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PRODEPAM

PROGRAMME DE DEVELOPPEMENT DE LA PRODUCTION AGRICOLE AU MALI - Financement USAID



Annual Performance Report

For the period of October 1, 2004, through September 30, 2005

Under USAID/Mali Contract # 688-C-00-04-00021-00

Prepared for: Gaoussou Traore, Cognizant Technical Officer, USAID/Mali
Dennis McCarthy, USAID/Mali
Jean Harman, USAID/Mali

Copy to: Todd Crosby, CLUSA

Prepared by: Benjamin E. Lentz, PRODEPAM Team Leader
Telephone: +223.222.40.05
Fax: +223.222.34.59
E-mail : belentz@prodepam.org.ml

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Context

This report covers the performance period of October 1, 2004 through September 30, 2005, under USAID Contract USAID/Mali Contract # 688-C-00-04-00021-00. The Program for the Development of Agricultural Production in Mali (PRODEPAM) is a five year program financed by the United States Agency for International Development. The mission of the program is to alleviate poverty by stimulating agricultural production in selected agricultural sectors. It seeks to impact USAID's Strategic Objective #9, which is aimed at increasing revenues in selected agricultural sectors.

PRODEPAM started in April of 2004. This is the third out of ten annual and semi-annual reports.

Executive Summary

PRODEPAM activities have significantly intensified since the prior reporting period. Regional offices are now open and fully functional in Sikasso, Ségou, Mopti, and Gao. In addition, a liaison office has been opened at the DRAER in Timbuktu. The presence of these decentralized regional coordination offices and local NGO partners has increased our spread and the intensity of our assistance. It has also provided greater proximity to client farmers and improved community mobilization and coordination with local partners.

During this reporting period PRODEPAM met or exceeded 90% of its targets in its various technical areas:

- Great strides were made in the rehabilitation of irrigation infrastructure to improve water use efficiencies and increase available irrigated land for agricultural production.
- In natural resources management 20 communes developed land use management plans. Empowered communities collaborated with forestry agents from the DNCN, PRODEPAM, its local NGO partners, IER, and PGP in determining priorities, discussion of land use planning issues, action planning and the creation of community based structures to manage the implementation and enforcement processes. Seven communities constructed over three kilometers of rock lines to protect and preserve their fragile, low-lying inland valley watersheds.
- Almost 9,000 farmers benefited from training in integrated soil fertility management.
- Micro-irrigation technologies have proven to be of great interest to women market gardeners because of their low operating cost, time saving and income generating potential. Farmer innovation with treadle pumps has led to their use in fruit orchards, arboriculture, and rice nurseries.
- PRODEPAM's action to promote multiple cropping seasons on land where water is fully controlled is positively impacting food security in the North. Also evident is the power of the complementarities between project components (see the attached site, component activities matrix inserted in the back cover). Rice yields have skyrocketed when improved irrigation infrastructure has been combined with new seed varieties, proper fertilization regimens, activities to enhance soil fertility and water use efficiency, and effective natural resource management practices.

The Program has developed a high level of synergy with other development partners and government technical services. We are particularly appreciative of the robust relationship developed with IER in such divergent areas as: community seed multiplication, demonstrations and farmer apprenticeship, biotechnology natural resources and watershed management, fertilization trials, improved cropping systems and salinity studies.

We look forward to enhanced collaboration with Trade Mali and Mali Finance in the rice and potato sub-sectors as well as in emerging high-value crops, like anis and cumin in the North.

The past year has been spent perfecting methods, demonstrating improved techniques and testing innovative models. As we go forward our main challenge will be to expand, replicate and bring to scale these proven technologies, methodologies, innovations and successes to the benefit of more rural clients.

Highlights of the year: Success Stories and Innovations

This section provides snapshots of program results and success stories for the year. Success stories are integrated into the "Results" section of this report on pages noted.

- *Cross sector synergies helps Touara harvest its 3rd crop in 14 months*

Huge increase in rice yields leads to better food security and decreases urban flight

[< Story Page 7 >](#)

- *PRODEPAM introduces technologies through women's groups in Niema*

Women are gatekeepers to new rice seed technologies in PRODEPAM experiment

[< Story Page 11 >](#)

- *AVD Delta provides innovative solutions for irrigation in North*

AVD helps villages overcome the obstacles to using large capacity motor pumps

[< Story Page 16 >](#)

- *Animal Feed Producers contract with maize growers to solve price problems*

Out grower scheme benefits growers and the feed producers cooperative

[< Story Page 20 >](#)

- *Nature, Wealth and Power Empowers Women in Fulani village*

Fulani Women put forward proposal to harvest Zaban fruit in a sustainable manner

[< Story Page 25 >](#)

- *Young farmer provides water to market gardeners using Nafasoro pump*

Moussa Lala Traore is using a treadle pump to provide water services to market gardeners

[< Story Page 31 >](#)

- *Farmers multiply improved rice seed for their neighbors in Mopti*

Fishes and Loaves: A single bag of Sambala Malo feeds 300 farmers and 4 villages

[< Story Page 31 >](#)

- *NERICA reaches more and more farmers in Koulikoro*

PRODEPAM participants provide a significant share of NERICA seed on the market

[< Story Page 40 >](#)

- *Nafasoro pump rescues women's fruit trees in Gao*

Women see benefits in maintenance free treadle pump for their desert orchard.

[< Story Page 41 >](#)

Results

PRODEPAM Strategic Results Framework

**STRATEGIC OBJECTIVE #9:
PRODUCTIVITY AND INCOMES INCREASED IN SELECTED AGRICULTURAL SUB-SECTORS**

Indicators:

- Annual % Change in Farm Net Income from Rice Production in Target Areas (SO9.1)
- Number of households Brought Above Poverty Line in Target Areas (SO9.2)
- Number of Community Organizations adopting Natural Resources Management in Target Areas (SO9.3)

**Intermediate Result for PRODEPAM (IR 1):
Sustainable Production of selected agricultural products increased in targeted areas**

Indicators:

- Volume of rice produced in target areas (IR 1.1)
- Volume of alternatives commodities produced in target areas (IR 1.2)
- Number of women brought into mainstream due to Prodepam's interventions in target areas (IR 1.3)
- Volume of standard-based animal feed produced in target areas (IR 1.4)
- Area under approved NRM plans implemented in target areas (IR 1.5)

**Sub-Intermediate Results 1:
Irrigated Agriculture Rehabilitated and Expanded**

Indicators:

- Area under expanded irrigation (s-IR 1.1)
- Cropping diversification rate (s-IR 1.2)
- Cropping intensity (soil utilization rate) (s-IR 1.3)
- Area under improved irrigation (s-IR 1.4)
- Rice yield increase (s-IR 1.5)
- Change in volume of irrigated production per m³ of water used. (S-IR 1.6)

**Sub-Intermediate Results 3:
Community-based NRM improved**

Indicators:

- Number of Conventions completed (s-IR 3.1)
- Area under Soil/Water Conservation, Defense and Restoration measures (CES/DRS) in target areas (s-IR 3.2)
- Hectares of Degraded Land Reclaimed in target area (s-IR 3.3)
- Increase in Number of Species in Target Conservation Areas (s-IR 3.4)

**Sub-Intermediate Results 2:
Access to improved animal feeds increased**

Indicators:

- Number of standard-based feed businesses developed or strengthened (s-IR.1)
- Volume of standard-based animal feed marketed (s-IR. 2)

**Sub-Intermediate Results 4:
Access to agricultural inputs and technology promoted**

Indicators:

- Number of on-farm input and technology demonstrations (s-IR 4.1);
- % Of planted area using improved seeds (s-IR 4.2);
- Number of farmers adopting improved production technologies in target areas (IR 4.3)
- Amount of approved loans (s-IR 4.4)
- Loan reimbursement rate (s-IR 4.5)

Notes on Baseline Information

A full explanation of PRODEPAM baseline data collection methods has been provided in previous reports, therefore, we will not include that information in this report. Please refer to previous reports for information on methodologies used to collect baseline information.

All primary data collected is maintained by the project and is available for independent review.

Strategic Objective #9: Productivity and Incomes Increased in Selected Agricultural Sectors

Cumulative Progress on SO Results Indicators:

Sub SO #9.1: Annual % Change for Farm Income from Rice Production in Target Areas

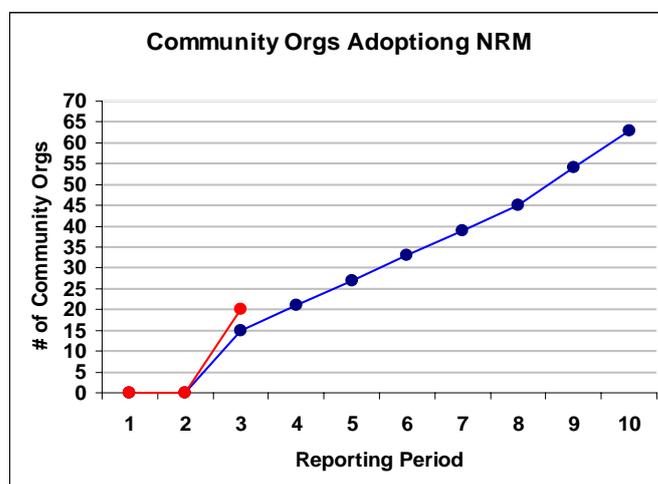
Notes and Analysis: Data for this indicator are collected once a year in February, after the main harvest for rice. It will be reported in our next semester's report.

SO #9.2: Number of Households Brought Above Poverty Line in Target Areas

Notes and Analysis: The number of households lifted from poverty is not applicable in the first year of the Project. Baseline was determined and reported upon in our April 2005 report. Data for this indicator will be collected in February 2006 and reported in our next semester report. A report on findings related to poverty in Mali from our baseline study in 2004 is presented in Annex 1. Overall conclusions from this study are:

- 1) 78% of households in the Project zone are below the poverty line of 144,022 FCFA/person/yr or approximately 12,000 FCFA/person/month;
- 2) Family size is smaller and female headed households are more prevalent in the North;
- 3) Food deficits are more pronounced in the North;
- 4) One third of surveyed households in the North sold livestock in 2004 to cover their food deficit;
- 5) PRODEPAM client households in the South have higher poverty rates than in the North because our focus is uniquely in the irrigated areas. Larger family size in the South plays a key role in the incidence of poverty;
- 6) An increase in consumption of \$5 (2,500 FCFA) per person per month would reduce poverty in PRODEPAM sites from 78% to 63%.

SO #9.3: Number of Community Organizations adopting Natural Resources Management in Target Areas	BASELINE	SEPT 04	MAR 05	SEPT 05
Projected (Blue)	-	0	0	15
Actual (Red)	0	0	0	20*



Notes and Analysis: *In conjunction with the DNCN, the Program assisted 20 communes in the development of their Natural Resource Management Plans. Community organizations were integrally involved in leading the planning process which resulted in community validation and communal level authorization for the execution of these plans as well as for their incorporation into the PDSEC of each commune. PRODEPAM considers that these 20 community organizations, having led the NRM planning process constitute the first organizations mastering NRM in the target areas. With Program support 68 village level NRM management committees have been constituted in different villages of the Project Zone. These committees serve as a catalyzing force to mobilize the local populations for NRM activities. They also serve as liaisons to intervening technical services and NGO/development partners in matters pertaining to NRM.



Success Stories: Cross Sector Synergy
Skyrocketing rice yields increase food security and keep youth in Touara

The people of Touara (MOP) have long cultivated rice using traditional methods and yet have never achieved a yield greater than 700 kg of rice per hectare. This year, during the counter-season no less, they increased their yield/hectare by a factor of 6, to 5.5 tons per hectare—a result that surprised even PRODEPAM staff.

How did they do it? The answer lies in the synergy of Soil Fertility, NRM, Technology and Irrigation

interventions by PRODEPAM and its collaborators AVD Delta and VRES.

In 2004, Touara collaborated with the VRES program to create an earthen Village Irrigated Perimeter (PIV). PRODEPAM helped improve on the infrastructure through canal lining. PRODEPAM staff trained the farmers in an Integrated Soil Fertility Management program, employing composting techniques which revitalized the soils in the PIV. Prior to planting, PRODEPAM helped the farmers obtain access to new WASSA and WAT 310 improved seed varieties and appropriate rice fertilizers Urea and DAP.

PRODEPAM provided a Lister-Petter pump to the village and facilitated the signing of water services contract with AVD Delta to provide maintenance to the pump through the growing season. In addition, VRES agreed to provide the diesel fuel and oil to run the pump for the first year. According to the agreement, if the pump ever broke down, AVD Delta would immediately replace it with a new pump. In turn, the village would pay 2750 FCFA (approximately \$5.50) each hour the pump was running to keep the water flowing to the PIV.

In addition, the village planted trees and live fences on the perimeter of the PIV to reduce wind erosion. Using these integrated strategies, the yield in Touara could potentially top out at 7 tons per hectare in coming seasons.

The exploding rice yields have increased food security in the village. The President of the PIV association explained, “Last year was disastrous due to the locusts and the drought, but thanks to the large rice harvest, our people still ate their fill this year.”

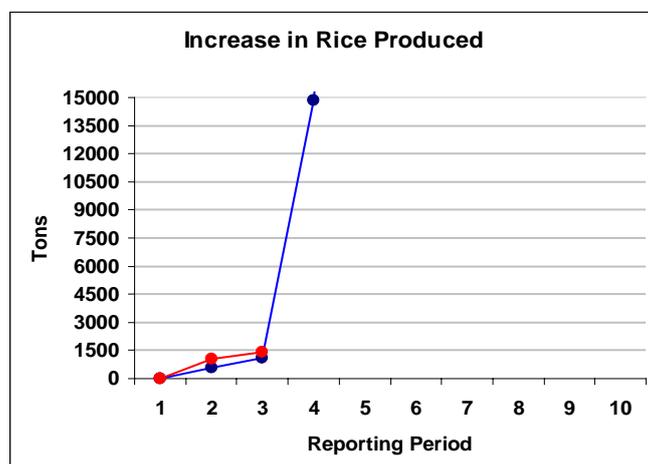
The village reports that even the youth, who normally go to Bamako or Abidjan to work during the dry season, have decided to stay home to cultivate rice during the counter-season this year. In fact, many people who are abroad are requesting plots in the PIV so they can return to Touara and work.

Plans are now being laid to expand the PIV to give the women’s group their own plot. In addition, the people of Touara want to create new plots for people who are returning from abroad to reestablish themselves at home.

