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AUDIT OF USAID/PERU
AGRICULTURAL RESEARCH,
EXTENSION AND EDUCATION
PROJECT NO. 527-0192

Audit Report No. 1-527-86-21
July 2, 1986

AGENCY FOR INTERNATIONAL DEVELOPMENT

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July 2, 1986

MEMORANDUM

TO : D/USAID/PERU, Mr. John A. Saborailo
FROM : RIG/A/T, *Coinage N. Gothard*
SUBJECT: Audit of USAID/Peru Agricultural Research, Extension and Education Project No. 527-0192

This report presents the results of audit of USAID/Peru Agricultural Research, Extension and Education, Project No. 527-0192. The specific objectives of this audit were to evaluate project effectiveness in achieving planned results, the efficiency of project operations, the adequacy of internal controls and compliance with AID regulations.

The agricultural research, extension and education project has been effective in achieving its major component outputs and objectives. However, project effectiveness was limited to a minor extent due to delays in the development of three of the five national agriculture support programs added to the project in September 1984. The efficiency of project operations was reduced due to an inadequate pay incentive program to recruit and retain highly qualified personnel. Internal controls did not provide adequate protection against waste, misuse, or theft of equipment and materials. Also, the project requirement to establish an adequate equipment maintenance program was not complied with.

Since project inception in 1980, progress has been made towards achieving the project goal of increasing the production and income of the rural population. From 1980 to 1984 the Peruvian agricultural sector grew at an average annual rate of 3.32 percent compared to only 0.61 percent during the 1970s. The improvement in the agricultural sector can be largely attributed to changes in economic policies introduced by the democratic government which took office in 1980. We also believe that the steps taken by the Government of Peru (GOP) with the help of AID and other international donors since 1980 to revitalize the research and extension system have contributed to the improved economic performance of the sector. For example, the improved technology developed under this project has made possible: two rice crops per year and increased yields of 25 percent in the high jungle region; the development of low-cost, small-scale rice planting and harvesting equipment; the release of high-yielding, disease-resistant varieties of corn and wheat; and the production of improved virus-free potato seed.

This report recommends that the National Institute for Agricultural Research and Extension: prepare a plan to implement a viable integrated pest control management program; provide the funding to establish a viable genetic resource program; provide the seed production unit with technical and any other assistance to become a viable activity; develop a satisfactory salary incentive plan as a replacement for the salary supplements program; establish sound maintenance and inventory control systems for project equipment; and install a power stabilizer system to protect sensitive laboratory equipment.

Except for Recommendation No. 1, your Mission concurred in all report findings and recommendations. Based on your comments contained in Appendix 1, we modified Recommendation No. 1 and the Executive Summary.

Please advise this office within thirty days of the actions planned or taken to implement the six recommendations in this report.

EXECUTIVE SUMMARY

USAID/Peru's Agricultural Research, Extension and Education Project began on August 26, 1980 and is currently scheduled to end on August 31, 1987. USAID/Peru had obligated \$15.25 million under the project and expended \$11.3 million as of December 31, 1985. The project purpose was to establish an agricultural research, extension and education system which would enable the institutions involved to increase agricultural production and provide for a continual flow of varying levels of agricultural technology to small and medium-sized farmers. The project was implemented by the National Institute for Agricultural Research and Promotion.

The Office of the Regional Inspector General for Audit based in Tegucigalpa audited the Agricultural Research, Extension and Education Project, covering activities from August 26, 1980 through March 18, 1986. Audit objectives included evaluating the project's effectiveness in achieving planned results, the efficiency of project operations, the adequacy of internal controls, and compliance with AID requirements.

The agricultural research, extension and education project had been effective in achieving its major component outputs and objectives. However, project effectiveness was limited to a minor extent due to delays in the development of three of the five national support programs. These support programs were added to the project in September 1984. The efficiency of project operations was reduced due an inadequate pay incentive program to recruit and retain highly qualified personnel. Internal controls did not provide adequate protection against waste, misuse, or theft of certain equipment and materials. Also, the project requirement to establish an adequate equipment maintenance program was not complied with.

Since project inception in 1980, progress has been made towards achieving the project goal of increasing the production and income of the rural population. From 1980 to 1984 the Peruvian agricultural sector grew at an average annual rate of 3.32 percent compared to only 0.61 percent during the 1970s. The improvement in the agricultural sector can be largely attributed to changes in economic policies introduced by the democratic government which took office in 1980. We also believe that the steps taken by the Government of Peru with the help of AID and other international donors since 1980 to revitalize the research and extension system have contributed to the improved economic performance of the sector. For example, the improved technology developed under this project has made possible: two rice crops per year and increased yields of 25 percent in the high jungle; the development of low-cost, small-scale rice planting and harvesting equipment; the release of high-yielding, disease-resistant varieties of corn and wheat; and the production of improved virus-free potato seed.

The integrated pest control management program was limited to a report prepared in March 1983. In 1984 and 1985, due to other priorities, the program was set aside.

In 1985 a base document was prepared for the genetic resource support program but it was considered very ambitious and not within National Institute for Agricultural Research and Promotion capabilities. A new document was prepared the same year as a basis for establishing the National Center of Genetic Resources. But due to the lack of funding, a viable genetic resource program was not established.

The seed production support program has the obligation to supply, standardize, and control investigation, production, and commercialization of seed activities. The National Agricultural Seed Service only has six employees and was not in a position to carry out its function due to a lack of statistical data, personnel and funding.

