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BEAN/COWPEA COLLABORATIVE RESEARCH SUPPORT PROGRAM
EXTERNAL EVALUATION

OF THE

Honduras/University of Puerto Rico/Beaver/Zuluaga Project

Improvement of bean production in Honduras through breeding for
multiple disease resistance".

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INTRODUCTION

On request from the Bean/Cowpea CRSP Management Office this EEPM reviewed the Honduras/UPR/Beaver/Zuluaga CRSP Bean Project in Honduras, from November 24 through 26, 1986, within the scope of work prepared by the MO (Annex 1). On November 24 and 25, the evaluation was jointly performed by the EEPM and Dr. M. Wayne Adams, a Bean/Cowpea CRSP Technical Committee member. The schedule of meetings and list of participants are presented in Annex 2. The evaluation team, formed by the TCM and EEPM, also visited some bean plots on the EAP campus. A condensed presentation of the results of the evaluation by the EEPM follows. Some of the conclusions and suggestions were shared with the participants for an early feedback, preceding the preparation of this report.

I. ROLE OF THE ESCUELA AGRICOLA PANAMERICANA IN THE NATIONAL BEAN PROGRAM.

I.A. Establishment of Research Priorities

Until approximately the last review of this Project by the EEP in January 1986, the role of the EAP in the National Bean Program (NBP) conducted by the Secretaria de Recursos Naturales of Honduras (MOA), was at best informal and marginal. The institutionalization of the Project at the national level was judged by the EEP to be not promising.

The situation since then has changed toward integrating the station-based research/teaching activities at EAP with the on-farm research/extension activities at the MOA within the scope of the Project.

On July 16, 1986 the EAP bean research team met on campus with MOA Southern Zone bean research personnel to exchange information and explore areas for interinstitutional cooperation. Furthermore, EAP participated this year in the Uniform Yield Trial Network set up by the MOA/NBP.

Yet, these approaches have been based mostly on personal acquaintances or relationships, rather than on a formal institutional arrangement between the EAP and MOA. As a result, there has been so far no official mechanism allowing the two institutions to work jointly in establishing and harmonizing research priorities on a country level, although they share the common objective of improving bean production in Honduras.

I.B. Procedures for Disseminating Research Results.

At least from 1985 to date bean research has been more concentrated at the EAP than at MOA, due in large part to the availability of a greater number of senior and better trained staff assembled by EAP to work on bean and to the technical and financial support of the B/C CRSP. On the other hand, MOA is officially responsible for the dissemination of research results in the agricultural public sector, through its on-farm demonstration, extension service and mass communication activities. Dissemination by other means, such as technical publications or meetings are by nature of limited direct value to

farmers, especially in less developing countries such as Honduras. Therefore the primary roles of the two institutions for improving bean production in the country are obviously complementary, suggesting that they need to be effectively integrated.

I.C. HC_Lead_Institution_of_the_Project

The Mission of the United States Agency for International Development in Honduras, as expressed during the evaluation by its Projects Officer, Mr. Richard L. Owens, fully supports the basing of this CRSP Project at EAP, as Host Country Lead Institution. This opinion especially takes into account the professional and managerial advantages of EAP over the MOA at this time, to get the Project moving. Similar considerations justify the Mission's support to the USAID-funded INTSORMIL CRSP, the AID/Honduras Integrated Pest Management (MIPH), and the AID/CSRS enhanced Nitrogen Fixation Projects, based on the EAP campus. The EAP Director, Dr. Simon E. Malo during the evaluation pledged EAP's unrestricted and sustained commitment to the Project. In spite of a rapid succession of HC Principal Investigators during the first five years, EAP has immediately and consistently assigned a new HCPI to the Project. More importantly, both the MOA's Vice-Minister of Natural Resources and the Director of the Department of Agricultural Research (DAR) maintained that they do not object to EAP being the HC LI of the CRSP bean Project in Honduras, as a joint effort between the two institutions.

I.D. Actions_Needed_to_Enhance_the_Project

The following are actions which may be needed to institutionally enhance the Project.

1. First, a signed agreement should be entered into between MOA and EAP/UPR, formalizing the joint participation of representatives of MOA, EAP and UPR in the planning, conduction, and management of the Project. A letter of understanding between EAP/UPR and MOA could be the simplest instrument required in this respect.
2. Joint research planning meetings between MOA and EAP/UPR staff on the Project, should become an established feature and should take place at least twice a year.

