

SODEVA CEREALS PHASE II

INTERIM REPORT

USAID/Senegal
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I. BACKGROUND

The zone of influence of the project is located in the Center and Western areas of Senegal, specifically in the administrative departments of Thies, Tivaouane, Bambey, Diourbel and Mbacke. The project area is characterized by an average annual rainfall of 400-680 mm, fairly poor, sandy soils and an agricultural production centered on cereals (millet and sorghum) as well as cash cropping in groundnuts. Average population densities in the zone are high, estimated at 75 persons/km². Although millet and groundnuts are relatively drought resistant, the recent years of abnormally low and erratic rainfall have resulted in highly variable crop yields and serious food crop shortages in many areas of the country.

Up until fairly recently, extension services were directed almost exclusively toward groundnut production modernization, to the detriment of local cereals which remained essentially traditional and low yielding. Current project area yields for groundnuts are estimated at 900 kg/ha. (30-50% higher than average traditional yields) whereas millet production in the same zone barely attains traditional averages of 500 kg/ha.

The primary GOS agent for the implementation of agricultural development schemes in the project zone is the SODEVA (Société de développement et vulgarisation). SODEVA has been actively involved in improving agricultural productivity and dissemination of improved agricultural techniques at the small farm level through its

extension services since 1968. _____

_____ Substantial support for the SODEVA programs have come from the foreign donor community (USAID, IBRD, Caisse Centrale, FAC and EDF) and its reputation as an organization capable of preparing, planning and implementing agricultural extension programs is generally regarded as good.

Although SODEVA has an in-house capability to evaluate and monitor its development programs, all original research is solicited of the National Agronomic Center (CNRA) located in the project zone at Bambey. Training for operational staff utilized in the programs is carried out in SODEVA's own training center, CETAD, located at Pout.

The current project proposal for AID assistance to the SODEVA is an extension of the Senegal Cereals Production Project (685-0201), approved in November 1974. Under this project financial support was provided for extension, training and, to a lesser extent, research, in a zone contained within the administrative departments of Thies, Diourbel and Bambey. Implementation of the project began with the 1975-76 crop cycle and will be complete with the closing of the 1978-79 crop year.

Several evaluations were made of the original SODEVA project and the most recent (dated February 15, 1978) recommended development to

a second phase. This latter evaluation was accepted in lieu of a Phase II. PID and a PP Project Team was fielded in April, 1979. It is currently anticipated that the final PP report will be in AID/W by mid-June.

II.

Phase II of the project will reinforce the extension efforts of SODEVA that it has developed and improved upon during the 4-year first phase of the project. Areas of concentration will be in extension of peanut and millet production, women's activities and applied research at the farm level. The continuation of the extension efforts will necessitate the attendant continuation of personnel and operating costs, but at a decreasing level over the projected 5-year life of the project so that by the end of the fifth year, SODEVA has assumed all these costs (See Table I). [To accomplish this, the design team is recommending that SODEVA decrease the number of low-level, poorer trained village extension agents and upgrading those that remain.]

This upgrading should permit each extension agent to have a sounder knowledge of the technical packages being delivered, proving more productive to both the farmer and to SODEVA. At the same time, since the TL theme has been widely accepted in the project zone, thus showing that the extension techniques for the lower level package have been accepted, less time and manpower will be needed to concentrate on each farmer, and the upgraded extension worker will be able to cover a larger number of villages.

Training in the upgrading of the extension staff will be accomplished at the CETAD training center in Pout. Training for CETAD staff will be provided for under the project to accommodate the higher level of expertise required by the extension agents.

SODEVA has requested AID to enlarge the project area coverage from Diourbel, Thies and Bambey to include Tivaouane and Mbacke. The new areas are contiguous to the original project zone and from an agronomic point of view, the soil characteristics and rainfall are similar to those found elsewhere in the zone. From a sociological standpoint, however, Mbacke is structured differently socially because of the influence of the Mouride Muslim sect. After consideration by the sociologist, it was decided to include this department because SODEVA's operation is geared to the small farmer and will directly benefit him.