Intermediate Result 1: Sustainable Production of Selected Agricultural Products Increased in Target Areas

Cumulative Progress on Intermediate Result Indicators:

IR #1.1: Increase in the Volume of Rice Produced In Target Areas (tons)	BASELINE	SEPT 04	MAR 05	SEPT 05
Projected (Blue)	-	0	595	1119
Actual (Red)	0	0	1044	1390

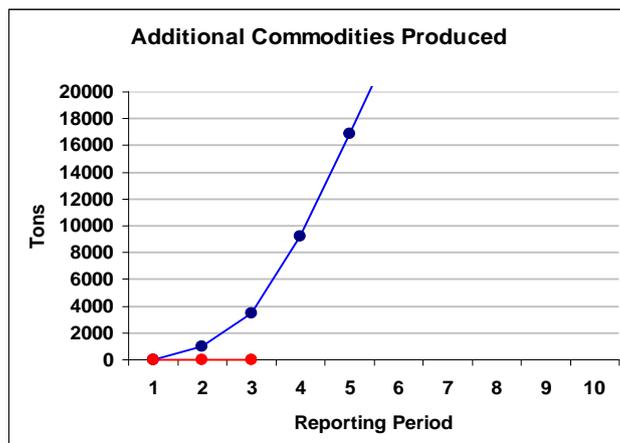


Notes & Analysis: PRODEPAM achieved 124% of its projected result for this indicator. Results presented for September are due to counter season rice production on PIV in Mopti and Timbuktu. Main season production results for 2005 will only be available for the next reporting period. Improved seed, technical assistance and assured water provision with Program furnished GMP. Highest yields (6.9 mT/ha) were achieved at Diogui using WAT 310. In Touara, yields averaged almost 6 mT/ha. Highest yielding plots achieved 8 mT/ha. In N’Gomi, where yields averaged 3,9 mT/ha, the best producing plot yielded better than 7mT/ha. Counter season production on these PIV added an average of 1,2 mT of paddy to each client farmers annual production. This is equal to almost 15, 80 kg sacs of rice for each participating PRODEPAM client farmer.

PRODEPAM partner counter-season 2005 rice production

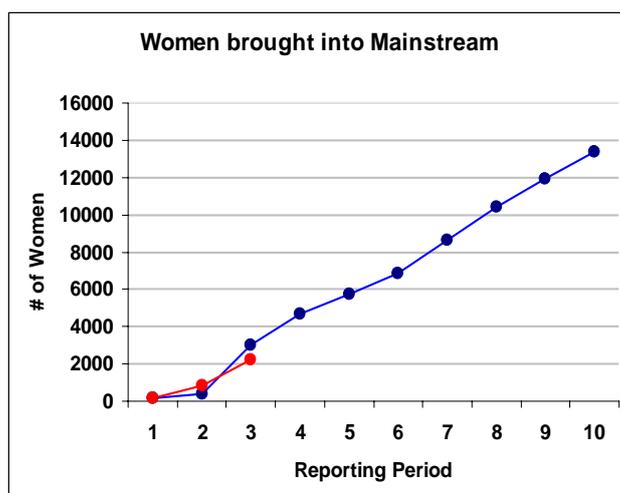
PIV	Hectares planted	Number of Farmers	Seed Variety	Production in mT	Yield (kg/ha)
Touara (MOP)	12	65	Nionoka	70.8	5900
Ngomi (MOP)	23.7	91	Nionoka	92.6	3900
Diogui (MOP)	22	102	WAT 310	152	6900
Iloua (TIM)	12.4	34	WAT 310 + Wassa	31	2500
Total	70.1	292		346.4	

IR #1.2: Volume of Additional Commodities produced in target areas (kgs)	BASELINE	SEPT 04	MAR 05	SEPT 05
Projected (Blue)	-	0	1000	3500
Actual (Red)	0	0	28	28



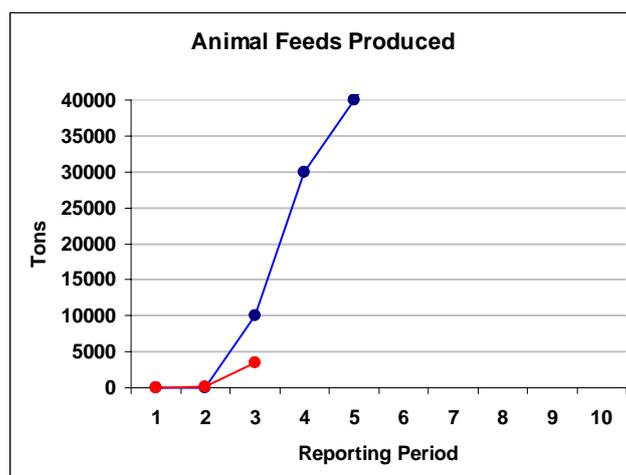
Notes & Analysis: By 30 September 2005 PRODEPAM was at 1% realization of this indicator. The Program facilitated diversification to maize in a farmer out-grower scheme designed to guarantee supply of this critical raw material to feed mill operators at a set price of 70 F/Kg, but at the time of this report the production from this 103 ha is not yet known, though estimates are for yields of 5 mT/ha or a total of 515mT. Updated data for this indicator will be reported on in our next semesterly report.

IR #1.3: Number of women brought into mainstream due to PRODEPAM's interventions in target areas	BASELINE	SEPT 04	MAR 05	SEPT 05
Projected (Blue)	-	194	383	3000
Actual (Red)	0	162	830	2223



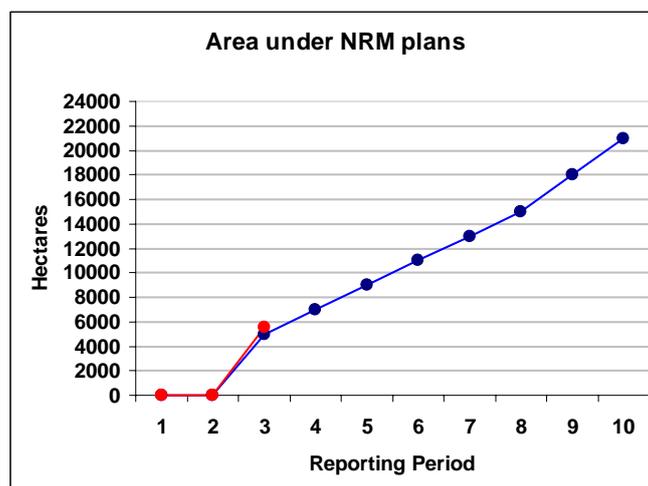
Notes and Analysis: By the end of this reporting period PRODEPAM had achieved 74% of its objective. Women have been heavily implicated in Nerica IV seed multiplication in Koulikoro, in TAPA treadle pump trainings and demonstrations and in Integrated Soil Fertility Management trainings and assistance. They have participated actively in the development of commune level NRM plans. They have been less visible in assistance offered by the irrigation infrastructure and animal feed components of the program. In Koulikoro, women's groups chose their best farmers to become Nerica seed multipliers in collaboration with UGOA. These women are producing seed with the expressed objective of providing the seed to other members of their cooperatives in succeeding years. ISFM training extended to 668 women in 15 different sites in three regions of the project zone (Sikasso, Mopti and Timbuktu). Additionally 87 women were trained in improved composting techniques. These women came from PIV in Mopti, Timbuktu and Gao. In Timbuktu and Gao, the training was offered in collaboration with AFRICARE and PRODECA respectively. Eight women benefited from capacity reinforcement in reforestation at training offered in Mopti. TAPA trained 243 women during the past six months, bringing to 554 the number of women trained to treadle pump technology. Trainings include technical transfer trainings and pump test sites. In general, a training differs from a demonstration in that it lasts from 2-4 hours, technical information and/or skills are imparted to the trainee(s), one or more pumps are left with the individual or group on a trial basis, and a minimum of one follow-up visit is made to the site. A Table of PRODEPAM activities related to the mainstreaming of women gives greater detail and is available in Annex 3.

IR #1.4: Volume of standard-based animal feed produced in target areas	BASELINE	SEPT 04	MAR 05	SEPT 05
Projected (Blue)	-	4.6	4.6	10,005
Actual (Red)	4.6	4.6	4.6	3477



Notes and Analysis: By September 30, 2005 PRODEPAM had only achieved 35% of its target for this indicator. In spite of PRODEPAM efforts to assist in the organization of this sub-sector through assistance in the creation of the COPROMA as a raw material supply cooperative composed of small informal sector feed mill operators, the sector has been constrained by the high prices of the raw material components of balanced feed rations and by the members lack of cash flow and disposable revenue for capital investments. Two larger operators who were identified as being interested in a partnership never materialized. The first (FAMAB) decided that investment in improved balanced feed rations was not in their strategic interest. The second (SANA) experienced financial difficulties for the purchase of essential equipment and delays in the construction of their factory. The Program supported a farmer out grower scheme for maize production and assisted COPROMA in negotiating favorable prices for the maize, as well as in the evaluation of its financial needs both for raw material stocks and operating capital. A credit request has been formulated and submitted to the BNDA for consideration. On the demand side, high unit prices for balanced animal feed discouraged livestock and poultry producers, some of whom were obliged to liquidate their stock because production costs outstripped their revenue potential.

IR #1.5: Area under approved NRM plans implemented in target areas	BASELINE	SEPT 04	MAR 05	SEPT 05
Projected (Blue)	-	0	0	5000
Actual (Red)	0	0	0	5580



Notes & Analysis: A total of 20 commune level natural resource management plans have been developed in PRODEPAM's target zones. These plans have been approved by the communities and adopted by the elected representatives of the commune councils. Total land area concerned exceeds 23,000 ha. At the date of this report, the plans had yet to be implemented. However, seven communities in communes of Sikasso with NRM plans had begun measures designed to protect their bas fond watersheds. Land area being impacted by these erosion control covers an estimated upslope and down slope area of 5,580 hectares. See Annex 2.



Innovations: Gender Mainstreaming
PRODEPAM makes women the gatekeepers of new technologies in Niena

The Association of Women Rice Growers of the Plains of Niena (SIK) is composed of 347 women from 12 different women's groups. Last year, the women approached PRODEPAM asking for assistance in organizing themselves into a formally recognized producer organization. Further, they presented a proposal for a project that would build their group's organizational and financial skills and would increase their harvests through the use of improved seed, improved agricultural techniques, and pest control measures.

PRODEPAM began helping them draft their statutes and bylaws and by training them how to organize and conduct meetings, how to document meetings and how to write proposals and reports. Soon after, they trained some of the members in the basics of financial management.

In addition, in conjunction with the DRA/Sikasso and ACOD, PRODEPAM agents trained members of the group in Integrated Soil Fertility Management skills. At the outset of the growing season, 4 women were selected as rice seed multipliers for a new variety (Sikasso 350A150). The women were provided with the improved seed, along with fertilizers to improve yields. They are now multiplying the seed and will provide it to other farmers, both men and women, of the commune during the next rice growing season.

The strategy behind the PRODEPAM experiment is to empower women as the primary gatekeepers of new agricultural technologies introduced in the commune of Niena. It is anticipated that through their central role as seed multipliers and distributors, the women will be ensured better access to quality inputs and will also gain a greater stake in making agricultural decisions in the zone—becoming more powerful participants in the local economy.

Sub-Intermediate Result 1: Irrigated Agriculture Rehabilitated and Expanded

Summary:

In the period between October 2004 and September 2005, the irrigation component of PRODEPAM was involved in 41 sites, of which 17 moved from the planning phase into the implementation phase.

Activities underway:

- **PIVs:** PRODEPAM improved 13 irrigated perimeters in **TIM**, **MOP**, **GAO**. Improvements included installing Lister-Petter motor pumps, establishing pump leases, relining of canals and water regulating structures (basins..etc).
- **Training:** Trainers at our partner NGOs have been trained in operation and maintenance of motor pumps. 25 sites are scheduled for training in water management and maintenance trainings in the upcoming rainy season. Training for 46 village motor pump operators was accomplished in July and August 2005.
- **Motor pumps:** To date, PRODEPAM, in collaboration with regional Chambers of Commerce, has assisted 10 sites with financing, acquisition and installation of Lister-Petter motor pumps in **TIM**, **MOP**, **GAO**. In addition, PRODEPAM partner, AVD Delta, has provided leased pumps to 2 additional sites.
- **Bas Fonds:** PRODEPAM repaired 4 dams in **SIK** which impacted 432 hectares. Additionally, the project is presently working with 10 villages (**SIK**) near bas fonds areas to diversify cultivation with potatoes and legumes. The target for the potatoes is 10,000 metric tons.
- **Topological Surveys:** 33 Topological surveys have been ordered for sites in **TIM**, **MOP**, **GAO** and **SIK**. These surveys will aid in the design of improvements to existing infrastructure and in accurately calculating quantities of materials needed in earthworks. In addition, the surveys will assist in agricultural intensification and in monitoring the performance of specific plots of land.
- **Lac Horo:** A large area (15,000 hectares) of renovated irrigation is expected to come on line after the raising and reinforcement of an existing dike (**TIM**). The project will benefit more than 5000 farmers from the UCAMHO cooperative. A guarantee loan was provided by the PDZL to help finance the project. USAID has approved the contract and the construction is anticipated to begin in the near future.
- **Dam at Zignasso:** Terms of Reference and tendering for work on the dam at Zignasso (**SIK**) has been completed and submitted to USAID for approval. Pending approval, the study is expected to begin in November of 2005. This project will expand irrigation to 500 hectares of land.
- **Office du Niger:** The association "APRIM" (**SEG**) has submitted a proposal with a detailed design to expand irrigation to 384 hectares. PRODEPAM has reviewed the proposal and made comments on it to improve the design. The next step is to review the technical considerations with Office du Niger.
- **OHVN:** Preliminary infrastructural assessments have been undertaken for the Farabana Irrigation System (**KOU**) and the Bankoumana Irrigation Scheme (**KOU**)
- **ISFM:** 248 Producers, 91 of whom were women, were trained in Integrated Soil Fertility Management through composting at the PIV sites in Touara, Kamaka and N'Gomi (**MOP**), and in Bourem Inaly, Goundam (**TIM**), and Gao (**GAO**).

