



PD/A CRSP NINETEENTH ANNUAL TECHNICAL REPORT

ESTABLISHMENT OF COMPANION SITES IN THE AFRICA REGION

*Ninth Work Plan, Adoption/Diffusion Research 4 (9ADR4)
Final Report*

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ABSTRACT

The establishment of companion sites was proposed as a way of expanding CRSP efforts in each region by assisting with needed research at sites other than CRSP host country sites and verifying the results of CRSP research at its host country sites. For the Ninth Work Plan the Kenya Project set out to identify and establish at least one companion site in the Africa region and to design and implement investigations at that site in support of the goals and needs of both the PD/A CRSP and the companion site. Discussions in 1999 between CRSP Kenya Project personnel and ICLARM-Malawi (Zomba, Malawi) and Bunda College of Agriculture (near Lilongwe) led to an agreement to collaborate. With oversight from Daniel Jamu, Director of ICLARM-Malawi, two studies were conducted between May 2000 and January 2001, one at the National Aquaculture Center near Zomba, and the second at Bunda College, Lilongwe. Reports on these two studies are included in this volume (see 9ADR4A, "Effect of stocking size and nutrient inputs on productivity of *Oreochromis shiranus* in ponds" and 9ADR4B, "Studies on potential use of salinity to increase growth of tilapia in aquaculture in Malawi"). An additional spin-off study conducted by a Bunda College student, "Tilapia *rendalli* fry production under a *Tilapia rendalli*/*Oreochromis shiranus* polyculture: The role of competition and predation," may be requested from the Program Management Office.

INTRODUCTION

The establishment of one or more companion sites in the Africa region was proposed as a way of expanding the regional effort of the CRSP by assisting with the conduct of needed research at other sites in the region and of verifying the results of CRSP research at its host country site. The objectives specifically listed for this effort in the Ninth Work Plan were to:

- 1) Identify and establish one or more companion sites for the Africa region (Year 1) and
- 2) Define and implement investigations at the companion site in support of PD/A CRSP and companion site goals (Year 2).

During the first year of the Ninth Work Plan (December 1998 to November 1999), CRSP Kenya Project personnel continued discussions with possible collaborators in Malawi, leading to a proposal to collaborate with ICLARM-Malawi, at the National Aquaculture Center (Zomba), and with Bunda College of Agriculture, near Lilongwe (Veverica and Jamu, 2000). Agreement to collaborate on two experiments was reached in early 2000, and the research was conducted between May 2000 and January 2001. A preliminary (progress) report on this effort was made in 2000 (Jamu et al., 2001), and this is the final report for the activity. The two reports that follow

are the results of work done in Malawi with support from the PD/A CRSP. They are:

- Effects of stocking size and nutrient inputs on productivity of *Oreochromis shiranus* in ponds (9ADR4A), by K. Chaula, D. Jamu, J. Bowman, and K. Veverica
- Studies on potential use of salinity to increase growth of tilapia in aquaculture in Malawi (9ADR4B), by J.S. Likongwe

An additional study, "Tilapia *rendalli* fry production under a *Tilapia rendalli* / *Oreochromis shiranus* polyculture: The role of competition and predation," was completed by an undergraduate student at Bunda College, L.S. Chimwala. The report can be requested from the Program Management Office.

ANTICIPATED BENEFITS

Fish farmers in Malawi and the region will benefit from information gained through this research because researchers will be able to provide better guidance with respect to appropriate stocking densities and to the use of saline waters for fish production. Aquaculture students from Bunda College who are involved in the research will benefit by gaining firsthand knowledge of the culture characteristics of several aquaculture species important in Malawi as well as from learning good

research methods through their work with Jamu and Likongwe. The growth characteristics of species cultured in Malawi might be compared with CRSP findings from host country sites. Companion site researchers will benefit from data collected during the course of experiments, and improved fish farming methods resulting from the experiments will be available for adoption by fish farmers in the area around the companion site. Ultimately, fish farmers in new areas will experience increased fish yields, and greater amounts of fish will be available for consumption in communities and markets in those areas.

LITERATURE CITED

- Jamu, D., J.R. Bowman, and K.L. Veverica, 2001. Establishment of companion sites in the Africa region. In: A. Gupta, K. McElwee, D. Burke, J. Burrigh, X. Cummings, and H. Eгна (Editors), Eighteenth Annual Technical Report. Pond Dynamics/Aquaculture CRSP, Oregon State University, Corvallis, Oregon, pp. 141–142.
- Veverica, K.L. and D. Jamu, 2000. Establishment of companion sites in the Africa region. In: K. McElwee, D. Burke, M. Niles, X. Cummings, and H. Eгна (Editors), Seventeenth Annual Technical Report. Pond Dynamics/Aquaculture CRSP, Oregon State University, Corvallis, Oregon, pp. 171–172.