Tivaouane is similar to the other areas sociologically, and the design team is recommending that it be included under the project. SODEVA already has extension agents in both areas and the lighter themes have been well received. Thus, no large grassroots effort and increases in staff are envisaged for this zone. Two zone headquarters and one extension center will need to be constructed under the project, however. These costs are included in the budget.

The following table represents SODEVA's goals for cereals production under Phase II. The production outputs, given timely inputs

Recurrent Cost Issue:

As was mentioned above, it is AID's intent to gradually reduce the support of the operating and personnel costs so that by the end of the project, SODEVA will have assumed these costs. The design team and USAID/Senegal believe it is possible and feasible to achieve this reduction through the following measures:

- A. SODEVA curtails recruitment and hiring during the first year of the project and recruits personnel to meet only priority requirements.
- B. No new low level extension agents will be hired.
- C. During the second year of the project, extension cadre at the lower levels will be retrained to provide the higher quality (rather than quantity of staff that will be required to continue the extension function.) A reduction of 20% of this level of agent will be made at this time by means of a test that will be administered at the end of training. Those that do not pass, will not be retained.
- D. AID will not assume personnel and operating costs of low level extension agents in the new areas to be covered by the project.

SODEVA has been operating in these areas and should continue with the funding of those already there. Some agents working in the areas funded under Phase I of the project may be reassigned to reinforce the certain aspects of the program devised for Phase II, but these will still fall under the 20% reduction that will have occurred in

Year 2. Other areas of the project such as seed production, and millet threshing will be covered by project funding as these should be extended to the entire project zone as early in the project as possible.

- E. The training center at Pout which received AID support during Phase I, will be strengthened to assist in the retraining of cadre to assure that adequate technical expertise exists within SODEVA to carry out its extension activities. Technical assistance will be provided to SODEVA to help prepare training plans for determining the level of efficiency required for the staff retained.

III. The components of the project, totalling approximately \$7,000,000 are described below:

A. Extension Services:

SODEVA, the developmental extension agency for the groundnut basin of Senegal, has received assistance for four years through an AID-financed project with a principal goal of increasing cereal production in the Thies, Bambey and Diourbel departments of Thies and Diourbel regions. The project has been evaluated and considered worthy of continuation into a Phase II element building upon the successful impact of the first project, and expanding further the extension capability and horizons of SODEVA. The project will continue in the areas covered under Phase I, and expand to include the department of Tivaouane in the Region of Thies, and the

department of M'Backe in the region of Diourbel. See Table II for a tabular listing of project goals in the five departments of the project. FIDA (Fond International pour le Developpement Agricole) will be providing funding for SODEVA's operations in the departments of Louga and M'Bour, thereby excluding these areas from consideration for AID funding.

SODEVA, in its extension program in the project area, will include refined recommendations initiated under Phase I. Under Phase I, the lowest level of technology (TL), involved a series of improved cultural practices which required few inputs other than better seeds, use of light implements, and low levels of fertilizers. The intermediate package (TB) included the same cultural practices as TL, but substituted heavier implements. The highest level (TBFF) involved all the TL and TB practices, use of heavier doses of fertilizers including the basic rock phosphate application. However, experience during Phase I of the project demonstrated that while packaging recommendations into discreet levels of intensification was a convenient mechanism to use in an extension program, in reality, the intensification levels were rather arbitrary categories to which farming units could not accurately be assigned.

In Phase II, therefore, extension recommendations will not be tied to specific levels of intensification, but rather will be offered as a series of recommended practices which the farmer

can adopt as applicable in relation to his entire farming operation or in relation to individual fields.

SODEVA extension recommendations in Phase II will involve refinement of recommendations offered in Phase I, plus a series of recommendations dealing with crop diversification, conservation, integration of livestock in the farming operation, and other aspects designed to improve the living conditions of the farming community, including lightening the workload of women.

The success of the SODEVA interventions at the end of the project will not be judged on levels of intensification as followed under Phase I, but rather quantifiable objectives of the project will include global yield increases in the project area for millet targets and hectares of improved varieties. (See Table II).