The National Institute for Agricultural Research and Promotion plans to stop paying salary supplements in 1986 because the supplements have not served as an effective incentive for its employees. Also, the National Institute for Agricultural Research and Promotion budget approved for 1986 did not include funds to finance them. As a result, opportunities to recruit and retain qualified personnel have been reduced.

The National Institute for Agricultural Research and Promotion did not implement sound inventory control procedures nor a vehicle maintenance plan. Many pieces of equipment were not operating which adversely affected the National Institute for Agricultural Research and Promotion's ability to successfully carry out the project's goals and objectives.

Equipment at the soils laboratory in Huancayo was exposed to possible damage because a stabilizer system was not available to control power fluctuations. Without such a system there was a strong possibility the equipment could be damaged.

Office of the Inspector General

AUDIT OF USAID/PERU
AGRICULTURAL RESEARCH,
EXTENSION AND EDUCATION
PROJECT NO. 527-0192

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AUDIT OF USAID/PERU
AGRICULTURAL RESEARCH,
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PART I - INTRODUCTION

A. Background

In 1968 a military government was established in Peru which carried out large-scale agrarian and social reforms. Some of the adverse effects of those reforms were that large numbers of professionals emigrated, and the strong agricultural research and extension system built up, with AID assistance, in earlier years was severely weakened; also, agricultural output per capita declined. However, in the late 1970's the Government of Peru (GOP) showed interest in rebuilding its agricultural research, extension and education system. As a result, USAID/Peru and the GOP signed a project agreement on August 26, 1980 for an Agricultural Research, Extension and Education project for \$11 million. The AID funding for the project was later increased to \$15.25 million of which \$9 million was a loan and \$6.25 million was a grant.

The project's goal (the project was restructured in 1984) was to further the socio-economic development of small and medium-sized Peruvian farmers so as to increase the production and income of the rural population of Peru. The purpose of the project was to create an agricultural research, extension and education system to increase agricultural production and provide for a continual flow of varying levels of agricultural technology.

The implementing agency for the project was the National Institute for Agricultural Research and Extension (INIPA). INIPA was established in January 1981, as a semi-autonomous institution under the Ministry of Agriculture. INIPA's research and extension activities are carried out by 18 Centers for Agricultural Research and Extension (CIPAs).

Project objectives were to support: (1) five national production programs in corn, rice, wheat, potatoes and beans; (2) sierra and jungle systems programs; (3) five national support programs in agro-economics, service laboratories, foundation seed production, genetic resources and integrated pest management; (4) an education and human resources program; and (5) a management support program.

Each of the national production programs was to have leaders and co-leaders responsible for the direction of the programs. The leaders were to be Peruvians employed by INIPA while the co-leaders were to be technical advisors contracted from one of the International Agricultural Research Centers and paid by the World Bank.

The original completion date for the project was August 31, 1985 which was later extended to August 31, 1987. The total estimated cost of the project is \$20.35 million which included a GOP counterpart contribution of \$5.1 million.

B. Audit Objectives and Scope

The Office of the Regional Inspector General for Audit/Tegucigalpa performed a program results audit of the Agricultural Research Extension and Education project. The audit covered expenditures of \$11,293,868 from August 26, 1980 through December 31, 1985. The audit fieldwork was conducted from January 23 through March 18, 1986.

The audit objectives were to evaluate:

- the effectiveness of the project in achieving planned results,
- efficiency of project operations,
- the adequacy of internal controls, and
- compliance with AID requirements.

To accomplish these objectives, we reviewed project files and interviewed officials of USAID/Peru and INIPA. We also visited two of the Centers for Agricultural Research and Extension (CIPAs) located at Huancayo and Tarapoto. This audit was made in accordance with generally accepted government auditing standards.

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PART II - RESULTS OF AUDIT

The agricultural research, extension and education project has been effective in achieving its major components and objectives. However, project effectiveness was limited to a minor extent due to delays in the development of three of the five national support programs. These support programs were added to the project in September 1984. The efficiency of project operations was reduced due an inadequate pay incentive program to recruit and retain highly qualified personnel. Internal controls did not provide adequate protection against waste, misuse, or theft of equipment and materials. Also, the project requirement to establish an adequate equipment maintenance program was not complied with.

Since project inception in 1980, progress has been made towards achieving the project goal of increasing the production and income of the rural population. From 1980 to 1984 the Peruvian agricultural sector grew at an average annual rate of 3.32 percent compared to only 0.61 percent during the 1970s. The improvement in the agricultural sector can be largely attributed to changes in economic policies introduced by the democratic government which took office in 1980. Steps taken by the Government of Peru (GOP), with the help of AID and other international donors since 1980 to revitalize the research and extension system, have contributed to the improved economic performance of the sector. For example, the improved technology developed under this project has made possible: two rice crops per year and increased yields of 25 percent in the high jungle; the development of low-cost, small-scale rice planting and harvesting equipment; the release of high-yielding, disease-resistant varieties of corn and wheat; and the production of virus-free improved potato seed.

This report recommends that the National Institute for Agricultural Research and Extension: prepare a plan to implement a viable integrated pest control management program; provide the funding to establish a viable genetic resource program; provide the seed production unit with technical and any other assistance to become a viable activity; develop a satisfactory salary incentive plan as a replacement for the salary supplements program; establish sound maintenance and inventory control systems for project equipment; and install a power stabilizer system to protect sensitive laboratory equipment.

