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Scientific, Technical and Research Commission of the African Union

*Production Support and Financial Services Program in  
Eastern and Southern Africa:*

***Final Report  
May-December 2002***

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# Part I: The Production Support and Financial Services Program in Zambia

## NORAD SUPPORT TO FARMER ASSOCIATIONS PROJECT (SFAP)



Agri-Business Forum Joint Project

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### Production Support and Financial Services Program

Activity Report for the period  
- May to December 2002 -

By:

**SFAP**

Project Implementation Unit

March 2003

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# **The Production Support and Financial Services Program in Zambia:**

## **Activity Report: May-December 2002**

### **1.0 Introduction**

This progress review report covers the period May – December 2002 being the first report of the Production Support and Financial Services Program (PSAFS) under the OAU/Semi-Arid Food Grain Research and Development Agency (SAFGRAD). The ZNFU/ABF-SFAP signed an MOU with SAFGRAD for the implementation of the approved PSAFS. The overall responsibility of the coordinating unit is to follow up and monitor the implementation of the PSAFS activities in Zambia. The total amount received during the period under review was US\$32,000.00 representing 80 % of the total approved budget of US\$40,000.00.

During the period under the review, the major activities included: Designing and signing of contracts for the beneficiaries, disbursement of funds to the beneficiary organizations and follow up on implementation.

### **2.0 Progress Review**

A discussion of the activities carried out during the period under-review is provided under this section.

#### **2.1 Administration/Project mobilization**

The ZNFU/ABF-SFAP which is also a beneficiary prepared the contracts for the other four (4) beneficiaries and had the contracts signed. The contracts provided modalities of how the funds would be utilized, management of the activities and submission of the performance reports. A sample of the contract is attached as Annex II. The ZNFU/ABF has not charged Administration for its administrative role. SFAP will however recover actual costs. For example, mailing expenses and telephone. The financial accountability statement is attached and appears as Annex I.

#### **2.2 Beneficiaries**

The beneficiary organizations are Zambia Agribusiness Technical Assistance Centre (ZATAC), Zambian Agricultural Commodity Agency (ZACA), Conservation Farming Unit (CFU), Cooperative League of the United States of America (CLUSA) and ZNFU/ABF-SFAP.

Table I tabulates approved activities.

**Table I: Summary of Activities by Beneficiaries**

<b>Organization</b>	<b>Planned Activities</b>
1. Zambia Agribusiness Technical Assistance Centre (ZATAC)	<ul style="list-style-type: none"> <li>– Training in developing work plan of its members</li> <li>– Visual aids, calendars for baby corn, fine beans, mange tout, sugar snap, tomatoes, paprika and coffee</li> <li>– Visual aids, Videos/TV for baby corn, fine beans, mange tout, sugar snap, tomatoes, paprika and coffee</li> </ul> <p>* Targeted 33 extension officers and 500 farmers</p>
2. .Zambian Agricultural Commodity Agency (ZACA)	Training of 140 participants in Grain Grading and handling
3. Conservation Farming Unit (CFU)	Production of 8000 copies of conservation farming brochures of 4 pages each
4. ZNFU/ABF-SFAP	Production of Production guide for 33 extension staff
5. Cooperative League of the United States of America (CLUSA).	Production of 754 Lead Contact farmer training manuals.

### 2.3 Disbursement and Utilization of Funds

The total budget approved for the program was US\$40,000 and 80 percent of the amount was received during the period under review. The Tables IIa and IIb below indicate the disbursement schedule and utilization of funds by beneficiary.

**Table IIa: Disbursement of Funds**

<b>Beneficiary</b>	<b>Amount (US\$)</b>	<b>Balance</b>
Zambia Agribusiness Technical Assistance Centre	6400	1600
Zambian Agricultural Commodities Agency	6400	1600
Conservation Farming Unit	6400	1600
Zambia National farmers Union/Agribusiness Forum-SFAP	6400	1600
Cooperative League of the United States of America	6400	1600
<b>Total</b>	<b>32,000</b>	<b>8,000</b>

**Table IIb: Utilization of Funds**

### 2.3.1 Zambia Agribusiness Technical Assistance Centre (ZATAC)

Zambia Agribusiness Technical Assistance Centre hired a consultant to train farmers, provide training of trainers course and develop manuals. The training period was for 60 days in Katuba. The total cost for the consultant was US\$6,000, which only covered the training in Katuba. Assessments were done for Buteko, Lusaka South, Nyemba, Lilayi, Kumboshi and Leobex cooperatives. Planning for training in these cooperatives has been finalized.

