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SHORT-TERM CONSULTANT REPORT

REVIEW OF EXTENSION PROGRAM

by

Larry K. Bond^{*}

Agricultural Extension Specialist, Utah
State University Extension Service, Logan
Utah. Short-Term Consultant, CID.

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REVIEW OF EXTENSION PROGRAM

Larry K. Bond

I. INTRODUCTION

Insofar as possible, this report follows the Scheduled Plan of Work for the CID Extension Specialist. The new contract year had barely begun when my tour of duty in Bolivia ended. Knowing that a replacement would not likely be found in the immediate future following my departure, I tried to lay the ground work for the continuation of the programs as set forth in the Plan of Work. I express appreciation to the CID Party Chief and others who have helped in any way to keep the program moving.

Because of the lack of adequate extension support by CIAT in Santa Cruz, few programs were planned this year for that area. Hence, most of my time was spent in the Department of Cochabamba and except where otherwise indicated, this report refers to programs in that area.

II. ADMINISTRATION

Administration seems to be improving somewhat but there is still room for improvement. At the departmental level, I found discontent among some extensionists with respect to the local administration. Furthermore, some of our important programs have not received the support and encouragement I had hoped for.

There are still outside interferences that adversely affect efficient extension program delivery, although this is not the fault of local administrators. Upon order from the Ministry, three extension jeeps have

been turned over to local MACA authorities. It is fully expected that the remaining jeeps will be requisitioned shortly. One of the agents has been without his jeep since December. It has not been properly cared for and the extension supervisor doubts if it will ever be of use to extension again.

The planned evaluation of extension agents in Cochabamba by their supervisors has just been completed. Forms for evaluating supervisors were given to the agents and were to be forwarded to La Paz when completed. However, the Head of Extension picked them up directly from the agents. This has caused some feelings. The evaluations were not forwarded to La Paz although this evaluation took place some time ago. I have discussed this matter with the National Extension Director and another evaluation of supervisors will be made.

III. TRAINING AND SUPERVISION

The last of the three-day training courses for agents was conducted three months ago. Only two per year are planned. However, the agents get together for one day each month to go over problems and get direction from the extension supervisors. It was planned that both CID and Bolivian technicians would be invited to present seminars on these days, and Dr. William Brown is using portions of these meetings for a plant pathology extension training program. So far, he has presented two seminars. Each agent is given a mimeographed handout which becomes part of a Plant Pathology Reference Manual. This program has praise from the Extension personnel.

The portable cassette recorders are being widely used by extension service. The supervisors have been training the agents in their use in radio programming as well as in other activities. According to the supervisors, eight of the nineteen extension workers in Cochabamba have voices and personalities well adapted to radio programming. Orlando Soriano, who recently returned to Bolivia after attending a six-months course in communications, will be working closely with the agents. He has prepared a fourteen-page handbook on the subject but was unable to get it printed for lack of funds. I arranged for CID to publish thirty mimeographed copies.

No new agents have been added to the staff. There are plans to hire an assistant for each agent, but no one seems to know when this might be done. I have discussed the need of orientation training for new personnel with the National Training Supervisor, and he is in full agreement.

IV. COORDINATION OF RESEARCH AND EXTENSION

There appears to be little improvement in the coordination of research and extension. I spent considerable time discussing this issue with the Cochabamba Departmental Director of IBTA. He is quite concerned about the problem and has developed a proposal.

Subsequent to my discussion with him I had an opportunity to read this proposal. It calls for an extension agent to be named coordinator for the major crops in the Cochabamba area, i.e., potato, corn, wheat, etc.

This Agent-Coordinator would work directly under and be supervised by the research station technician in charge of that particular crop. All agents working in provinces where this crop is important would be supervised by the Agent-Coordinator and the research technician. Agents working in provinces where more than one crop is important would receive directions from more than one Agent-Coordinator.

In short, some agents would have multiple supervision and there would be little need of the present system of supervisors. This sounds quite similar to an extension program proposed a year ago by a national program leader. Some of the national leaders have asked for about ten agents to work under each of them to do nothing but extend technology for their particular crop. The extension personnel are concerned that it will be detrimental to the extension service. They feel that extension's job is not only to extend technology but to help improve the standard of living of the campesino, and this does not necessarily result from technology extension alone. As proof, they say that campesinos in the Lequezana area of Chuquisaca have been using tractors, fertilizers, etc. for years but their living standards have not shown appreciable improvement. Moreover, they fear the agents will lose their acceptance among the campesinos if he refuses to help them with other problems.