A. Findings and Recommendations

1. Integrated Pest Management Was Not Operational

Amendment No. 6 of the project agreement calls for the development of a pest control management support program for the major food crops and other crops according to accepted integrated pest management principles. Very little has been done in this program due to its lack of priority in the eyes of the National Institute for Agriculture Research and Extension (INIPA) management. The status of the integrated pest management program was limited to a report prepared in March 1983. According to USAID/Peru, the integrated pest management support program was to develop a core group of pest control scientists with responsibility for assisting with the difficult problem of National Production Programs. In 1984 and 1985, due to other priorities, the program was set aside. Delays in the implementation of this program prevents the Government of Peru (GOP) from tackling the serious problem of pest control.

Recommendation No. 1

We recommend that USAID/Peru obtain a time-phased schedule from National Institute for Agriculture Research and Extension setting forth the actions it will take to staff, plan, and fund an integrated pest management program.

Discussion

Amendment No. 6 of the project agreement calls for the development of a support program in pest control management for the major food crops and other crops according to accepted integrated pest management principles. In the opinion of the current Coordinator, the integrated crop protection program is extremely important and necessary for the country, because losses from crop pests in Peru is a serious problem.

In March 1983, the Consortium for International Crop Protection issued a report on an integrated crop protection program for Peru. The report stated that "Crop protection is a necessary and integral part of crop production". The status of the integrated pest management program is limited to the report prepared in March 1983. Beginning in January 1984 through August 1985, a new INIPA Director was appointed and, due to other priorities, the program was set aside.

According to USAID/Peru, the integrated pest management program will provide a methodology whereby multidisciplinary teams of scientists use a combination of biological, cultural, physical and chemical controls to reduce the economic damage of crop pests. In addition, the integrated pest management support program will develop a core group of pest control scientists with responsibility for assisting with difficult National Production Program problems. This core group will be composed of both INIPA and National Agrarian University personnel.

The lack of implementation of this program prevents the GOP from tackling the serious problem of pest control.

Management Comments

USAID/Peru did not agree with our draft recommendation that they obtain evidence from INIPA that the program had been staffed and planned because, in their judgment, all possible steps have been taken and are being taken to initiate and implement the program. Complete USAID/Peru comments are contained in Appendix 1.

Inspector General Comments

In the light of the Mission's comments, we concur that it would be premature to recommend the staffing of the program and the preparation of an operational plan. However, because of the slow implementation of this support program, we believe it would be prudent to prepare a time-phased schedule of the steps required to staff, plan and fund the program. We have accordingly revised Recommendation No. 1.

2. Genetic Resources Program Was Not Operational

Amendment No. 6 to the project agreement calls for the National Institute for Agricultural Research and Extension (INIPA) to establish a support program to collect, classify, preserve and produce genetic resources. Although a base document was prepared for this support program before 1985, it was considered very ambitious and not within INIPA's capabilities. As a result, North Carolina State University, the technical assistance contractor for the project, and INIPA prepared a new document in 1985 to be used as a basis for establishing the National Center for Genetic Resources. The document called for a \$685,000 budget the first year and \$280,000 the following years. However, this support program was never implemented because the Government of Peru (GOP) did not budget funds for the program. The genetic resources program was to be used to increase the efficiency of crop production, thus increasing food levels and aiding in the introduction of new food products. Without this program aspect, accomplishments will, in the long run, be limited because of a deficient genetic resource base.

Recommendation No. 2

We recommend that USAID/Peru obtain evidence that the National Institute for Agricultural Research and Extension has made available sufficient funding to establish a viable genetic resource program.

Discussion

The USAID Project Agreement No. 527-0192 Amendment No. 6 calls for INIPA to establish a program to collect, classify, preserve and produce genetic resources. The program was to focus on non-conventional plants and animals indigenous to Peru. The elements of the program were to include a system of germplasm banks, a national herbarium, a sanitation and quarantine unit, a computer program for genetic materials and a research element linked with other research programs.

Although a base document was prepared for the support program before 1985, it was considered very ambitious and not within INIPA's capabilities. As a result, North Carolina State University, the technical assistance contractor for the project, and INIPA prepared a new document in 1985 to be used as a basis for establishing the National Center for Genetic Resources. The study estimated the operation would cost \$685,000 in the first year and \$280,000 in the next year. According to this document, the National Center for Genetic Resources would be charged with introducing, maintaining, exploring and documenting genetic resources. The organization would be broken into two activities. A headquarters activity would have the responsibility to introduce, conserve and collect seed information and data for the long term. The field activity would maintain, regenerate and do preliminary evaluations on live seeds. However, this support program was never implemented because the GOP did not budget funds for it. Due to the lack of funding for this program, a viable genetic resource program has not been established.

According to USAID/Peru, since INIPA is a relatively new institution, obtaining sufficient GOP funding levels have been a serious problem. The problem has been more severe in 1986 because of the new Peruvian government's interest in cutting costs in the public sector which has particularly affected INIPA's budget and because donor assistance has been uncertain. For example, debt repayment problems between the GOP and the U.S. have held up a \$3.4 million FY86 project obligation until the present time and Interamerican Development Bank support was also terminating. USAID/Peru believes that the new administration of INIPA has correctly chosen to delay the start-up of new activities while concentrating scarce resources on existing National and Regional Production Programs, and at the same time working aggressively to lobby for additional resources. At this writing, it appears that the AID resources mentioned above may become available in late April 1986, that more flexible access to World Bank funding may be forthcoming and that the GOP may increase its support to INIPA considerably.

Current plans call for initial implementation of the genetic resources program to begin in June 1986, with assistance from the International Board for Plant Genetic Resources and resources from the project and the World Bank. Initial activities will consist of the development of the first year's implementation plan and identification of the INIPA personnel to be assigned to the program. The construction of seed bank facilities is planned for later in the year. It is hoped that World Bank resources can be used to contract for long-term technical assistance from the International Board for Plant Genetic Resources.

