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To PARIS
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PD-AAC-684

Date: NOV 7 1975

MEMORANDUM FOR: Members of the Research and Development Committee

FROM: TA/PPU, Carl R. Fritz *C.R.F.*

SUBJECT: Approved Project Identification Document

Attached is a copy of a Project Identification Document (PID) which has been approved by the Assistant Administrator for Technical Assistance for project design and the drafting of a Project Paper (PP):

Project Title: Weed Control-Utilization Phase (KPA #28)

Project Number: 931-11-130-206

Initial FY: 1976 *or 19*

Responsible Office: TA/AGR

If you have any comments, questions or issues which you would like to see addressed in the PP, please send them directly to the responsible office listed above with a copy to TA/PPU. They should be received by that office within two weeks/one month, so that the comments can be addressed by the drafter.

The draft PP will be submitted to the Research and Development Committee for review and comment. However, we encourage your comments as early in the design process as feasible so that the project can be responsive to Agency concerns.

Attachment: *r/*

cc: TA Technical Office

MEMORANDUM

DATE: October 29, 1975

TO : AA/TA, Mr. Curtis Farrar

FROM : TA/PPU, John N. Ginning

SUBJECT: PID Clearance

Project Title: Weed Control-Utilization Phase (KPA #2)

Begins FY 1976.

1. The PID complies with the following AA/TA instructions if the appropriate block is checked. Otherwise, comments are attached.

a. Main points of Program Guidance #3 covered.

b. AA/TA budget review comments have been incorporated or adequately appealed in the narrative. *(see attached.)*

c. Proposed funding is within limits described in TA Bureau FY 76/77 Program Submission to PPC and/or as amended by current OYB.

d. Dates of PP development, approval and project initiation are realistic and consistent with the Program Submission.

2. This PID has been in TA/PPU and staff work is incomplete because of TA/PPU work pressure, or Tech office work pressure. We recommend you return the PID for further review prior to your final decision.

3. We recommend the following action:

a. Approval

(1) subject to Reducing funding in other activities in the amount provide this project.

b. Disapproval or delay for reasons specified in attached.

4. AA/TA Action

Approved

Subject to above, plus increased focus on environmental aspects as part of the project, i.e. help recipients understand environmental aspects.

Disapproved

Curtis Farrar
Signature

11-3-75
Date

October 31, 1975

SUBJECT: PID Approval for Weed Control-Utilization Phase (KPA #2)

At the AA/TA budget review you decided not to propose a GTS companion project to the ongoing Oregon State Weed Control Research Project. A FY 1977 shelf project, however was listed.

In the attached PID, TA/AGR again proposes a FY 76 GTS project. Dr. Hesser would like to discuss the project with you with the view of funding during the Interim Quarter if FY 76 funds are not available. TA/AGR would like to circulate the research project statement for a proposed extension of the current project and a proposal for the GTS project as a package to the R & DC. The two proposals together represent a significant increase in funding for Oregon State, which contract now is running at \$520,000 per year.

PPU recommends your approval subject to TA/AGR reducing other projects in order to remain within the CP ceiling.

cc: TA/AGR;L.Hesser

AGENCY FOR INTERNATIONAL DEVELOPMENT
PROJECT IDENTIFICATION DOCUMENT FACESHEET
 TO BE COMPLETED BY ORIGINATING OFFICE

1. TRANSACTION CODE (X) APPROPRIATE BOX) PID
 ORIGINAL CHANGE
 ADD DELETE DOCUMENT NO. 1

2. COUNTRY/REGIONAL ENTITY/GRANTEE
 Interregional - GTS - KPA-28

3. DOCUMENT REVISION NUMBER

4. PROJECT NUMBER
 931-11-130-206

5. BUREAU
 A. SYMBOL TAB B. CODE 6

6. PROPOSED NEXT DOCUMENT
 A. FRP PP B. DATE MO. YR. 10 75

7A. PROJECT TITLE - SHORT (STAY WITHIN BRACKETS)
 Weed Control - Utilization Phase

8. ESTIMATED FY OF AUTHORIZATION/OBLIGATION
 A. INITIAL FY 76 B. FINAL FY 79

7B. PROJECT TITLE - LONG (STAY WITHIN BRACKETS)
 Weed Control Systems Utilization for Representative Farms in Developing Countries
 Contractor: OSU
 Project Manager: E.J. Rice