Synergies taking place:

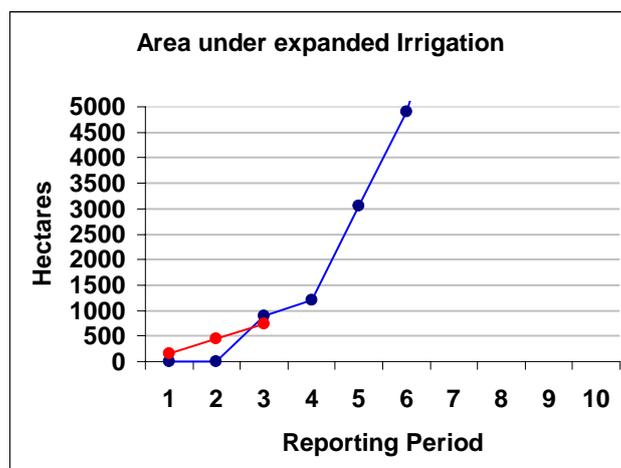
- **Seeds and Fertilizers:** PRODEPAM has created credit applications in collaboration with TradeMali and MaliFinance to provide access to improved seeds and fertilizers to 10 villages around the Bas Fonds. (**SIK**).
- **Water Services Contracts:** PRODEPAM has collaborated with AVD Delta to provide Water Services Contracts to 3 villages in **MOP**.
- **PIVs:** MOU has been established with VRES to provide technical services and support to PIVs in **MOP**

Challenges identified:

- **New irrigation systems:** Producer organizations are having difficulty obtaining the financial means to undertake large scale irrigation projects. Banks do not easily lend to farmers. PRODEPAM has only limited funds to undertake irrigation infrastructure. Additional solutions must be envisioned in partnership with Mali Finance to help finance irrigation projects.
- **Local contributions:** Farmers are finding it difficult to meet the program's requirement of a 50% local contribution to undertake repairs and improvements to irrigation infrastructure. Of 18 sites of which Engineer Estimates (EE) were created, only 10 sites were able to commit to formal agreements to undertake work.
- **Importation of Lister-Petter pumps:** The project launched an order for 10 additional Lister-Petter pumps in April. Four of these pumps arrived too late for the 2005 growing season.

Progress on Results Indicators:

Sub IR #1.1: Area under expanded (new) irrigation (hectares)	BASELINE	SEPT 04	MAR 05	SEPT 05
Projected (Blue)	-	0	0	900
Actual (Red)	N/A	163	441	742



Notes & Analysis:

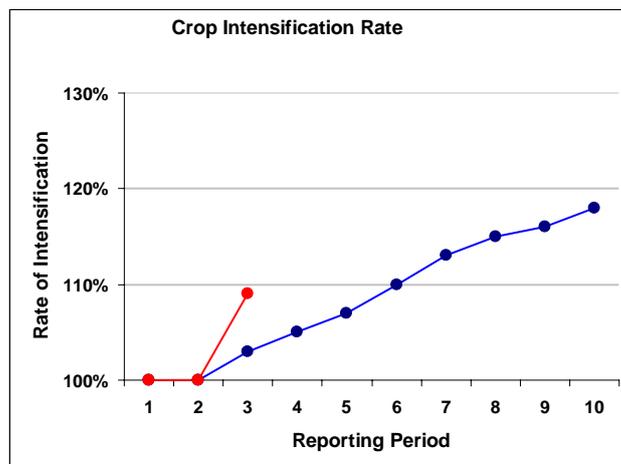
PRODEPAM accomplished 82% of its projected objective for this indicator during FY 05. This achievement is primarily linked to motor pumps provided to previously unexploited PIV in Mopti, Gao and Timbuktu. Achieving results under this indicator has been constrained by slower than expected community mobilization, reticence of financial institutions to engage in medium term financing of agricultural infrastructure, and a dearth of project funds to finance infrastructural investments. See Annex 4 for a list of sites with Motor Pumps.

Sub IR #1.2: Cropping diversification rate

Notes & Analysis: As cropping diversification is a long term activity, no impact is expected to be measurable until the next reporting period (Mar, 2005).

- 1) Diverse agricultural practices from region to region render this indicator valuable only if it is measured on a regional basis.
- 2) Beginning in Mar. 2006, annual augmentations of approximately 2% are envisioned in every zone except Sikasso, where there is no intention to further diversify cropping.
- 3) There is no intention of raising the cropping diversification rate beyond 50% in any region as it would be detrimental to primary crop production.

Sub IR #1.3: Cropping intensity (soil utilization rate)	BASELINE	SEPT 04	MAR 05	SEPT 05
Projected (Blue)	-	100%	100%	103%
Actual (Red)	100%	100%	100%	109%



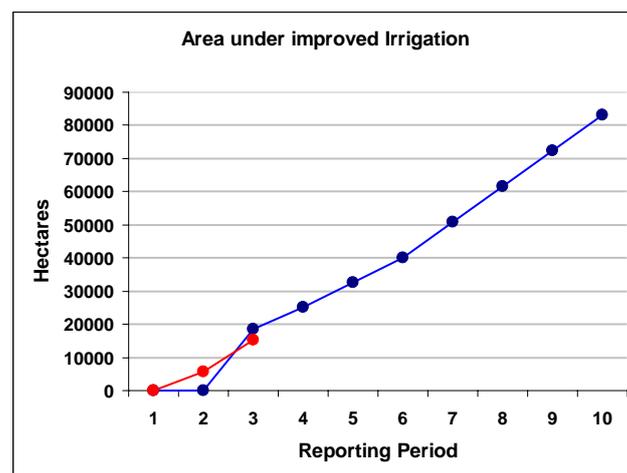
Notes and Analysis: Clients exceeded objectives for this indicator by 6% during this fiscal year.

Intensification was greatest on PIV in the North where double cropping of rice provides greater food security for our clients. Seventy five percent of these PIV are in Mopti, 25% are in Timbuktu. In Sikasso *bas fonds* produced potatoes during the counter season and rice during the 2005 rainy season.

Intensification of agriculture on irrigated lands is important for food security, as a strategy to increase farmer incomes, stabilize rural populations and for natural resources management. Increasingly, the Program will emphasize actions destined to promote cropping intensification by our rural clients.

Challenges to continued success in this area are related to improved land tenure security for rural small holders, availability of sufficient quantities of high quality agricultural inputs at competitive prices at the right time and improved soil management-both structural and in terms of fertility.

Sub IR #1.4: Area under improved or rehabilitated irrigation (hectares)	BASELINE	SEPT 04	MAR 05	SEPT 05
Projected (Blue)	-	0	0	18,600
Actual (Red)	N/A	0	5816	17,752

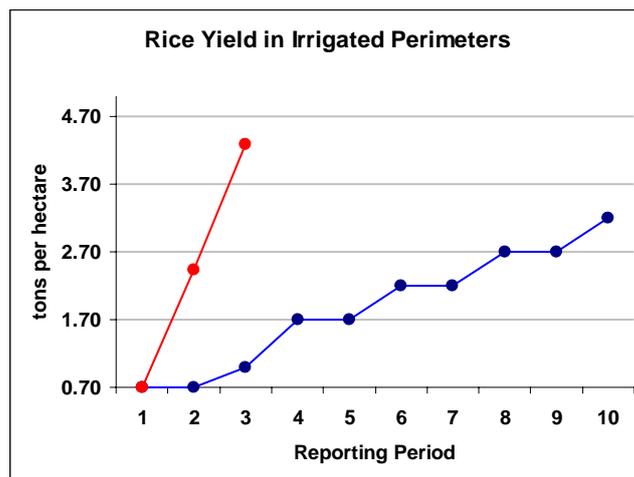


Notes & Analysis: PRODEPAM achieved 96% of its objective during this fiscal year, but more than tripled the hectareage under improvement or rehabilitation in the last six months. This was largely due to extension efforts in integrated soil fertility management, composting and integrated cropping systems. Also counted here are hectares benefiting from physical rehabilitations performed at different sites in Sikasso, Mopti, Timbuktu and Gao. These include canal linings, reconstruction of dissipation basins, division boxes, and the rehabilitation of small dams and weirs. In addition, use of treadle pump technology by farmers in the counter season also contributed hectareage to this indicator.

During the next reporting period another major jump is expected as renovations occur to the Takoudoust dike at Lac Horo in Timbuktu. By the end of FY 05, the contractor had been identified, prices and terms had been negotiated and the Program was awaiting clearance from the RCO to proceed with contracting. ¹

Difficulties in community mobilization of funds delayed rehabilitation of certain sites. For others, rehabilitation was in progress at the start of the rainy season and has been suspended until after rice harvest. While the Program benefited from seed funds for infrastructural work in FY 05, contract modification permitting disbursement of these funds was only signed in June 2005, too late to begin renovations in most of the country. The challenge for FY 06 is to intensify activities catalyzing community mobilization early on and to co-opt sufficient non USG funds to complement the seed money previously allocated.

Sub IR #1.5 (A): Average Rice yield in Irrigated Perimeters (tons/hectare)	BASELINE	SEPT 04	MAR 05	SEPT 05
Projected (Blue)	-	0.7	1.0	1.0
Actual (Red)	0.7	0.7	2.4	4.3



Notes and Analysis: Since there was no counter-season production of rice in FY 2004, it is irrelevant to measure percent rice yield increases for this counter-season report. Percentage increases in yield can only be accurately described after counter-season production has been established. For this report, we are therefore reporting average rice yields (tons/hectare) in the PIVs. No counter-season production of rice was reported in the Office du Niger, *bas fonds*, Controlled Floodplains, or rain-fed rice areas. An exponential increase in rice yield during the first year was expected due to poor quality of the inputs and limited training originally available to the farmers at the PIV sites. Hereafter, we expect to see less drastic incremental increases in yield. The increase in PIV rice yields depends on multiple factors: 1) Access to improved seed (Wat 310 and Wassa); 2) Access to quality fertilizers and their application at agronomically recommended rates at appropriate times in the cropping cycle; 3) Improved water management and, finally, 4) competent and regular technical assistance.

Sub IR #1.6: Change in volume of irrigated production per m3 of water used (percent increase)

Notes & Analysis:

Baseline studies to determine water consumption of the new, introduced varieties have been completed. Data analysis is being finalized during the upcoming rainy season and will be reported as baselines in Spring of 2006. No impact for this indicator has been envisioned and no performance targets have been set until 2006.

¹ The anticipated approval from the RCO was received in October 2005 and the contractor began mobilizing staff and equipment during the latter half of the month.

Success Stories: Irrigation
Farmers and herders collaborate in N'gomi

The village of N'gomi (MOP) has paid their respects for over a hundred years to the owners of their land, the nearby Fulani village of Toumoura. Now the people of Toumoura are paying their respects to N'gomi.

Last year, N'gomi asked Toumoura for permission to build an irrigated perimeter to grow rice outside of the village. Being herders, the people of Toumoura feared that its land, now used as pasture for animals, would eventually become an object of conflict. PRODEPAM helped to negotiate a convention between the two villages and the local government to allow the project to move forward with Toumoura's consent.



PRODEPAM and its partners, SABA and co-donor VRES, provided the village with access to herbicides, and improved seed and fertilizers. PRODEPAM also provided a Lister-Petter pump and facilitated a water services contract with AVD Delta to ensure the maintenance of the pump.

During the counter-season alone, results have been striking. N'gomi has experienced rice yields averaging more than almost 4 tons per hectare. The mother village, Toumoura has been impressed with the rice yields and even more interested by the production of hay after the harvest is complete. Now Toumoura has requested that N'gomi expand its PIV so that some of the Toumoura residents can work alongside their neighbors to cultivate rice and hay for their village.

The budding collaboration between N'gomi and Toumoura proves that farmers and pastoralists can work together for mutual benefit.



Innovations: Water Services
Partner AVD Delta keeps the faucet turned on in northern irrigated perimeters

Although essential for large irrigation schemes, high capacity motor pumps have always provided a challenge to low income villages. Initial investment costs, costly replacement parts, and the high cost of fuel keep these pumps out of reach for smaller or less affluent villages. Even if a village can afford to put up the initial money to purchase a pump, it risks losing its entire rice crop if it cannot keep the pump running reliably.

PRODEPAM partner AVD Delta reduces that risk for villages in the north and helps ensure sufficient

quantities of water to permit them to expand their agricultural production. AVD Delta accomplishes this through water services contracts. AVD contracts with the communities to provide an agreed-upon number of pumping hours to the village. AVD provides a pump and the fuel to keep it running. If the pump breaks down, AVD either repairs it or replaces it immediately.

This year, PRODEPAM collaborated with AVD Delta to provide water to the Irrigated Perimeters of Sah, N'gomi and Touara (MOP) with notable success. All three perimeters reported large increases in production. PRODEPAM plans to expand this innovative model by helping AVD Delta bring water services to other villages in the north during the upcoming year.

Sub-Intermediate Result 2: Access to Improved Animal Feeds Increased

Summary:

The animal feed sector faced some challenges early on due to the lack of organization of feed mill operators in the sector. This impeded progress at the outset of the program. The problem was resolved by the creation of COPROMA (Cooperative de Provendiers du Mali) in January 2005. This cooperative has allowed the individual producers to coordinate more closely and purchase inputs at competitive prices and in greater volume.

PRODEPAM's animal feed component presently works closely with the 10 animal feed producers that make up COPROMA : two in **SIK** ; one in **SEG** and seven in the region of **KOU**.

Activities Underway:

- **Cooperative Development:** PRODEPAM helped COPROMA create its statutes and bylaws and file its documents with local and central government. As a result, the cooperative received official legal status as a cooperative.
- **Business Development Services:** PRODEPAM arranged technical assistance to have the Bureau Kouyate provide accounting oversight to all members of COPROMA. Each member of the cooperative agreed to contract with the accounting firm for a minimum of 125,000 FCFA over the year to perform internal audits and to validate the members' accounting. This will improve the transparency of their financial management and will provide the cooperative with greater leverage before financial institutions.
- **Operations Diagnostics:** A diagnostic study of the operations of each cooperative member was conducted to determine the potential capacity of each individual producer and the best methods to improve the members' production. PRODEPAM also worked with COPROMA members to install quality control systems for their balanced feed rations.
- **Financing:** Assisted COPROMA with the elaboration of a financial proposal to the BNDA for short term financing in the amount of 147 million CFA (approximately \$300,000 USD) to help secure sufficient maize, cotton seed cake, brown wheat, fish meal, oyster shells and pre-mix (vitamins minerals) at reasonable prices during this year's harvest season. The money will be used to purchase maize stocks in large quantities at more competitive prices. The proposal has been submitted to the BNDA for consideration.
- **Warehouses :** Sufficient warehouse space has been identified to store COPROMA's raw materials.
- **New Feed Formulas:** Seven new feed formulas have been developed for meat production, dairy production, egg production, and broiler production. These improved feeds provide maximum nutritional content using available raw materials and pre-mixes that are readily available in Mali.
- **Out grower linkages:** PRODEPAM, in collaboration with Winrock/Eucord and IER facilitated linkages between COPROMA and 88 maize growers in **KOU** to produce a minimum of 412 tons of maize for use in ameliorated animal feeds. PRODEPAM provided 10 million FCFA as an advance to the farmers for seed and fertilizer (see success story below) as well as training them in improved agricultural techniques.
- **Supplier linkages:** PRODEPAM has helped to create linkages between COPROMA members and input suppliers outside of Mali.
- **Marketing and Distribution:** PRODEPAM has begun to assist COPROMA with the creation of a distribution network for the animal feed products. Six retail distributors have been identified in **SEG**, (Segou, Bla, San) and **MOP** (Mopti) who have agreed to market COPROMA products.

