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# **Livelihoods and Enterprises for Agricultural Development (LEAD)**

**Final Report:**

**Financing Analysis for LEAD's Targeted Value Chains: Coffee  
March 2009**

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### **Financial Value Chain Analysis for Coffee**

#### **Introduction:**

From 9 March to 23 March 2009 INSPIRED Associates (U) Ltd. (INSPIRED), conducted financial value chain field research and analysis on Uganda's coffee production and marketing for USAID's Livelihoods and Enterprises for Agricultural Development (LEAD) Project. Data was collected from input suppliers, producers, primary processors, transporters and exporters of coffee at field level for both Arabica and Robusta coffee varieties in Bushenyi, Ibanda, Iganga, Kapchorwa, Kamuli, Kasese, Masaka, Mityana, Mukono and Mubende. The prices and costs are reported by the actors themselves and are accurate for the dates that the data were collected. These value chains from the level of primary processing through to export are characterized by extremely high levels of competition. Exporters all felt that the supply chain for the coffee they exported was extremely efficient with most traders earning small margins for the service they provided. INSPIRED concurs with this perspective.

In terms of organization, this document begins with a broad overview of the coffee industry. This is followed by the specific value chain analyses from the regions sampled by INSPIRED with recommendations pertinent to each region, as appropriate. Following the location-by-location discussion, there is a summary of all recommendations. Finally, data collected from exporters is presented as an annex to this document.

#### **Overview of the Coffee Industry:**

Coffee is Uganda's principal export with a total value of USD 388M in 2007-2008 representing the consolidated output of 1.3 million smallholder households<sup>1</sup>. The vast majority of the crop is exported and it is reasonable to say that there is effectively no domestic demand for Uganda's coffee versus the export demand. Uganda's coffee largely is exported to Europe where the Robusta varieties are preferred and are sought after for blending in espresso formulations. Arabica varieties are beginning to be differentiated and have both sophisticated and consumer buyers. An interesting secondary market for Uganda's coffee is Sudan.

Coffee yields are quite low as a result of poor farming practices and low input use. Uganda's coffee is also negatively impacted by coffee wilt disease, stem boring insects and a poor research regiment to address these and similar problems. There is a growing movement toward the promotion of organic coffees in Uganda. Most agriculture in general is considered organic in Uganda by default as input use is so low. When most exporters were asked candidly about the organic market, all agreed that organic *was not* the best option for Uganda. They all contended that organic was the best you could do in this situation where input use was low and the problem of supplying inputs was seemingly insolvable. The best solution for Uganda, all agreed, would

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<sup>1</sup> Uganda 2008, *The Case for Coffee*, Café Africa, p. 3.



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be to increase yields with fertilizers and proper picking practices and thereby capture greater revenue from an ongoing seller's market for Uganda's conventional coffees.

Beyond the low output from coffee farmers, other levels of the value chain such as primary processors, graders and exporters also universally report either running under capacity (in most cases) or wanting to add capacity but lack the throughput to justify it (in a few cases).

The value chain for coffee itself might better be described as a "value web" as linear relationships of who buys what from whom, are not easily qualified. INSPIRED struggled with diagramming the value chain for coffee but ultimately opted only to describe it as the relationships are too convoluted. Thus, the relationships are described below.

### **Input Supply:**

Input suppliers purchase inputs both from Kampala dealers and Kenyan input exporters. Terms are predominately cash though some supplier based credit (mostly between Kampala suppliers and trusted stockists takes place). Suppliers sell inputs in cash to farmers and rural stockists. Some have strong relationships on the basis of post dated checks to sell to NAADS or other research/demonstration type actors. Some input suppliers have their own tree nurseries. Those who do not have their own nurseries either buy from those who do or refrain from dealing in seedlings.