#### Actual Training Provided

Type of Training	Actual Participants		Total	Cost (ZMK)
	Female	Male		
1. Cooperative Values, Principles and Practice	17	34	51	1,170,240
2. Cooperative Leadership, management and marketing	2	18	20	358,800
3. Cooperative Organization Structure	2	15	17	320,620
4. Models Cooperative Building and PEARLS monitoring System	3	7	10	133,400
5. Business Financial Management	26	48	74	1,429,600
6. Institutional Development Framework for Model Cooperative Building	1	7	8	96,600
<b>Sub Total</b>	<b>51</b>	<b>129</b>	<b>180</b>	<b>3,509,260</b>
US\$ @ K4,500				779.84
Cost of Consultant				6,000.00
<b>Total</b>				<b>6,779.84</b>

### 2.3.2 Zambian Agricultural Commodities Agency (ZACA)

The support to ZACA assisted in implementing a training and capacity building program for smallholder farmers targeted to be the first participants in its Warehouse Receipt program. A deliberate decision was taken by ZACA to work with farmer groups already formed in the various areas by organizations pursuing other interests. Therefore, the program did not contain a group formation component.

The planned activities included training in the management of grain quality and grading for at least 140 small farmers in seven districts and conducting awareness programs in the same selected districts intended to encourage smallholders to use the warehouse receipt system and articulate the advantages of the system. These activities were carried out concurrently with follow up meetings with leaders of the farmer groups that attended. The table below indicates what was done and utilization of funds. The balance of funds will be needed to reach other areas.

### Results achieved to Date

District	No. Of Participants				Cost	
	Targeted	Actual	Women	Men	Budgeted (US\$)	Actual (US\$)
Kalomo	20	84	45	39	1,007.00	1,194.19
Choma	-	85	20	65	-	1,321.48
Monze	20	57	13	44	947.00	1,118.18
Mazabuka	-	56	23	33	-	1,098.57
Petauke	20	-	-	-	1,007.00	-
Chipata	20	39	17	22	1,084.00	425.18
Kabwe	20	59	21	38	972.00	1,121.23
Lundazi	20	-	-	-	1,097.00	-
Kapiri/Mkushi West	20	71	21	50	947.00	1,654.00
<b>TOTAL</b>	<b>140</b>	<b>451</b>	<b>160</b>	<b>291</b>	<b>7061.00</b>	<b>7,932.83</b>
<b>Amount Received</b>						<b>6,355.00</b>

#### 2.3.3 Conservation Farming Unit

The Conservation Farming Unit has over the past 4 years distributed 11,000 English, 18,000 Tonga and 4,000 Nyanja handbooks on improved conservation farming technologies to staff and farmers. The handbooks help to disseminate the improved technology and are therefore important in the adoption process.

The funds obtained contributed to producing new leaflets in English, Tonga and Nyanja. The leaflets are being distribute to farmers and trainers in support of the Conservation Farming-Food Security Pack Programme supported by FAO to ensure that farmers who have completed Conservation Farming land preparation understand how to basal dress, lime, inoculate legume seed, sow different crops and top dress. The Tonga Handbook was reprinted due to heavy demand from farmers.

#### Materials Produced

Language	No. of Leaflets	No. of Manuals	Cost (US\$)
English	4,000	-	800
Tonga	70,000	-	2,400
Nyanja	30,000	-	2,200
Tonga	-	10,000	1,000
<b>TOTAL</b>			<b>6,400</b>

#### 2.3.4 Zambia National Farmers Union/Agribusiness Forum-SFAP

The objective of the program is to produce technical messages through a production guide for 33 field extension agents. This is in line with the overall project objective, which is to build capacity among agricultural extension agents in order to ensure improved productivity among about 500 smallholder farmers engaged in production of fresh vegetables through contract farming.

The cooperatives are producing quality produce being sold on International markets mostly UK.

#### **Materials Produced**

<b>Activity</b>	<b>No. of Copies</b>	<b>Cost (US\$)</b>
Zambian Export Producers Handbook-	75	8,000

#### **2.3.5 Cooperative League of the United States of America**

CLUSA principally provides both technical and business information to farmers through regular training sessions and provision of hands on training materials. The training covers aspects of group formation, democratic governance, depot management, agronomy and production management and marketing. The technical messages disseminated during training is based on a package of negotiable and non-negotiable practices recommended for farmers as conservation farming and delivered to them as training materials based on a Training Manual. This is an effective tool for field staff, facilitators and farmers leaders.