Management Comments

USAID/Peru concurred with Recommendation No. 2.

3. Seed Production Program was Inadequate

According to the project agreement, this support program was to focus on the implementation of the previously authorized National Agricultural Seed Service (SENASE) of the National Institute for Agricultural Research and Extension (INIPA). Peruvian law No. 23056, dated May 21, 1980, makes SENASE responsible for the supply, standardization, and control of the investigation, production, and commercialization of agricultural seed. Currently, SENASE has only six employees, and according to its Director, is not in a position to determine the country's seed requirements due to the lack of statistical data. Additionally, the Director stated that no seed had been bought this year because of a lack of funds. Due to a lack of personnel, statistical data and funding, SENASE had not been able to comply with law No. 23056. Contracting insufficient production of improved varieties of agricultural seed constitutes a major obstacle to the development of a modern Peruvian agricultural sector.

Recommendation No. 3

We recommend USAID/Peru provide the National Institute for Agricultural Research and Extension with the assistance necessary for the implementation of an improved seed multiplication policy.

Discussion

According to the project agreement, this support program was to focus on the implementation of the previously authorized National Agricultural Seed Service (SENASE) of the National Institute of Agricultural Research and Extension (INIPA). According to the law No. 23056 dated May 21, 1980, SENASE has the responsibility to supply, standardize, and control the investigation, production, and commercialization of seed activities.

Currently, SENASE is staffed by six INIPA employees: a Director, three Agronomists, an agricultural technician and a secretary. The present Director was appointed a short time ago (February 1986); he told us that he is not yet familiar with the program.

The SENASE Director also said he is not in a position to determine the country's seed requirements. At the moment, SENASE agronomists are travelling throughout the country attempting to obtain the necessary data in order to prepare a seed program. The Director also stated that no seed had been bought this year due to a lack of funds.

Due to a lack of personnel, statistical data and funding, SENASE has not been able to comply with law No. 23056 in which SENASE-INIPA has the obligation to plan, produce, coordinate, distribute, finance and control the overall seed program in the country. It is our view that insufficient production of improved varieties of agricultural seed is a major obstacle to the development of a viable agricultural sector.

USAID/Peru officials noted that corn and wheat yields have been stabilized through the release of high-yielding disease-resistant seed varieties. In addition, virus-free, improved potato seed was being produced in large quantities for sale to farmers and virus-resistant bean varieties have been selected and two are being multiplied for release.

Management Comments

USAID/Peru agreed with Recommendation No. 3.

4. Salary Supplements Not Being Paid

The salary supplementation plan, a pay incentive plan for highly qualified Institute for Agriculture Research and Extension (INIPA) personnel, agreed to by USAID/Peru and INIPA, calls for the Government of Peru (GOP) to fund the full cost of salary supplements in 1986. INIPA plans to stop paying salary supplements in 1986 because INIPA employees received a 25 percent cost-of-living allowance on February 1, 1986 and because the supplements had not served as an effective incentive for its employees. Our interviews with INIPA employees at Tarapoto revealed that skilled personnel are leaving for other jobs; the main reason cited was poor pay.

Recommendation No. 4

We recommend that USAID/Peru obtain evidence that the National Institute for Agriculture Research and Extension has developed a satisfactory pay incentive plan as a replacement for the salary supplements program and is working with relevant Government of Peru entities to implement the plan.

Discussion

According to the project paper, salary supplements were necessary because of the scarce quantity of professionally qualified Peruvians within the agricultural sector. A ten-year history of reduced budget support and lack of attention paid to agricultural institutions discouraged careers in the agricultural sector. Many young Peruvians sought training in other fields, while those with agricultural training and experience sought employment in the private sector or left the country for more attractive economic opportunities within international and third country agricultural institutions.

In order to reverse this trend, the project called for monetary incentives, (salary supplements) varying in amounts according to the level of training and experience of the professionals involved. Additionally, the project paper stated that the institutions involved in the research, extension and education system were developing the basis for civil service code reform for the agricultural sector.

Some elements that were being analyzed for the new code included:

- Rewards and promotions tied to advanced training and experience;
- Merit-type rewards linked to professional productivity;
- Institutional rewards to professionals apart from promotion to administrative positions;
- Differential rewards for productive professionals who choose to remain in local and regional research, education or extension sites; and

- Differential rewards for those advanced professionals in areas of continued scarcity.

As a condition precedent to the project agreement, the GOP was obligated to provide a salary supplements implementation plan for specified employees. The implementation plan was to include plans for the assumption by the GOP of the cost of the salary supplements over the life of the project. Implementation Letter No. 14 laid out the salary supplementation plan developed by INIPA and agreed to by USAID/Peru. In 1983 USAID/Peru was to pay 90 percent of the cost of the salary supplements and INIPA was to pay 10 percent. In 1984 INIPA funding was to increase to 40 percent and in 1985 to 70 percent. Beginning in 1986 INIPA was to assume the full cost of the salary supplements.

According to INIPA officials and the USAID/Peru project officer, the salary supplementation plan was abolished for the following reasons. First, the GOP gave their employees a 25 percent pay raise on February 1, 1986. However, according to Government decree the 25 percent increase was only a cost of living adjustment for the six-month period August 1985-January 1986 during which inflation rose by 28 percent. Secondly, the salary supplements were not an effective program because it strained relations between INIPA and the union. The union thought it was unfair to give salary supplements to only a few employees. Due to pressure from the union, INIPA was forced to pay supplements to all employees for the last six months of 1985. However, USAID/Peru continued to pay the incentives only to key employees. Thirdly, INIPA's budget approved for 1986 did not include funds for salary supplements although additional funds could be obtained through a separate budget request.