Enlarging the project area to Tivaouane and M'Backe will entail a certain amount of construction and personnel costs in those departments. In Tivaouane, the project will construct and equip a departmental headquarters office, provide complementary facilities necessary to make the delegation ZER functional, and finance 10 personnel positions. In M'Backe, the project will construct and equip a departmental headquarters office, and finance 15 personnel positions. The above-mentioned personnel positions will be financed from project funds, but will actually be part of the personnel ceiling being carried by the project from the first phase. In other words, the positions will be transferred from project financed positions presently allotted to other departments of Thies and Diourbel.

CONSTRUCTION AND EQUIPMENT COSTS
IN NEW PROJECT AREAS

Tivaouane

Office headquarters	\$ 25,000
Office furniture and equipment	5,000
Completion of ZER	10,000

M'Backe

Office headquarters	\$ 25,000
Office furniture and equipment	5,000

TOTAL \$ 70,000

B. Information and Extension Center at Pout

The CETAD (Centre d'Entrainement aux Techniques Agricoles) has been functioning at its new location near Pout since late 1975. New facilities,^{were} partially financed under Phase I of the project at the Pout location to enlarge its ability to give induction training to new SODEVA staff members as the project cadre increased, and in-service training to gradually upgrade SODEVA staff.

The present five year development plan for CETAD envisages transforming CETAD from strictly an in-training center to a coordinated Information and Extension Center responsible not only for the training needs of SODEVA, but also to include the transformation of research and evaluation results into communicative forms appropriate for the farming community, extension agents, and training sessions in the entire SODEVA zone of operation. The Center will work in close liaison with specialists within SODEVA, especially those assigned within the Technical Studies Office, in determining extension recommendations appropriate for dissemination. The Center's responsibilities will also include analysis of target groups, with development of means and approaches most suited to each.

This entire five year plan developed by the Center in 1978, would require financing in the amount of 1.1 billion FCFA (U.S. \$5,000,000). This budget would double the capacity of the training center, enlarge the existing facilities into an integrated Information and Extension Center, provide for limited expatriate technical assistance, and finance certain participant trainees. Half of this

cost is in expanding personnel from 22 to 50 and in operating costs neither of which AID has assisted during Phase I of the project. It is anticipated that this Center will take broadened extension training responsibilities for GOS development organizations other than SODEVA, as well as the production and distribution of audio-visual aids to them. It can be expected, therefore, that contributions will come from several sources to support the overall budget.

Phase II of AID-financed project will focus on support of those aspects of the five year budget which will assure meeting SODEVA's staff training requirements in the project area, and which will assure the essential functioning of the I and E Center. The training needs are largely for upgrading existing SODEVA staff. Project assistance will also focus on these parts of the budget which will strengthen the recombination of all existing SODEVA audio-visual services to the Pout Center. This assistance will include financing for construction of a Cellule de Recherche Pedagogique (Information Research Office) at 7,650,000 FCFA and a Cellule de Realisation de Production (Audio-Visual Section) at 11,600,000 FCFA. The plans proposed for technical assistance and staff training (within and outside Senegal) focus mainly on these two units; therefore, the project will partially finance these costs by providing 3-1/2 person years of technical assistance at about \$350,000 and up to 6 person years of training focused at higher level staff training, at \$90,000.

Also to be provided are three of the planned seven light mobile projection units and three of the planned seven service vehicles, under the stipulation that these serve as a priority the project area. The estimated total cost of these units is \$70,000.

The sub-total of costs proposed for this aspect of the project is \$675,000. These AID supported costs are budgeted over the first two years of the 5-year Phase II. The technical assistance would stress the technical (agricultural) and psychological aspects of extension work and the psychology and methods of developing and using audio-visuals in extension work. The latter includes leaflets, posters, bulletins, slide sets, films, and radio programs.

In order for any Information and Extension Center to operate properly, it must constantly have access to information and new techniques. One of the major sources of information is the research results obtained at appropriate research facilities. But research information is not adapted for immediate use in an extension program. It must be reviewed, analyzed, and reworked before it can become an extension recommendation suitable for processing through an I and E Center. For the project, therefore, it has been determined that a technical staff will be assigned to the SODEVA headquarters Technical Studies Office, whose major function will be to follow research operations and research results and transform appropriate results into SODEVA recommended practices. In other words, liaison between research and extension will have SODEVA as the active member seeking

research information, and not have research as the active member funneling information to extension. This aspect of the project will involve participant training to the M.S. level of the two staff members mentioned above.