Synergies taking place:

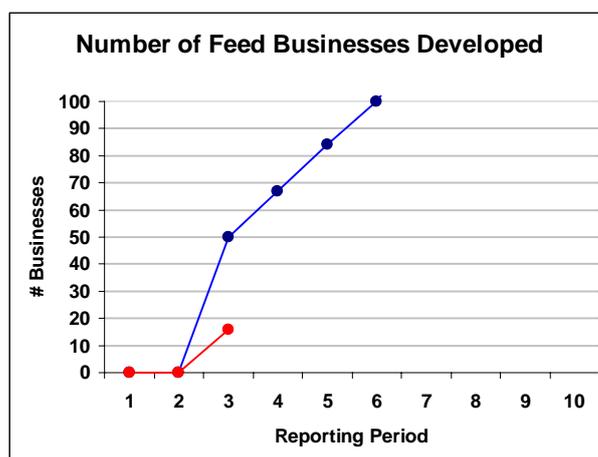
- **Production of Red Meat:** PRODEPAM collaborated with Trade Mali to study red meat production with producers in **MOP**, **SEG**, **SIK**, **KOU**. These studies will be important as the animal feed component begins to market its feed to these producers. They will also help in the creation of technical workshops for meat and milk producers (5 workshops are scheduled for the autumn).
- **Distribution:** COPROMA is working with the TAPA component of PRODEPAM to develop a wide distribution network for the animal feeds. COPROMA plans to tap into the same network of agricultural enterprises which are currently marketing Nafasoro pumps to distribute its animal feeds. The cooperative will also collaborate with TAPA on packaging and marketing activities.

Challenges Identified:

- **Marketing Studies:** More studies in collaboration with Trade Mali are needed to determine how to best market animal feeds to local producers and also to determine appropriate and acceptable breakeven points for each line of animal feed.
- **Financing to attain scale:** The production of improved animal feeds requires a high level of investment and operating capital. Profit margins, however, are relatively slim. Therefore, small producers will not be able to achieve significant scale without external capital for investment and financing of their activities.
- **Price Fluctuations:** The fluctuation of market prices for raw materials is problematic. Profit margins on animal feeds are slim and it is hard for small producers to deal with large swings in prices for maize, fish meal, wheat flour, etc.. It will be important for feed mill operators to figure out how to ensure reliable quantities of raw materials at stable and predictable prices. One of the most important ways to do this is to mitigate market swing by building up a significant stock of raw materials when prices for these materials are low. Building stocks when supply is plentiful remains challenging for these small feed mill operators as their cash flow is often constrained.

Progress on Results Indicators:

Sub-IR #2.1: Number of standard-based feed businesses developed or strengthened	BASELINE	SEPT 04	MAR 05	SEPT 05
Projected (Blue)	-	0	0	50
Actual (Red)	0	0	0	16

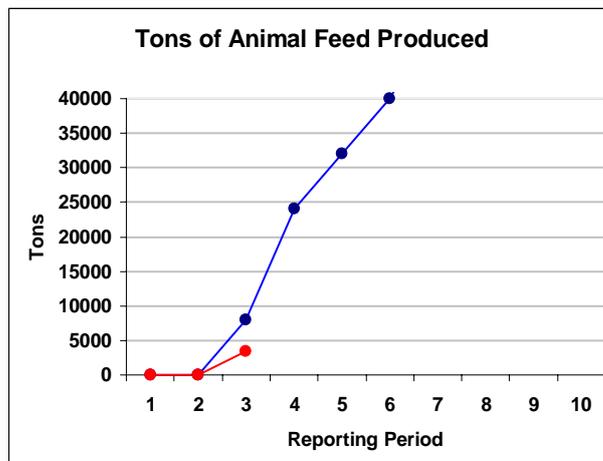


Notes and Analysis: By 30 September 2005 the Program had achieved only 32% of its target for this indicator. Small feed mill operators are challenged by their lack of capitalization and the widely fluctuating and prohibitive prices of raw materials. When maize prices reached 215 F/Kg this year, largely due to erratic and insufficient rainfall in 2004, a number of poultry producers-both layers and broilers, were forced to liquidate their stock because they were unable to afford feed. Feed mill operators stopped production and turned to mixing feed ingredients for those producers who brought their own raw materials and recipes.

Partnerships announced with FAMAB SA and Sana SA had to be suspended when the former refocused its strategy away from cattle feed and the latter suffered setbacks in their financing and delays in finishing the infrastructure necessary to commence production.

Until the sector’s structural and capitalization issues are resolved, permitting it to produce balanced animal feeds at competitive prices, progress in this indicator will remain constrained. Demand has remained tepid, though the animal production sector continues to gain ground (in terms of number of head) and good pastureland becomes scarcer.

Sub-IR #2.2: Volume of standard-based animal feed marketed (tons)	BASELINE	SEPT 04	MAR 05	SEPT 05
Projected (Blue)	-	0	0	8000
Actual (Red)	0	0	0	3477



Notes and Analysis:

Achievement for this indicator during this fiscal year is only 43% of projected. High prices, uneven quality and a lack of knowledge among herdsmen and poultry raisers as to the productive potential of balanced feed rations constrained demand.

It is interesting to note that 68% of all cattle feed produced by COPROMA-both for fattening animals and for improving dairy herd performance, is produced in Ségou. COPRAAV, a COPROMA member, is based here but competes for market share with FAMAB. COPRAAV has a strategy for market penetration both North to Mopti and beyond, and South to Bamako.

90% of poultry feed produced by COPROMA is produced in Koulikoro and Bamako to serve the peri-urban market of Bamako. Members in Sikasso produce 7% of the monthly tonnage in the area while COPRAAV produces only 3% of the poultry feed.

In order to increase production of standard-based animal feeds, prices must be stabilized, quality must be standardized and demand for product among herdsmen and poultry raisers must be catalyzed via demonstrations and marketing.



Success Stories: Animal Feeds
COPROMA cooperative creates economies of scale for animal feed producers

Since January of 2005, PRODEPAM has assisted in the creation and development of the Cooperative de Provençiers du Mali (COPROMA). The members of the cooperative include 10 different animal feed mill enterprises based in Bamako (7), Sikasso (2), Segou (1) who currently produce a wide variety of animal feeds for meat production (both bovine and poultry), and dairy and egg production.

The members of COPROMA have a single mission: To provide Mali's meat and poultry producers access to a reliable source of quality animal feeds at lower prices than if they formulated them themselves. Organizing themselves into a cooperative allows these small businesses to achieve economy of scale to make bulk purchases of primary raw materials such as maize, brown wheat, fish meal and vitamin pre-mix as well as equipment such as grinders and mixers, and packaging such as rice sacks. Buying in bulk allows the feed enterprises to purchase at lower prices and in greater quantities. This, in turn, allows them to offer more advantageous feed prices to their clients.

In upcoming months, the COPROMA cooperative aims to develop a brand name for its feeds and create a variety of product lines that will be marketed according to the specific types of animal producers. All the feeds will be produced in a methodical fashion by all the enterprises according to rigorous quality control standards that will be monitored by the IER laboratory in Sotuba. Further, all members will provide the same advice to their clientele regarding best practices in the use of the feeds.

Innovations: Animal Feeds
COPROMA cooperative creates partnerships with maize producers in Koulikoro to stabilize prices.

Getting high quality, reliable, and affordable maize stocks to create animal feed has always been problematic for the few animal feed mill operators who are active in Mali. For instance, last year maize prices fluctuated to such a degree that many small feed producers could not afford to purchase maize for their feed mills. As a result, animal feed production was extremely low in Mali last year.



However, the 10 feed producers who form COPROMA found a way to ensure a reliable maize supply this year. With a loan of 10 Million FCFA from PRODEPAM, who helped organize the cooperative earlier in the year, COPROMA contracted with 88 maize out-growers in KOU to cultivate 103 hectares of maize. The growers cultivated two different varieties of maize, including a white hybrid variety. COPROMA negotiated a pre-arranged price of 70 FCFA per kilogram for the purchase of 4 tons of maize per cultivated hectare once it is ready for harvest. PRODEPAM provided credit to the growers at the outset of the season for the purchase of seed and fertilizers. In collaboration with WinRock/Eurocord and IER, PRODEPAM provided technical assistance during the growing season by training the growers in improved cultivation techniques that would assure them of the best possible yield. The PRODEPAM loan will be reimbursed by the farmers out of the profits of the maize sales to COPROMA.

This productive partnership has simultaneously assured COPROMA of sufficient quantities of quality maize for its processing activities over the next year and has mitigated the risk for the maize growers who now have assurance that they will get a more predictable payoff for their efforts. COPROMA reports that many more growers are interested in participating in the program next year. Overall, it has been a win-win partnership for everyone involved.

Sub-Intermediate Result 3: Community-Based NRM improved

Summary:

The last semester of FY 2005 saw an evolution in NRM activities from the planning stage through training to technological improvements and enterprise development. The acceleration of activities in NRM is primarily related to PRODEPAM's partnerships with the Regional Directorates for Nature Conservation (DRCN), elected officials in rural communes and the Regional Center of Agronomic Research (CRRA) (SIK). Further, beginning in June, the presence of local NGO partners in proximity intensified our community mobilization activities.

Activities Underway:

- **NRM Conventions:** 8 NRM conventions have reached the stage of either preliminary (Falan, Dogoutou, Digan KOU) or final drafts (Diatatene, Diala, Zangaradougou SIK, Guiwel/Kabaye and Denga Ouro MOP). A ninth (Touara MOP) remains at the level of inter-communal consultation.
- **NRM Plans:** 20 communes have developed or are in the process of developing NRM plans. As of 30 September, 20 NRM plans were complete and had been approved by the *Conseil Communele* of their respective communes.
- **Commune Level NRM:** 20 commune working groups for NRM have been put into place and are underway with assistance from the DRCN/CRRA.
- **Village Level NRM:** 68 Village level NRM committees (CVGRN) have been created. These committees will serve as intermediaries between the communities and the local government on NRM related matters.
- **Training:** 28 sites benefited from training in rapid assessment techniques with strong village participation.
- **Local NRM activities:** An awareness campaign comprised of more than 100 individual village level meetings brought together government, traditional authorities and community members to discuss NRM issues.
- **NRM Conference:** A national conference on NRM planning was organized in SIK and included 20 mayors, 20 technical specialists from the DRCN/CRRA as well as other technicians and representatives from projects and NGO collaborators in SIK, KOU, SEG, MOP, TIM, GAO. Together, they discussed critical issues relating to NRM and developed important standardized tools including: a national strategy for NRM, a methodology for the NRM planning process, a training manual, and a strategy for monitoring NRM plan development and implementation.
- **Land Reclamation:** Nearly 3.3 kilometers of rock lines were laid in 10 lowland (*bas fonds*) areas in SIK. PRODEPAM organized training for interested farmers at N'Gomi (MOP) to promote tree planting as a way to reclaim degraded land. The training was attended by 56 producers (8 of whom were women) and covered tree planting techniques. During the training 3.2 hectares of land were reforested, protecting 84 hectares.
- **Enterprise Development:** Training for 20 nursery owners from six regions of Mali was organized in Severe (MOP) to improve seed collection, pre-treatment of seed, plant production, grafting, sales and new product development.
- **Soils Study:** A study in the Lac Horo region (TIM) and the PIV of Kamaka is underway to determine the degree/type of soil salinity problem and to identify the most cost effective methods to revitalize the soil.

Synergies taking place:

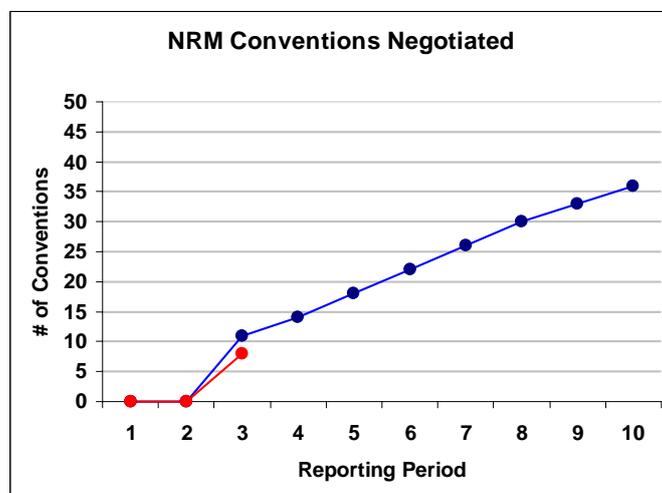
- **Nature, Wealth and Power:** The PRODEPAM and PGP projects have held a series of meetings in Bamako, and in the regions to identify points of collaboration and synergy, including Nature Wealth and Power related themes. Specific areas of collaboration that have been discussed include an evaluation of the NRM plan development process, elaboration of NRM conventions, facilitation of the signatory process to reduce conflict and aid in the translation and dissemination of key forestry and land tenure codes, facilitation of activities leading to the development of new commune level land use management plans, and participation in in-service training activities for NGO and government technical service agents.
- **Land Plan Implementation:** PRODEPAM is collaborating with the Near East Foundation in Douentza (MOP). With NEF, PRODEPAM has developed a mechanism for inter-project consultation concerning the implementation of the Land Use Management Plan in Korientze. In this collaboration PRODEPAM takes the lead in organizing and assisting the development of NRM enterprises, as well as in the conception and management of advocacy campaigns related to NRM issues of interest to the population.
- **Carbon Credits and Clean Technologies:** Micro-irrigation using treadle pumps can be counted towards carbon credits on the basis that the technology reduces the amount of carbon emissions created by motor pumps that burn fossil fuels. Seven emission-free treadle pumps have the same capacity of one diesel motor pump. Data has been provided to the AEG team for the purpose of reporting to Washington on the use of Clean Technologies.

