AQUANEWS
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CRSP UPDATE

The University of Michigan/Thailand Project

Several changes have been made in the Thailand CRSP project since the last report appeared in the Winter 1983 issue of "Aquanews". The mainline experimental site was moved from the Nong Sua station to the Ayuthaya station in July 1984 as the former location was subject to flooding and acid water. The Ayuthaya Fisheries Station, inaugurated in early 1984, is located approximately 80 km north of Bangkok. The new station occupies 32 hectares on the bank of Chao Phaya River, and the facilities include 70 earthern ponds with sizes ranging from 400 to 3200 m2, 50 concrete ponds, a hatchery-laboratory complex, staff housing and a fisheries training center. A 3-hectare reservoir serves as water supply for the ponds. Sixteen 400 m2 earthen ponds, five 50 m2 concrete ponds, a laboratory and one house are dedicated to the CRSP project.

Staff changes for the Thailand CRSP include two new research associates, Sompong Hiranyawat and Sompote Ukkata-wewat. Vijai Sirsuwanatach is no longer with the project. The research activity is carried out by six biologists: Vinij Tansakul (data processing); Somlek Auworatham (zooplankton); Worathep Muthu-wana (water analysis); Werawan Chin-aksorn (phyto-plankton), and Agaluck Saloaw and Tongsuk Saelee (Macrobrachium project). The team is also supported by three manual workers and one secretary.

In addition to completion of two cycles of mainline experiments in the past two years, several small site-specific projects have also been initiated: 1) Nitrogen fixation in the Tilapia culture ponds, 2) Pond dynamics and growth of all female Tilapia culture, and 3) Spawning seasonality of Tilapia. A host -country special topic research project on "Im-provement of Seed Production and Management Strategy in Pond Culture of Freshwater Prawn" was initiated in Sept-ember of 1984. Two locations were selected to conduct the experiments: The Freshwater Prawn Research Center at Chacheongsao for seed production, and a private commercial prawn farm in Banglane for pond dynamics and management research. Disease research on freshwater prawn is also conducted by fish pathologists Supranee Chinabut (National Inland Fish-eries Institute) and Chlor Linsuwan (Kasetsart University).

Tilapia harvest, Ayuthaya Station.

A number of papers and abstracts resulting from the CRSP experiment have been prepared for publication and presentation at either international or in-country meetings. They are: 1) "Cul-ture of Freshwater Rotifers and Chironomid Larvae for Fish Fry Feed", (presented to

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and published by the Asian Freshwater Fish Culture Symposium in Beijing, China, 1985); 2) "Biological Characteristics of Macrobrachium rosenbergii in Relation to Pond Production and Marketing" (with Mali Boonyaratpalin, presented to the First Asian Fisheries Forum in Manila, 1986); 3) "Acidification and Reclamation of Acid-sulfate Soil Fish Ponds in Thailand" (presented to the Asian Fisheries Forum in Manila, 1986); 4) "Nutrient Dynamics

Freshwater prawn harvested from CRSP experimental pond, Thailand.

Between Inorganic and Organic Fertilized Ponds for Tilapia Culture" (Thai Fisheries Academy Seminar, 1986); 5) "Production and Utilization of Organic Carbon in Tilapia Culture and Ponds" (Thai Fisheries Academy Seminar, 1986); 6) "Dietary Consumption of Zooplankton by Tilapia in Fertilized Ponds" (Thai Fisheries Academy Seminar, 1986). Papers 4, 5, and 6 were presented by the three CRSP biologists for the project to give each of them an opportunity to prepare and present a paper for a meeting.

CIFAD TRAINING PROGRAMS

The Consortium for International Fishries and Aquaculture (CIFAD) is offering training programs in various subjects this summer. They are:

Water Quality and Aquatic Ecology, 9 June - 1 August 1986. A training program for beginning to junior level scientists and administrators responsible for the production and quality of food commodities from aquaculture. Offered by Michigan State University and CIFAD, the program covers the theoretical bases and techniques for assessment of water quality in aquaculture systems. Fee for instruction, materials and supplies will be $4,500.

Fisheries Data Management Using Microcomputers, 21 July - 22 August 1986. A training program for scientists and managers in fisheries and aquaculture. Offered by Oregon State University and CIFAD, the program provides information which will enable participants to evaluate and use data management tools appropriate to their particular country and fishery resources. Fee for instruction, materials and supplies is $4,200.

Fisheries Economics, 25 August - 26 September 1986. A training program for middle and upper-level administrators with responsibility for fisheries or aquaculture management and development. Offered by Oregon State University, CIFAD, and the International Institute of Fisheries Economics and Trade. The program hopes to improve the participants understanding of fisheries and aquaculture economics, management, and policy. The fee for instruction, materials and supplies is $3,750.

CIFAD is a team of five U.S. univerities (University of Arkansas at Pine Bluff, University of Hawaii, University of Michigan, Michigan State University, and Oregon State University) committed to providing an effective, coordinated proram for transfering technical assistance in fisheries, aquaculture and coastal research to developing countries of the world. For further information on these training programs contact: CIFAD Training Programs, 443 Snell Hall, Oregon State University, Corvallis, OR 97331; (503) 754-2624; Telex, 510596 0682 OSUCOVS.