To avoid unnecessary duplication of efforts, the more fundamental and station-based research work would be carried out principally by EAP/UPR personnel, whereas the more applied, on-farm research/extension activities would be undertaken principally by MOA/NBP personnel on a country-wide basis.

3. Some amount of CRSP fund should be budgeted annually to support at least part of the research activities assigned to MOA/NBP through the joint planning meetings.
4. The CRSP Bean project should endeavour to recruit Hondurans (males and females) for formal and informal training, locally or abroad and facilitate the participation of MOA/NBP personnel in local and international technical meetings on bean. These include national seminars or workshops and the annual meeting of the Central American Cooperative Program for the Improvement of Food Crops (PCCMCA).
5. The work relationship that has been established between the HC PI and the NBP Director for the Southern Zone, should be officialized through the proposed agreement between MOA and EAP/UPR and broadened to involve other relevant units of the NBP.
6. For all conceptual and practical reasons the CRSP bean Project component at EAP/UPR should be regarded as an integral part of the MOA/NBP in Honduras.

II. TYPES OF LINKAGES WITH NATIONAL, REGIONAL AND/OR INTERNATIONAL ORGANIZATIONS AND ACTIONS NEEDED TO IMPROVE LINKAGES.

1. The Project has developed work relationship with the NBP/Southern Zone Director, Eng-MS Federico Trece Ramos and his assistant, Eng Roldán Echeverría.

Both the EAP and UPR segments of the Project have been cooperating closely with the Centro Internacional de Agricultura Tropical (CIAT), and participating in the annual meetings of the PCCMCA. They have also collaborated with the bean research program of the U.S. Department of Agriculture/Agricultural Research Service at UPR/Mayaguez.

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At EAP the Project has established linkages with the USAID-funded MIPH and ENF Projects.

2. The linkages at the HC national level would become more effective upon formalizing and broadening them through the proposed agreement between the MOA and EAP/UPR.

III. PROGRESS OF THE PROJECT

Considering its difficult start, high turnover of HC PI's, and low budget ceiling, the Project can be considered to have made appreciable progress.

III.A Progress Toward Research Objectives

1. The project is making a unique contribution to the Global Plan of the B/C CRSP by focussing on small, red-seeded bean. Furthermore, results from the Malawi/Michigan State University/ Adams/ Msuku Project of the CRSP, tend to suggest that small-seeded and large-seeded bean landraces may belong to separate germplasm pools which if proved correct would add to that contribution..
2. Together the UPR and EAP segments of the Project have identified several bean lines which combine disease resistance, high grain yield and other desirable agronomic traits.
3. The Project has produced large populations of breeding lines, from which small, red-seeded, multiple disease resistant and agronomically suitable bean varieties may be developed in the long run, to be utilized in Honduras or elsewhere.

III.B Calibre of research Conducted

The technical calibre of the research conducted by the UPR and EAP segments of the Project is high. But greater emphasis on land race population genetics for adaptation and disease resistance could enhance its breeding methodology .

III.C Progress Toward Training Objectives/Needs

1. An updated cumulative list of formal and informal Project trainees was not available during the evaluation. The

Annual Technical Report of the Project for Fiscal Year 1986 shows that one Honduran is undergoing a BS degree program, whereas one U.S. and one Peru citizens are pursuing M.S. degree programs supported fully or partially with B/C CRSP funds.

2. Training needs especially at the MS and PhD degree levels are critical in the MOA/NBP, according to official information gathered during the evaluation. The FY 1986 ATR proposed that if additional funds were available during the Project extension period, it would be very desirable to offer opportunity for graduate training to one of the researchers of the NBP, to strengthen the ties between the CRSP project and the MOA.

III.D Contribution of the Project toward Alleviating Constraints Identified in the Global Plan

Diseases are among the major constraints to increase biological and economic yield in bean production worldwide. The Project therefore, in concentrating its efforts on breeding for multiple disease resistance, if successful, can make a significant contribution toward the improvement of bean production in Honduras and elsewhere. Moreover in focussing on small, red-seeded bean, it complements research that traditionally has been emphasizing other seed coat-colors and size.

III.E Level and Effectiveness of Collaboration between the PI's

The level and effectiveness of collaboration between the PI's are excellent, in spite of reduced CRSP funding of the Project.