Pout Center

Information Research Office	
Construction	35,000
Equipment	20,000
Audio-Visual Section	
Construction	55,000
Equipment	55,000
Technical Assistance	
Three and a half PY at 100,00-0/year	350,000
Training	90,000
Mobile Units	70,000
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TOTAL	\$675,000

C. WID Component of SODEVA Cereals Project

The Women in Development component of this project is designed to fill an important gap in SODEVA's extension operations by setting up a women's extension unit at the national level and by establishing a village-level extension program. The aim of this component is to

ensure that women who represent approximately 50% of the project area's population and who assume an important role in the production of groundnuts and millet have access to regular SODEVA extension services for groundnut and millet farmers; are relieved of some of their time-consuming, physically strenuous daily tasks - a precondition to enable them to increase their access to additional sources of income through initial assistance provided by the project; and receive a minimum of village-level training in areas not covered by the regular SODEVA extension services. This will enable them to make a greater contribution to the improvement of the quality of village life.

Among SODEVA's primary concerns is its desire to participate in the structuring of the rural communities through advising village groups, cooperative and Communautés; to intensify and diversify food and animal production and to develop the practice of integrated farming of agriculture and livestock; and to diversify the activities of the rural sector with a view to discouraging the rural exodus.

This component of the project responds to those concerns in several ways: a) Traditional women's groups already existing in the area will be strengthened and developed by the unit in SODEVA into pre-cooperative women's producers groups to manage and amortize the equipment and other inputs provided by project funds and to carry out village development projects. This is the precondition for the possibility of their groups becoming sections of

larger agricultural cooperative. b) By assisting the groups in acquiring millet mills and by developing the raising of livestock and vegetable gardening on a small scale, women are being freed (time and laborwise) and integrated into the GOS and SODEVA's overall economic and rural development orientation. At the same time, they will be more able financially to improve the quality of life of their immediate families and their villages. c) No one is near guaranteeing a solution to the serious problem of rural exodus; nevertheless, this project component will make a contribution to stabilizing the social fabric through making it possible for women and girls to increase their incomes and to develop new skills through the training received under the unit's extension program, life in the village should become more attractive and the women will become more aware of ways in which they can improve their living conditions.

Beneficiaries

The women's extension unit will have a positive direct and immediate impact on the lives of the poorest of the rural women. Two village women's associations from each of the 14 arrondissements in the project area, averaging 100 to 150 members, will participate and benefit from project inputs. This means between 2,800 to 4,200 women will be touched.

Village women spend an average of up to 4 hours a day preparing millet for consumption. This task will be reduced by at least half through the contribution of millet mills. The extra time gained will enable village women to devote more time to intensifying the production of their groundnut and millet plots, and to producing

livestock and vegetables on a small scale. They also will have more time and energy available to devote to receiving the new information and training which the SODEVA WID unit will provide.

Although project inputs are directly aimed towards poor rural village women, their entire families will benefit from the additional income acquired from increased millet, groundnut, and sheep sales, more vegetables in their daily diet, improved hygiene and child/family care, in addition to a working knowledge of basic village technology, _____ It should be mentioned that since women are almost wholly responsible financially for any improvements in the daily meals, it is probable that the initial positive effects will appear in the family diet.

WID Unit

The WID extension unit in SODEVA will be at least partially staffed by women seconded from the Secretariat of State for the Condition of Women. The Unit will be responsible for the design and organization of training for candidates selected by women's groups to be vulgarisatrices villageoises. The Unit will also assist SODEVA in addressing the technical and extension needs of women farmers. The project budget will bear the cost of setting up and running the Unit, and it will include such items as M. Sc. training for the Unit's Directrice and some short-term training for the two assistants, as well as a vehicle to enable each of the Unit members to spend an average of 10 days per month in the field.