Our interviews with INIPA employees at Tarapoto revealed that 10 skilled personnel (about 10% of the skilled work force) had already left for other jobs. The main reason cited was poor pay.

According to USAID/Peru, INIPA under its new leadership over the last four months, has developed a new, aggressive approach to overcome the constraint of inadequate remuneration:

- Supported by technical assistance from the project, INIPA now has a computerized personnel data base and recently completed a first ever evaluation of its employees.
- A proposal has been drafted for the creation of a foundation providing support to INIPA. Such a foundation would not be subject to GOP laws on salary levels.
- With assistance from the project, INIPA is preparing a justification for a new pay scale. The justification will be based on salaries of research and extension professionals of other Latin American countries, the pay scale of the Peruvian private sector, and the salaries in other highly specialized Peruvian public sector entities.

In summary, well-trained scientists and technicians are indispensable in developing a modern agricultural sector to produce low-cost, abundant food. Well-trained agricultural professionals command a high price and have employment alternatives. If Peru is unwilling to pay for them, it must forego an improved agriculture sector and place in jeopardy the continued benefits of this AID-supported activity.

Management Comments

USAID/Peru agreed with Recommendation No. 4.

5. Maintenance and Inventory Control of Equipment Needed to Be Strengthened

According to the project agreement, the vehicle maintenance plan, and sound management practices, all project equipment should be properly maintained and safeguarded through a sound inventory control and maintenance system. The National Institute for Agriculture Research and Extension (INIPA) did not implement sound inventory control procedures or a vehicle maintenance plan. Many pieces of project equipment were not operating, which adversely affected INIPA's ability to successfully carry out the goals and objectives of the project. Additionally, weak inventory controls create a potential for equipment/material to be misused or stolen.

Recommendation No. 5

We recommend that USAID/Peru obtain evidence that the National Institute for Agriculture Research and Extension has established sound maintenance and inventory control systems for project equipment.

Discussion

Section B.5 of the project agreement requires that the host country, "maintain or cause to be maintained, in accordance with generally accepted accounting principles and practices consistently applied, books and records relating to the project and to the Agreement adequate to show without limitation the receipt and use of goods and services acquired under the loan and grant...".

The vehicle maintenance plan approved for the project states that the vehicle operators would be responsible for: (1) the use of vehicles; (2) the maintenance of a daily log book; and (3) the keeping of a maintenance control log which indicates maintenance performed on vehicles.

We found numerous instances of project equipment not being properly maintained or controlled in a satisfactory manner at either the Tarapoto Center for Agricultural Research and Extension (CIPA) or the Huancayo CIPA:

- An inventory of major pieces of equipment based on an AID equipment list revealed that only one of two threshers purchased for the Tarapoto CIPA (unit price of \$6,745) could be accounted for. According to the CIPA Director, only one was received.
- A brief spot check of three vehicles and three motorcycles at the Tarapoto CIPA revealed that inventory control records could not be found for one of the vehicles nor for one of the motorcycles.
- Inventory control of materials and equipment at the Tarapoto CIPA needs to be updated. Our inspection of the warehouse records on March 4, 1986 indicated that latest postings were of December 31, 1985.
- The Tarapoto CIPA did not maintain any inventory control over hand tools. Although there is a person in charge of controlling hand tools, there were no records to show to whom the tools were issued.

- The Tarapoto CIPA has a maintenance control booklet for each vehicle which is a guide to be used by the drivers to conduct equipment maintenance and to log daily mileage, gas consumed, oil used, etc. Only one driver was maintaining this control log.
- A check of the Tarapoto CIPA maintenance shop showed that of the 76 vehicles in the fleet, 20 were out of order which is an indication of a poor preventive maintenance program. Of the 20 vehicles not in use, eight were AID-financed.
- We found discrepancies in the records kept at the Tarapoto CIPA between its administrative office and mechanic shop. According to the administrative records, the CIPA has 63 vehicles but the records of the mechanic shop showed the CIPA had 76 vehicles. For motorcycles, the records of the administrative office showed 104 and those of the mechanic shop 116.
- Several pieces of equipment were delivered to the Tarapoto CIPA in January 1986 but were not being used because some parts were missing and the CIPA maintenance staff did not know what was wrong with the equipment. Additionally, USAID/Peru commented that the equipment which had arrived in January had not been checked out by dealer representatives or national program co-leaders.
- The Huancayo CIPA did not have a maintenance plan.
- Vehicle maintenance at the Huancayo CIPA was being done in a small mechanic shop that the CIPA was in the process of establishing at the Santa Ana experimental station. Vehicle inventory control and maintenance records had not been updated for the prior three months.
- A check of the Huancayo CIPA maintenance shop showed that of 47 vehicles in the fleet, 6 were out of order. One of the 14 AID-financed vehicles was not operating.
- Huancayo CIPA officials stated that different control formats are used to control the vehicles, but no one format is used on a regular basis.

According to USAID/Peru officials, an attempt should be made to distinguish between project equipment and equipment purchased by the AID financed Huallaga Central Project. The goal of our audit visits was to observe the CIPAs' ability to maintain and protect equipment in general. Therefore whether the equipment observed belonged to this project or another project was not considered relevant. A poorly managed maintenance program and inventory control system would adversely affect all pieces of equipment.