9. ESTIMATED COST (LIFE OF PROJECT) (\$000 OR EQUIVALENT, \$1 = _____)

PROGRAM FINANCING	AMOUNT
A. AID APPROPRIATED	1,192
B. OTHER U.S.	
C. HOST GOVERNMENT	
D. OTHER DONOR(S)	
TOTAL	1,192

10. ESTIMATED COSTS/AID APPROPRIATED FUNDS (\$000)

A. APPRO-PRATION (ALPHA CODE)	B. PRIMARY PURPOSE CODE	C. PRIMARY TECH. CODE	FIRST YEAR		ALL YEARS	
			D. GRANT	E. LOAN	F. GRANT	G. LOAN
	FY 76		360		1,192	
TOTAL			360		1,192	

11. OTHER U.S. (\$000)

A. PROGRAM TYPE	B. FIRST YEAR	C. ALL YEARS
TOTAL		

12. PROJECT GOAL (STAY WITHIN BRACKETS)
 To increase the food production of small farmers in LDCs by decreasing food losses caused by weed infestations.

13. PROJECT PURPOSE(S) (STAY WITHIN BRACKETS)
 Assist the world weed control community by training weed scientists, improving the interchange of information, and by identifying the magnitude of important aquatic weed problems and developing integrated systems for their control.

PLANNING RESOURCE REQUIREMENTS (STAFF/FUNDS)

15. ORIGINATING OFFICE CLEARANCE

15 Man Days/Yr.

SIGNATURE: *Leon F. Hesser*

TITLE: Director, TA/AGR

DATE SIGNED: 10-16-75

16. DATE RECEIVED IN AID/W, OR FOR AID/W DOCUMENTS, DATE OF DISTRIBUTION

MO. DAY YR. 10 16 75

PREFACE

AID has contracted with Oregon State University since 1966 to carry out a multi-faceted weed control program. Most recently the contract focused on developing and evaluating weed control systems for representative farms in developing countries, with special emphasis on small- and medium-size farms. The present contract terminates December 31, 1975.

Improved food production continues to loom as a dominant worldwide objective. In order for developing countries to raise production levels, new technology and methods in weed control -- in conjunction with other agricultural inputs -- will very likely be required. To be useful, however, new technology must be socially acceptable to all levels of the rural community, including the less affluent, smaller farmer. Thus, there is a need in developing countries to;

- a) encourage and help develop institutions responsible for weed control;
- b) help identify and train weed control specialists;
- c) stimulate information flow and communication in the weed science community;
- d) develop improved weed control systems for varying size farms; and,
- e) assess the economic and social impact of weeds and promising new weed control technology, including the effect on income distribution and rural employment.

A program of weed control is proposed -- commencing March 1, 1976, and terminating February 28, 1979 -- to assist in meeting the above needs. The program consists of research and general technical assistance -- each with its specific objectives and budget. The two components are inseparably interlocked into a common framework necessitating consideration of the program as a single entity. The GTS project is contained herein. The research project is being presented in a separate document.

Project Identification Document

Title: Weed Control Systems Utilization for Representative Farms in
Developing Countries

Status: New

Proposed Contractor: Oregon State University

Type of Project: GTS

Funding: \$360,000. July 1, 1976 (1 yr. funding) *or FY 76 or 19*

The Problem:

Even with the use of modern technology the relative importance of weed control is increasing. For rice production in the Philippines, 8% of the total man hours engaged in farm labor related to some phase of weed control as of 1966, compared with 17% in 1970. This situation stems in part from the effect of other agricultural inputs on weed growth. Increased fertilizer use and improved culture of crop plants also benefit the weed population, thereby generating even stronger competition for available nutrients.

Most weed-caused damage to crops occurs within the first 30 days of crop plant life, also usually a period of peak labor need. Often, land in production is limited by the amount of weeding that can be performed given the available labor supply. The effective constraint is not area of land available, but the weeding requirement of land in production and the availability of labor to perform the task of weeding.

