

A STRATEGIC PLAN FOR THE NORTH CENTRAL REGIONAL AQUACULTURE CENTER (NCRAC)

June 1999

NCRAC is one of five Regional Aquaculture Centers administered by the U.S. Department of Agriculture's Cooperative State Research, Education, and Extension Service. These centers work together within the broader, integrated aquaculture program of USDA to promote a well developed and sustainable aquaculture industry in the United States.

NCRAC is an administrative unit that serves 12 states in the heartland of America: Illinois, Indiana, Iowa, Kansas, Michigan, Minnesota, Missouri, Nebraska, North Dakota, Ohio, South Dakota, and Wisconsin. The region's geography spans approximately 920 miles south to north and over 1,200 miles east to west. Within this region, aquaculture is characterized by great diversity with more than 1,000 producers, but only a few per state who account for the majority of the production of food fish, baitfish, and fish for stocking into recreational and ornamental water bodies.

These producers are highly diverse, ranging from the well established with a significant capital investment who are interested in ways of reducing production costs while increasing output to those who could be classified as newcomers, who need training, capital, and an awareness of the potentially high risk, high investment, and low returns that most producers encounter.

NCRAC is jointly administered by Michigan State University (MSU) and Iowa State University (ISU). The Office of the Director is located at MSU while the Associate Director's Office is at ISU. It relies on leaders in the aquaculture industry for direction in its programs. An Industry Advisory Council (IAC) sets priorities. A Technical Committee (TC) works with the IAC to formulate programs on priorities. Regional programs are meshed with activities of other centers to avoid duplication. Teams of research and extension aquaculture specialists from midwest universities, public agencies, and the private sector develop and execute projects to solve priority problems. A Board of Directors oversees administration and management of NCRAC's programs.

Since its inception the Center has concentrated on funding projects for emerging species that have good potential as food fish for production in the North Central Region (NCR), such as yellow perch, walleye, and hybrid striped bass. In addition, NCRAC has supported projects on sunfish, salmonids, crayfish, baitfish, aquaculture wastes and effluents, aquaculture drugs, and more recently tilapia. All funded projects are directed at high priority industry needs that include development of new technologies and application of research findings that will benefit diverse constituencies. Therefore, research and extension activities have been integrated into all funded projects to develop and implement educational outreach materials and programs.

MISSION STATEMENT

NCRAC's mission is to enhance aquaculture through education, research, and technology transfer to support a sustainable profitable industry throughout the NCR. Essential to accomplishing this mission is building a North Central aquaculture community representing a partnership between the industry, universities, and public agencies. NCRAC's mission will be accomplished by:

- ◆ Developing transferable technology enabling producers to be profitable
- ◆ Disseminating relevant educational materials to achieve profitable margins of operation
- ◆ Providing demonstrations and regular aquaculture extension programs
- ◆ Engaging in research partnerships between industry, universities, and public agencies
- ◆ Fostering open dialogue and networking throughout the North Central aquaculture community

Goal 1: NCRAC will research, develop, and extend profitable aquaculture technology, marketing, and economics for a limited number of species and systems. Producer involvement will be strongly emphasized to ensure this information's relevance and timely transferability. A measure of success will be the increased number of profitable operations.

Challenge:

A major challenge facing the North Central aquaculture community is the absence of a shared vision based on an accurate assessment of the region's long term needs. Diversifying NCRAC-funded activities has precluded focusing on a limited number of species that would have the greatest prospect for profitable aquaculture in the North Central states. Additionally, there is an industry perception that NCRAC information is not sufficiently accessible and the research is not relevant to producers' needs.

It is agreed that closer links are needed among researchers, extension, and producers. The minimal number of aquaculture extension personnel in the NCR has significant impact on the producers both in terms of access to information and direct contact.

NCRAC has had limited success in identifying the needed market information for a profitable aquaculture industry.

Finally, promoting systems which are untested, unsubstantiated, and lacking credibility has severely impacted the expansion of a profitable aquaculture industry. This raises the obvious need for a source of unbiased information.

Objective A. Develop a long-term needs assessment which establishes industry priorities for the NCR. An overarching document identifying the status and needs of NCR aquaculture will be developed.

Major steps:

1. Identify who will be responsible for developing the overarching document.
2. Create the opportunity for developing white papers for other potential species and/or systems similar to those for tilapia and yellow perch at a cost of \$2,500 per paper.
3. State-by-state profiles will be developed outlining each state's needs and ranking of the top three priorities.
4. The IAC will narrow the state priorities to a maximum of 12 and will submit this list for consideration in development of the overarching document.
5. The overarching document with recommendations will be compiled and presented to the Board.