The project is introducing on a pilot basis a strategy of training extension workers from the village women's groups to compensate for the lack of sufficient monitrices and the difficulty of getting trained women to work and live in often remote rural areas. The SODEVA Unit will set minimum criteria for the selection of the vulgarisatrices villageoises (VV) who will attend training sessions during the first two years and refresher training during the last two years of the project. These women will be trained in such areas as techniques of sheep raising, vegetable/market gardening, small project development and management, group leadership/dynamics, family and home care, management, and economy - including nutrition mainly based on the improved use of local foods and plants, hygiene, food preservation, basic village technology, and the development of local crafts for home use and sale.

During the first year of training, the project budget will bear the cost of the monthly compensation to be received by each VV. After that, each women's group will bear the expense of its vulgarisatrice.

Research and Evaluation

There is very little socio-economic data available on women in the project area; therefore, in the initial year of the project a short socio-economic study will be made to provide the data necessary for the WID Unit to define its strategy. Another survey will be conducted near the end of the project in order to provide the data on which the final evaluation of the WID component may be based. These surveys will be conducted by temporary "enqueteurs"/"enquetrices"

under the direction of SODEVA's research unit.

Village Inputs

The installation of inputs will be staged in over a 2-1/2 year period according to a program to be established by the WID Unit. The women's groups will establish an amortization system for the millet mills and the sheep.

Market/vegetable gardening will be undertaken on an experimental basis (given acute water problems in the area and the high cost of bored wells) in no more than 14 of the villages where the water supply is not an obstacle.

SODEVA Headquarters WID Unit - Budget

The salaries of at least the Unit's two assistants will be borne by the GOS. The project budget provides for the salary of the Units' Directrice in case the GOS does not have a woman available with sufficient qualifications and field experience to second to the Unit. The indemnities listed below are those required to bring the Unit's staff into line with SODEVA policy. These amounts include per diem for a minimum of 10 days per month in the field for each person, including the project vehicle driver.

SODEVA Headquarters - Women's Unit

1 Directrice salary and indemnities for 2-1/2 yrs 150,000 CFA/mo. x 32 months (salary includes 13th month bonus) 140,000 CFA/mo. x 30 months (indemnities)	\$ 40,910
2 Assistants. Indemnities for 5 years 50,000 CFA/mo. x 2 x 13 x 5	27,270
1 Driver. Salary plus indemnities for 5 yrs 55,000 CFA x 13 x 5	16,250
28 Vulgarisatrices 7,000 CFA/mo. for 1 year	10,690
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	95,120

Training

To provide the high level of skills required to develop SODEVA's WID extension program, the Directrice of the Unit will receive M.Sc. training in an appropriate institution where subjects such as tropical agronomy (emphasis on millet and groundnut production in tropical countries), horticulture, and livestock are taught, as well as courses in basic village technology, tropical nutrition and hygiene, and management/organization/training for village extension programs.

Research

Two seven-day socio-economic surveys will be conducted in each of the 28 villages by temporarily employed enqueteurs/enquetrices.

392 enqueteur/days x 2,000 CFA per day = 784,000 CFA ... \$3,570

D. Research

As part of the Phase I SODEVA Cereals Project a Cellule de Liaison was created at the CNRA at Bambey whose function was to fill the gap which has traditionally separated research from extension. The Cellule was created with responsibility for preparing documents and brochures in a form consistent with research results and useable by the extension service. Also, the Cellule was charged with the conduct of applied research trials throughout the project area and for socio-economic surveys and evaluations to measure the effects realized by the projects at the farm level.

While the Cellule has undertaken a series of useful studies on the socio-economic impact of the technology packages, its disparate functions, semi-independence from budgetary control of either CNRA or SODEVA, and limited staff in relation to assigned tasks, have meant that the Cellule has not always responded to the needs of SODEVA, or set its course of actions in collaboration with SODEVA. It is the recommendation of the Design Team, therefore, that the functions of the Cellule de Liaison be maintained, but that these functions be taken on in a more direct and controllable manner by CNRA and SODEVA. The functions of the Cellule can be divided into the areas of a) liaison between extension and research; b) preparation of brochures and pamphlets based on research results, but suitable for use by extension; c) conduct of applied research trials

throughout the project area; and, d) socio-economic surveys and evaluations of project impact. It is proposed that the above functions be handled by the following various means:

a) Liaison: The essential feature of this function is to assure that results obtained by research are ultimately transmitted to extension for appropriate dissemination to the farming community; and, likewise, to assure that research is planned and executed in a manner responsive to the needs of the farming community.