Challenges Identified:

- **Community mobilization** around NRM is difficult during the rainy season as most farmers are working in their fields and aren't available for group meetings. NRM planning should take place in the dry season when people have more free time and are located in the villages.
- **Coordination with partners** at the DRCN and CRA is sometimes problematic because the MOUs were negotiated at a high level and commitments were made by people who are not field agents. Protocols for partnership need to be discussed and agreed upon at the field agent level.
- **Approach:** All partners need to have the same approach and level of confidence in the local populations and the same manner of working with them. The communities should take leadership roles in all activities and partners should not intervene except when requested by communities.
- **Capacity building with NRM related enterprises:** Local businesses need skills training and capacity building to allow them to negotiate with other partners, donors and financial institutions, particularly regarding the financing of project proposals.

Progress on Results Indicators:

Sub IR #3.1: Number of NRM Conventions established	BASELINE	SEPT 04	MAR 05	SEPT 05
Projected (Blue)	-	0	0	11
Actual (Red)	0	0	0	8



Notes & Analysis:

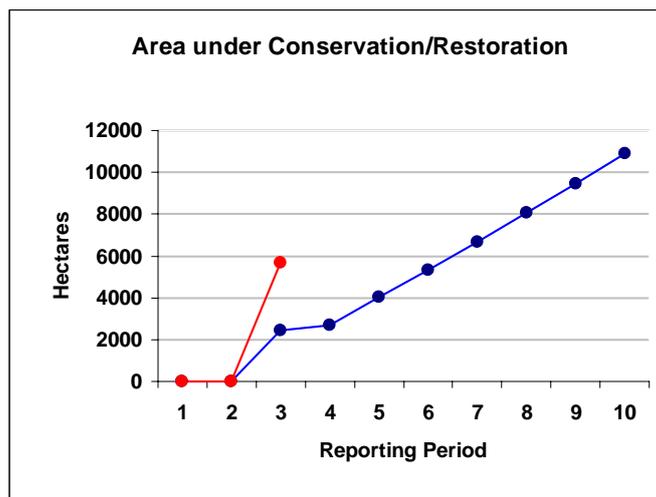
Eight NRM conventions are currently in draft or final stage. Once the writing is finished the final product must be reviewed and validated by the communities to ensure their resolutions have been properly presented. After this, the conventions are submitted to the Commune, the Prefecture and the DRCN for signature. One convention is still at the stage of inter-communal consultation.

These conventions are for sites in three regions: Sikasso (3), Koulikoro (3) and Mopti (2).

Five of eight conventions concern general exploitation of natural resources. The three others concern:

- The controlled exploitation of firewood and land clearing (Diomatene, **SIK**)
- Restoration of biodiversity (Zangaradougou, **SIK**) and
- Controlled harvesting of *Saba senegalensis*, a wild fruit (Guirwel/Karbaye, **MOP**)

Sub IR #3.2: Area under Soil/Water Conservation, Defense and Restoration measures (CES/DRS) in target areas (hectares)	BASELINE	SEPT 04	MAR 05	SEPT 05
Projected (Blue)	-	0	0	2420
Actual (Red)	0	0	0	5667



Notes & Analysis:

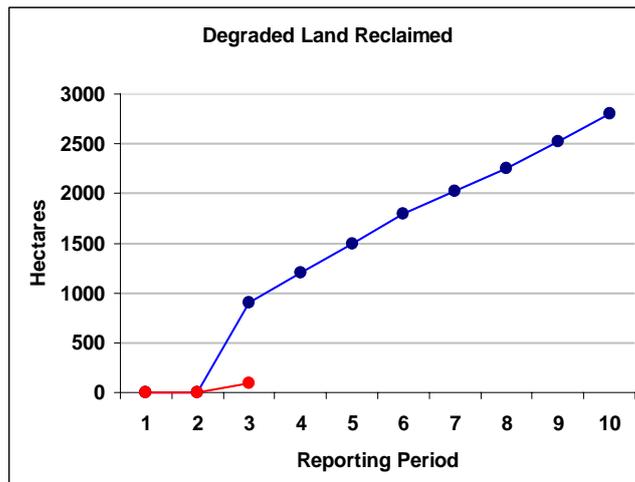
The Program accomplished 234% of its objective during this reporting period due, primarily, to a high level of participant interest and understanding of the importance of the proposed protection measures being proposed to their future livelihood.

The vast majority of hectareage attributed to this indicator concern anti-erosive measures undertaken in seven watersheds surrounding *bas fonds*, notably Samogosso, M’Pegnasso, Zangaradougou, Bamadougou, Klela, Diala and Sanankoroni Togola (SIK). In collaboration with the CRRA of Sikasso, 115 producers were trained to lay contours and build rock lines. Following the demonstration, villagers proceeded to lay out 8.4 Km of contours and built a total of 69 rock lines with an overall length of 3.3 Km. This protected an estimated land area of 5,580 ha.

It is impressive to note that farmers voluntarily mobilized to lay rock lines during the height of the 2005 rainy season despite their already heavy agricultural work loads. Farmers in these communities understand the importance of these soil and water conservation measures and the potential impact they will have in protecting the watershed from gullying and topsoil erosion and preventing siltation of agricultural land in the *bas fonds*.

56 farmers, including eight women from nine communities: N’Gomi, Diogui, Madiama, Sahona, Touara, Kouakourou, Tako, Korientze and Konodaga (MOP), participated in a seminar on tree planting in N’Gomi. As a result of this session 2,500 trees of eight different species were planted as a community woodlot on 3.2 h, and additional 84 ha was protected using windbreaks and improved hedgerows.

Sub IR #3.3: Hectares of Degraded Land Reclaimed in target area	BASELINE	SEPT 04	MAR 05	SEPT 05
Projected (Blue)	-	0	0	900
Actual (Red)	0	0	0	90



Notes & Analysis:

The late implantation of anti-erosive technologies in the Sikasso watersheds (SIK) as well as the technologies chosen for diffusion limited the Program’s capacity to show effective results for this indicator during the current reporting period. Recuperation of degraded lands up slope and down slope of rock lines normally requires two to three rainy seasons before tangible impact is shown. By the end of the current reporting period 2.7 ha of land behind the rock lines were exhibiting soil accumulation and new vegetative growth.

In Mopti windbreaks and hedgerows planted at N’Gomi have begun mitigating Aeolian erosion on the PIV. PRODEPAM, in conjunction with the CRRA of Niono engaged an intern to characterize soil salinity issues in Kamaka (MOP) and Lac Horo (TIM). Recommendations based on the results of these studies will propose innovative, economically profitable techniques for recovery of this degraded land.

Sub IR #3.4: Increase in Number of Species in Target Conservation Areas

Notes & Analysis: This indicator was negotiated with the Mission only in April of 2005. Transects to determine baseline data are expected to be completed during FY 06. We note, however, that biodiversity has been included as an objective in 100% of the 20 commune level natural resource management plans. Actions included in these plans include:

- Delimitation of protected areas at the village, commune and inter-commune levels;
- Restocking of fish ponds and waterways with the introduction of locally rare or disappearing species;
- River bank stabilization using vetiver grass;
- Introduction and extension of new fast growing, high yielding wood varieties like *Acacia Colle* (especially in the Office de Niger);
- Extension of agro-forestry techniques in the project zone;
- Introduction of fast disappearing forest species like Baobab, Néré, and Andropogon into reforestation plans

It is interesting to note that each of the land use management plans foresees the negotiation of various conventions to be signed by local, communal, and prefect authorities and witnessed by the appropriate technical services, in the area of biodiversity. The also envision setting up community structures dedicated to biodiversity with the authority to manage the planned actions.



Success Stories: Nature, Wealth and Power
NRM Collaboration with women bears fruit

In the small Fulani villages of Guirwal and Karbaye, in the commune of Kounari (MOP), PRODEPAMs Nature Wealth and Power activities are having an impact on everyday lives. In these two villages, the wild “Zaban” (*Saba senegalensis*) fruit has long played an important role in village life. The juice is used in the preparation of one of the principle local dishes, “dagana,” or millet cream. The leaves are used in traditional medicine to help prevent difficulties during pregnancy and to treat young children with digestive problems.

In the past, women, the traditional harvesters of Zaban, were only permitted to gather the fruit when it was fully ripe. However, high demand has pushed some of the local women to resort to new techniques that help accelerate the ripening of green fruit. Unfortunately, these techniques also damage the Zaban vines and compromise the quality of the fruit. In recent years, fruit production has dropped and many women have been forced to purchase substitutes at the local market.

When PRODEPAM initiated NRM planning in the commune in July 2005, the women of the villages saw an opportunity to put forward a proposal to protect and improve Zaban production. They proposed to limit Zaban harvesting to a defined season. Further, they proposed that harvesting of green fruit be prohibited. A town crier was selected to announce the opening of Zaban season. Anyone caught harvesting Zaban before that time or using improper harvesting techniques would be penalized. Finally a certain number of Zaban fruit would be allowed to fall to the ground to reproduce new vines.

With the facilitation of PRODEPAM and its NGO partner SABA, the commune level NRM committee has helped to integrate the proposal into a commune wide NRM plan. The mayor of the commune has ordered a detailed study to collect the necessary information to inform the proposal, such as the exact dates of the season and acceptable harvesting practices, which will be finalized in the commune NRM plan.

Success Stories: Community Based NRM
Samagossoni takes back the land

Deforestation in the *bas fonds* near Samagossoni (SIK) has led to severe rain water runoff, which robs the soil of important organic matter and nutrients. The result is that the soils in the *bas fonds* are becoming increasingly poor as the humus is replaced with sand and gravel and siltation limits productivity

Since 2005, PRODEPAM partner, ACOD and CRRRA/Sikasso, initiated land management and reclamation activities with the local farmers in the area. The participatory process has included organization of village level meetings to discuss the issues; identification of activities to address the problems; a convention signed between all the partners to clarify roles and responsibilities; and local contribution of tools (shovels, picks, wheelbarrows), logistical assistance (donkey carts) and labor.



The initial results of the collaboration are extremely encouraging. Although many inhabitants were occupied with rainy season field work, the community managed to lay almost a half kilometer of rock lines with the aim of protecting and rehabilitating 1000 hectares of *bas fonds* land. Already the people are reaping the rewards of their work: soil deposits are building behind the rock lines and vegetation is growing on the reclaimed soil.

Samagossoni will be an important demonstration site to encourage other *bas fonds* communities in Sikasso (Zangaradougou, Bamadougou, M’Pegnesso, Klela, Diala, Sanankorni Togola) to take measures to protect their soils and reclaim their degrading land.

Sub-Intermediate Result 4: Access to Agricultural Inputs and Technologies Promoted

Summary:

Increasing access that farmers, particularly in the North, have to high quality agricultural inputs and technologies has produced results that have been even better than anticipated. The combined effect of these technologies, along with technical guidance from PRODEPAM and its partners, has led, in some cases, to production increases five or six times greater than before PRODEPAM's intervention.

The treadle pump promotion program is beginning to show real impacts. In the first 12-month period, 144 small farmers have adopted this technology and have used it to expand their production of high-value horticulture crops in the counter-season. In addition to vegetables, farmers are using the treadle pumps to irrigate tree nurseries, fruit tree orchards, and rice nurseries. Since May, the program has expanded its reach into the north by extending the supply chain and gaining early-adopters in Timbuktu, Goundam, Tonka (TIM), Gao and Ansongo (GAO)

Activities Underway:

Below is a breakdown of some of the technologies that the PRODEPAM consortium is introducing:

- **Improved Rice Seeds:** PRODEPAM is promoting local production of rice seed for improved varieties. Below is a description of our seed multiplication activities.

Nerica

- 2.65 tons of Nerica 4 foundation rice seed was distributed among 18 villages in 10 communes to 68 community seed multipliers in SIK and KOU. The multiplication efforts yielded 9.3 tons of R1 seed, of which 9 tons was certified by DGRC. The seed was redistributed in KOU to 221 farmers, **including 40 women.**
- In Niono, with PRODEPAM support, the CRRA worked with seed multiplying farmers in N'Debougou (SEG) to produce 585 Kg of Nerica 1 seed and 855 Kg of Nerica 2 seed.
- In collaboration with the CRRA of Sikasso, we are producing Nerica 4 foundation seed on a 1.5 hectare plot. Production is expected to be 5 tons of Nerica 4 seed. Additionally, 27 of the best Nerica farmers from 10 different villages in (SIK) expect to obtain 30 tons of R2 Nerica 4 seed this season. **Two women's groups are involved: Zamblara and M'Pegnasso.** When conditioned, this seed will be distributed in mini-packets of 20 kg to a minimum of 1,500 farmers in SIK.
- PRODEPAM, in 2005, supplied a total of 119 farmers in SIK with 20 kg mini packets of Nerica 4 seed. The choice was left to these farmers whether the rice was to be used for production or seed multiplication. Technical assistance in proper cultural practices (land preparation, seeding density, fertilization, harvesting, drying/threshing and final conditioning) was provided in conjunction with the CRRA of Sikasso.
- In KOU, 76 farmers in the circles of Ouelessebougou and Dioila planted 20.3 ha of R1 Nerica 4 in collaboration with UGOA (a third tier cooperative structure) and PRODEPAM. Of these farmers, 9 are seed multipliers. PRODEPAM provided technical assistance in collaboration with INAGEF, a Malian NGO.

WAT 310

- 15.2 tons of WAT 310 seed was produced by farmers in PIV in Touara and Diogui (MOP). The CRRA in Niono provided the initial seed. Further spread of the technology took place this season as seed produced in Touara and Diogui (MOP) was used in counter-season rice production in Iloua (TIM), Sah and N'Gomi (MOP).
- In Niono (SEG) the CRRA, in conjunction with seed multiplying farmers in N'Debougou, produced 1.5 tons of WAT 310.
- In Gao, during the 2005 main cropping season, 45 farmers in Tobon, Tondibi and Boya (GAO), are acting as farmer demonstrators/seed multipliers of WAT 310. Each farmer is cultivating 0.25 ha for a total demonstration/seed multiplication area of 10.25 ha. The farmers will reimburse the program 2kg of seed for every kg received as seed and are then free to sell the rest of their production to their neighbors.

Nionika

- In Gao (GAO) the CRRA produced 3.9 tons of R1 Nionika seed.