Management Comments

USAID/Peru agreed with Recommendation No. 5.

6. Sensitive Laboratory Equipment Needed to Be Protected

Section B.2 of the project agreement and sound management practice call for the protection of expensive sensitive laboratory equipment. At the Center for Agricultural Research and Extension (CIPA) in Huancayo, the AID-financed soils laboratory equipment was exposed to possible damage because a power stabilizer system was not available to control power fluctuations. According to laboratory personnel, at the time the equipment was purchased, it was not realized that power fluctuations were a problem. If the power supply at the CIPA is not stabilized, it is possible the laboratory equipment could be damaged.

Recommendation No. 6

We recommend that USAID/Peru obtain evidence from the National Institute for Agriculture Research and Extension that AID-financed laboratory equipment at the Center for Agricultural Research and Extension in Huancayo has been adequately safeguarded against power surges.

Discussion

Section B.2 of the project agreement requires the host government to carry out the project or cause it to be carried out with due diligence and efficiency, in conformity with sound technical, financial, and management practices. During our field trip to the Center for Agricultural Research and Extension (CIPA) in Huancayo, it was brought to our attention that erratic power supply fluctuations could cause damage to the soils laboratory equipment, worth about \$35,000, procured under the project. Since this problem was not anticipated, no power stabilizer system was ever purchased. We thus believe that USAID/Peru should obtain evidence from INIPA that the proper steps have been taken adequately safeguard CIPA's laboratory equipment in Huancayo against power surges.

Management Comments

USAID/Peru agreed with Recommendation No. 6.

B. Compliance and Internal Controls

1. Compliance

The audit disclosed five compliance exceptions:

- National Institute for Agricultural Research and Extension (INIPA) had not complied with the project agreement by not developing an integrated pest management program.
- INIPA had not complied with the project agreement by not developing a genetic resources program.
- INIPA had not complied with the project agreement by not developing a seed production program.
- INIPA had not planned to assume the cost of salary supplements in 1986 as required by the project.
- INIPA's equipment maintenance did not comply with standards established in the project agreement.

Other than the conditions cited, nothing came to our attention that would indicate that untested items were not in compliance with applicable laws and regulations.

2. Internal Controls

We noted one internal control exception:

- INIPA did not provide reasonable inventory control protection against waste, misuse or misappropriation.

Except for the internal control weakness cited, internal controls were found to be adequate and operating in a satisfactory manner.

**AUDIT OF USAID/PERU
AGRICULTURAL RESEARCH,
EXTENSION AND EDUCATION
PROJECT NO. 527-0192**

PART III - APPENDICES

NIVZCZCTG0149
P RUEHTG
DE RUEBPE #7306/01 1751510
ZNR UUUUU 22B
P 241500Z JUN 86
FM AMEMBASSY LIMA
TO AMEMBASSY TEGUCIGALPA PRIORITY #704
BT
UNCLAS SECTION 01 OF 02 LIMA 07305

24-JUN-86
CN: 47364
CERG: AID
DIST: RIG



AIDAC

FOR MR COINAGE N. GOTHEARD, RIG/A/T

E.O. 12356: N/A
SUBJECT: DRAFT AUDIT REPORT PROJECT NO. 527-0192
AGRI. RESEARCH, EXTENSION, EDUCATION

1. THIS IS THE USAID/PERU RESPONSE TO THE SUBJECT DRAFT AUDIT REPORT OF PROJECT NO. 527-0192 "AGRICULTURAL RESEARCH, EXTENSION AND EDUCATION".

2. THE EXECUTIVE SUMMARY OF THAT REPORT INTRODUCES FOUR BASIC ISSUES. WE WOULD LIKE TO COMMENT ON THE FIRST OF THOSE ISSUES WHICH WAS STATED AS FOLLOWS:

"THE EFFECTIVENESS OF THE REE PROJECT WAS LIMITED DUE TO THE LACK OF PRIORITY GIVEN TO THREE OF THE FIVE NATIONAL SUPPORT PROGRAMS.

THE STATEMENT OF THAT ISSUE IS MISLEADING. TO ASSERT THAT THE PROJECT'S EFFECTIVENESS WAS LIMITED, BECAUSE OF LACK OF PRIORITY GIVEN TO THREE OF THE FIVE NATIONAL SUPPORT PROGRAMS, REPRESENTS A FAILURE TO FOCUS ON THE PRIORITY ACTIVITIES OF THE PROJECT. AS STATED IN THE PROJECT AGREEMENT, THE PROJECT OUTPUTS WERE TO BE THE FORMATION OF (A) FIVE NATIONAL PRODUCTION PROGRAMS (NPP) FOR CORN, RICE, POTATOES, SMALL GRAINS (WHEAT, BARLEY), AND GRAIN LEGUMES; (B) SIX REGIONAL SERVICE LABORATORIES; (C) FIVE REGIONAL RESOURCE CENTERS; (D) A NATIONAL RESEARCH SUPPORT UNIT; (E) AN EDUCATION PROGRAM; (F) A NATIONAL REE MANAGEMENT DIVISION. THE MID-TERM PROJECT EVALUATION (MARCH 1984) CONCLUDED THAT THE PROJECT "IS MAKING GOOD PROGRESS TOWARD THE ACHIEVEMENT OF THE PROJECT PURPOSE AND END OF PROJECT STATUS". THE EVALUATION NOTED THAT THE FIVE NPPS WERE FUNCTIONING, THE RSLs ESTABLISHED, IMPROVED MANAGEMENT INSTITUTED, RESEARCH CENTERS FUNCTIONING, AND A LONG-TERM TRAINING PROGRAM IN EXECUTION. THE EVALUATION RECOMMENDED THAT IN A SECOND PHASE, UNDER A FUTURE PROJECT OR EXTENSION, SUPPORT PROGRAMS IN INTEGRATED PEST CONTROL, SEEDS, AND GERMPLEASE BE INITIATED. THESE SUPPORT PROGRAMS WERE ADDED TO THE REE PROJECT IN SEPTEMBER 1984 THROUGH PROJECT AMENDMENT NO. 6.

