

1. SUBJECT CLASSIFICATION	A. PRIMARY Agriculture	AN10-0000-G354
	B. SECONDARY Agricultural engineering and structures--Costa Rica	

2. TITLE AND SUBTITLE  
Consulting visits with the Costa Rica seed improvement program: Dec.1970 and March, 1971

3. AUTHOR(S)  
Boyd, A.H.

4. DOCUMENT DATE 1971	5. NUMBER OF PAGES 7p.	6. ARC NUMBER ARC
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7. REFERENCE ORGANIZATION NAME AND ADDRESS  
Miss. State

8. SUPPLEMENTARY NOTES (*Sponsoring Organization, Publishers, Availability*)  
(In TA 71-07)

9. ABSTRACT

10. CONTROL NUMBER PN-AAC-223	11. PRICE OF DOCUMENT
12. DESCRIPTORS Costa Rica Seed production	13. PROJECT NUMBER
	14. CONTRACT NUMBER
	15. TYPE OF DOCUMENT <i>AID/W-607 CTS</i>

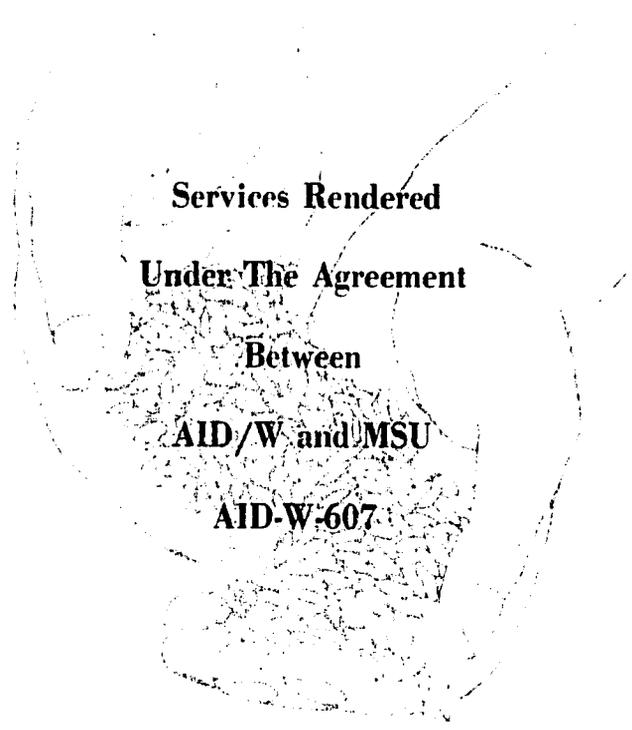
AID/W-607 GTS  
PN-AAC-223

REPORT TO AID/W AND  
AID/COSTA RICA

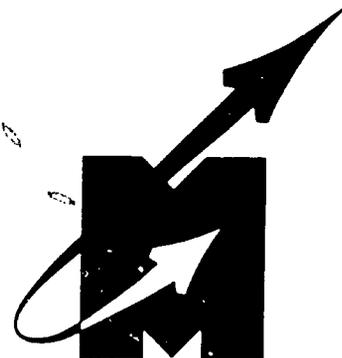
TA 71-07  
Boyer, A. H.

CONSULTING VISITS  
WITH THE  
COSTA RICA SEED IMPROVEMENT PROGRAM

PERIOD: DECEMBER 10 - 17, 1970  
MARCH 22 - 27, 1971



SEED TECHNOLOGY LABORATORY  
MISSISSIPPI STATE UNIVERSITY  
STATE COLLEGE, MISSISSIPPI



## REPORT SUMMARY

**Title:** Report to AID/W and AID/Costa Rica on Consulting Visits With the Costa Rica Seed Improvement Program

**Author:** A.H. Boyd, Jr., Assistant Agronomist

**Period of Report:** 10 December - 17 December, 1970  
22 March - 27 March, 1971

**Project Title:** AID/W - MSU

**Contract No.:** AID-W-607

**Contractor:** Mississippi State University

**Investigator:** A.H. Boyd, Jr.

## SUMMARY

As a continuing part of the technical assistance to GOOCR by the Seed Technology Laboratory, Mississippi State University, two brief consulting visits were made 10 - 17 December 1970 and 22 - 27 March 1971 to help in working out details for recommending a seed drying and processing facility for the Consejo Nacional de Produccion, Barranca, Costa Rica. Plans and specifications for the facility were presented to CNP and AID/Costa Rica and are included in report. Work is continuing on the project implementing AID Loan 515-L-022 and contract is being maintained with USAID/Costa Rica and CNP. Additional visits in this connection are anticipated by MSU and AID/Costa Rica.

REPORT TO AID/W  
AND  
USAID/COSTA RICA  
ON CONSULTING VISITS  
WITH THE  
COSTA RICA SEED IMPROVEMENT PROGRAM

10 Dec. - 17 Dec., 1970  
and  
22 March - 27 March, 1971

A. H. Boyd, Jr.

Introduction

Assistance to the Government of Costa Rica from the Seed Technology Laboratory, Mississippi State University was requested by USAID/Costa Rica under contract AID-W-607. This assistance is in connection with implementation of the Seed Improvement Project under AID Loan 515-L-022. Under terms of the request Dr. James C. Delouche, Director, STL visited Costa Rica in October 1970 to initiate the project and coordinate with consultants concerned with other projects under the AID Loan (grain grading and food technology).

