



PD/A CRSP NINETEENTH ANNUAL TECHNICAL REPORT

EDUCATIONAL DEVELOPMENT ACTIVITIES IN SUPPORT OF TILAPIA AQUACULTURE IN THE PHILIPPINES

*Ninth Work Plan, Feeds and Fertilizers Research 5 (9FFR5)
Final Report*

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ABSTRACT

This host-country institutional capacity-building objective has been met and in fact exceeded, in part because of a small budget supplement that was made available late in the project. Three visitors from Central Luzon State University, Philippines, traveled to Florida International University as part of this objective, including two who received technical training. An additional graduate student at Central Luzon State University was supported in the course of his doctoral studies.

Physical improvements within the Freshwater Aquaculture Center were completed in the process of meeting the capacity-building objective; these improvements included the replacement of two obsolete computers, the renovation of teaching laboratories, and the construction of a set of poured-concrete fish-culture tanks on campus.

PROJECT SUMMARY

A modest capacity-building component of this project was added during the course of other pond-based and extension objectives. At the time, some commitments had been made to support the doctoral studies of Eddie Lopez. In keeping with the commitments that had been made earlier, some research support was made available to Mr. Lopez, who is in the concluding stages of his dissertation-writing.

Institutional ties between Central Luzon State University (CLSU), Philippines, and Florida International University (FIU), Florida, were formalized and strengthened with the execution of a Memorandum of Understanding, which recognized not only our common interest in the successful completion of the Pond Dynamics/Aquaculture CRSP project but also the common interests of our two institutions that extend well beyond the project.

Scientific exchanges between CLSU and FIU have occurred on several levels. Each project principal investigator has visited the corresponding institution and presented a guest lecture or seminar. CLSU graduate student Eddie Boy Jimenez visited FIU for a ten-day technical training period, in which he learned the basic elements of confocal microscopy, protein quantification by the Lowry method, and morphometric analysis of larval and juvenile fishes. CLSU faculty member Emmanuel

Vera Cruz also visited FIU for technical training in the summer of 2001, for a one-week session covering the same material. The president of CLSU, Dr. Rodolfo Undan, visited FIU and met with institutional officials at the North Miami campus to discuss the continuation and expansion of the interactions between the two universities.

The simple exchange of students envisioned at the outset of work on this objective has grown into something significantly more ambitious. CLSU distinguished faculty member Emmanuel Vera Cruz is now an applicant for the doctoral program in Biological Sciences at FIU.

In addition to the exchange of students, faculty, principal investigators, and executives, this educational development component activity has provided resources for improvement of facilities at CLSU that have already begun having a positive effect on educational activities in aquaculture and fisheries. Fifteen $2 \times 1 \times 1$ m concrete tanks were constructed as an additional research facility for students and researchers. These will be used in future student and faculty research projects. The Fisheries Information and Learning Center (FILC) is being set up, which will maintain a modest collection of aquaculture and fisheries references. These are presently cataloged for easy retrieval using bibliographic system computer software. About 200 students can benefit from this once it becomes operational. Two additional computer units

have been ordered and will be made available for students at the FILC.

ANTICIPATED BENEFITS

Human Capacity Development activities have resulted in a range of upgrades to key components of the educational mission of the Freshwater Aquaculture Center at CLSU. The availability of improved experimental facilities, teaching

laboratories, and information technology (two computers) will significantly improve the quality of teaching and research at both the undergraduate and graduate levels. The most direct impact will be among the aquaculture students, but all students and faculty at the Freshwater Aquaculture Center are likely to benefit either directly or indirectly from these improvements. In addition, the research support for doctoral candidate Eddie Lopez has enabled him to reach the final stages of completion of his doctoral studies and dissertation-writing activities at CLSU.