#### **3.0 Activities of the Coming Quarter**

The activities in the coming quarter will include finalization of the approved activities. There is therefore urgent need for SAFGRAD to release the balance of funds of US\$8,000.00. In addition, some beneficiary institutions have already advanced the programme from other sources of money. These need to reimburse such sources of money.

#### **4.0 Conclusions**

Following the signing of an MOU in 2002, SFAP prepared and signed Agreements with beneficiary institutions. The main activity during the review period has been monitoring implementation of the approved activities. The main M& E activity has been asking the beneficiary institutions to submit review reports.

Implementation was proceeded at various paces. Some beneficiaries were continuing with implementation by the close of the period under review. This somewhat delayed the production of this report.

## **Part II: The Production Support and Financial Services Program in Uganda**

### **THE UGANDA SHELLER IMPLEMENTATION PROGRAM**



Submitted by USAID IDEA Project  
P.O. Box 7856  
Kampala

December 2002

## **Initial Background documentation requesting support from SAFGRAD**

The following represents the IDEA project summary of the activities proposed for SAFGRAD support.

### **Grain Processing Hubs to Strengthen Producer Organizations in Support of Rural Access to Markets**

#### **Background**

Over the past 5 years, the USAID IDEA project has been promoting improved efficiency of production, particularly for small-holder producers of maize and beans. This promotion has been particularly successful with regards to maize, which has been responsive to management (low or no cost inputs) as well as to fertilizers (higher external inputs). Improved seeds in the form of disease resistant open pollinated materials as well as high yielding hybrids have contributed much to the success of this crop.

The USAID IDEA project is a 9-year effort, which has focused essentially on productivity enhancement activities, from research through regional marketing to include small holder growers as the principal target group. The IDEA project has as its goal the raising of incomes at the farmer level. Any activity through the whole commodity system which adds value at the farm level contributes to this goal. The IDEA project has worked at three principal activities – Technology transfer, Input Supply and Marketing. It is only where these three activities overlap that enhanced rural incomes result.

The program has been highly successful by using some innovative interventions. Rather than focus on a single technology package, the project has presented a range of practices that can be adopted in sequence. This has enabled farmers to use what they see as immediately of benefit and are able to afford. Utilizing available extension workers rather than import an employed staff has been of significant benefit. Extension workers have for the first time been able to demonstrate something that really works. This has given them a renewed sense of professional pride. Additionally, the level of responsibility given to the district coordinators has moved them to develop really suitable programs for their farming clients.

The technology transfer mechanism in combination with a real response to demand for inputs has led to the emergence of a growing group of commercially orientated farmers. This is an essential development. Uganda, and other agricultural based economies in Africa must develop a commercial market reputation. The only sustainable way of doing this is to intensify and commercialize the agricultural base.

Commercial farmers have begun to aggregate through real producer lead associations. Their principal aim is to benefit themselves through improved input purchases as well as to generate better opportunities for output marketing. In this way they are able to ensure a sustained production system.

A past USAID Uganda supported the Post Harvest Handling Project (PHHP) developed appropriate equipment and stimulated local capacity to produce post-harvest machinery. However, no support was provided for **commercializing post-harvest technology**. In order to fully utilize the post-harvest project outputs, stimulate the private sector suppliers and get the machinery into the hands of the producer, some additional support mechanism is required.

Any support to the output side of the production – marketing chain - would help in ensuring the financial stability of the producer groups.

### **Strengthening Producer Organization with Production Support Service**

Farmers who have grouped themselves into producer organizations have shown their ability to move from subsistence to commercial production and are now accessing credit from one of two banks recently active in the agricultural sector. The loan program is in the third or fourth cycle and repayments have been excellent. Increased commercialization of these farmers (with farm size averaging 3-10 ha), has stimulated interest in group procurement of inputs, group accessing of credit, as well as group marketing of output. However, as volume increases at the group level, marketing is constrained both by volume of product and by the capacity for processing. Direct market access requires value-added and uniform quality product on a timely basis. There is therefore need for enhanced capacity to process the product at the farm level.

