

PD-AAQ-357

37497

Zaire

660-0075

EVALUATION REPORT
CEDECO Small Tools Production Center
Project 660-0075

Prepared by
Françoise van Egroo
for USAID/Zaire
December 15, 1980

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I. SUMMARY

The CEDECO small tool production center at Kimpese, Bas Zaire is considered a worthwhile project by most observers. This appreciation is based on the visible and concrete accomplishments of CEDECO and the expansion of its capacities and activities in 1980. The extension program now being carried out is the logical follow up of the earlier phases of construction of the workshop, installation of new machinery, design and fabrication of tools, training of carpenters, blacksmiths and iron workers, and counterpart training.

However, these accomplishments seem more adapted to the middle class farmer or to the agro-industrial business, which grows food crops for its workers ¹⁾ than to the small farmer. It should be pointed out that the project was slow to get underway and that it is at least one year behind schedule ²⁾. This was due partly to slow administrative procedures for clearing funds and ordering commodities abroad, and partly to difficulties in obtaining local commodities due to insufficient local funds.

CEDECO is aware that the primary beneficiaries of the project should be small farmers. To reach these farmers it has attempted to change the orientation of sales of its products. In the pursuit of this objective CEDECO has been faced with the following difficulties.

A. Economic conditions of localization: one of the first problems which CEDECO faced in distribution of its tools was that the potential buyers were not in the immediate region of Kimpese. The Kimpese zone is more a pastoral region and farmers do not grow sufficient quantities of food crops to warrant the use of the production Center's technological implements and machines.

1) for example CIZA (Cimenteris du Zaire)

2) The project is 2 years behind schedule if one takes into consideration that an extra year was spent looking for a qualified advisor. The Grant Agreement was originally signed in October 1977.

B. Sociological resistance: Some agricultural habits of small farmers are also traditional social functions. The simple introduction of tools cannot always replace these functions. There has to be acceptance and perhaps some modifications in habits. In some cases an individual farmer who adopts new methods may create jealousies and as a result, may find himself exposed to certain dangers.

C. Psycho-sociological factors: People in Bas Zaire have become accustomed to receiving aid through missions of all sorts, thus developing a type of "welfare syndrome". This ambiance has created a certain inertia towards "buying".

D. Administrative factors: CEDECO has been dependent on the agricultural experiment station of ECZ to draw people into buy tools. The residents of the Kimpese region speak of the decline of the impact of the station in the last few years and they mention its high prices ¹⁾ and the low quality of its seeds ²⁾.

CEDECO has attempted to find solutions to these problems of distribution in the following ways:

1. CEDECO collaborates with cooperatives, with village communities, missionary projects, and other extension projects such as the West German extension program, BEAU/GER Mbanza-Ngungu training unit program, CEAZ community in Bas Fleuve, extension in the Mayombe, and with CEPAS for dissemination of workshop manuals.

2. CEDECO has requested Peace Corps Volunteers to aid in the distribution of tools in collaboration with CEDECO's developing extension service.

1) CEDECO sells its eggs for 100K and chickens for 40-50Z; CIZA, which produces for its workers, sells its eggs at 50K and chickens for 15Z. The average price of chickens in the Kimpese region is 35Z.

2) claimed by the Catholic Missions but contested by Fiebig.

II. PURPOSE

The principal purpose of this evaluation is to collate the experience gained from this project as it might pertain to future AID-assisted activities in small tool production in Zaire. The evaluation was carried out over the period December 3 - 12, 1980.