- **Improved Access to Fertilizers:** PRODEPAM is increasing farmers access to fertilizers that greatly improves productivity. In particular, PRODEPAM provides access to urea and di-amonium phosphate (DAP) for rice production.
- **Improved Agricultural Techniques:** Integrated Soil Fertility Management Techniques have been introduced in 20 villages to more than 8900 farmers, including 668 women.
- **Community-Based NRM Techniques:** 10 lowland (*bas fonds*) areas in Sikasso have begun land reclamation activities using rock lines and live fencing.
- **Water Management Services:** PRODEPAM has assisted two villages in MOP in negotiating and signing water management contracts with PRODEPAM partner AVD Delta. A larger contract is planned with AVD Delta in upcoming months.
- **Improved Access to Micro-Irrigation Technologies**

Nafasoro Treadle Pumps:

- Farmers have adopted and used 144 treadle pumps to improve counter-season horticultural production.
- 89 on-farm demonstrations have been held with a total of 2592 participants, including 826 women.
- 53 treadle pumps have been field tested on demonstration sites. A study of the test pumps has been completed to determine the effectiveness and applicability of the technology. Data analysis is being finalized and will be reported shortly.
- 37 private sector partners around the country have signed an agreement to become official dealers of the "Nafasoro" treadle pump and have received training in micro-irrigation. These partners will also work with PRODEPAM to promote and market other agricultural technologies and inputs.
- 68 technology transfer trainings have been conducted benefiting a total of 1531 individuals, including 554 women.
- PRODEPAM is implementing a public information campaign to increase farmer's awareness and understanding of micro-irrigation technologies. So far 11 rural radio stations as well as the national radio station have aired informational "spots" about treadle pumps in local languages.

Drip Irrigation

- Based on test results from last growing season, 24 sites in the regions of TIM, GAO and MOP have been targeted for extended demonstration and promotion of this micro-irrigation technology. Two types of IDE drip kits will be used: the Vegetable Garden Kit (capable of irrigating 100 m² of vegetables) and the Horticulture Kit (capable of irrigating up to 200 m² of bananas or papayas). Currently, the drip kits are at Winrock's office in Tamale, Ghana awaiting export to Mali.

Synergies taking place:

PRODEPAM is collaborating with numerous partners in providing technologies to Malian farmers including: IER ICRISAT, PGP, TradeMali, MaliFinance, AVD Delta, AVRDC among others.

- **An agreement has been signed with ICRISAT and AVRDC** to: 1) implement varietal demonstration trials of new sorghum and groundnut varieties in 15 villages; 2) produce breeder and foundation seed for sorghum and groundnuts; 3) identify production niches for high value crops in the Niger Basin/Bancoumana zone; 4) develop joint communication strategy with farmers concerning seed availability, characteristics and adaptation zones; 5) train seed entrepreneurs; 6) perform varietal testing of tomatoes in order to identify suitable varieties for importation or seed multiplication; 7) identify non-traditional legume crops that can diversify income and nutrition through on-station and on-farm trials in the Niger Basin/Bancoumana zone; 8) develop a detailed business plan for the setting up of a Regional Foundation Seed Unit
- **Nerica partners** include WARDA, the CRRRA of Sikasso, NGO's INAGEF and ADAF-Galle, OHVN and UGOA.
- **WAT 310** Partners included VRES, AVD-Delta and the CRA of Tombouctou.

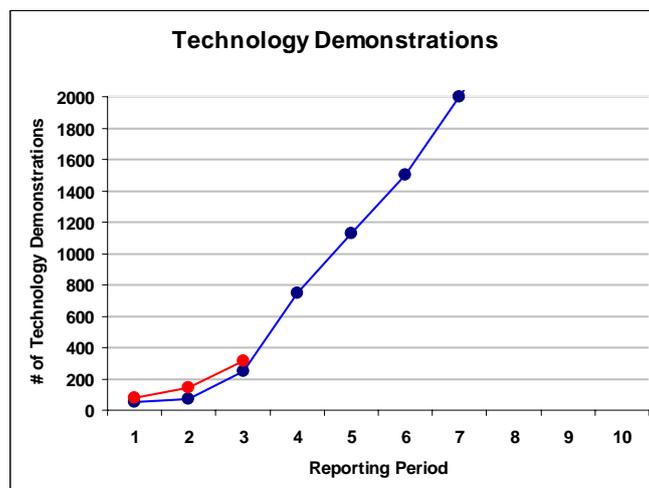
- **Communications:** PRODEPAM is working with the USAID-funded ComDev project implemented by HKI. Eleven partner rural radio stations are disseminating information about improved agricultural practices.
- **Potatoes:** PRODEPAM is working with Trade Mali and Mali Finance to reduce production costs, to increase yields and to expand the market for potatoes and increase potato production for export, including the potential creation of seed potato farming in Sikasso.

Challenges Identified:

- **Sufficient quantities of improved rice seed at competitive prices at the right times.** Until now, it has been difficult to get sufficient quantities of improved rice seed to all the farmers who need it. We anticipate that the need will at least be partially filled by PRODEPAM's seed multiplication activities underway in almost every region.
- **Sufficient quantities of fertilizer at the right times:** Last year there was a shortage of fertilizers on the Malian market. Urea and DAP were expensive and difficult to secure. PRODEPAM has been talking with partners about how to improve access to fertilizers.
- **More rice seed to women:** When new technologies are introduced, women are often the last beneficiaries of the new technologies. PRODEPAM is experimenting with several women's groups to make them the gatekeepers of technologies in certain areas to ensure that they play a central role in expanding agriculture.
- **Seed potatoes for Sikasso:** Seed potatoes currently come from Holland and are bulky, expensive and are often significantly infected with potato viruses. Improved fertilization methods and production practices as well as local seed potato production is being explored.
- **Lack of awareness of and access to micro-irrigation technologies for dry season production.** The majority of market gardeners continue to water their off-season crops by hand, resulting in lower yields and limited production. The public information and promotion campaign needs to be broadened in order to reach a greater number of potential beneficiaries. At the same time, the network of suppliers needs to be expanded to make these technologies and inputs available to farmers at the right time at affordable costs. PRODEPAM plans to add at least 13 more certified dealers by January 2006.
- **Access to credit to acquire treadle pumps, drip irrigation, and inputs.** The number one factor that farmers cite as an impediment to their adopting micro-irrigation technologies and using improved seeds and fertilizers is the lack of liquidity. Farmers need access to micro-credit at the beginning of the growing season in order to acquire these productivity-enhancing and income-generating technologies. PRODEPAM's field staff and NGO partners are working with producer organizations to assist them in preparing bankable loan applications.

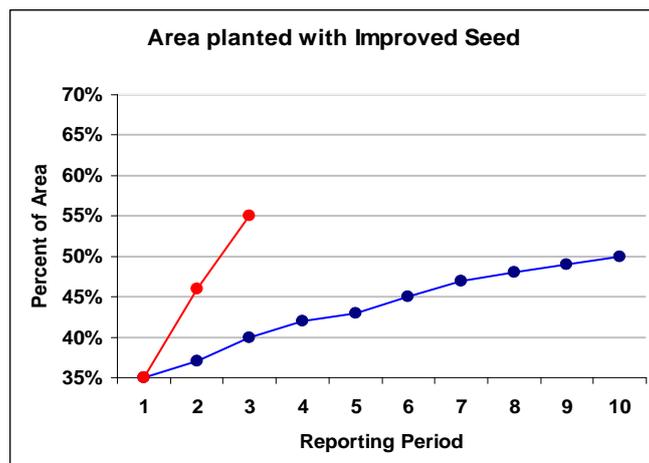
Progress on Results Indicators:

Sub IR #4.1: Number of on-farm input and technology demonstrations	BASELINE	SEPT 04	MAR 05	SEPT 05
Projected (Blue)	-	50	75	250
Actual (Red)	0	78	143	316



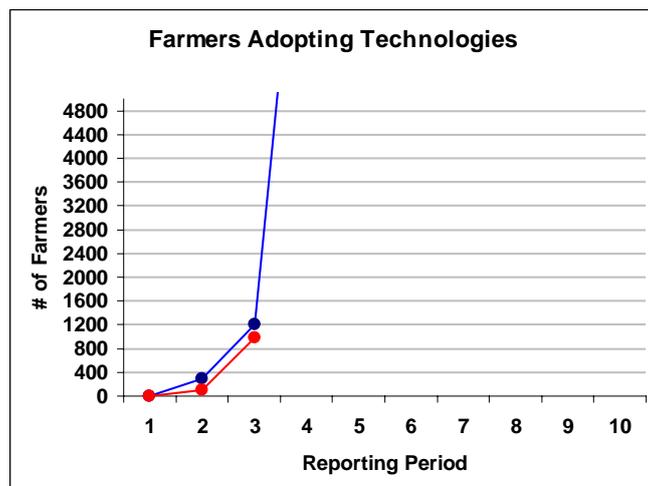
Notes & Analysis: PRODEPAM achieved 126% of its objective for this indicator. Demonstrations and farmer field days related to Nerica IV and WAT 310 drew large crowds of interested farmers. Variable fertilization schemes for rice elicited animated debate among participating farmers. The results of compost application to rice nurseries and test plots in Northern PIV generated excitement among farmers. Data includes 89 on-farm demonstrations of improved micro-irrigation using treadle pumps.

Sub IR #4.2 : % of planted target areas using improved seeds	BASELINE	SEPT 04	MAR 05	SEPT 05
Projected (Blue)	-	35%	37%	40%
Actual (Red)	35%	35%	46%	55%



Notes & Analysis: Farmer's interest in improved seed continues to grow as they witness its yield potential. Non-partner PIV in proximity with PRODEPAM clients are voluntarily approaching the management committees to obtain improved seed. PIV have provided seed outside their administrative regions with seed multiplied in Mopti being provided to PIV in Timbuktu and Gao. As this is a percentage of the total target area, the percentage is likely to fluctuate in future reports as the areas of intervention grow in size exponentially.

Sub IR #4.3: Number of farmers adopting improved production technologies in target areas	BASELINE	SEPT 04	MAR 05	SEPT 05
Projected (Blue)	-	0	300	1200
Actual (Red)	0	0	111	988



Notes & Analysis: By September 30, PRODEPAM had achieved 82% of the projected results for this indicator. The eight fold increase in farmer adoption of technologies being showcased through PRODEPAM interventions attests that farmers are convinced of their productive potential. This fact should assist in the scaling up and spread of those technologies yielding the greatest income potential for rural smallholders in the project zone. Data includes 144 farmers adopting treadle pump technology.



Innovations: Nafasoro Pumps
Young farmer uses treadle pump to provide water to village gardeners

Moussa Lala Traore is an entrepreneurial young farmer who has a market garden in the village of Keniegue (KOU). In January, he participated in a PRODEPAM sponsored training where he learned how to increase his profits in dry season horticulture using a “Nafasoro” treadle pump. Moussa used the pump during the training and was convinced it would help him improve his garden. It did. In one growing season, it enabled him to double the size of his garden and increase his production of shallots, eggplant and cabbages. But Moussa also put the pump to work in other peoples

gardens. Seeing how quickly he watered his own garden, he began to offer services to other gardeners to water their plots for a small fee of 250 to 500 FCFA, depending on the size of the plot. Moussa now uses the Nafasoro pump to irrigate nearly 3100 square meters of garden compared to the 94 square meters that he had formerly watered by hand. This example demonstrates a type of micro-irrigation innovation that, if brought to scale, has the potential to significantly impact a large number of small scale farmers.

Success Stories: The Multiplier Effect
Mopti farmers multiply improved rice seed for their neighbors

In 2004, PRODEPAM provided farmers in the village of Diogui (MOP) with a single 80 kg sack of improved WAT 310 rice seed for seed multiplication purposes. The seed, known in Mali as “Sambala Malo” (the rice that flourishes quickly), is a highly productive, short cycle rice.

By all accounts, the 2004-2005 agricultural season was a disaster in Mopti as the region was hit both with severe drought and heavy infestations of desert locusts. Diogui was hit hard as well and the farmers managed to preserve only a 0.7 hectare parcel of land that they seeded with the new rice. Notwithstanding, from that single sack of rice seed and the small plot of land, the farmers produced 40 sacks of rice seed (3.2 tons).



During the 2005 counter-season, the Diogui farmers then planted 22 hectares of their land in Sambala Malo. The resulting harvest yielded an amazing 152 tons of rice (a yield of 6.9 tons per hectare).

Deeply impressed by Diogui’s tremendous increases in rice production, the people of the neighboring villages of Sah, Takoutala and Ambiri, approached Diogui to purchase some of the wonder seeds. Diogui agreed to sell them 2.3 tons of Sambala Mali--enough for 54 hectares of land.

Though the 2005 harvest is not complete, PRODEPAM anticipates that the four new villages will have similar results as Diogui. The single sack of PRODEPAM WAT 310 has provided seed for 300 farmers in 4 different villages.

Diogui is not the only village where PRODEPAM is observing a multiplier effect. The village of Touara also provided seed to 3 other villages as far away as Timbuktu. The lesson for PRODEPAM is a powerful one: even a single sack of improved rice seed can, even in the worst of growing seasons, can have exponential impacts on food security and increased revenues from rice.

Initiative to End Hunger in Africa (IEHA)

Summary:

PRODEPAM uses IEHA funds in three ways:

- 1) To conduct activities in the drought and locust stricken northern regions of Mali, namely **MOP**, **GAO**, and **TIM**. In these regions, PRODEPAM aggregates IEHA funds with Mission funding (APIM) to support a wide range of activities that improve food security for villages and reduce vulnerability to hunger.
- 2) PRODEPAM also focuses activities on vulnerable populations such as the poorest of the poor, marginalized groups and women by helping to improve incomes and diversify revenue streams.
- 3) Finally, IEHA funds are used by PRODEPAM to explore and promote new technologies that hold significant promise to help resolve hunger related issues in Mali. These include support to seed sector development, including biotechnology, improved soil and water management, NRM and biodiversity activities.

Activities Underway:

In PRODEPAM, very few activities are funded discretely by IEHA. Most activities are funded partially from IEHA and partially from Mission funding and, as such, have been reported under the various IRs above. However, below are highlighted some activities where IEHA funding is playing a pivotal role. In the case of biotechnology and micro-irrigation, all funding for these activities currently comes from IEHA.

- **Crop Intensification in MOP, TIM, GAO**

- **Improved Seeds**

- **WAT multiplication:** 15.2 tons of WAT 310 seed was produced by farmers in PIV in Touara and Diogui (**MOP**). The initial seed was provided by the CRRRA in Niono. Further spread of the technology took place this season as seed produced in Touara and Diogui was used in counter-season rice production in Iloua (**TIM**), Sah and N'Gomi (**MOP**).
 - **2005 Counter-season rice production** of improved varieties disseminated by PRODEPAM occurred in Iloua, Touara, N'Gomi and Diogui and resulted in 238 tons of supplemental rice production
 - **Seed Multiplication In Gao (GAO):** During the 2005 main cropping season, 45 farmers in Tobon, Tondibi and Boya are acting as farmer demonstrators/seed multipliers of WAT 310. Each farmer is cultivating 0.25 ha for a total demonstration/seed multiplication area of 10.25 ha. The farmers will reimburse the program 2kg of seed for every kg received as seed and are then free to sell the rest of their production to their neighbors.