The groups formed to date are typically 40 or 50 farmers with a range 30- 160. Although the average area under production varies from region to region, the average size is 4 hectares, cropping twice a year. Aside from technical assistance from the IDEA project, the groups currently do not receive direct financial or material assistance from any donor. The Groups are self-financed and their elected volunteers provide direction within the groups. Typical per group output averages 1000 mt. grain per season, which if processed within 6 weeks can avoid substantial post harvest losses, and enable growers to service loans and carry out production preparation in time for the following season.

Being able to handle the grain centrally through a processing hub puts small-scale growers "on the map." For the first time, these growers have access to the end user, or very close to the end user. Price received by the farmer increases and rural incomes are enhanced. Addressing the needs at the process end forms the final link in the already established production, input supply and marketing chain.

### **The Approach**

- **Producer group formation** under the IDEA strategy has been unique particularly because there are literally thousands of associations formed with the sole objective of accessing donor funds. There has been little or no "grass roots" support for the association for mutual benefit. For the first time since the collapse of the cooperative movement, farmers are seeing the need of associating and are doing so in order to benefit themselves without the promise of financial support or otherwise. The approach - offering income-enhancing technologies to the broad community and then to "watch" groups form has been shown to be a better intervention strategy than to "promote" group formation at the outset.
- The approach to **enhancing efficiencies of production** is unique in that it addresses the needs of what would usually be called an elite group of farmers. Traditionally, developmental assistance would be targeted at the poorest of the poor- those having no resources at all, and being unable to respond immediately in any commercial way. This may lead to few tangible results and no upward spiral in terms of economic growth. The IDEA approach is to address the concerns of the middle of the target group – early adopters who can be effectively used as farmer trainers and motivators.

If their peers see these as successful, then a real multiplier effect can be achieved. The middle range farmer is also able to very early on establish commercial off take. This is important in that it develops a commercial core in terms of market. The small scale producer not yet at the level of sustained market orientation has a market on which he can depend. This further encourages his development and more farmers are pulled into the market economy. Even the subsistence grower benefits by being able to place his variable surplus onto an established market chain.

Grant support following a period of self-determined association development would tend to strengthen groups. Farming groups would be deemed to have "made it" if they could sustain market penetration on behalf of their membership with financial benefits. Such groups would serve as excellent role models for newly emerging groups. Of particular importance is support to post harvest handling and processing to market requirements.

Productivity enhancement is clear – farmers who are growing more efficiently would now be marketing as efficiently as possible. Employment opportunities are clearly increased as farming takes on a commercial outlook. Each hectare generates 0.2 full time jobs at the field level and 10% of that at the processing and input supply level. These new opportunities are created at a fraction of the cost in traditional industry and present the only opportunity for employment under Ugandan (and most other African). In this way additional support has a unique opportunity assisting an intervention that has changed totally the way people think about agriculture and opened the way for significantly improved incomes for rural people.

#### **Specific Grant Support mechanism:**

The IDEA project has seen the rapid development of these groups. Currently they are at the stage where market penetration is vital for their successful operation. The IDEA project does not have a funding mechanism to support the expansion of successful group processing hubs. Support is required for at least 4 groups to complete the production, marketing linkage. This intervention will enable a complete intervention package.

Following an indication from SAFGRAD that support was possible for this activity, the following list of criteria was drawn up by the project for inclusion of rural marketing groups (RAMS centers) into the activity.

The following selection criteria was used in group selection

Selection Criteria	Essential	Desirable
Group registered at least at the Local Council Level	•	
Membership Lists Drawn up and Current	•	
Records of Financial Transactions available in at least a basic form	•	
Prior exposure to the use of mechanical shellers		•
Confirmed interest on the part of members to pay for the service	•	
Willingness to Assign and pay for permanent sheller supervisor	•	
Initial producer base per sheller to equal or exceed 200 acres		•
Number of member s per sheller to equal or exceed 40		•
Established links with exporter already in place		•

Following the assessment of criteria for group inclusion, the following was sent as a tender request to suppliers of maize shellers which would be suitable for small group activity.

26<sup>th</sup> March 2002

**Invitation to tender: Maize grain shellers 3/02**

The Agribusiness Development Center Kampala is seeking bids from qualified suppliers to supply the following:

- 12 (twelve) x Maize grain shellers capable of handling maize cobs, which have had their sheath, removed.
- Capacity 1.5-2.0 mt grain per Hour
- Independently powered (diesel or petrol engines)
- Capable of being mobile and not requiring fixed floor mounts.
- Spares for both power supply and sheller for the first year of operation. Assume two periods of operation for two months each. – working 6 days per week 6 hours per day. The equipment will be placed in 4 regions in Uganda – likely Kasese, Kiboga-Mubende, Kapchorwa and Hoima. Three or four units will be placed with each of these areas. The supplier should include in the bid price for each unit, the cost of a one day training on site in machine use and maintenance as well as the cost of 2 routine maintenance visits to each of the 4 sites during the first year of operation. Spares will be maintained by the supplier for these visits and supplied as part of the initial bid price.