III. METHODOLOGY

- A. Documentation: The evaluator studied documentation on hand at CEDECO and USAID. This included correspondence between USAID and ECZ, the previous project evaluation and recommendations, program description and quarterly reports and statistics. Other documents consulted included the Dept. of Agriculture/FAO document on commercialization of agricultural products in 1980, and the Department of Plan's Rapport de Mission Region du Bas Zaire, 1976.
- B. CEDECO staff: The evaluator had intensive discussions concerning the project with responsible CEDECO staff in Kimpese and in Kinshasa.
- C. Directed interviews: The evaluator interviewed some beneficiaries of the project activities, but was not able to contact any direct end-users of the tools produced because they were all located too far from Kimpese and not easily accessible. The estimate of the impact of the tool center is based on interviews with representatives of neighbouring agro-industries and missions. These are CIZA (Cimenterie du Zaire), CINAT (Cimenterie Nationale), the Catholic missionaries at Kimpese, and the Oxfam representative in Zaire.

IV. Project Objectives

- A. This project had four specific objectives as set forth in the Grant Agreement.

1. The lines of tools produced will be changed and expanded to include basic hand tools required by small farmers in production of the most important staple food crops (notably manioc and plantains). Tools in current use and markets for such tools will

be researched. Improvements on these tools will be studied, designed, and field tested.

2. The current production facility will be enlarged and modified for more efficient production, with particular emphasis on a metal workshop and wood driving unit. The expanded facility will be outfitted with new equipment and tools required in the production processes.

3. Technical production improvements will be installed through advisory and training assistance to the tool production staff and assembly line operation. A demonstration farm will test the tools produced. There will be close collaboration with the CEDECO agricultural extension field service.

4. Business management improvements will be installed through advisory and training assistance. The improvements will be in financial management (budgeting, accounting, pricing, auditing), operations, administration, including purchasing and supply of raw materials, and advertising and marketing of produced tools.

B. Progress towards each of these objectives is discussed below.

1. CEDECO has changed and expanded the lines of the tools it produces in response to needs of small farmers for the production of the most important staple food crops (manioc, peanuts, corn, coffee). New tools have been studied, designed and are being field tested.

In 1975 the line of tools included twenty-five different items, only twelve of which were actually produced ¹⁾. Total production of all articles was sixty-eight units. In 1979, eighteen tools were produced for a total of 362 units. In 1980 the lines of tools were modified after having been observed in use. As of December 1980, 419 units had been built, representing eleven different types of tools (see Annex 2).

¹⁾ Corn planter, electric incubator, chicken brooder, wheel plow, winnowing machine, wheelbarrow, chicken feeder, laying nest, small chicken feeder, peanut decorticator, corn sheller, rice thresher.

5.

Major changes in 1980 were from hand-powered to pedal-powered machines (winnowing, corn sheller, manioc mill). A small kerosene incubator for 150 eggs, and costing 600Z, replaced the big electric incubator costing 4,000Z.

CEDECO reoriented its metal production to include galvanized garden watering cans (to respond to dry season watering problems), pails, hoes and machettes. It received samples of metal tools made in North Shaba, and contacts were being made between workshops in North Shaba and CEDECO to see the possibilities of expanding both production and training programs.

Market research for the distribution of the tools is being carried out. In collaboration with the CEAZ community in Bas-Fleuve at Nsumbi, a small tool unit is being established at the Institut Agricole. Several visits have been made to deliver various orders of tools. CEDECO will continue to follow up to see what impact these tools will have in this very productive agricultural region.

CEDECO has asked for a Peace Corps volunteer for two years to aid in the distribution of tools through involvement in construction, utilization and the gradual acceptance of the new technologies in collaboration with CEDECO's extension service.

CEDECO has a rural development project with BEAU (Bureau d'Etudes d'Aménagement Urbain) and the GER/Mbanza Ngungu in training rural artisans in the trades of small agricultural tool production, blacksmithing, and metal work.

Manuals have been designed which show in detail how to build some of the tools. Publication and distribution is done in collaboration with CEPAS. New manuals are now being prepared.

2. Although during the first year no expansion of the existing installations took place, construction of a 300M² extension began in January 1980 and was finished in March 1980.

