marketing organization/cooperative (obtained from Objective 1) will be provided to introduce the concept. The following is a sample of the information that will be gathered from producers through the survey.

- ▶ Are they interested in assistance with marketing their product?
- ▶ Would they be interested in joining an aquaculture cooperative?
- ▶ What services would they want the cooperative to provide (e.g., marketing, bulk purchasing, processing, etc.)?
- ▶ Would they be willing to invest in cooperative services and, if so, at what level?
- ▶ Would they benefit from cost-shared use of equipment?
- ▶ What types of aquaculture product(s) do they produce?
- ▶ What are their production volume, acreage, and their production intentions for the next three years?

Data from the survey will be tabulated and a final report prepared. The results will be provided to the Extension and Industry Advisory Council liaisons to ensure distribution throughout the region. If the findings of the survey appear positive and NCRAC desires to continue with the project, the SIUC RICDC can provide further assistance with cooperative formation. In addition, if sufficient interest is generated, agencies such as the U.S. Department of Agriculture Federal-State Marketing Improvement Program could be approached to leverage funding for a marketing specialist, as was accomplished by the RICDC for the Midwest Organic Producers Cooperative.

## FACILITIES

### **Rural Illinois Cooperative Development Center**

The SIUC RICDC was established in October 2000 with a grant from the U.S. Department of Agriculture. The Center serves as a specialized division of the Office of Economic and Regional Development at SIUC. Presently, two MBAs, one MBA graduate assistant, and an undergraduate business student staff the SIUC RICDC. The facilities at the Center include state-of-the-art computers and other support equipment and materials.

The RICDC provides assistance to new and existing cooperatives in all aspects related to the establishment and operation of both standard cooperatives and new generation cooperatives. The Center provides the necessary guidance and consulting necessary to ensure profitable functioning cooperatives. Services include:

- ▶ Feasibility Studies
- ▶ Business Planning
- ▶ Technical Assistance
- ▶ Board Training
- ▶ Incorporation Consulting
- ▶ By-Law Creation Consulting
- ▶ Referral Services
- ▶ Market Identification
- ▶ Survey Design and Execution
- ▶ Management Consulting

The Center has a track record of creating and supporting cooperatives in rural Illinois. For example, cooperative development assistance was provided to the Shawnee Winery Cooperative, the Midwest Organic Producers Cooperative, and the Shawnee Freshwater Prawn Grower's Association. Since the Center's inception, over 15 cooperatives have received assistance.

#### **REFERENCES**

Garland, W.R., and P.F. Brown. 1985. Fishery cooperatives. U.S. Department of Agriculture, Agriculture Cooperative Service, ACS Research Report No. 44.

USDA (U.S. Department of Agriculture) Rural Business and Cooperative Service. 1995. What is a cooperative? Cooperative Information Report No. 50.

Warman, M., and T. Kennedy. 1998. Understanding agriculture marketing cooperatives. USDA Rural Business and Cooperative Service, Cooperative Information Report No. 45.

**PROJECT LEADER**

<u>State</u>	<u>Name/Institution</u>	<u>Area of Specialization</u>
<b>Illinois</b>	Susan T. Kohler	Enterprise Development



**PARTICIPATING INSTITUTION AND PRINCIPAL INVESTIGATOR**

**Southern Illinois University-Carbondale**

Susan T. Kohler

UNITED STATES DEPARTMENT OF AGRICULTURE  
COOPERATIVE STATE RESEARCH, EDUCATION, AND EXTENSION SERVICE

OMB Approved 0524-0039

Expires 03/31/2004

**BUDGET**

ORGANIZATION AND ADDRESS Board of Trustees, c/o Research Development and Administration Southern Illinois University, Carbondale, IL 62901			USDA AWARD NO. Year 1, Objectives 1 and 2				
PROJECT DIRECTOR(S) Susan T. Kohler			Duration Proposed Months: <u>12</u>	Duration Proposed Months: _____	Non-Federal Proposed Cost-Sharing/ Matching Funds (If required)	Non-federal Cost-Sharing/ Matching Funds Approved by CSREES (If Different)	
<b>A. Salaries and Wages</b> 1. No. of Senior Personnel			<b>CSREES FUNDED WORK MONTHS</b>				
			Calendar	Academic	Summer		
a. ___ (Co)-PD(s) .....							
b. ___ Senior Associates .....							
2. No. of Other Personnel (Non-Faculty)							
a. <u>1</u> Research Associates-Postdoctorates ...			9.0			\$30,600	
b. ___ Other Professionals .....							
c. ___ Paraprofessionals .....							
d. ___ Graduate Students .....							
e. ___ Prebaccalaureate Students .....							
f. ___ Secretarial-Clerical .....							
g. ___ Technical, Shop and Other .....							
<b>Total Salaries and Wages</b> ..... →						\$30,600	
<b>B. Fringe Benefits (If charged as Direct Costs)</b>						\$12,542	
<b>C. Total Salaries, Wages, and Fringe Benefits (A plus B)</b> ..... →						\$43,142	
<b>D. Nonexpendable Equipment (Attach supporting data. List items and dollar amounts for each item.)</b>							
<b>E. Materials and Supplies</b>						\$1,500	
<b>F. Travel</b>						\$1,500	
<b>G. Publication Costs/Page Charges</b>							
<b>H. Computer (ADPE) Costs</b>							
<b>I. Student Assistance/Support (Scholarships/fellowships, stipends/tuition, cost of education, etc. Attach list of items and dollar amounts for each item.)</b>							
<b>J. All Other Direct Costs (In budget narrative, list items and dollar amounts and provide supporting data for each item.)</b>						\$3,858	
<b>K. Total Direct Costs (C through I)</b> ..... →						\$50,000	
<b>L. F&amp;A/Indirect Costs.</b> (If applicable, specify rate(s) and base(s) for on/off campus activity. Where both are involved, identify itemized costs in on/off campus bases.)							
<b>M. Total Direct and F&amp;A/Indirect Costs (J plus K)</b> ..... →						\$50,000	
<b>N. Other</b> ..... →							
<b>O. Total Amount of This Request</b> ..... →						\$50,000	