The active gleaming for research results is best initiated by the utilizing agency, and it is unrealistic to suppose that research will responsively synthesize and choose research results appropriate for each extension agency. Within SODEVA headquarters therefore, a cadre of technical specialists in the Office of Technical Studies will be responsible for keeping abreast of research plans and results, and will synthesize into a form usable by SODEVA, those research results which are appropriate and applicable to the SODEVA area.

b) Preparation of Brochures and Pamphlets:

The Technical Specialists within the Office of Technical Studies will be in direct liaison with an Information and Extension Center (I and E Center) within SODEVA to be developed under the project and whose function will be to transform into appropriate audio-visual form those extension recommendations synthesized by the Technical Specialists. The output of the I and E Center will not

be restricted to pamphlets and brochures, but will include preparation of more effective forms of extension such as radio programs, locally produced films, slides, and other media. SODEVA has given preference for locating the I and E Center at the CETAD Training Center at Pout. At Pout, it will serve primarily as the general I and E Center for SODEVA, but will also serve the audio-visual training needs of CETAD. Project inputs to the I and E Center will be in the form of construction, commodities, technical assistance, and personnel costs. (See Section III.B.)

c) Conduct of Applied Research Trials

The Cellule de Liason presently conducts various applied research trials rather independent of SODEVA and restricted to three pilot villages of the project area. It is proposed by the Design Team that a more cooperative type research between CNRA and SODEVA be initiated. A protocol is to be developed, defining the responsibilities of each party in the actual carrying out of off-station research trials, and in assuring that each year's off-station research plans is a mutually coordinated and approved approach. The research will not be restricted to pilot villages, but will be broad-based, with SODEVA playing an active role in selecting sites. Research will plan the lay out and design of the research, and will be responsible for analysis of the results. The project will finance an initial series of off-station trials mutually agreed to between

CNRA and SODEVA. This cooperative type off-station research gives CNRA an opportunity to verify its research results under actual farm conditions, and also gives it an opportunity to view the problems and realities of the farming community. Likewise, it allows extension to more fully understand the constraints and requirements of research. Ideally, it will serve as one of the vehicles by which extension makes known to research the priorities of the farming community in the way of problem solving research interventions. Project assistance in this area will involve financial support for materials, equipment, and personnel.

d) Socio-Economic Surveys and Evaluations:

The greatest project benefit of socio-economic surveys and evaluations are those dealing directly with the impact of SODEVA's operation and in determining the implications and interactions of extension recommendations on the farming community. It is SODEVA itself who can best identify the surveys and studies necessary to refine its own directions and evaluate its own programs. Within SODEVA there is an Evaluation Section under the Office of Studies which handles surveys similar to those presently undertaken by the Cellule de Liaison. Therefore, it is proposed that SODEVA handle all necessary evaluations from its own Evaluation Section.

The organizational chart of CNRA Bambey presently shows the Cellule de Liason as a unit of the Pre vulgarization Section. With

the reorganization of functions as presented above, the remaining functions of the Cellule retained at CNRA will focus on its role as an interface to which users of research results will report as their initial contact in their search for research results. The project will not be recognizing the Cellule as a distinct entity for continued financing.

Under Phase I of the project, CNRA was tasked with preliminary development of an experimental unit on the "deck" soils in the area of NDiamane. Since other donors have expressed interest in development of this specific area, and since the soils are typical of only a small portion of the project area, it is proposed by the Design Team that assistance to NDiamane not be continued into Phase II.

There are certain aspects of the program at CNRA Bambey which it is in the interest of the project to finance as directly benefiting the extension program. Notably, there is the research function of producing Foundation Seed. SODEVA, in its program of millet production and crop diversification has to a limited extent become involved in seed multiplication, and is dependent on research for supplying Foundation Seed for new varieties. It is proposed by the Design Team, therefore, that CNRA be given funding for the necessary equipment, infrastructure, and personnel to produce (specifically) Foundation Seed of several improved selections of sorghum, which will be multiplied by SODEVA through its contracts with farmers. These sorghum varieties will then become an aspect of SODEVA's crop diversification program in the project area.