The metal workshop (which was located in a small exterior mud house) and a wood drying unit were integrated into the new addition to the workshop. This new facility was equipped with machines

and tools needed for the production process. Workshop equipment was ordered in 1979 through the Mennonite Central Committee.

3. Advisory and training assistance to the tool production staff and assembly line operation do not seem to have received much attention during the first year of the project. Aside from the training of two workmen in animal traction (oxen) and the recruitment of two new carpenters, not much information is given in the quarterly reports which cover the first year of the project. However, the recruitment of trainees for the CEDECO project was planned by ECZ in conjunction with the representatives of the ECZ communities throughout Zaire. Recruited trainees were to begin training in January 1980 but training actually began in April when the new workshop was equipped to handle the work. Expenses for the trainees were to be divided between CGT (Groupe Technique Central of ECZ) and CEDECO, and at the end of the training period CGT-CEDECO would finance up to 25,000 per region to re-equip existing workshops in the communities of the trainees. For example, IMELOKO in Equateur sent two trainees to Kimpese. After the training program CEDECO sent a complete tool unit back to IMELOKO.

Training of carpenters and blacksmiths lasted from April 1980 to September 1980. The workshop now has two qualified workers and ten trainees in the carpentry section, and one qualified blacksmith and three blacksmith trainees. Trainees receive bonuses for their work from CEDECO.

A "demonstration farm" to test tools is being developed close to the workshop. Here will be tested all the tools already produced on a commercial scale as well as those which are being tried on an experimental basis, such as solar driers, mud ovens, and silos. The close collaboration which should have existed with the CEDECO agricultural extension field service (under the direction of Cit. Ingingasa) did not take place. Cit. Ingingasa left his post in September 1980. A new extension program is being programmed with West German funding assistance.

4. It is difficult to say whether the advisory and training assistance has much improved business management. The present advisor has principally assisted Cit. Mpondo, chief of the workshop, in all the technical aspects of the workshop. Cit. Mpondo will be sent to Senegal and Cameroon in January, 1981, for a six-week training program. Business management improvement training given by the advisor has dealt with accounting, budgeting, pricing, advertising and marketing of tools. Mr. Fiebig, the advisor, and Cit. Mpondo have recently worked out production costs for the various items manufactured in the workshop (see Annex 4). This is the first time that actual costs of production have been calculated for the enterprise. Up to now CEDECO was run on a less cost-conscious basis. This new consciousness is due in major part to the effects of the last devaluation of the zaire and the continuing effects of inflation.

V. End of Project Conditions

There exists at present a continuous supply of basic, appropriate, agricultural tools in increasing quantities to meet the needs of small farmers in Bas Zaire. In the Kimpese region it appears that prices of some machines are too high for subsistence agriculture farmers, whereas in the richer Mayombe region these same prices appear "reasonable". In any case CEDECO is trying to produce for the small farmer (the most simple tools: hoe, wheelbarrow, water can) as well as for the "middle class farmer" (Bas Fleuve), while trying to draw the poorer farmer into the use of more elaborate tools through cooperative and collective village pooling of such tools.

Demand by small farmers for CEDECO tools has increased and demand should continue increasing as distribution methods begun in April 1980 (by frequent trips into the interior) are expanded. The additional use of these tools should increase productivity and facilitate production in Bas Zaire. Such effects are beginning to be felt at the present time.

In the long run women inevitably will benefit from the time-saving innovations of these tools (such as the manioc mill), although it is not necessarily the women who will be using them. Who actually uses the tools will depend on village acceptance, but the eventual outcome will be to lessen the burden of work on women.

IV. Implementation

The project was implemented through the ECZ's Groupe Technique Central. The first advisor left at the middle of the project in November, 1979, and his successor arrived in December of the same year without any overlap. It is only in January, 1981, that the chief of the tool production section will be sent outside of Zaire to be trained further by observing and working with a similar enterprise in Africa. Delay in scheduling this training seems to have been due partly to internal questions between the Production Center Chief and the Director of CEDECO, and partly to long administrative procedures.