While I'm not in favor of the proposal as written, there may be points worth considering. Maybe it is time for agents to quit trying to be everything to everybody and concentrate on a few major programs. They could help with other problems when called upon but devote most of their

effort to a few programs. Of more concern to me is the proposed line of supervision. An agent should not have more than one supervisor.

I would propose that program coordinators (crop specialists) be appointed to work closely with research technicians. Each should become an expert in a particular crop, and could have a well prepared set of visual and other teaching aids. In addition to presenting seminars to keep agents up-to-date on crop technology, he should be available to make presentations at campesino shortcourses.

A meeting is scheduled in Cochabamba on April 11 where the aforementioned proposal will be presented to national research and extension administrators. I suggest that Dr. David James be present at this meeting.

V. DISSEMINATION OF INFORMATION

A. Publications

Despite the fact that IBTA is now printing several of the bulletins that were delivered as early as fourteen months ago, there is still need for improvement. While serving as Co-Director of Extension, I consistently argued the need of a formal review committee, and went so far as to write a proposal, outlining the publication process, complete with a suggested timetable, from research data to the published bulletin. During this short-term assignment, I met with the Director of IBTA and again voiced my concern. He agreed that something would definitely have to be done, indicating that he had already decided to appoint a review committee.

Of the publications that were pending when I left two months ago,

the following will shortly be published:

Tizón Tardío de la Papa.

Enfermedad de la Papa - I. Nematodos

Enfermedad de la Papa - II. Tizón Tardío

Las Principales Enfermedades de la Papa en Bolivia.

Indice de Enfermedades de las Plantas en Bolivia.

La Mosca de la Fruta.

Before Dr. Kenneth Ellis left, he told me of booklets on crop diseases for selected crops published by CIMMYT and CIP. Dr. William Brown has now received some copies and will order enough for the agents.

I talked to the CID technicians in Cochabamba about potential extension bulletins forthcoming from the research stations this year. They suggested the following as possibilities: (1) Fertilization of Potatoes; (2) Irrigation of Potatoes; (3) Tips on Storing Potatoes; (4) Proper Application of Potato Pesticides; (5) Barley Production and (6) Description of New Cereal Varieties. In addition, there could be some technical bulletins, but a lot depends on the results of this year's research.

B. Radio Programming and Use of Recorders

According to the reports of the supervisors, the agents are making good use of the portable cassette recorders. I have seen some of the scripts written by the agents. The agents are enthusiastic. Five radio stations are now giving free time to extension programming.

C. Slide Projectors

There are no slide projectors, not even in the departmental extension office. When training sessions are held for the agents in Cochabamba, the supervisors have to borrow a projector from outside. At times there are none available. It would be well if one of the old ones belonging to CID could be assigned to extension, at least until those ordered under Loan 053 arrive.

Several agents expressed a real need for small projectors that will operate from a jeep battery. Such a projector is available at a local photography shop for about \$b. 1,300.- that can be adapted by changing the lamp. While going over the equipment for purchase under Loan 053, I suggested that the projectors be adaptable to 12 volt use, as well as AC current. Whether my recommendations were followed, and when the equipment will arrive, I don't know. If a lengthy delay is expected, consideration should be given to purchasing at least one small projector locally. It would greatly improve the ability of the extension service to extend certain kinds of technical knowledge to the producer.

D. Field Days

The extension program included Plans to take the provincial representatives of the Potatoe Producer's Association to the Toralapa Research Station at least three times this year. However, because of frost at the station, the trials have been badly damaged and there is not a lot for these producers to see. However, Plans still include meeting with these

producers to discuss their needs which can be assisted by research.

A Field Day was held at the Saavedra Station while I was here. The supervisor of extension was in charge of publicity for the event. A few agents brought campesinos to the Field Day. However, the majority of those in attendance were not producers and they came mainly for a social event. I suspect that any campesinos may have felt somewhat out of place. It is doubtful that much technology was extended. However, there may be other benefits from this type of Field Day, such as acquainting those in agri-business and the public in general with the work being done at the station. From the standpoint of technology extension to the small farmer, it may be better to have the agents bring small groups at different times during the growing season.

VI. PROGRAM PLANNING AND EVALUATION

The agents in Cochabamba are not yet ready to start writing plans of work for the coming year. However, I discussed certain programs with the supervisors, indicating the need for continued emphasis and expansion of activities in these programs. I also asked that a thorough evaluation be made of each program so as to make improvement possible.