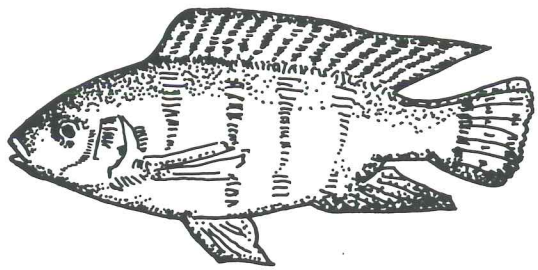
HONDURAN CONFERENCE

The First National Conference on Fish Culture was held in Comayagua, Honduras, 11-12 October 1985. Objectives of the conference included the bringing together of the diverse groups working in or pro-viding support to fish culture in Honduras to learn of their activities and to enhance communication among all groups.

The initiative for the conference originated with the staff of the "El Carao" Aquaculture Experiment Station, Comayagua. A joint Conference Organizing Committee, formed in mid-1985, was presided over by Jonathan Espinoza, CRSP Honduran P.I., and head of Fisheries and Aquaculture for the Honduran government. Honduran CRSP Research Associate Hermes Alvarenga and Auburn's Bart Green were members of the planning team representing Renewable Natural Resources (RENARE). Representatives working in fish culture from the U.S. Peace Corps, Escuela Agricola Panamerica El Zamorano and the National Agrarian Institute (INA) also participated in the planning. Mario Berrios, former CRSP P.I. and now professor of aquaculture, represented the National Autonomous University of Honduras.

More than 160 people from the private sector, various Honduran government agencies and international development agencies participated in the conference. Keynote speaker Dr. Leonard Lovshin of Auburn University addressed the conference on the vital importance of an adequate supply of fingerlings, in this case tilapia, in aquaculture development in Latin America, and on some examples of successful fish culture in Latin America and the Caribbean.

Tilapia nilotica



Conference participants divided into working groups during the latter part of the second day to formulate recommendations in dealing with specific issues raised during the conference. A visit to the "El Carao" Aquaculture Experiment Station and a tilapia fry concluded the activities. Proceedings of the conference are in preparation; for information write: Lic. Jonathan Espinoza, Jefe, Depto. de Pesca, Direccion General de Recursos Naturales Renovables, Altos de La Vivienda, Tegucigalpa, Honduras.

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MSU/INDONESIA
Research Planning

A five-year research planning project has been initiated for the Faculty of Fisheries at the Institut Pertanian Bogor (IPB) in Indonesia. The Institut is collaborating with Michigan State University (MSU) in the CRSP. The planning project, initiated at the request of USAID/Jakarta, will be carried out by members of the Faculty of Fisheries at IPB, MSU CRSP personnel, and additional fisheries consultants provided by the University of Rhode Island (URI) under a cooperative agreement with USAID.

The purpose of the planning exercise is to develop a detailed five-year plan for staff research in the following departments of the Faculty of Fisheries: Aquaculture, Aquatic Resource Management, Fisheries Economics, and Post Harvest Management. The bulk of the planning will be carried out by the joint IPB/MSU Committee. The Committee will be chaired by CRSP Co-PI's Dr. Cal McNabb (MSU) and Dr. Muhammad Eidman, Dean of the Faculty of Fisheries at IPB. Members of their committee will include a representative of each of the IPB departments noted above, as well as U.S. counterparts Dr. Don Garling and Dr. Ron Kinnunen (MSU); and Dr. Harlan Lampe and Mr. Joe McAllister (private consultants provided under URI cooperative agreement). CRSP Research Associate Dr. Christopher Knud-Hansen will also be actively involved in the planning activity.

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MSU FISHFEED STUDY

Michigan State University researchers wish to thank the CRSP Research Associates who responded to a request for practical fish feeds from their host countries.

Dr. Donald Garling, MSU Associate Professor in Fisheries and Wildlife, and a member of the CRSP Technical Committee reports: "We will be using the feeds to test a new dietary evaluation method that we are developing. Our method is quantitative, cheap, and fast, requiring only simple equipment. A calculator can be used to perform the diet analysis. In a 3-5 week experiment, triplicate tanks of 5 fingerling fish/tank are fed 5 graded levels of feed ranging from 0.5 to 5%. The fish are weighed weekly to adjust feeding levels. At the end of the experiment, growth is plotted against feeding level. The curve will represent the summation of physiological responses of the fish to the feed. Using the interative nonlinear least square curve fitting technique, a derivation of the Michaelis-Menten equation can be calculated. The constants of this equation, particularly Km, can be used to compare different diets. The lower the Km value, the better the diet production value. Feeding level at Km is near maximum efficiency for the particular diet. Economic comparisons can also be made using the growth response to specific feeds. We hope to have some results by our March meeting and complete the evaluation of all the diets by the end of the summer.

We will also be looking at why different diets may perform differently under our controlled conditions. Comparisons of protein accretion/protein fed and energy deposition/energy fed will indicate differences in protein quality and metabolizable energy availability."

MEETINGS

--American Fisheries Society 116th Annual Meeting, September 14-18, 1986, Biltmore Plaza, Providence, Rhode Island. For further information contact: Roy A. Stein, 1986 Program Chairman, Dept. of Zoology, 1735 Neil Ave., Ohio State University, Columbus, OH 43210, Tel. (614) 422-7826.

Program Manager..... James E. Lannan
Assistant Program Manager and Newsletter Editor ..... Nancy Brown

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Hatfield Marine Science Center
Oregon State University
Newport, OR 97365