
III. Program Background

At its inception the Pond Dynamics/Aquaculture CRSP had a single, main theme—that of a common set of experiments to be implemented globally, following a standard experimental protocol at a number of research sites around the world. The Global Experiment, as it came to be called, was intended to facilitate comparative studies of aquaculture pond dynamics; such studies would help lead to an understanding of how and why ponds at different geographic locations function differently, and how the management of aquaculture ponds might be fine-tuned or adapted to different sets of environmental conditions to optimize production.

As CRSP research progressed, it became apparent that there were important additional needs to be addressed. To meet these additional needs, research components were added, so that in the past few years the main core of the program has included the Global Experiment, Special Topics Research in Host Countries, and Data Analysis and Synthesis.

This main core of CRSP activities has been augmented by supplemental activities that are associated with the main components and complement them in unique ways. These supplemental activities have included socioeconomic studies, soil-water interactions research, the development of simple new techniques for the evaluation of pond conditions, and studies to develop improved techniques for fish reproduction. Under the *Continuation Plan 1996-2001* the research program will be further complemented by three new research support components: Database Management, Information Management and Networking, and Education Development Coordination.

The CRSP Research Program

The long-range goal of the CRSP is to increase the efficiency of pond culture operations. This goal benefits less-developed countries by increasing the availability of animal protein and can also improve the economic efficiency of aquacultural production in any country, including the U.S. A technical plan consistent with this goal was developed under a planning study funded by USAID in 1981. Under this planning study, the literature on state-of-the-art pond culture was reviewed and synthesized, resulting in the publication of the first edition of "Principles and Practices of Pond Aquaculture." Overseas sites were surveyed to determine research needs and the potential for the establishment of research projects.

The technical plan that evolved from the planning study called for the establishment of research projects at seven sites in six countries. Two brackish water and five freshwater research projects were begun at sites in Central America (Panama and Honduras), Africa (Rwanda), and Southeast Asia (Thailand, Indonesia, and the Philippines) in 1983. All of the sites were within a zone 15 degrees north or south of the equator and represented the three major tropical regions where advances in pond aquaculture would be most beneficial and most apt to succeed. Subsequent changes (primarily in response to funding constraints) in the CRSP program required that research be continued only at the sites in Honduras, Rwanda, and Thailand; still the three original tropical regions continued to be represented.

The CRSP program expanded in 1991 with the initiation of a companion site in the Philippines and the beginning of a new project in Egypt. The research conducted in Egypt greatly increased the scope of the program by adding an arid sub-tropical site to the program, which had previously included sites only in relatively humid areas. Although research activities in Egypt ended in March 1995, the research begun there will continue at other sites during the next grant period. In 1993, research in brackish water environments was resumed with the addition of a coastal site in Honduras. Despite the CRSPs withdrawal from Rwanda in 1994, a new prime site in Kenya will allow the CRSP to continue its research effort in Africa.

CRSP Work Plans

The CRSP Technical Committee (TC) has had the responsibility for developing technical work plans throughout the CRSPs history. The first three CRSP Work Plans, outlining annual research programs that were almost exclusively global in nature, covered activities from 1 September 1984 through 31 August 1987. The First Work Plan specified a standard procedure for the preparation and stocking of ponds. The concept of a standard protocol for research at all sites has been maintained throughout the program.

These standards have evolved into the CRSPs "Handbook of Analytical Methods", which was completed and distributed to participants in 1992. Permission from publishers allowed the PMO to reprint a limited number of copies of the Handbook in summer 1996 for distribution to researchers who will work with the CRSP under the new grant. The TC may undertake an update of the Analytical Methods Handbook in 1997.

In response to recommendations of the External Evaluation Panel during the first triennial review, the Fourth Work Plan and all plans developed since have been based on a biennial schedule to allow more time to complete and evaluate experiments before planning new ones. This change in the planning procedure is the logical outcome of the need to test hypotheses that develop directly from the results of previous CRSP experiments. Another significant change that began with the Fourth Work Plan is that site-specific studies have also been included. Although the global aspects of CRSP research are maintained by conducting similar experiments (referred to as the Global Experiment) at the various sites and by conducting these experiments in a standardized manner, other experiments are adjusted to more directly address the needs of aquaculture producers in the country or region where the research is taking place.

The Fourth, Fifth, Sixth, and Seventh Work Plans covered research conducted in two-year periods from 1987 through April 1995. The Interim Work Plan was developed during the current reporting period for activities undertaken between the end of the third and the initiation of the fourth CRSP grant, which was awarded in August 1996. The abstracts in the following section summarize research activities during this reporting period. Editorial changes on abstracts that include the notation, "Printed as Submitted," were limited to correction of spelling and grammar.