The Procurement Manager at the Agribusiness Development Center must receive bids at 18 Prince Charles Drive Kololo Kampala by 1700 Hrs Friday 5<sup>th</sup> April 2002.

Following the tender process, only one firm was found to be qualified to produce and support maize grain shellers in Kampala. This was a company that had been visited previously by the SAFGRAD representatives. An appropriate purchase order (ADC PO ref 022/2002) was made to JBT Engineering on 23<sup>rd</sup> April 2002 for the fabrication, supply and training in the use of 12 maize shellers. A Bank account was opened styled SAFGRAD – IDEA Project a/c # 4220271 at Barclays Bank Kampala. It was into this account that the funds (\$25 600 ex SFAGRAD)) were transferred and the account managed. Funds were transferred into the account on 21<sup>st</sup> May 2002 and closed out on 26<sup>th</sup> August 2002. (see Annex I) The total number of shellers procured was 13 after evaluating exchange rate gains and performance on the initial procurement. 6 Groups were selected as represented in the following distribution.

## GROUP SHELLER DISTRIBUTION – 2002



*Source: IDEA Project and FEWS NET, December 20*

### Results of the Intervention:

The ADC did not dictate the mechanism that was to be adopted by each RAMS operation. The groups were told that the charging mechanism should be competitive with hand shelling in order to attract sufficient throughput, should ensure that all costs are covered and that there remains sufficient funding to cover repairs and maintenance. Depreciation was explained to them. The supplier, as per the ADC contract agreement, trained the groups in proper maintenance of the equipment. Monthly reports were received from the groups and the results are tabulated in table 1 below. All the groups have utilized the machinery except for Mubuku Irrigation scheme, which will begin in January 2003. The only group that was able to utilize the shellers for 2 seasons was Kiboga. It is of interest that the number of farmer benefiting in Kiboga increased by 56% over the 1<sup>st</sup> season activity.

**Table 1 Summary Activity as reported by Producer groups**

Location	Shellers	Bags shelled	Number of farmers	Shelling charge per bag	Income season b	Cost incurred	Balance
Gukwatamanzi	2	4,322	58	755	3,259,550	1,313,360	1,946,190
Bugiri	2	1,383	12	200	276,600	-	276,600
Kiboga season 1	3	1,836	82	800	1,468,800	1,156,680	312,120
Kiboga season 2	3	2,066	128	400	826,400	378,900	447,500
Hoima	2	306	5	1,000	306,000	214,900	91,100
Mubende	2	461	11	1,000	461,000	271,000	190,000
Mubuku	2	-	-	-	-	-	-
<b>Totals</b>		<b>10,374</b>	<b>296</b>	<b>4,155</b>	<b>6,598,350</b>	<b>3,334,840</b>	<b>3,263,510</b>

The cost of shelling a 100kg bag of maize grain by hand using sticks to beat the bag of unshelled maize is generally 1000 Ug sh. Charges therefore were all less than the competing rate over the first season. Some groups chose to provide and charge for a full service while others chose to charge a partial rate and make the client pay for fuel, oil and labour in some instances. These differing costings and charge out situations resulted in differing margins and costs as outlined in table 2 below.

**Table 2. Analysis of reports by producer group**

Output Analysis	Kg's per farmer	Cost per kg to association	Charge per kg	Margin per kg
Gukwatamanzi	7,452	3.04	7.55	4.51
Bugiri	11,525	-	2.00	2.00
Kiboga season 1	2,239	6.30	8.00	1.70
Kiboga season 2	1,614	1.83	4.00	2.17
Hoima	6,120	7.02	10.00	2.98
Mubende	4,191	5.88	10.00	4.12
Mubuku	-	-	-	-
<b>Average</b>	<b>4,734</b>	<b>3.44</b>	<b>5.94</b>	<b>2.50</b>

Gukwatamanzi group from Masindi district obtained the greatest margin per kg processed. They processed more product than any other group (432.2mt) and would therefore have been operating at closer to the installed capacity of the equipment (estimate 60% over the time utilized). Their charge out rate was attractive to the clients, being 75% of the traditional cost by hand.