I participated in a program coordination meeting in Santa Cruz where representatives of eight different institutions, all doing some form of extension work, were present. The original intent was to develop a single plan of work for all eight organizations. I commended them for their good intentions, but suggested this was not feasible in as much as some organizations may be committed to individual programs. As an alternative, I suggested that they coordinate activities only on those programs common to several or all of the organizations.

They agreed that this was the logical approach. A date was set for another meeting and the chairman instructed all to come with their individual plans of work.

VII. OTHER ACTIVITIES

A. Cereal Seed Cleaning

Attempts were made to visit most of the provinces, except the Chapare, to check on this program. In some cases, roads to the provincial headquarters of the agent are closed because of heavy rains. In others, it was not possible to get to the demonstration plots because of swollen creeks and bad roads. However, I was able to talk to many of the agents in Cochabamba. In some instances, the agents themselves have not been able to visit the sites since seeding because of the heavy rains. I saw one plot in which there appeared to be a visible difference in the number of weeds and crop yields in the control plot as compared to the plot seeded with cleaned seed. However, the general consensus among the agents is that this has been an exceedingly wet year and weed seeds which are ever present in the soil, sprouted in greater numbers than would be the case in a normal year. I accept this as a plausible explanation. In one province, herbicide was applied to both the control and the test plots making yield comparisons meaningless.

The agents were all asked for their reactions to the program. All agreed that weed control is very important and that they want to continue the program next year. However, they indicate that not all campesinos want to clean their grain. Wild mustard, the most serious weed problem in the area, makes good canary feed and many campesinos supplement their income by harvesting it and selling it in Cochabamba. Others permit this plant to grow about to three feet then rogue it out for animal feed. I personally saw a campesino doing this.

Despite these attitudes, some producers are interested in cleaning their seed. An estimated 2,630 campesinos were present when the use of

the small hand screens were demonstrated on various occasions during December. Nearly two thousand of these were in a single province during an agricultural exposition. Agents informed me that many campesinos borrowed the seed cleaners after the demonstrations. Others, made their own by cutting large cooking oil or alcohol cans in half and punching holes in them. Others made cleaners by punching holes in leather.

In summary, I am disappointed that we will not have much reliable production data for making yield comparisons. It will have to be shown to the producer that the value of the increased yields due to the use of clean seed is greater than the value of the weeds as canary seed or forage. I do not observe much enthusiasm for this program on the part of the Chief of Extension. Unless there is someone else, with a lot of interest, to push this program, I don't look for significant progress during the coming year.

B. Range Cage Demonstrations

Here again, heavy rains have made it impossible for even the agents to properly monitor the growth of grass under the cages. I hiked into a couple of sites and found that one cage which I had personally helped locate had been stolen. Several others have been stoled and one was run over by a truck. I was able to take a few pictures that showed an impressive difference in growth inside and outside the cage.

In the Capinota area, the agent informed me that the last time he was able to get to one of the cages, the grass was about three feet tall

inside the cage and pushing out through the wire. Outside the cage, the grass has been grazed clean. The campesinos are very impressed by this. Sheep and goats are prevalent in this area and heavy grazing is causing erosion problems. The agent wants to work closely with us. I suggested it would be better to fence in a large area using local materials. There is an abundance of thorny bushes in the region and he will try to get the campesinos to fence with this material.

The road to Independencia was closed because of land slides, but I did get to spend part of one day with the agent at Morochata. He said the agent at Independencia had received the wire supplies by CID to enclose a fairly large grazing area. However, the heavy rains had delayed construction of the fence. These two agents, as well as the one in Capi- nota, show the most interest in the program and should be encouraged. Their interest no doubt partially stems from the fact that these are the areas most suited to grazing.

C. Potato Producer's Association

The Potato Producer's Association is still very active, with a membership of about 6,500. I spent some time acquainting Dr. Kendall Adams, CID Ag. Economist, with the background and goals of the association, and introduced him to several key people in the organization. He was shown part of the data from the field survey we conducted several months ago. The final report is being typed and should be available the first week in March. Among other things, it contains consumption and product distribution

data that will be very helpful in marketing studies. The Centro de Investigación y Promoción Campesina (CIPCA), who is tabulating the data and giving guidance to the association along with the extension service, were delighted to know of Dr. Kendall Adams' interest in cooperating with them.