Artisans received training in metal work and other skills for which they needed upgrading through recommendations by the advisor. This training is still going on at present.

According to the CEDECO advisor, ECZ has not provided any kind of business training to the production unit director. ECZ continues controlling the financing of the activity. Orders are placed through the Mennonite and the Church World Service. ECZ participation in the project is primarily financial and administrative. Disbursement and procurement procedures are those established by ECZ, and the advisor has had to postpone closing his accounts because funds allocated to CEDECO had been used temporarily by ECZ for other projects and had not yet been reimbursed ¹⁾.

The enlargement of the CEDECO facilities conforms to project requisites: simple in design and using local materials. Actual construction was performed by the artisans of the center according to plans drawn up by the advisor. Plans for a further extension were drawn up by the ECZ architect to add a dormitory, classroom,

1) reference here is to 20,000 CTER (Groupe Technique Encadrement Regional) in Oct/Nov. 1979.

and stockroom, but these plans were dropped as too expensive.

The CEDECO project is responsible for accounting only of receipts and expenses. All other accounting is done by the CEDECO accountant and is integrated into the CEDECO agricultural experimentation program. Cit. Mpondo is responsible for the accounting. Mr. Fiebig was the cashier until 1 Dec. 1980.

Quarterly reports were submitted by advisors of the project from the beginning. USAID noted in December 1979 that ECZ's contribution to the project was not being reported and requested that such a report covering past activities be presented by the GTC. Quarterly reports including such information have been submitted regularly by the advisor since then. CEDECO has received 3 visits from USAID in the last twelve months.

The pick-up truck which was purchased was not a locally-assembled GM model as envisioned in the program description. A diesel pickup truck and spare parts were ordered through Church World Services' Offices in New York in November 1978. The truck went through customs in Matadi in April 1980 but no spare parts were procured because the cost of the vehicle exceeded the \$9,000 allotted. Aside from the fact that the truck arrived only when two thirds of the project was completed, it is not particularly suited to the slippery clay roads of the interior Bas Zaire region.

VII. Project Reporting

Eight quarterly reports were submitted to USAID. The first four coincide with the time period spent by the first advisor to CEDECO. These first reports gave no accounting of funds disbursed by ECZ for the first year of the project. Since January 1980 the reports have conformed to the criteria set down by USAID.

VIII. Budget

The budget allotments had not been completely utilized by CEDECO as of December 1, 1980. USAID intended to extend the completion date until March 31, 1981 in order to complete the scheduled

purchase of supplies needed to fabricate small tools. Funds for the project came from three sources: AID, ECZ, and counterpart funds.

1. AID funds: Personnel and training have been implemented as programmed. Funds budgeted for training costs in third countries are being used to send Cit. Mpongo for 6-weeks training to Cameroon and Senegal in January 1981. One vehicle was bought with funds, but \$2,000 provided for vehicle operation and maintenance were put into vehicle purchase and no spare parts were obtained with the order. Research and development items of budget were not utilized for these purposes. Funds were shifted to other costs (for import of machines and tools for manufacturing). Marketing and advertising funds were not expended but may still be used to purchase paper and material for publication of manuals.

2. ECZ funds: The Grant Agreement proposed a \$42,000 budget plan over a 2 year period, \$27,700 of which were to be spent in the first year and \$14,300 the second year. CEDECO actually disbursed only \$10,100 during the first year and budgeted the equivalent of \$6,600 (or 213,530) for 1980. As of October 1980 CEDECO had expended 29,580 on the ECZ budget. ECZ converted the \$10,000 originally intended for the purchase of the second vehicle into budget support for gas-oil provisions. ECZ funds were principally used for local training costs, local commodities, and production tools. The ECZ project accounts have not been closed since CEDECO-allocated funds were used on other ECZ projects and have not yet been reimbursed.