In assuring continued research strength and Senegalese research expertise in areas of research directly benefitting the project area, the Design Team proposes that three Senegalese researchers be trained to the M.S. level in research disciplines related to the needs of farm problems in the project area, yet disciplines which complement the training needs of CNRA's overall training plan.

Funding Requirement for the Research Component

I.	Cooperative off-station research trials	350,000
	(funding over five year life of project)	
II.	Foundation Seed Production	15,000
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	Total	365,000

E. Seed Multiplication

One of the main aspects of SODEVA's extension program is the recommendation that farmers plant their crops with high quality seed of improved varieties. Therefore, it is in the interest of the project to assure that there is a ready supply of quality seed in the project area, especially of subsistence crops being focused upon by the project.

The initial step in the production of quality seed is the furnishing of Foundation Seed of improved varieties from a center

of research, which in the case of the project is the CNRA at Bambey. In the project area Foundation Seed of millet is multiplied in selected villages by farmers under contract to SODEVA. The seed that is grown by these farmers is then purchased at a premium by SODEVA and processed at a seed processing warehouse at Diourbel. It is the responsibility of ONCAD to distribute the seed, and the Seed Service to coordinate the entire program and maintain quality control at the various stages of production.

In order to assure a seed supply of improved millet and cowpea for the project area, SODEVA will continue to handle for the next several years the processing of these seeds at the warehouse in Diourbel. The project will finance improvements to the equipment at the warehouse so that the output can be increased from its present 1,000 MT to 2,500 MT. The equipment will complement the present facility with additional seed cleaning and sizing capacity. Total equipment cost for this aspect of the project will be \$300,000, and will help assure that by the end of the project 232,000 ha. of millet in the project area will be planted to an improved variety.

IV. SOCIOLOGICAL CONCLUSIONS ON M'BACKE

In Phase II of the SODEVA Cereals project, USAID proposes to include M'Backe, a department in Diourbel, as an area to be covered by the project.

Technically, it makes sense to include M'Backe in the zone of operations. M'Backe shares most of the same characteristics and problems as the rest of the department in the project area. Its two main crops are peanuts and millet; it suffers from unreliable rainfall and periodic drought; it has a rapidly growing population which is putting heavy pressures on the land; and it is in need of intensification programs to maintain and raise the living standards of its people.

M'Backe also contains Touba, the religious capital of the Mouride brotherhood. In the department can be found some of Senegal's largest maraboutic estates. The talibes (disciples) of the marabouts provide the labor to farm these large estates. There are about twenty large maraboutic estates in the department. However, these represent only a tiny fraction of the department's total production. Most of the department's rural population of 105,000 live in villages and work primarily for themselves.

The SODEVA extension program has been doing extension work in M'Backe since 1968. Given the nature of SODEVA's technical packages, its actions have been geared primarily to small and middle-sized farms. The large-scale maraboutic estates because of their size require different kinds of technical advice than those diffused to the average farmer. SODEVA has a special relationship with the largescale maraboutic estates and frequently provides services to

the major marabouts at a higher level. One thus sees a dual system operating: (1) a mass vulgarisation/extension program which involves most of SODEVA agents and attempts to reach the average peasant; and (2) a special program at a high level to service the main marabout estates.

This system is in effect in all departments in which there is a strong Mouride presence and not just in M'Backe. M'Backe would therefore represent an extension of SODEVA activities to a new area rather than an extension of SODEVA activities to include a new and qualitatively different target population.