The science of weed control has enjoyed spectacular advances in the developed countries of the world. Each year research institutes and commercial firms develop and market superior herbicides, application equipment, mechanical

weeders, and agronomic practices which reduce labor requirements and increase weed control.

In spite of these advances in the science of weed control in the developed countries, the weed problem has proliferated in the developing countries.

Recognizing that much of the technology essential for crop production in temperate developed nations was inappropriate for the small tropical farms, USAID and other organizations and institutions began research programs in specific target areas. Much of the resultant data from this research was useable by larger farmers who could afford the inputs required. Recently research has been initiated to develop weed control systems not biased toward herbicides and concomitant application equipment but rather toward a systems approach employing existing power, simpler tools, plus herbicides.

In order for this relatively site-specific approach to be implemented; weed scientists must be trained; information must be collected, analyzed, and distributed; seminars and workshops conducted; and training and extension manuals published.

Description and Rationale for the Activity

Assistance to the world weed control scientific community will be provided and development of research institutions will be encouraged with these objectives:

1. Strengthen the science of terrestrial weed control in developing countries through training weed scientists in the methods and procedures of weed research and developing research capabilities of institutions with responsibility for weed research, control, and policy formulation.
2. Improve the flow, scope, and interchange of information among members of the world weed research community.
3. Strengthen aquatic weed control through identifying important aquatic weed problems and encouraging the development of integrated systems for their control.

I. Activities related to technical assistance objectives

Objective No. 1: Strengthen the science of weed control --

- (a) Assist counterpart institutions in developing countries to train weed control specialists, through on-the-job training. Also identify key nationals with potential scientific leadership and encourage them to pursue advanced graduate training.
- (b) Promote awareness of weed-related damage to crop production and weed control techniques to agricultural administrators and non-weed control agriculturalists.
- (c) Organize and conduct short courses in developing countries; participate in short courses conducted by other organizations.

- (d) Respond to requests for short term technical expertise by providing consultants. (The consultants would not be restricted to working only with food crop weeds, but could be called upon for work on pasture and rangeland weeds, poisonous weeds, and other specialized weed problem areas).
- (e) Actively encourage and promote safety in the use of herbicides (and other pesticides as applicable) in developing countries.

Objective No. 2: Improve the flow of information --

- (a) Periodically publish a newsletter devoted to weed science information and distribute it to the weed science community in developing countries.
- (b) Write, publish, and distribute materials oriented toward improving the knowledge level of developing country weed scientists.
- (c) Promote and participate in the formation, growth, and activities of worldwide, regional, and national weed science societies.
- (d) Develop basic information concerning economical weed control.

Objective No. 3: Strengthen aquatic weed control --

- (a) Identify the biological and socio-economic problems of aquatic weeds in agricultural and related non-agricultural production.
- (b) Provide short term consultation in integrated weed control methods to developing countries.
- (c) Provide answering services for aquatic weed problems.
- (d) Develop integrated control systems for important aquatic weeds.

Training and Institution Building

A basic responsibility will be to train local personnel in effective and efficient weed control methods and modern research procedures and to increase

the independent research capabilities of local institutions and personnel. Programs will be developed for selected institutions in order to test and evaluate known practical methods of weed control and to develop appropriate weed control systems for small- and medium-size farms. Considerations of concern will be effectiveness, efficiency, timeliness, labor requirements, capital costs, cost of inputs, yield effects, effects on farming practices, and suitability to the social environment.

The program will demonstrate the potential benefits of weed control systems to farmers, agricultural administrators, and government policy makers. It will emphasize utilization of research, demonstration, and information dissemination.

On-the-job training through development of the program and conducting the research will be helpful in the development of a trained weed science cadre. Counterpart personnel will work closely with regional advisors. Advanced academic and practical training may be required, however, for qualified counterparts. An earnest attempt will be made to identify and obtain needed financial support for such training.

The aquatic weed program would consist of providing technical assistance through short term consultations with governments of developing countries and providing a literature review and question answering service to this same group of nations.