<b>P. Carryover -- (If Applicable)</b> .....	Federal Funds: \$	Non-Federal funds: \$	Total \$
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<b>Q. Cost Sharing/Matching (Breakdown of total amounts shown in line O)</b>		
Cash (both Applicant and Third Party) ..... →		
Non-Cash Contributions (both Applicant and Third Party) ..... →		

<b>NAME AND TITLE</b> (Type or print)	<b>SIGNATURE</b> (required for revised budget only)	<b>DATE</b>
<b>Project Director</b>		
<b>Authorized Organizational Representative</b>		
<b>Signature (for optional use)</b>		

According to the Paperwork Reduction Act of 1995, an agency may not conduct or sponsor, and a person is not required to respond to a collection of information unless it displays a valid OMB control number. The valid OMB control number for this information collection is 0524-0039. The time required to complete this information collection is estimated to average 1.00 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing the reviewing the collection of information.

Form CSREES-2004 (12/2000)

**BUDGET EXPLANATION FOR SOUTHERN ILLINOIS UNIVERSITY-CARBONDALE  
(Kohler)**

**Objectives 1 and 2**

- A. Salaries and Wages.** A Business Specialist (9.0 months) will assist in the activities as well as report preparation.
- B. Fringe Benefits.** Medical, dental, and retirement benefits (12.37% + \$973/month) for the Business Specialist position.
- E. Materials and Supplies.** These funds will be used for office supplies including paper, pens, folders, printer cartridges, etc.
- F. Travel.** The funds (\$800) will be used to travel to sites, when necessary, for data collection. The funds (\$700) will also be used for dissemination of results at professional meetings.
- I. All Other Direct Costs.** The funds will cover telephone (\$600), fax (\$300), photocopying (\$1,000), and postage (\$1,958).

### **SCHEDULE FOR COMPLETION OF OBJECTIVES**

**Objective 1:** Initiated and completed during the first six months of the project.

**Objective 2:** Initiated and completed during the second six months of the project.

**PRINCIPAL INVESTIGATOR**

**Susan T. Kohler**, Southern Illinois University-Carbondale

## VITA

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### EDUCATION

B.A. St. Mary's College of Maryland, 1974  
M.S. Southern Illinois University, 1984  
Ph. D. Southern Illinois University, 1992

### POSITIONS

Associate Director (2000-present), Acting Executive Director (1999-2000), Assistant Director (1995-1999),  
Research Specialist (1992-1995), SIUC Office of Economic and Regional Development  
Honorary Professor (1993-present), University of the Peruvian Amazon

### PROFESSIONAL ORGANIZATIONS

American Fisheries Society  
Illinois Development Council  
Rural Partners  
World Aquaculture Society

### SELECTED PUBLICATIONS

- Curry, P., S.T. Kohler, M. Wagner, and D.A. Selock. 1991. Market research to support the development of the Southern Illinois Aquaculture Industry. Report to the Southern Illinois Coalition.
- Kohler, S.T., and D.A. Selock. 1992. Choosing an organizational structure for your aquaculture business. NCRAC Fact Sheet Series #103, NCRAC Publications Office, Iowa State University, Ames.
- Kohler, S.T. and D.A. Selock. 1993. Evaluation of a Cooperative Extension Service inservice training program conducted at Southern Illinois University at Carbondale. Illinois-Indiana Sea Grant Program Technical Report IL-IN-SG-R-93-3.
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- Alcantara, F.B., S.M. Tello, C.C. Kohler, S.T. Kohler, and W.N. Camargo. 2002. Culture of mollusks to improve human protein intake in the Amazon region. *AquaNews* 17(4):8, 11, 15.
- Alcantara, F.B., S.M. Tello, C.C. Kohler, S.T. Kohler, and W.M. Camargo. 2002. Arapaima pond culture by the small-scale fish producers of the Peruvian Amazon. *AquaNews* 17(4):9, 14, 16.