SODEVA CEREALS PRODUCTION PROJECT PHASE II
BUDGET - BY YEAR (INDICATIVE)

	<u>Total</u>	<u>FY 79</u>	<u>FY 80</u>	<u>FY 81</u>	<u>FY 82</u>	<u>FY 83</u>
\$Personnel	1,594	483	386	386	242	97
\$Op. Costs	667	196	157	157	98	59
Research	350	50	150	150		
Foundation Seed Prod.	15		15			
<u>Training:</u>						
In country training (CETAD, other local)	150	10	50	50	20	20
Training (U.S.)	190		114	76		
T.A. 3 yrs x 3 people	900		500	200	200	
Vehicles	60		60			
Constr. M'Backe & Tivaouane	65		65			
<u>I & E</u>	90		90			
Mobile Units	70		70			
Short-term tech. assist. 10 man months	100		50	25	25	
Evaluation terminal	50					50
Women	353	50	150	100	53	
Seed Prod.	300	50	250			
I & E Equip. & Materials	75		50	15	5	5
Demonstration harvest equip. & materials	150	50	100			
Office equip.	130		130			
	<u>5,309</u>	<u>889</u>	<u>2,387</u>	<u>1,159</u>	<u>643</u>	<u>231</u>
Contingency 20%	<u>1,061</u>	<u>178</u>	<u>477</u>	<u>232</u>	<u>128</u>	<u>46</u>
	<u>6,370</u>	<u>1,067</u>	<u>2,864</u>	<u>1,391</u>	<u>771</u>	<u>277</u>
plus 10% p.a. inflation	555		286	152	86	31
	<u>6,925</u>	<u>1,067</u>	<u>3,150</u>	<u>1,543</u>	<u>857</u>	<u>308</u>

\$As now planned, AID's support to personnel and operating costs will be 100% in FY 79, 80% in FY 80 and 81, 50% in FY 82 and 20% in FY 83. The GOS will assume these costs at the end of the project.

SODEVA'S GOALS FOR CEREALS
1979-1983 USAID PROJECT ZONE - PHASE II

TABLE II

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in hectares (Has)

AREA	THIES Ha	TIVAOUANE Ha	BAMBÉY Ha	DIOURBEL Ha	MBACKE Ha	TOTAL PROJ. Ha
Cereals	35,000	58,000	50,000	43,000	35,000	221,000
Rural Pop. 1978	140,000	205,000	125,000	90,000	105,000	665,000
Needs in Cereals (T) (Rural inhabitant 180 kg)	25,200	36,900	22,500	16,200	18,900	119,700
Balance (T)	-9,450	-12,540	+ 6,500	+ 4,440	-4,900	-15,950
Present mean yield (has)	450	420	580	480	400	465
Production(T)	15,750	24,360	29,000	20,640	14,000	103,750
<u>1978</u> Yield (has)	465	430	591	506	435	490
Product. (T)	16,200	25,000	29,500	21,800	15,600	108,100
Needs (T)	25,750	37,600	22,950	16,500	19,300	122,100
Balance (T)	-9,550	-12,600	+ 6,550	+ 5,300	-3,700	-14,000
<u>1979</u> Yield (has)	490	455	611	534	460	515
Product. (T)	17,200	26,500	30,500	23,000	17,500	114,700
Needs (T)	26,300	38,400	23,700	16,850	19,700	124,950
Balance (T)	-9,100	-11,900	+ 6,800	+ 6,150	- 2,200	-10,250
<u>1980</u> Yield (has)	560	490	654	562	490	550
Product. (T)	19,600	28,500	32,700	24,200	19,600	124,600
Needs (T)	26,800	39,100	24,200	17,200	20,100	127,400
Balance (T)	-7,200	-10,600	+ 8,500	+ 7,000	- 500	- 2,800

<u>1981</u>						
Yield (has)	630	560	736	636	565	625
Production(T)	22,000	32,500	36,800	27,300	23,700	142,300
Needs (T)	27,300	40,000	24,700	17,500	20,600	130,600
Balance (T)	-5,300	-7,500	+12,100	+ 9,800	+ 3,100	12,200
<u>1982</u>						
Yield (has)	715	680	828	728	655	720
Product. (T)	25,000	39,500	41,400	31,300	29,000	166,200
Needs (T)	27,900	40,800	25,200	17,850	21,000	132,750
Balance (T)	-2,900	-1,300	+ 16,200	+13,450	+ 8,000	+ 33,450
<u>1983</u>						
Yield (has)	820	765	911	786	740	805
Product. (T)	28,500	44,400	45,500	33,800	34,000	186,200
Needs (T)	28,500	41,600	25,700	18,200	21,500	135,500
Balance (T)	0	+ 2,800	+19,800	+ 15,600	+12,500	+ 50,700