Through a sub-contract with the University of Florida, short-term consultants would be made available in all areas of aquatic weed research. In total,

12 man-months of time per year would be available for this service. These experts would not only provide technical consultation where requested, but would simultaneously pinpoint areas and institutions where on-site staff might be located. One such possibility would be at the proposed National Weed Science Research Institute at Bangkok, Thailand. When the research priorities and locations are ascertained, a decision would be made as to the justification of continuing the short-term consultation effort versus switching to on-site staff working on a specific problem.

The program in aquatic weed research will also identify and develop an integrated control system for important aquatic species. To do this, an investigation priority must be established; all aquatic weed problems cannot be tackled simultaneously. The priority rating will be based upon economic, social, and health problems created by aquatic weeds.

The initial effort will be to obtain an up-to-date survey of the growing aquatic weed problem in various areas of the world. At the end of the survey, a determination will be made as to the species to be studied, the geographical locations of the effort, and the magnitude of the problem.

It will not be required to visit each geographical area of the world. A conference or seminar wherein leading aquatic weed scientists are brought to one location (under the auspices of the National Academy of Science) should provide much of the information and hopefully a framework for decisions. This likely will be held in May or June 1976 in Asia.

Additionally, a research assistant would be located in Florida to provide information and literature review service for the aquatic research

international community. Several letters are now received daily in Florida requesting information on aquatic weed control.

Funding

FY 1976: A budget of \$360,000. is recommended for one year funding (includes \$84,066. for aquatic weeds). Unfortunately, funding is not now in sight in TA/AGR until FY 1977, but it is strongly recommended that the project be funded by July 1, 1976.

Issues

The Regional Office for Central American Programs (ROCAP) is very interested in multiple cropping, a production system commonly found in Central America. Over 48% of all cropped land in El Salvador, as an example, produces more than one commodity per calendar year, and generally it is interplanted or relay planted. The project has been approached relative to participating in the ROCAP program at CATIE. A complete evaluation of this possibility will be made. Regardless of the outcome, Central America remains an area of considerable concern to the project and an area recommended for continued concentration. Project activity in Central America would be regional in scope and involve several disciplines.

Southeast Asia

The Royal Thai government officially requested Oregon State University, through IPPC, to assist in developing a National Weed Science Research Institute at Bangkok. Last year, IPPC personnel visited and conferred with Thai officials, and submitted a recommendation for participation. In accord with that recommendation, it is proposed that two regional project staff be stationed in Thailand so as to collaborate simultaneously with the proposed Institute while conducting the project's main research and technical service programs, and also cooperate with other agencies and institutions in the area, where feasible.

In addition, the project would attempt to honor as many requests for short-term consultants as possible, consistent with the project's areas of expertise and in conformance with budgetary limitations. The consultants would be both in-field and Oregon based IPPC staff, as well as non-project members of Oregon State University staff.

The role of small farmers and the rural poor

The basic goal of this project is to develop weed control systems for small and medium size farms in developing countries. An attempt is being made to analyze small farm operations in order to establish efficiency trade-offs to achieve societal goals.

The role of Women

Women have traditionally been involved in weed control activities in the DCs. A major goal of this project is to survey the farm population and the associated agricultural labor pool. The results will provide coefficients for production, labor availability; consumption, and human health for the socioeconomic models.

In those areas where mechanized (power driven) or chemical control appear efficient and economical as a supplement to manual control, on-farm labor performed by women will be reduced.

Impact on Environment

The anticipated outcome of this project will be the development of improved weed control systems for various environments. The use of herbicides will be recommended only when their economic use has been demonstrated to be superior to other methods. To ensure that there is a minimum of danger to the applicator as well as to the environment, the training of applicators in the safe use of herbicides will be a continuing activity. The impact of this project should be positive for it analyzes all methods of weed control and recommends systems that demonstrate superior efficiency instead of only recommending pesticides.

The effect of the project on purchased energy inputs is unknown at this time, but should be minimal because efficient use of hand labor is one of the areas of study in the research project.

Estimated Overall Budget

<u>Classifications</u>	<u>First Year Funding</u>
Salaries and Wages	\$120,347
Consultants	0
Payroll Assessments	18,640
Indirect Costs	48,792
Travel and Transportation	30,715
Allowances	18,266
Other Direct Costs	2,839
Equipment, Vehicles, Material and Supplies	35,504
Subcontract (Aquatics)	<u>84,066</u>
	\$359,169