III.F Adequacy of Staff Support to Conduct Research at EAP

The EAP administration has assigned a highly qualified professional team to bean research. This multidisciplinary group includes:

- 1) Silvio Zuluaga, PhD, HCPI, Plant breeding
- 2) Juan J. Alan, PhD, Germplasm Management

- 3) Juan Carlos Rosas, PhD, Agronomy/ENF
- 4) Jairo Castaño, PhD, Phytopathology
- 5) Alfredo Rueda, Eng, Pest Management

III.G. Availability of Adequate Equipment

Available equipment seems to be adequate for Project purpose and present level of activities, but a bean plot thresher is badly needed at EAP.

III.H. HC Support Provided for Project

The project has received the professional collaboration of Federico Trece Ramos and his assistant.

III.I USAID Knowledge and Support of Project and Integration of CRSP into USAID Country Strategy.

The USAID Mission/Honduras is well aware of the work of the Project at EAP and feels that it fits into its country strategy. Furthermore, the Mission has shown interest in funding a joint bean project involving MOA/NBP, EAP/UPR and the USAID/ENF Project at EAP. It has suggested that the HC and US FI's of the CRSP bean project, the FI of the USAID/ENF Project, and an authorized representative of MOA/NBP get together to write an AID/Honduras Cooperative Bean Research/Extension Project document, modelled on the INTSORMIL Honduras Project Proposal which has been approved for funding by USAID/Honduras (US\$350,000 per year for three years). If submitted on time to the Mission, the CBRE Project (title to be defined) may be approved for financial support from USAID for US\$ 350,000 or more per year for three years or more, starting from the first quarter of FY 1987. The proposal, however must be backed by a formal agreement among the relevant administrative authorities of the EAP/UPR CRSP Project, USAID/EAP ENF Project and the MOA/NBP.

Consulted on this matter during the evaluation, MOA's Vice Minister of Natural Resources, Eng. Jose Montenegro showed strong interest in entering into the agreement and phoned the Representative of the USAID Mission/Honduras to work out its negotiation.

Therefore the prospects for additional funding to the CRSP bean Project at EAP are quite encouraging. The MO may want to be kept informed on the development of this initiative in Honduras.

III.J. Actions Needed to Enhance Project

The suggestions offered in previous sections of this report would tend primarily to strengthen the institutionalization of the Project on a country level in Honduras. The following actions may be needed to enhance the Project more specifically at the technical level.

1. The HC PI should avoid to spread too thin his bean research activities. This concern was voiced during the evaluation because of his direct responsibilities in other bean projects already in progress or proposed for external funding, principally on ENF and drought tolerance.

2. If agreement is reached between EAP/UPR and MOA/NBP on the joint operation of the CRSP bean Project at EAP, it would be convenient to name a HC CO-PI drawn from MOA/NBP. This arrangement was suggested during the evaluation and was well received by the HC and US PI's. It was further proposed that the HC CO-PI would be placed ex-officio on the Agricultural Research Committee (on bean, maize, and sorghum) to be officially established soon at EAP.

IV. CONTRIBUTIONS OF EAP TO THE PROJECT

The EAP has committed a fair share of human resources and physical facilities to the Project. None of the EAP Project personnel as shown in the FY 1986 roster, except one field assistant (Agr. Concha M. Elvir) is paid from CRSP fund assigned to the Project.

IV.A Operation of the Project in the Collaborative Mode

1. Within EAP, the Project operates in a large cooperative research network, involving the following professional staff:

- 1) Dr. Juan Carlos Rosas, PI, ENF project funded by USAID/CSRS BNF, limiting Factors Program and Director, ENF Potential project, funded by the Board on Science and Technology for International Development/National Research Council/National Academy of Sciences.

- 2) Dr. Juan José Aian, Specialist, Plant Germplasm Resources.
- 3) Dr. Jairo Castaño, Acting Head, Crop Protection Department.
- 4) Ing. Alfredo Rueda, Acting Head, MIPH Project.

The cooperative activities would be more effective and steady though, if they were specifically defined, programmed and incorporated, as definite commitments into the Project's Annual Workplan.

2. One of the proposed Planning meetings could be part of an Annual Workshop of the CRSP bean Project, gathering MOA/NBP and EAP/UPR Project Staff and collaborators, including Project trainees enrolled in the announced BS degree program at EAP to be started in April 1987. This would insure and enhance the collaborative mode of the Project.

