9311157001502 (2)
PD-AAH-298-B1

CLASSIFICATION

# PROJECT EVALUATION SUMMARY (PES) – PART I

Report Symbol U-447

| 1. PROJECT TITLE | 2. PROJECT NUMBER | 3. MISSION/AID/W OFFICE |
|---|---|---|
| Swim Bladder Inflation Physoclistous fish (SMALL ACTIVITIES FUND) | 931-1157 | |

4. EVALUATION NUMBER (Enter the number maintained by the reporting unit e.g., Country or AID/W Administrative Code, Fiscal Year, Serial No. beginning with No. 1 each FY) 80-4 3 6/10/8

☒ REGULAR EVALUATION ☐ SPECIAL EVALUATION

| 5. KEY PROJECT IMPLEMENTATION DATES | | | 6. ESTIMATED PROJECT FUNDING | | 7. PERIOD COVERED BY EVALUATION | |
|---|---|---|---|---|---|---|
| A. First PRO-AG or Equivalent FY 79 | B. Final Obligation Expected FY 80 | C. Final Input Delivery FY 80 | A. Total | $ | From (month/yr.) | 1/79 |
| | | | B. U.S. | $ 28.0 | To (month/yr.) | 1/80 |
| | | | | | Date of Evaluation Review | 3/21/80 |

8. ACTION DECISIONS APPROVED BY MISSION OR AID/W OFFICE DIRECTOR

| A. List decisions and/or unresolved issues; cite those items needing further study. (NOTE: Mission decisions which anticipate AID/W or regional office action should specify type of document, e.g., airgram, SPAR, PIO, which will present detailed request.) | B. NAME OF OFFICER RESPONSIBLE FOR ACTION | C. DATE ACTION TO BE COMPLETED |
|---|---|---|
| Confirm submission of final report by August 31, 1980. | K. Osborn | 8/31/80 |
| Confirm scientific publication of research results. | K. Osborn | 1/1/81 |

9. INVENTORY OF DOCUMENTS TO BE REVISED PER ABOVE DECISIONS

- ☐ Project Paper
- ☐ Financial Plan
- ☐ Logical Framework
- ☐ Project Agreement
- ☐ Implementation Plan e.g., CPI Network
- ☐ PIO/T
- ☐ PIO/C
- ☐ PIO/P
- ☐ Other (Specify) _____
- ☐ Other (Specify) _____

10. ALTERNATIVE DECISIONS ON FUTURE OF PROJECT

- A. ☐ Continue Project Without Change
- B. ☐ Change Project Design and/or Change Implementation Plan
- C. ☒ Discontinue Project

11. PROJECT OFFICER AND HOST COUNTRY OR OTHER RANKING PARTICIPANTS AS APPROPRIATE (Names and Titles)

RAN
Richard Neal DS/AGR/F - Project Manager
CCB
C. A. Breitenbach DS/AGR/F
Stephen Engberg DS/AGR SAE 6/6/80

12. Mission/AID/W Office Director Approval

Signature

Typed Name KEITH BYERLY, DD/AGR

Date 6/10/80

AID 1330-15 (3-78)

# PROJECT EVALUATION SUMMARY - PART II

## Summary:

The research was conducted as planned except that some modifications in the experimental procedure were made to facilitate interpretation of early results. Only one temperature was used during the experimentation. It was demonstrated during the course of this research that low dissolved oxygen levels (levels previously believed to be suitable for larval fish culture) can cause abnormal development of the swim bladder in physoclistous fishes. This problem has been a severe one causing heavy hatchery mortalities of mullet and stripped bass and was previously believed to be caused by improper diet. Work on correction of the problem has been directed toward diet modification while rearing was continued in ponds and tanks at intermediate dissolved oxygen levels known to be suitable for larger fish.

Dissolved oxygen levels can be controlled easily in fish hatcheries; therefore, application of research results and correction of the problem can be expected to follow publication of research findings. Research has broad implications for hatcheries being used and developed worldwide to rear brackish water and marine fishes of economic importance in aquaculture.

## Evaluation Methodology:

This was a routine, end-of-project evaluation. However, it was conducted prior to completion of the final report because the project manager was visiting the University of California, Davis for other reasons. Only the project manager participated in the evaluation. The final report is expected within 60 days and publications of significance resulting from this and related work are attached.

## External Factors:

Not pertinent at this time.

## Inputs:

Not pertinent at this time.

## Outputs:

Research progress was satisfactory and planned research was completed appropriately. When it became obvious during the early stages of this research that dissolved oxygen rather than temperature was of critical importance, research focus was shifted to the oxygen and temperature comparisons were deleted. This was desirable and resulted in results of a useful nature.

See attached publications. Data from experimentation was examined but will not be submitted in final summary form until the final report is complete.

Purpose:

The purpose of this research is to describe relationships between environmental factors and swim bladder inflation. Purpose has been achieved.

Goal/Subgoal:

The goal is to improve techniques for rearing larvae of commercially important marine and anadromous fishes. Methods for achieving this goal have been demonstrated. Publication of research results is expected to result in adoption of improved techniques.

Beneficiaries:

Direct beneficiaries will be hatchery operators using results of this research. Indirect beneficiaries will be farmers producing fish and consumers having access to more fish. Additional employment may also be generated through increased fish farming activity.

Unplanned Effects:

Not pertinent at this time.

Lessons Learned:

Not pertinent at this time.

Special Comments or Remarks:

This small expenditure for a specific piece of research has resulted in an important breakthrough in hatchery technology that will have wide application. The work probably would not have been funded by other U.S. funding agencies because the species involved are mostly low priced fish of little economic importance in the U.S. This project is a good example of constructive use of small research project funds.