- **Fertilizers**

- **Urea/DAP:** PRODEPAM has provided urea and di-amonium phosphate fertilizers to communities in **MOP**, **TIM**, **GAO** which have significantly contributed to higher rice yields.

- **Soil Fertility**

- **ISFM:** Producers, **91 of whom were women**, were trained in Integrated Soil Fertility Management at Touara, Kamaka et N'Gomi (**MOP**) and in Bourem Inaly, Goundam (**TIM**) and Gao (**GAO**).

- **Irrigation**

- **PIV creation and development**

- **PIVs in 13 villages** in **MOP**, **GAO**, **TIM** have greatly multiplied the amounts of rice available in the zones around the villages. They proved to be important sources of food and income all year long and particularly during the recent drought and locust infestation (see "Touara" success story).
 - **Lac Horo:** Dike rebuilding activities underway in Lac Horo are expected to result in an additional 15,000 hectares of land for rice- this will greatly increase rice production in the **TIM** region.

- **Water Management Services**

- **AVD Delta:** Water management contracts with AVD Delta have ensured reliable water provision to 2 rice producing PIVs in MOP. PRODEPAM's expects to expand its partnership with AVD in upcoming months.

Micro-Irrigation

- **Nafasoro pumps** are now available through 11 agricultural suppliers in **MOP**, **TIM**, **GAO**. Sales in these zones have exceeded those in the south. On-farm demonstrations, field tests and trainings have focused on PRODEPAM sites, including N'gomi, Koubi (**MOP**), Iloua, Tonka, Kondi (**TIM**), Tondibi, Tobon, Boya Gourma, and Dogome (**GAO**).
- **Drip irrigation**: 24 high potential sites have been identified in **MOP**, **TIM** and **GAO**. Farmers in Gao are particularly keen on testing this technology to help them overcome the difficult conditions they face in growing produce in this harsh environment.

- **Other Technologies**

- In addition to the two micro-irrigation technologies mentioned above, PRODEPAM will introduce two new technologies – a low-cost hand pump designed to irrigate smaller plots similar to those found in collective women's gardens; and a deep-well pump capable of drawing water from more than 20 meters below the surface. These two pumps are currently being tested in Kenya and promotion will begin in September 2006.
- Demonstrations of an oilseed press and animal feed baler are scheduled for late 2005 and early 2006.

- **Natural Resource Management**

- **3 NRM conventions** in **MOP** have reached the final draft stage. These conventions will protect the environment, prevent land mismanagement, mitigate depletion of soils and permit expanded agriculture in the future. (See success story "NRM collaboration with women bears fruit," under Section IR.3.)
- **CBNRM Training**: PRODEPAM organized training for interested farmers at N'Gomi (**MOP**) to promote tree and live fence planting as a way to reduce wind erosion and reclaim degraded land. The training was attended by 56 producers (8 of whom were women) and covered tree and live fence planting techniques. During the training 3.2 hectares of land were reforested.
- **NRM Enterprise Development**: Training for 20 nursery owners from six regions of Mali was organized in Severe (**MOP**) to improve techniques of seed collection, pre-treatment of seed, plant production, grafting, sales and new product development

- **Biotechnology**

Advocacy

- **Ministerial Decree**: PRODEPAM and IER assisted the Malian Ministry of Agriculture in elaborating a "Ministerial Decree" (policy paper) on Genetically Modified Organisms with suggested policies and procedures for the processing of requests for GMO related studies and evaluations. Multiple meetings were held with civil society organizations and government agencies to discuss concerns and questions about GMO organisms. The final paper has been submitted to the Malian Secretary General for consideration and adoption.
- **Bio-safety Framework**: PRODEPAM collaborated with the Ministry of Agriculture, IER and UNEP-GEF to elaborate a bio-safety legal framework for Mali. These documents were debated and validated during a national workshop in April 2005. They have been submitted to the government for approval prior to being sent to the National Assembly for adoption into law.

GMO Cotton Project

- **Public-Private partnership**: A project proposal to test GMO cotton was elaborated and submitted to technical partners Monsanto and Syngenta. Negotiations with the partners are well advanced, however work will not begin until the Ministerial Decree has been signed.

GMO Laboratory

- **Sotuba GMO Lab:** PRODEPAM collaborated with IER's Sotuba laboratory to design a facility capable of safely receiving and manipulating GMO products. Construction of the facility awaits the signature of the Ministerial decree. Government funds have been earmarked for the construction of the laboratory.

Conferences and workshops

- **Ministerial conference** on Biotechnology in the CEDEAO: the goal of this conference was to operationalize science and technology recommendations from the various governments. PRODEPAM and the government put forward recommendations on a biotechnology work plan, harmonization of bio-safety regulations, creation of a biotechnology "center of excellence," and suggestions regarding "North-South" collaborations. 250 representatives took part in the conference.
- **Several seminars on GMOs, bio-safety and biotechnology** were organized in February and June 2005. Participants included government agencies, civil society and international partners. The participants explored and debated diverging viewpoints.
- **Media workshop:** Organized in partnership with ABSP and ISAAA, this workshop was held to educate 30 journalists, including 5 women, in the broad topics surrounding biotechnology. The purpose of the workshop was to prepare journalists to educate the public and to ask pertinent questions of the Government and outside partners.
- **Bio-safety workshop:** A conference on GMO issues regarding bio-safety policy and practices was held in conjunction with PBS. 42 people, including 7 women, participated.
- **Information Session with the High Commission for Territorial Collectives:** PRODEPAM organized an information session was held before the High Commission to respond to concerns on GMOs put forward by civil society organizations.

Synergies taking place:

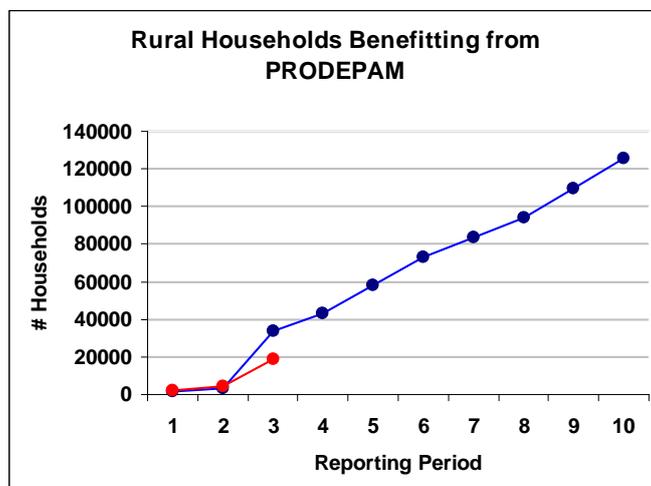
PRODEPAM collaborates with numerous partners on IEHA-related activities including: AVD Delta, VRES, CRA/Gao, CRRRA/TIM & GAO, AFRICARE, TRADE Mali, PopPIV. Some specific collaborations include:

Drip Irrigation: CRRRA/TIM GAO – The CRRRA in Gao is planning to test drip irrigation systems on ten sites in the region. PRODEPAM has made a commitment to provide ten IDE drip systems to compare with the more expensive Netafim systems that the CRRRA will be testing.

Treadle Pumps: DRAER Gao – The service's reforestation program has decided to equip eight of its tree nurseries with Nafasoro treadle pumps. The pumps will be purchased from PRODEPAM's local authorized dealers in Gao.

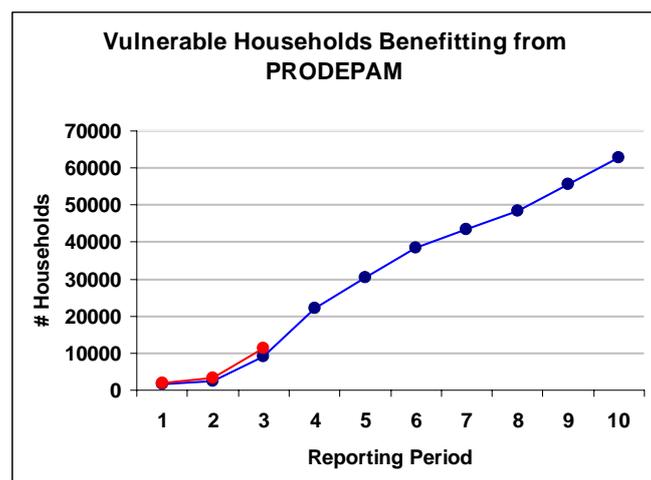
Progress on Results Indicators:

OPIN #1: Number of Rural households benefiting directly from interventions	BASELINE	SEPT 04	MAR 05	SEPT 05
Projected (Blue)	-	1800	3500	33,900
Actual (Red)	0	2100	4474	18,649



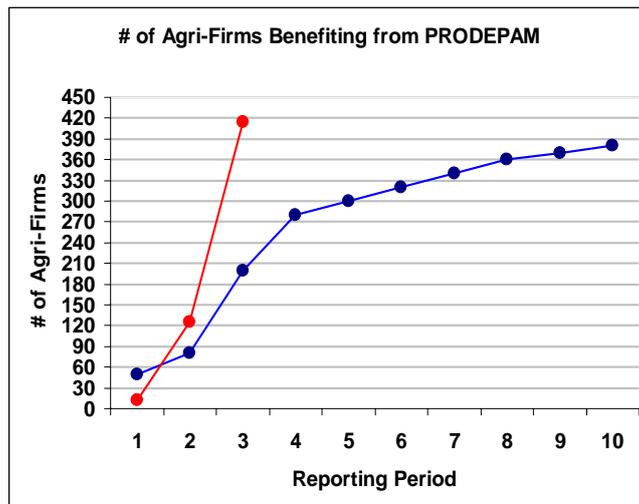
Notes & Analysis: At the end of this FY the Program is at 55% of its objective. Even so this means the Program is impacting 302,114 rural beneficiaries. Rural clients were particularly excited by their participation in the development of commune level NRM plans. This activity involved 20 communes, elected officials, representatives of the DRCN, NGO partners and citizens of 380 different communities. On multiple occasions and despite conflicting priorities tied to agricultural season field operations, they attended general assemblies to analyze their current situation, prioritize the NRM actions and define geographic zones for interventions. They also selected leaders empowered to manage implementation of the plans and relations between the different stakeholders in the process. In addition to our continuing work with farmers in the northern PIV, ISFM extension (including composting), seed multiplication of WAT 310 and Nerica IV as well as varietal trials introducing new high yielding bas fond and upland rice varieties, farmer apprenticeship comparing improved agricultural cultural practices for rice also contributed to the number of households benefiting from Program interventions. Adopted of improved treadle pump technology for market garden plots and technical assistance to feed mill operators and maize producers both diversified our product line for clients and added to this indicator.

OPIN #2: Number of Vulnerable households benefiting directly from interventions	BASELINE	SEPT 04	MAR 05	SEPT 05
Projected (Blue)	-	1750	2500	9050
Actual (Red)	0	1900	3205	11,215



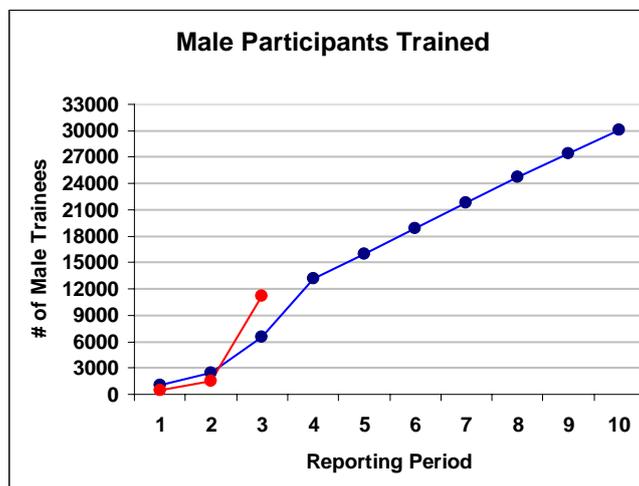
Notes & Analysis: Achievement for this indicator is 124% of target for the fiscal year. Vulnerable households represent 60% of PRODEPAM client households which translates to 181,268 rural beneficiaries. Program activities in the North are primarily responsible for this achievement. Component activities contributing to this indicator concern, principally GRN, ISFM and assistance to women's groups undertaking animal fattening activities.

OPIN #3: Number of Agriculturally related enterprises benefiting directly from interventions	BASELINE	SEPT 04	MAR 05	SEPT 05
Projected (Blue)	-	50	80	200
Actual (Red)	0	12	126	414



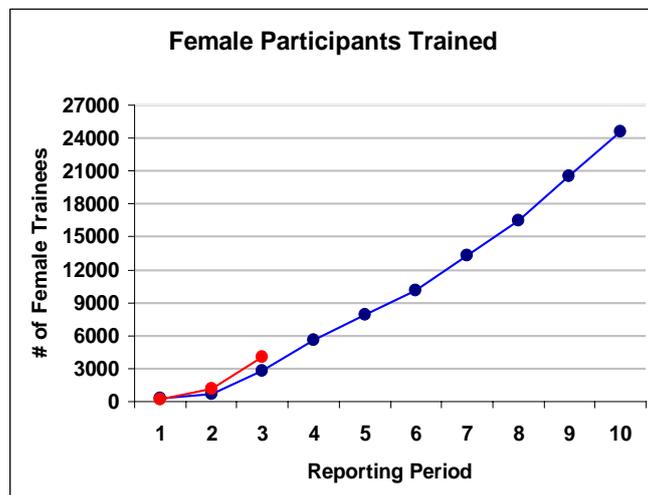
Notes & Analysis: By the end of FY 05 PRODEPAM had achieved 207% of its targeted objective for this indicator. “Agriculturally-related enterprises” include tree nursery owners and sales points, agricultural input and equipment suppliers, animal feed sales points, animal feed mill operators, adopters of treadle pump technology and maize producers involved in the out-grower scheme to supply raw materials for balanced feed rations to COPROMA.