The lowest margins were obtained by the Kiboga group during season 1. This was due to the high cost of transport incurred by the group in moving the sheller from farmer to farmer. The distances involved are great and the costs were not effectively covered by the charge out rate. This was rectified during season 2, where farmers were asked to arrange and pay for the transport of the machine to their farms. This brought down the cost to the association from 6.3/= per kg to 1.83/= per kg.

Using the average from all groups, but bearing in mind that these performances will be improved with better management based on first season experience, an analysis of financial performance was carried out to determine the viability of a commercial sheller operation. The results are represented in tables 3 and 4 below.

**Table 3. Financial Analysis of performance**

Financial Analysis	
Purchase cost	3,200,000
Amortized over 4 years @ 18%	-1,189,564
Total payment	-4,758,255
Maintenance/kg *	0.69
Depreciation SL 4 years (pa)	800,000
Annual cost loan Rep + Dep	-1,989,564

\* Maintenance calculated at 20% of operating costs

**Table 4. Financial performance vs Throughput**

Throughput mt per annum	Maintenance charge	Operating costs	L/Repay	Total cash out	Revenue	Surplus/Defecit	Less Dep
100	68,783	343,917	1,189,564	1,602,264	593,571	-1,008,692	-1,808,692
200	137,567	687,833	1,189,564	2,014,963	1,187,143	-827,821	-1,627,821
300	206,350	1,031,750	1,189,564	2,427,663	1,780,714	-646,949	-1,446,949
400	275,133	1,375,666	1,189,564	2,840,363	2,374,286	-466,077	-1,266,077
500	343,917	1,719,583	1,189,564	3,253,063	2,967,857	-285,206	-1,085,206
600	412,700	2,063,499	1,189,564	3,665,763	3,561,429	-104,334	-904,334
700	481,483	2,407,416	1,189,564	4,078,463	4,155,000	76,537	-723,463
800	550,266	2,751,332	1,189,564	4,491,163	4,748,571	257,409	-542,591
900	619,050	3,095,249	1,189,564	4,903,862	5,342,143	438,280	-361,720
1000	687,833	3,439,165	1,189,564	5,316,562	5,935,714	619,152	-180,848
1100	756,616	3,783,082	1,189,564	5,729,262	6,529,286	800,024	24
1200	825,400	4,126,998	1,189,564	6,141,962	7,122,857	980,895	180,895

The assumption that a sheller operation for the group will enhance quality, timeliness and overall response in the market was tested. A commercial loan was assumed to be over 4 years at an annual rate of 18%. The amortization would have to be covered, as would maintenance and the depreciation charge on the equipment. From the above it is clear that a commercial sheller loan over the period suggested, would be viable (on a cash flow basis only) at an annual throughput of 700mt. This assumes 2 seasons of production and represents 350 mt per season. This is equivalent to 3500 x 100 kg bags. Only Gukwatamanzi achieved this output rate. In the first year of operation. In order to fully cover depreciation, a throughput of 1200mt per annum would be required. This approaches 95% of installed capacity. The following table outlines the possible performance levels of each machine:

**Table 5. Installed capacity**

Assuming 7 week shelling window	Mt per day over 2 seasons	% of installed capacity
100	1.19	8%
200	2.38	16%
300	3.57	24%
400	4.76	32%
500	5.95	40%
600	7.14	48%
700	8.33	56%
*800	9.52	63%
900	10.71	71%
1000	11.90	79%
1100	13.10	87%
1200	14.29	95%
1300	15.48	103%
1400	16.67	111%
1500	17.86	119%

From the work carried out by the SAFGRAD grant activity, it is clear that small-scale maize shellers locally fabricated and utilized by well-coordinated producer groups are an effective tool for post harvest handling and marketing. The machinery is a vital first step in establishing viable rural processing hubs. The groups are able to respond effectively to market demand in terms of quality and quantity. Future work based on the SAFGRAD initiative will develop the processing hubs, with the introduction of dryers and cleaning equipment.

This information will continue to be refined and recommendations will be made to all groups involved as to the most cost effective and profitable ways to operate the machines to maximize benefits to the producers and to the groups as a whole. Additionally, the information will be transmitted to the financial institutions in order to develop a commercial finance mechanism for expanded group access to these machines.

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