IV.B MOA's Acceptance and Promotion of Implementation of Research Results Generated by the CRSP/EAP Bean Project.

During the evaluation, at the MOA's Headquarters, the Vice Minister of Natural Resources and the Director of DAR assured the EEFM that MOA would both accept and promote the implementation of research results generated by the CRSP bean Project based at EAP, if such results were consistent with the country's technology needs to improve its bean production. That condition is more likely to be met if the Project were fully integrated with the MOA/NBP, through the agreement suggested by the USAID Mission in Honduras.

Annex_1

BEAN/COWPEA CRSP
EXTERNAL EVALUATION PANEL AND TECHNICAL COMMITTEE
SCOPE OF WORK FOR HONDURAS (Beaver-Zuluaga)

- I. What is the role of the EAP in the National Bean Program.
- A. How are research priorities established.
 - B. What are the procedures for disseminating research results.
 - C. Should the CRSP have a private lead institution? If not, what are the alternatives?
 - D. Actions needed to enhance project.
- II. What types of linkages have been established with national, regional and/or international organizations and actions needed to improve linkages.
- III. What is the progress of the project.
- A. Progress toward research objectives.
 - B. Calibre of research conducted.
 - C. Progress toward training objectives/needs.
 - D. Contribution project makes toward the alleviation of constraints identified in the Global Plan.
 - E. Level and effectiveness of collaboration between the PIs.
 - F. Adequate staff support to conduct research.
 - G. Adequate equipment available.
 - H. HC support provided for project.
 - I. USAID Mission knowledge and support of project and integration of CRSP into USAID country strategy.
 - J. Actions needed to enhance project.
- IV. What are the contributions of EAP to the program.
- A. Does the project operate in a collaborative mode?
 - B. Will the MOA accept research results generated by the CRSP/EAP and promote implementation of results with the same determination as with a MOA project?

Annex 2

SCHEDULE OF MEETINGS AND LIST OF PARTICIPANTS
DURING THE EVALUATION OF THE HONDURAS/UPR/BEAVER/ZULUAGA
PROJECT IN HONDURAS
November 24-26, 1986

MONDAY, NOV 24 AT EAP, ZAMORANO

Morning and afternoon

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|----|------------------------|--|
| 1. | Francisco Trece Ramos, | MOA/NBP, Coordinator Southern
Zone Coordinator. |
| 2. | James S. Beaver. | EAP/UPR CRSP Bean Project, US PI |
| 3. | Silvio Zuluaga, | EAP/UPR CRSP Bean Project, HC PI |
| 4. | M. Wayne Adams, | TCM |
| 5. | Antonio M. Pinchinat, | EPPM |

Late afternoon

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|----|-----------------|---------------|
| 1. | Simón E. Malo, | EAP, Director |
| 2. | F. Ramos | |
| 3. | J. S. Beaver | |
| 4. | S. Zuluaga | |
| 5. | M.W. Adams | |
| 6. | A. M. Pinchinat | |

TUESDAY, NOVEMBER 25 AT EAP. ZAMORANO

Morning

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|----|-------------------|----------------------------------|
| 1. | Richard L. Owens, | USAID/Honduras, Projects Officer |
| 2. | S. Zuluaga | |
| 3. | J.S. Beaver | |
| 4. | M.W. Adams | |
| 5. | A.M. Pinchinat | |

Early afternoon

1. Leonardo Corral. EAP, Agronomy Dept., Head
2. Juan Carlos Rosas, EAP, USAID/CSRS and BOSTID/NCR/NAS
ENF Bean Projects, Director
3. Juan José Alan, EAP, Agronomy Dept., Assoc. Prof
4. Alfredo Rueda, EAP, USAID/MIPH Project, Acting
Head.
5. Dan Meckenstock, EAP, CRSP INTSORMIL Project, PI
6. J.S. Beaver
7. S. Zuluaga
8. M.W. Adams
9. A.M. Pinchinat

Late Afternoon

1. S.E. Malo
2. L. Corral
3. M.W. Adams
4. A.M. Pinchinat

WEDNESDAY, NOVEMBER 26, TEGUCIGALPA

Early morning, at the MOA Headquarters

1. José Montenegro B., MOA, Vice-Minister, Natural Resources
2. Leopoldo R. Alvarado, MOA, Director, DAR
3. A.M. Pinchinat

Morning and Afternoon

1. José Alberto Franco, IICA Honduras Office, Director
2. A.M. Pinchinat