WHILE IT IS TRUE THAT THE IMPLEMENTATION OF THE SUPPORT

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PROGRAMS APPROVED IN LATE 1984 HAS BEEN SLOW, IT IS MISLEADING TO BEGIN THE REPORT ARGUING THAT THE SLOW IMPLEMENTATION OF THREE RELATIVELY NEW AND MINOR PROGRAMS HAS BEEN SIGNIFICANT IN LIMITING THE EFFECTIVENESS OF THE PROJECT. NOTE THAT THE REE PROJECT IS A \$19.65 MN PROJECT. THE AMOUNT CURRENTLY BEING BUDGETED FOR THE SUPPORT PROGRAMS DOES NOT EXCEED 600,000. THE CONCENTRATION ON THE LIMITED ACHIEVEMENT TO DATE OF THE SUPPORT PROGRAMS, THEREFORE, APPEARS TO BE MISPLACED. FURTHER, A TEAM OF INTERNATIONALLY RECOGNIZED EXPERTS ON AGRICULTURAL RESEARCH AND EXTENSION CONCLUDED IN THEIR DECEMBER 1985 REPORT THAT THE POST 1980 REE SYSTEM (OF WHICH INIPA IS A MAJOR PART) HAS SHOWN REMARKABLE PROGRESS AND GROWTH WHICH IS ALL THE MORE IMPRESSIVE GIVEN THE FACT THAT DONOR FUNDS HAVE ONLY BEEN FLOWING SINCE 1983". FINALLY, A RECENTLY COMPLETED STUDY SHOWS HIGH RETURNS TO PUBLIC INVESTMENTS IN PERU'S REE SYSTEM OF 17 TO 35 PERCENT. A BALANCED AUDIT REPORT WOULD CONCLUDE THAT THE PROJECT HAS BEEN VERY SUCCESSFUL, HAS BEEN MONITORED CLOSELY AND HAS BEEN MODIFIED TO RESPOND TO EVALUATION RECOMMENDATIONS. IT WOULD INDICATE THAT ADDITIONAL WORK NEEDS TO BE DONE TO INSURE COMPLETE IMPLEMENTATION OF 1984 RECOMMENDATIONS BUT THAT A GOOD START HAS BEEN MADE.

3. WITH THE EXCEPTION OF FINDING AND RECOMMENDATION NO. 1, WE CONCUR THAT RECOMMENDATIONS NO. 2-6, OF THE REPORT AS STATED ARE POSSIBLE TO CLEAR. WE REQUEST HOWEVER THAT THE AUDIT TEAM PROVIDE A MORE BALANCED AND ACCURATE PICTURE OF PROJECT IMPLEMENTATION AND PLACE THE SUPPORT PROGRAMS IN THE PERSPECTIVE OUTLINED ABOVE.

4. WE CONTINUE TO POSE OUR EXCEPTION TO FINDING AND RECOMMENDATION NO. 1 STATED AS FOLLOWS:

FINDING: INTEGRATED PEST MANAGEMENT WAS NOT OPERATIONAL.

RECOMMENDATION: WE RECOMMEND THAT USAID/PERU OBTAIN EVIDENCE FROM NATIONAL INSTITUTE FOR AGRICULTURAL RESEARCH AND EXTENSION THAT THE PEST CONTROL SCIENTISTS CORE GROUP HAS BEEN STAFFED AND AN OPERATIONAL PLAN FOR THE PROGRAM HAS BEEN DEVELOPED.

THE OARL PROJECT MANAGEMENT POSITION IS THAT ALL

POSSIBLE STEPS HAVE BEEN, AND ARE BEING, TAKEN TO INITIATE AND IMPLEMENT THE INTEGRATED PEST MANAGEMENT SUPPORT PROGRAM.

A PRELIMINARY BASELINE STUDY FOR THIS PROGRAM WAS PREPARED IN 1983 BY A THREE PERSON TEAM FROM THE CONSORTIUM FOR INTERNATIONAL CROP PROTECTION (CICP) WITH FINANCING FROM THE AID/W IPM PROJECT. IN NOVEMBER, 1985, DR. BENJAMIN QUIJANDRIA, EXECUTIVE DIRECTOR OF INIPA, VERBALLY REQUESTED THE ASSISTANCE OF AID IN IMPLEMENTING PEST MANAGEMENT ACTIVITIES. AS A RESPONSE, WE CONTRACTED DR. CARLOS OLIVARES ON A SHORT-TERM BASIS UNDER THE NCSU CONTRACT TO OVERSEE THE MOSCA MED INITIATIVE AND TO COORDINATE PREPARATION OF AN IPM PROGRAM. IN JANUARY 1986, AFTER THE RECEPTION OF A WRITTEN REQUEST FROM INIPA, ASSISTANCE WAS REQUESTED FROM THE CENTRALLY FUNDED PEST AND PESTICIDE MANAGEMENT PROJECT (PPMP) FOR IPM DESIGN AND SUPPORT. ON APRIL 7, DR. MIEE IRWIN FROM PPMP, BASED AT THE UNIVERSITY OF ILLINOIS AND A MEMBER OF THE EARLIER TEAM, ARRIVED IN PERU TO WORK FOR TWO WEEKS WITH OLIVARES ON FINALIZING AN IPM BASE DOCUMENT AND TO OUTLINE PPMP SUPPORT TO THIS ACTIVITY OVER THE REST OF THE CALENDAR YEAR. DURING THE SECOND WEEK OF IRWIN'S TDY, INPUT WAS RECEIVED FROM A THREE PERSON TEAM WORKING WITH IPM SCIENTISTS AT NAU. ONE MEMBER OF THIS TEAM WAS ALSO ON THE EARLIER IPM BASELINE STUDY. TO FINANCE CY86 TECHNICAL ASSISTANCE FROM PPMP, APPROXIMATELY \$100,000.00 OF REL RESOURCES HAS BEEN EARMARKED BY A PIO/T SIGNED MAY 23, 1986.