OPIN #4: Number of male individuals who have received training	BASELINE	SEPT 04	MAR 05	SEPT 05
Projected (Blue)	-	1000	2500	6565
Actual (Red)	0	510	1497	11,231



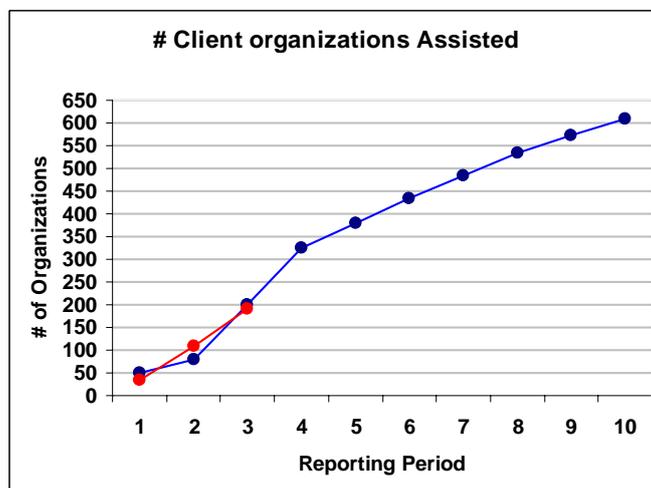
Notes & Analysis: PRODEPAM achieved 171% of its target for this indicator by the end of the current reporting period. All project components contributed to this achievement but the greatest numbers were registered under NRM activities.

OPIN #5: Number of female individuals who have received training	BASELINE	SEPT 04	MAR 05	SEPT 05
Projected (Blue)	-	250	700	2815
Actual (Red)	0	162	1139	4039



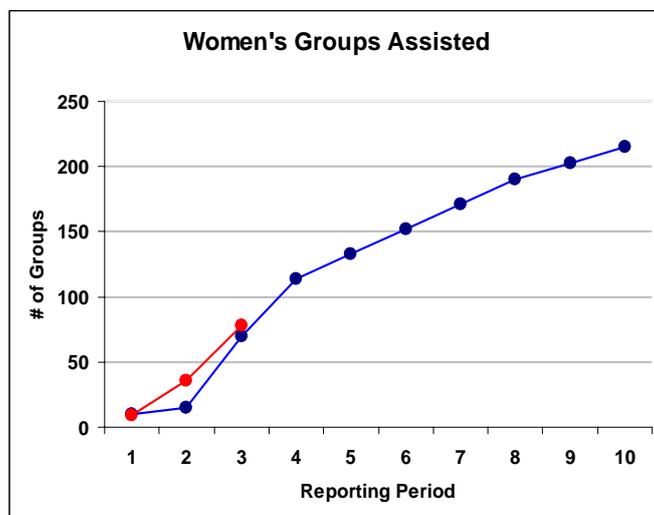
Notes & Analysis: Achievement by the end of FY 05 is 144% of our target. Program components, with the exception of irrigation infrastructure and animal feed, contributed to this indicator. Greatest activity was registered under NRM, followed by TAPA. See Annex 3.

OPIN #6: Number of Producer Orgs, Water User Associations, Trade and Business Associations and CBOs assisted	BASELINE	SEPT 04	MAR 05	SEPT 05
Projected (Blue)	-	50	80	200
Actual (Red)	0	35	108	190



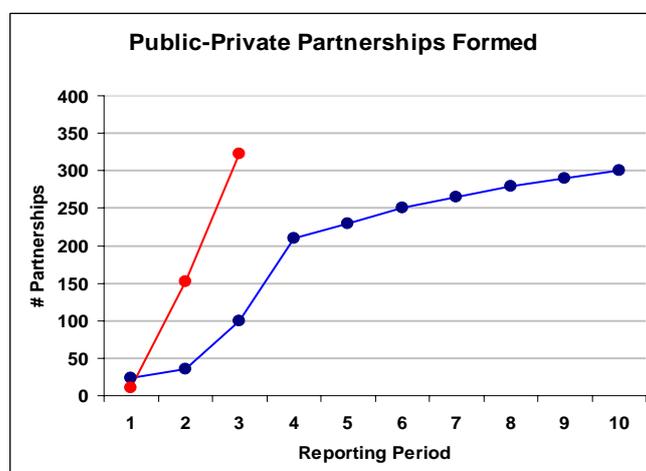
Notes & Analysis: Achievement for this indicator is 95% of our objective for this fiscal year. The presence of our NGO partners in the field (as of June 2005) expanded our outreach and increased our proximity to our rural clients. See Annex 5.

OPIN #7: Number of Women's organizations/ associations assisted	BASELINE	SEPT 04	MAR 05	SEPT 05
Projected (Blue)	-	10	15	70
Actual (Red)	0	9	36	78



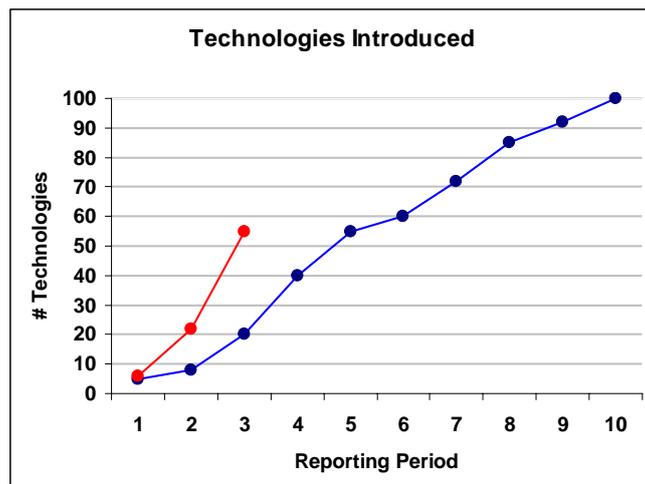
Notes & Analysis: The actual number of women’s organizations assisted by PRODEPAM exceeds the expected result by 11%. The majority of these groups are in Ségou, Sikasso and Koulikoro followed by Timbuktu and Mopti. Gao has the fewest number of women’s groups assisted.

OPIN #8: Number of public/private partnerships formed	BASELINE	SEPT 04	MAR 05	SEPT 05
Projected (Blue)	-	23	35	100
Actual (Red)	0	10	152	322



Notes & Analysis: Public/Private partnerships skyrocketed during this reporting period due to the negotiation of 88 maize farmer out grower contracts and an increase from 17 to 37 in the number of input supply/agricultural equipment suppliers partnering with PRODEPAM. Fully 70% of these partnerships are formalized with a written MOU or contract. By 30 September 2005 we had achieved 322% of our projected outcome for this period. This number includes 37 private sector partners (Revendeurs Agréés) who are actively promoting micro-irrigation in all of PRODEPAM’s zones of intervention. PRODEPAM has partnered with 11 rural radio stations to disseminate information about improved agricultural practices. For a full list of partnerships see Annex 6.

OPIN #9: Number of technologies made available for transfer	BASELINE	SEPT 04	MAR 05	SEPT 05
Projected (Blue)	-	5	8	20
Actual (Red)	0	6	22	55



Notes & Analysis: By the end of FY 05, PRODEPAM had achieved 275% of its projected results in this area. During the six month period ending 30 September 2005, an additional 33 technologies had been made available for transfer. Most of these involve new improved seed varieties of rice, maize, sorghum, millet and groundnut. Additionally, improved tree nursery practices, crop fertilization regimes and improved hedgerow and woodlot practices were brought to the attention of our rural clients. Irrigation technologies also figure in the calculation.

Success Stories: IEHA & Nerica

PRODEPAM seed multipliers provide significant quantities of Nerica seed to others

In 2004 PRODEPAM, in collaboration with 2 local NGO (INAGEF and ADAF GALLE) and UGOA provided Nerica IV seed and technical assistance to 21 seed multipliers in nine villages of Koulikoro. Six of these were women or women's cooperatives. A total of 6.25 ha was cultivated, 72% by men. Due to late planting and poor rainfall distribution, a total of 4.7 mT of R1 certified seed was produced.

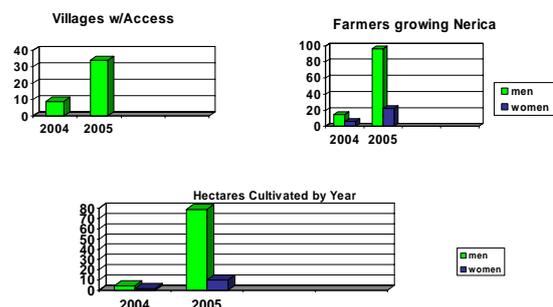
In 2005 PRODEPAM, together with INAGEF (a local NGO partner) and UGOA have assisted 118 farmers, including 22 women and women's cooperatives in 34 villages to produce Nerica IV on 89 ha of land. This scaling up is important to note given the Nerica IV seed in Mali

If in 2004, 100% of NERICA IV seed was provided by PRODEPAM, in 2005 only 57% came from this source. UGOA (43%) and 2004's seed multiplying farmers (3%) provided the rest. Transference of seed distribution to UGOA and seed multiplying farmers is important for long term sustainability of this activity. It also promotes diversification by better farmers to a new, highly profitable agricultural sub-sector (seed multiplication).

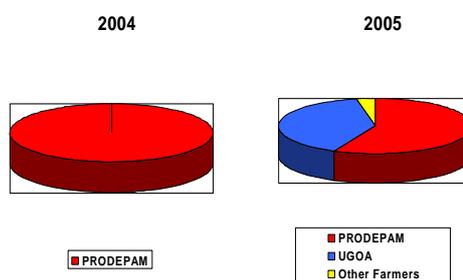
Of the 2004 Nerica IV seed multiplying farmers, 57% provided seed to others in 2005. Those 2004 multiplication farmers providing seed, provided it preferentially to neighbors in their own villages (100%). Fifty percent also provided certified seed to farmers in surrounding villages.

In Sikasso, similar tendencies are being noted. However data was incomplete at the time of this report to provide much detail. However in the village of Zignasso, the 11 seed multiplying farmers from 2004 were able to provide certified R1 seed to 74 of their neighbors this year. Further details of the scaling up process are being collected and will appear with the harvest data in our next report.

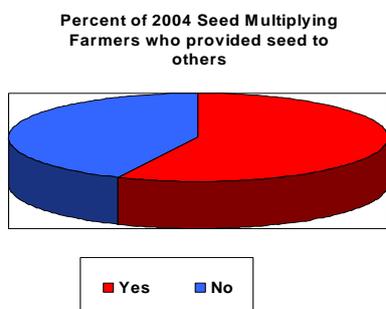
Evolution of NERICA IV introduction by PRODEPAM in Koulikoro Region



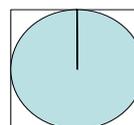
Source of Nerica IV Seed in Koulikoro Region



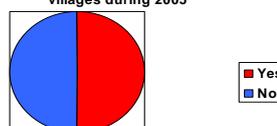
2004 Nerica IV Seed Multiplying Farmers in Koulikoro



Provided Seed to farmers in the same village in 2005



Provided seed to farmers in neighboring villages during 2005





Success Stories: IEHA & Micro-Irrigation
Nafasoro pump rescues women's income at the edge of the Sahara

The Njawa women's association is a dynamic group of Dogon women who produce fruit and vegetables year-round at the edge of the Sahara desert. Working a small, sandy parcel located a few kilometers outside of Gao (GAO), the women do their best to cultivate a variety of fruit trees, including citrus, dates and guavas, which they sell in the local market. In 2003, an NGO donated a 3.2 hp Honda motor pump to assist the group in their enterprise. The motor pump functioned well the first year, but started having problems soon after. When the pump broke down the first few times, the women invested their own money to repair it. But this year the

pump continued to malfunction and eventually the women could no longer afford the repairs and maintenance costs. It happened at the height of Gao's long dry season leaving the women without a reliable means of watering their fruit trees. Before long, many of the trees started to wither and die. The situation became dire so they decided to abandon the motor pump and go back to the old way of watering the trees – by hand with buckets and rope.

Fortunately, Saidou Guido, a local seed and fertilizer supplier and official dealer of the "Nafasoro" treadle pump, heard about the Njawa women's plight. Mr. Guindo offered to conduct a demonstration of the pump in the women's garden. Desperate to find a solution to their problem before their trees perished, the women quickly organized the demonstration. As she watched the pump in action, Mrs. Ina Oueleguem, president of the women's association, immediately realized the advantages of the treadle pump -- no longer would the women have to spend their money on fuel, oil, replacement parts and repairs. Convinced that the pump's simple, reliable and inexpensive operation was what they needed, the women traded in their motor pump to Mr. Guindo in exchange for a human-powered "Nafasoro" treadle pump. Upon delivery of their new pump the women exclaimed "Suba kal'ir sardin nga ma firzi ka tonton!" in Songhai-- "Tomorrow our garden will be green again." Since then, the women have used the new treadle pump to bring their trees back to health..

Conclusion

As witnessed by the results presented in this report, significant progress was achieved in all sectors during this fiscal year. Our component activity by site matrix (see inside back cover) indicates the Program conducted multiple interventions on most sites as defined in our first work plan. The power of these complementarities is now becoming evident as exhibited in the results throughout this report and the vignettes presented here.

Clearly, where irrigation infrastructure has been improved in combination with enhanced soil fertility and cropping practices, superior seed varieties, and where attention is paid to soil/water conservation and better natural resources management, there is a striking increase in yields. Double cropping further increases food security where the mastery of water regimens is complete. Risk of non-production may be mitigated in PIV by the adoption of water leasing services. In the past year farmers have seen this benefit demonstrated twice when replacement motor pumps were provided within 24 hours of a breakdown and pumping continued to permit a full harvest where, before, the entire crop might have failed.

The lack of quality seed in sufficient quantities to meet smallholder demands is being met by the Program through community seed multiplication activities in collaboration with IER. Certification of this seed is provided by the DRCR (now incorporated into the services of the DRA). Organic spread of these varieties farmer to farmer is occurring at a rapid rate, increasing access for our clients. As our smallholder clients observe the impacts on demonstration plots, they are seeking out the new technologies on their own. It is probable that seed multiplied in Mopti will serve neighboring PIVs as far as Gao and Timbuktu. CBNRM has demonstrated that populations are engaged enough to construct multiple kilometers of rock lines for erosion control at the height of the rainy season. In the north, PIV are now opting to lease water rather than use the GMPs they received as donations.

An unprecedented level of collaboration between locally elected officials, the citizenry and government technical service agents of the DRCN for the development of commune level natural management plans approved and managed by citizen committees is an invaluable step forward. It has also reduced tensions and mitigated conflict during NRM plan negotiations.

As stated at the outset of this report, our next challenge is to bring all of this to scale to benefit greater numbers of smallholders. To replicate and adapt to respond to agricultural, environmental and economic constraints faced by Mali's rural farmers. We believe that our strategy has validated by the results in this report and scaling up activities in a sustainable fashion will certainly increase impact and augment farmer revenues in the target zones.

We wish to thank our consortium members for their engagement, perseverance, motivation and professionalism. We also wish to thank our partners, both public and private for their frank and constructive feedback which has helped to strengthen program implementation. Finally, we thank USAID for the confidence they have demonstrated and the support they have given our Program. There are many challenges before us, yet we believe a sustainable foundation for agricultural development has been laid.

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