I do not feel that the extension service is giving enough attention to the association. This feeling is shared by CIPCA, as well as Eng. Lucio Antazana. However, the Head of Extension in Cochabamba is reluctant to get more involved, although he is once again permitting agents to attend association meetings. This is the sort of organization through which technology can be extended. CIPCA is trying to help obtain credit so that fertilizer and other inputs can be purchased directly. It would be quite easy to require that the producer adopt a particular technology in order to get a loan through the association.

As indicated earlier, we had planned to take the leaders of the association to the Toralapa Research Station at least three times this year. Frost has destroyed many of the trials this year. I still feel extension is passing up an excellent opportunity to cultivate a good relationship with the leaders, and even extend technology at the monthly meetings of the association.

D. Vegetable Program

Most campesinos in the Santa Cruz area do not grow vegetables. As part of my extension program last year, I distributed nearly fifty pounds of vegetable seeds to the agents, who in turn initiated a program with

selected small farmers in the Santa Cruz region. The extension supervisor informs me that this has been a very successful program. The campesinos are not only pleased with the wider variety of food for the family, they are also selling produce from their gardens as an income supplement. Most of the cooperators plan to grow larger gardens next year in some cases by reducing the production of traditional crops.

The extension supervisor would like more seed to expand the program to a new group of campesinos this coming year. While vegetables are not a part of the CID/MACA research program, this appears to be an area that could benefit small farmers in the Santa Cruz area. Rice prices are often depressed. Vegetables grow well but for some reason few are grown. The family diet as well as income could be improved if more vegetables were produced. Seeds are commercially available in Santa Cruz, but consideration should be given to an extension sponsored seed distribution program for small farmers as the initial step in acquainting them with the potential benefits from vegetable production. All the varieties sent down last year responded well and I will have more sent this year.

Eng. Lucio Antezana, extension supervisor in Cochabamba, has also requested vegetable seeds for distribution to families outside the traditional vegetable growing areas. This would be done through the rural youth program by forming what might be called "garden clubs" supervised by the agents. This would be a way of improving family nutrition. A nominal fee would be charged for the seed, the proceeds of which would go

to buy seed in subsequent years. I am taking a list of requested seed types with me and will have them sent down.

E. Rural Youth Program

The coordinator of the rural youth program has been as active as he could be under the circumstances. He gets good cooperation from one of the extension supervisors and has made occasional visits to the provinces. Work in the other supervisor's area has to be conducted mainly by correspondence or personal contacts when the agents are in Cochabamba.

We visited Tiraque where members of a rural youth group were meeting with the extension agent to draw up by-laws for their association. This is a sheep producers' association, organized during my tour, which is using improved animals. They recently purchased 52 young animals from La Cooperativa Cuquiña and have placed an order for 100 more. During this two-day meeting, they were given technical information on raising sheep and shown how to shear. They are getting legal permission to graze their animals on unexploited range lands just off the eastern slope of the nearby mountains where grazing conditions are excellent.

There are plans for encouraging more campesinos to grow vegetables by working through the rural youth, as mentioned earlier in this report.

F. Sheep Improvement Program

The agents at Morochata and Independencia have been very active in this program. They recently helped campesinos select and purchase 256 improved rams and ewes. The majority were purchased by one campesino

with Banco Agrícola credit, which is now available as a result of meetings between local extension and BAB officials during the past year. This campesino intends to offer improved stock for sale in future years.

A few campesinos have been taught to shear and others want to learn. Shearing schools are being planned for the future. Three dipping vats have been constructed.

These agents would like a range specialist to work with them on their pasture problems. They are very interested in the range cage demonstrations. However, they need someone to work closely with them in this program.

G. Animal Traction

The animal traction workshop, held at the Menonite Mule Farm in Santa Cruz in late December, was a success, although the plows I had arranged for with the Ministry were never sent. Eighteen campesinos and seven extension agents attended. Several campesinos, sponsored by the Equipo Chapare (a religious organization doing extension work) came from as far away as the Chapare. Agents and campesinos were taught to harness a team and plow with a mold board plow.

I visited the Mule Farm and saw an ox, with less than a week of training, pulling in a harness and being guided by a bit in its mouth. This program has excellent possibilities and should be used for training. Extension agents from Cochabamba and other areas could benefit from participating in these workshops.

Apparently, the head of Maquinaria Agrícola in MACA had never received official word that the plows could be sent to the Mule Farm in Santa Cruz for distribution to campesinos who participated in the animal traction workshops. This oversight has been rectified and hopefully the plows will be sent soon.