Objective B. NCRAC activities will increase production of a limited number (three to five) species in open-water and indoor systems that have market demand or potential through technological advancements.

Major steps:

1. The Board will define a process to select the species and systems.
2. After appropriate consultation with the industry, the Board will designate species/systems for NCRAC concentration.
3. A Project Review Committee will be formed consisting of three IAC and three TC members. After the Board has determined the species/systems focus for NCRAC efforts and there has been a response to the call for proposals, the Project Review Committee will evaluate and make funding recommendations to the Board. Funding-formula guidelines will be used to give

preference to those proposals containing collaborative endeavors and matching funds from universities, industry, other state/federal sources, and private corporations/foundations.

4. Funding for the next five to ten years for NCRAC activities will be based on the species/systems selected.

Objective C. More effectively serve producer needs by creating a closer link between research and extension, enhancing the dissemination of existing information, and building a better network within the North Central aquaculture community.

Major steps:

1. A concerted effort will be made to increase the number of regional aquaculture extension specialists. If it is permissible within NCRAC's mandate, a sum of monies will be earmarked for seed money, matching funds, or challenge grants. Funding-formula guidelines will be used to give preference to those proposals containing collaborative endeavors and matching funds from industry, other state/federal sources, and private corporations.
2. Over the next five to ten years all research and extension efforts must conform to criteria requiring linkage and relevance to producers needs.
3. Based on a survey of the industry, NCRAC information dissemination will be assessed in order to identify what, if anything, needs to be improved and have greater accessibility. This will include publications, technology transfer workshops, and direct access to aquaculture specialists.
4. The IAC and TC will be charged with making recommendations to improve the NCRAC network. Options to be explored will include electronic communication, enhancing state associations, and sub-regional coalitions.

Objective D. NCRAC will serve as an unbiased information source on the feasibility (both technological and economic) of NCR aquaculture systems and will only promote those that are credible.

Major steps:

1. NCRAC will identify "experts" who are unbiased and willing to serve as contacts/information sources regarding "credible" aquaculture.
2. NCRAC needs to develop informational materials and utilize the aquaculture network to promote itself as an available source for "credible" information to assess promoted systems.
3. NCRAC will make a concerted effort to have contact with or knowledge of regional aquaculture consultants.

Goal 2: NCRAC will build a strong aquaculture community through partnerships in the North Central states.

Challenge:

There has been a lack of cohesiveness between the industry and the academic community as well as within the academic community. Many within the industry and the university (research and extension) community perceive that they do not have sufficient opportunity to be fully engaged in NCRAC activities and decision making processes and are unclear about their potential roles and responsibilities for building a successful NCR aquaculture industry. Many state associations are neither well organized nor representative of the aquaculture industry. There are only tentative connections between producers, state agencies, and university research and extension personnel.

Aquaculture in the NCR can best be described as a "fledgling" industry. Participants' capacities must be enhanced to more fully maximize existing opportunities. There is a need for a more coherent/recognized industry voice to take advantage of funding possibilities, better use research results, and maximize networking.

Objective A. Identify and implement a process so that NCRAC roles, responsibilities, and governance are understood, enabling full membership participation.

Major steps:

1. Assess NCRAC's Operations Manual to determine if it sufficiently communicates members' roles, responsibilities, and governance.
2. Develop more effective supplementary materials if needed.
3. The Board will review the governance procedures of NCRAC with particular emphasis on industry participation in decision making. Reference will be made to other RACs and similar industry/university partnerships. A Board determination will be shared with the membership.

Objective B. Initiate the NCRAC leadership training program to build capacity within the North Central states' aquaculture community to more effectively voice the community's concerns, funding opportunities, and increase networking.

Major steps:

1. Ascertain leadership training opportunities within universities and those provided by the states and federal governments.
2. Identify a liaison for each state who will determine local leadership development needs and interests. The liaison will be provided with basic leadership literature, a methodology for making that determination, and administrative assistance. A report will be prepared by the Center to the Board.
3. A prototype model for building strong state aquaculture associations through leadership training will be developed utilizing the Iowa Aquaculture Association.
4. In collaboration with a TC and IAC representative, a proposed leadership development plan and budget will be developed.
5. With Board approval the leadership development program will be proposed to Washington.
6. The leadership development program will be implemented over a two year period and externally assessed by Washington representatives to determine whether it should be refunded, altered, or abandoned.

Goal 3: Enhance aquaculture's stature in the North Central states and NCRAC's image within the industry and among its key stakeholders, e.g., elected officials (federal, state, and local), public agencies, politically influential agricultural organizations, professional organizations, and other Regional Aquaculture Centers.