3. Counterpart Funds: The Haut Commissariat au Plan allocated 292,300 of counterpart funds which was divided into three installments. As of October, 1980, 262,874 had been expended. The building and renovations, commodities, and "miscellaneous" were the most important items in this budget. The "miscellaneous" included a 26,000 amount passed over to GTER/ECZ by the first advisor in October 1979 just before leaving Zaire. This was

styled an "advance" which ECZ took from the CEDECO account to use temporarily on another project and which should be reimbursed. The project had not recovered the amount as of the time of this evaluation. The budget will be completely utilized by the end of the year after purchase of 222,000 of lumber. A new request for counterpart funds has been prepared by the advisor for next year in the same amount, 292,300 of which 265,000 will buy production materials for the workshop.

4. Budget Projection and Self-financing: In the program description it was estimated that the CEDECO budget needs for the 3rd and 4th year would be \$25,000 per year and that CEDECO's tool operation would be self-financing one year after the OPC project period. The financial plan estimated that proceeds from the sale of tools would be about \$5,000 during the 1st year, and \$10,000 in the 3rd year. The financial records of CEDECO for calendar year 1979 showed a positive balance of 26,391. Sales had totaled 2122,517. In 1980, after 10 months, sales had reached 2113,958 and there was a positive balance of 233,298. The last purchase of lumber make the advisor skeptical about the self-financing prospects of the activity. Prices for lumber rose in the last few months from 2660 per cubic meter to 22,200. Fiebig estimated dollar needs between \$10,000 - \$15,000 per year for the next two years.

IX. Conclusions and Recommendations

CEDECO was confronted with problems on four levels: planning, production, training, and dissemination. This project addressed all four requirements. With a view to deriving lessons of value for similar undertakings, the following conclusions are drawn.

A. Detailed studies of project possibilities must be made before beginning projects. These studies must take into consideration the following points.

1. The importance of the location of the project based on socio-economic conditions. Factors of production (inputs) and

outlets for production must be determined.

2. The scale of the project must be determined in response to potential demand possibilities of the region.

3. The appropriate types of tools which are to be produced must be determined.

The project should be initiated only after all these factors have been weighed. The fact that something already exists somewhere should not be the only factor in determining project location. It is better to lose time at the beginning but to create a project under maximum conditions for success.

B. Production costs must be carefully studied, but the criteria of minimum costs should not be an absolute condition for production. The tools must be adapted to the different categories of buyers - including the small farmer - but tools cannot be sold below the level of production costs if the activity is to have long-term viability. The profitability of the enterprise is jeopardized by such price policies. Demand might be financed through cooperative buying or through credit allocations to small farmers. Tools and equipment produced by the project must have follow up maintenance in the communities where they are installed. This should be an absolute rule.

C. Counterpart training is crucial to the survival of the enterprise. The real objective is to institutionalize the process. Training of a counterpart is only one of the elements which lead toward this objective. The advisor must create the framework which permits the institution to function under the direction of a person having normally expected qualities and not exceptional qualities. The dimension of the enterprise must be calculated to correspond to a realistically manageable size under local conditions. The enterprise must have a system of relationships in harmony with internal conditions of the region. The administrative and financial aspects of the organization must be adapted to local capacities. A process of guidance and intermediary con-

trols should be put into effect during a period of transition before the advisor leaves. The advisor has accomplished his mission only if he has rendered his services unnecessary. Furthermore, it is unrealistic to limit training to only one counterpart, even if the person has all the qualities necessary to exercise his functions. There is no guarantee that he will be maintained at the post after the departure of the advisor.

D. The logical extension of this project is to use the CEDECO center for replication of the experience and for the training of managers. However, in order to reproduce this experience on a broader scale, the following conditions must be fulfilled:

1. "Animateurs" must be found or trained to assume the role played by the advisor.
2. The project must correspond to a need and a demand from the population, even if this demand has to be stimulated.
3. Social and economic conditions must be favorable for implementation of the project.