THESE FUNDS WILL SUPPORT TECHNICAL ASSISTANCE TO INIPA FOR APPROXIMATELY ONE YEAR TO FORMULATE A STRATEGY FOR THE RATIONAL IMPLEMENTATION OF A VIABLE INTEGRATED CROP PROTECTION SERVICE FOR PERU. EXTERNAL EXPERTS WORKING WITH PERUVIAN SPECIALISTS WILL ASSESS THE PROSPECTS FOR GROWER PARTICIPATION AND THE POTENTIAL ROLE FOR BOTH THE PUBLIC AND PRIVATE SECTOR IN SUCH AN INTEGRATED SERVICE. THROUGH THIS EFFORT A CONCEPTUAL FRAMEWORK WILL BE DEVELOPED, CROP PROTECTION PROBLEMS WILL BE PRIORITIZED AND A STRATEGY FOR ADDRESSING THESE PRIORITY PROBLEMS DEVELOPED. IT IS ONLY AFTER THIS EFFORT THAT A DETAILED COURSE OF ACTION, INCLUDING THE MAKEUP OF A CORE GROUP OF PEST CONTROL SCIENTISTS, CAN BE DEVELOPED. IN ADDITION TO THE ABOVE RESOURCES, FY86 FUNDS TO BE OBLIGATED FOR THE REL PROJECT WILL INCLUDE AN AMOUNT TO BEGIN START-UP ACTIVITIES OF THE IPM PROGRAM.

IN VIEW OF THE ABOVE PROCESS WHICH HAS BEEN SET IN MOTION, AND OUR OPINION THAT INIPA RECOGNIZES THE IMPORTANCE OF THE IPM PROGRAM, WE BELIEVE THAT SUFFICIENT ATTENTION IS BEING GIVEN AT THE PRESENT TIME. WE FEEL IT IS PREMATURE TO REQUIRE USAID/PERU TO OBTAIN EVIDENCE FROM INIPA THAT THE CORE GROUP HAS BEEN STAFFED AND AN OPERATIONAL PROGRAM DEVELOPED AS RECOMMENDED IN THE DRAFT AUDIT REPORT. WE BELIEVE THE MISSION PLAN OF PROVIDING TECHNICAL ASSISTANCE TO DEFINE LONGER-TERM PROGRAM NEEDS, INCLUDING CORE STAFFING NEEDS, REPRESENTS THE MOST PRUDENT IMPLEMENTATION

APPROACH.

APPENDIX 1
Page 4 of 4

FOR THIS REASON, WE CONTINUE OUR REQUEST THAT FINDING
AND RECOMMENDATION NO. 1 OF THE DRAFT AUDIT REPORT BE
DELETED. SHOULD YOU OR YOUR STAFF CONTINUE TO FEEL THAT
AID'S INTERESTS ARE BETTER SERVED BY A DIFFERENT
APPROACH, I WOULD WELCOME AN OPORTUNITY TO REVIEW THIS
MATTER WITH YOU FURTHER PRIOR TO PUBLICATION OF THE
FINAL AUDIT REPORT. JORDAN

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LIST OF REPORT RECOMMENDATIONS

	<u>Page No.</u>
<u>Recommendation No. 1</u>	4
We recommend that USAID/Peru obtain a time-phased schedule from National Institute for Agriculture Research and Extension setting forth the actions it will take to staff, plan, and fund an integrated pest management program.	
<u>Recommendation No. 2</u>	6
We recommend that USAID/Peru obtain evidence that the National Institute for Agricultural Research and Extension has made available sufficient funding to establish a viable genetic resource program.	
<u>Recommendation No. 3</u>	8
We recommend USAID/Peru provide the National Institute for Agricultural Research and Extension with the assistance necessary for the implementation of an improved seed multiplication policy.	
<u>Recommendation No. 4</u>	10
We recommend that USAID/Peru obtain evidence that the National Institute for Agriculture Research and Extension has developed a satisfactory pay incentive plan as a replacement for the salary supplements program and is working with relevant Government of Peru entities to implement the plan.	
<u>Recommendation No. 5</u>	13
We recommend that USAID/Peru obtain evidence that the National Institute for Agriculture Research and Extension has established sound maintenance and inventory control systems for project equipment.	
<u>Recommendation No. 6</u>	15
We recommend that USAID/Peru obtain evidence from the National Institute for Agriculture Research and Extension that AID-financed laboratory equipment at the Center for Agricultural Research and Extension in Huancayo has been adequately safeguarded against power surges.	

APPENDIX 3

REPORT DISTRIBUTION

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