Challenge:

The general public in the North Central states is unaware of aquaculture. This is reflected in aquaculture's lack of influence around policy issues impacting the industry and producers' frequent inability to obtain capital from financial institutions. In some states in the region, traditional agricultural interests have lined up against aquaculture as have some states' natural resource agencies. Aquaculture's image in the NCR is largely misunderstood, frequently misperceived, and virtually invisible. The persistence of this poorly defined image will perpetuate missed opportunities for funding, coalition building, and influencing policy makers as well as future generations.

Objective A. NCRAC, in alliance with the industry, will work to develop a political strategy to raise the awareness and importance of aquaculture. The primary outcome of this strategy will be to identify elected officials who will champion aquaculture in the political arena.

Major steps:

1. Use university liaison offices and legislative tours to make key lawmakers and staffers more aware of aquaculture.
2. Collectively identify federal legislators from the NCR who are willing to champion aquaculture.
3. Network producers and facilitate their contacts with potential political supporters.
4. Develop a targeted information campaign to North Central congressional representatives, particularly those who are on agriculture and appropriation committees.

Objective B. Develop allies among local and state agriculture, natural resource, and environmental groups to increase the awareness, importance, and acceptance of aquaculture within the region.

Major steps:

1. Inventory each state to identify potential partners and possible contacts.
2. Seek opportunities whereby NCRAC and the aquaculture industry can jointly support multiple agency programs, conferences, and workshops.
3. Use university extension contacts and others to develop entrées to key agriculture organizations, e.g., Farm Bureau and commodity groups, as well as state departments of agriculture.
4. Identify and disseminate models from different states which have successfully forged partnerships in the region.

Objective C. Develop promotional materials that will enhance aquaculture's image in the midwest and NCRAC's contribution to the industry.

Major steps:

1. Develop two glossy publications for distribution to the general public and key stakeholders: (1) "Why aquaculture in the midwest?" and (2) "NCRAC's role in aquaculture development."
2. Include NCRAC articles in the promotional materials of agency and organizational partners.
3. Use university communication offices to broadly disseminate articles and news releases favorable to aquaculture.

Objective D. In collaboration with 4-H, Sea Grant, and local science centers, actively promote aquaculture.

Major steps:

1. Complete a 4-H module that will be made available throughout the NCR.
2. Promote and facilitate dissemination of CD-ROMs (e.g., "Getting Started in Aquaculture") to schools, libraries, and local science centers.

Goal 4. NCRAC will increase the funding available to support NCR aquaculture through collaboration, partnering, and more active state-level involvement.

Challenge:

The federal funds available to enhance "viable and profitable commercial aquaculture production" in the 12 North Central states are limited. Many within the industry and associated universities maintain that if the total budget was concentrated in one state alone, it would still be insufficient to truly address the

need. If NCRAC is to achieve the expected regional results, it is necessary to increase funding. By using existing funding as "core" funding for the Center, it is imperative that the aquaculture community collaborate with NCRAC to more vigorously explore a variety of funding sources and mechanisms to increase support.

Objective A. NCRAC participants will significantly increase the private sector contribution to priority projects through a Center-supported, coordinated effort of local state leadership.

Major steps:

1. On a state-by-state basis the state coordinators, with assistance from the Center, will compile a regional database of existing and potential aquaculture stakeholders. This effort will be initiated by the respective university development officers.
2. NCRAC will ask other Regional Aquaculture Centers how they have broadened support within the private sector.
3. NCRAC will develop and distribute a "promotional" package to assist local efforts in projecting positive and professional images of the industry and NCRAC.
4. At the state level, the local coordinator and industry representatives will contact and explore private sector funding possibilities. Examples will vary by state, but possibilities include grain marketing boards, ethanol plants, and power companies.
5. NCRAC will compile the locally developed information and serve as a clearinghouse to keep states informed about each others' activities.

Objective B. NCRAC will increase public funding to its projects.

Major steps:

1. A state-by-state inquiry will be made into unallocated federal and state funds which could be used to support NCRAC activities.
2. Once potential funds have been identified, NCRAC will seek potential researchers and producers who:
 - a) are interested in collaborating,
 - b) are qualified to cooperate on a joint project, and
 - c) meet funding requirements.
3. To the degree possible, NCRAC will assist in developing funding proposals or grant applications as long as these efforts are consistent with NCRAC's mission, procedures, and direction.
4. Progress on such efforts will be regularly disseminated to each state coordinator for distribution to local members.

Objective C. NCRAC will establish at least one multistate coalition to garner additional funds for a regional project.

Major steps:

1. Solicit interest among the 12 states to ascertain the level of interest in a collaborative project. This will largely be the responsibility of the state coordinator and local producers.
2. NCRAC will support convening interested parties in developing strategies and will establish contacts to further their communication.