At this time, preliminary talks were held with management personnel at the Consejo Nacional de Produccion to obtain facts on current seed programs and projected development figures for planning the proposed seed drying and processing plant at Barrancas.

As the STL staff began to develop ideas on physical arrangement of the facility in relation to existing and other proposed facilities, it

became desirable to have further discussion with CNP and AID/Costa Rica. This trip was made to present some preliminary ideas and gain more knowledge on the agriculture of the country so that realistic proposals will be made.

#### Meetings with Consejo Nacional de Produccion

Meetings were held at CNP with members of management and engineering to discuss the preliminary proposals. Those present from CNP were: Ing. Guillermo Munog, assistant manager; Ing. Lionel Cubillo, Agr. Victor Witte, Sr. Carlos Salazar, Sr. Carlos Herman, and Ing. Jose Enrique Aguila. Sr. Juan Chamberlain of USAID/Costa Rica accompanied the author to help with interpreting and was most helpful on several occasions in obtaining production information that might otherwise have been missed.

The first order of discussion was a proposal by STL that the location of the processing plant be changed from that shown on drawings developed from the earlier (1960) study and moved to a more central location to increase the efficiency of material handling. This was enthusiastically agreed on by the CNP personnel since the proposed new location would fit well with the anticipated changes in roads as the commercial rice mill at the same location is expanded.

With the decision made to change the proposed location of the seed drying and processing area, further discussion on traffic patterns and probable direction of future expansion was held. Drawings of the conditioned seed storage warehouses and the entire Barranca facility were furnished to help with planning.

Discussion was held with Ing. Aguila concerning detailed construction plans for the facilities. Engineering and management at CNP understand that we as agronomists are mainly concerned with efficient lay-out and matching machines to the job. The services of competent engineers are needed for detailed construction specifications, drawings, and planning. The engineering section at CNP is highly competent and expects to perform this function.

As was indicated in Dr. Delouche's report of December 1970, the corn seed production is highly mechanized and will probably proceed in basically the same manner for a time. Some minor adjustments may be made as the need arises.

Bean production needs the most development both for commercial production and seeds. Current plans for bean seed production are to utilize land along the Pacific coast during the dry season after rice has been harvested, producing the beans in fields large enough to be directly combined. On the surface this looks good, however, we anticipate problems with temperature and wind during the growing season. The tough stem, fleshy pod, and growth habit of the bean will also probably combine to produce harvesting problems. It would be advisable to have at least a part of the crop produced by traditional or modified traditional methods until dependable techniques are worked out for mechanical harvest and drying.

It is obvious that much research has been done on beans but emphasis needs to be placed on developing practical production and handling methods so that bean production can become attractive as a commercial venture rather than continuing as a subsistence project.

March 22 - 27

After the basic agreement brought about by meetings with CNP and USAID/Costa Rica in December 1971, the staff at STL/MSU developed a set of ten (10) drawings of the recommended facilities at Barrancas along with specifications for the equipment to be used. The purpose of this visit was to consult with them, explain the thinking behind the layout, and help settle any problems that might arise in this connection. Ing. Ramon E. Raminrez Z, the new head of Engineering at CNP was most cooperative. Discussion and question sessions were held with him and the above mentioned personnel from CNP interested in the seed project. Since Ing. Raminrez had planned a visit to the U.S, we suggested that CNP provide expenses for a short stay at MSU/STL for conferences with the staff and opportunities to observe commercial seed operations in the area.

A short conference was also arranged with Dr. Ronald Echandi to discuss the seed testing facility at the University of Costa Rica. The architect was working on the detail of the building at the time. We discussed the general needs of the walk-in germinator and the dehumidified cold storage facilities. The drawings of the building were not available at the time of my departure. As soon as they are

received specifications for the above mentioned rooms and equipment will be worked up and forwarded.

#### RECOMMENDATIONS

1. Specifications and drawings for the seed facility have been presented. CNP engineering should make detailed studies of the site to determine foundation requirements. A suitable building to house the processing machinery should be designed and estimates of construction and electrical costs made. Only then can a final determination of expected costs be made.
2. Research should be initiated on use of available technology in production of beans for seed. This should include use of defoliants, crop desiccants, etc. as aids in preparing the crop for mechanical harvest.
3. Drawings of the proposed seed testing laboratory should be forwarded to STL/MSU so that equipment specifications can be completed.

#### Acknowledgements

The author expresses his appreciation to Ing. Guillermo Munoz, Sub. Gerente, CNP, Ing. Aguillar, Ing. Ramirez, Agr. Cubillo, Agr. Velez, Ag. Witte for the fine spirit of cooperation in which they approach the project. Mr. Milton Lau and his staff, especially Mr. Paul Holden, as usual were most helpful in all matters.

Respectfully submitted,

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