### **Production:**

Producers sell their coffee in literally dozens of different ways. These include:

- Selling un-harvested crop against cash advances from middlemen;
- Selling un-harvested crop directly to exporters who pay a fair price and harvest the red cherry;
- Selling red cherry at time of harvest to middlemen,
- Selling red cherry at time of harvest to exporters' buying stations;
- Selling red cherry at time of harvest to wet processors;
- Sun-drying and selling dried red cherry (kiboko) to middlemen at farm-gate;
- Sun-drying and selling kiboko to middlemen in towns;
- Sun-drying and selling kiboko exporter buying stations;
- Sun-drying and selling kiboko to hulling operations;
- Sun-drying and hulling kiboko to fair average quality (FAQ) for sale to middlemen;
- Sun-drying and hulling kiboko to FAQ for sale to exporter buying stations;
- Sun-drying and hulling kiboko to FAQ for direct sale to Kampala exporters;
- Sun-drying and bulking kiboko with other farmers for sale to middlemen;
- Sun-drying and bulking kiboko with other farmers for sale to exporter buying stations;
- Sun-drying, bulking, hulling kiboko to FAQ with other farmers for sale to middlemen;



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- Sun-drying, bulking, hulling kiboko to FAQ with other farmers for sale to exporter buying stations;
- Sun-drying, bulking, hulling kiboko to FAQ with other farmers for direct sale to Kampala exporters; and
- Sun-drying, bulking, hulling kiboko to FAQ with other farmers for grading and sale to international buyers.

In short, the coffee, in whatever form, is for sale and has a competitive market. Even the husks left as a byproduct of the hulling process have a market, and again, that market is competitive.

### **Processing:**

Dry processing (hulling kiboko to FAQ) is everywhere throughout rural Uganda and normally operating at under capacity. Most processors work on a cash commission basis where they collect a fee from the client on the basis of the FAQ outturn. Some keep the coffee husks for sale to industrial processes (cement factories); some pay the client for the coffee husks for sale to industrial processes; and some return the husks to the clients. Some processors actually buy the kiboko themselves and either transport the FAQ coffee to Kampala or sell it to middlemen.

Wet processing (washing and drying red cherry to parchment) is gaining popularity both through small scale washing machines and large scale pulping stations. The small machines tend to be privately held by farmers or by small producer organizations. Larger scale pulping stations are owned by larger farmers' organizations and more recently by exporters. The red cherry is normally washed on commission. Some exporters now purchase the red cherry at a fair price and pulp it to parchment. Location for wet processing is critical as there is only a short time after picking that red cherry remains viable for processing. Those pulping stations that are far from high concentrations of farmers fail to gather adequate throughput volumes.

Dry and wet rural processing both tend to run under capacity. Exporters also complain that processing often results in losses of quality and coffee itself as the machines are poorly maintained<sup>2</sup>.

Grading facilities that sort coffee by screen size, density and color are common in Kampala but not elsewhere in Uganda. According to exporters and traders, the grading capacity is twice the size of the throughput given that many coffee exporters went out of business in 2003-2004. Grading is either done by the exporter or it is done by traders (middlemen again) who consolidate specific screen sized graded coffee for filling out shortfalls in orders for exporters. Grading is normally handled on a commission basis. Most exporters saw little reason to move grading to rural Uganda as all of the coffee, once graded, would need to be transported to Kampala anyway and the requirements of maintaining sophisticated machinery are better served in the capital city.

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<sup>2</sup> While this was a common opinion, no one was really sure of the degree to which poor primary processing resulted in losses.



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### **Middlemen:**

Middlemen are everywhere in the coffee value chain. They buy and sell all qualities and all quantities of coffee and deal in coffee at all stages of transformation from the time it flowers to the moment it is exported. They sometimes provide credit and they sometimes provide inputs. They are both large and small. Some are *legitimate*, registered businesses that pay taxes, access commercial credit, own assets, etc.; some are devious characters operating barely legal operations on the periphery of the industry.

The value of middlemen's role is not well understood. Certainly, Ugandan farmers, according to the major exporters, receive a higher percentage of the FOB price than farmers anywhere else in Africa with the exception of fair traded, boutique coffees. It is almost entirely the open, free market approach to the coffee sector in Uganda that both enables the middlemen to fight vigorously for coffee and thus deliver a higher price to the farmers. Nonetheless, this extremely competitive, weakly regulated value chain which enables all of these middlemen to compete also creates strong disincentives for building long term trust relationships that can enable credit products that would increase productivity.

In other coffee producing countries, farmers' organizations, exporters and financial institutions are able to provide credit in cash or in kind for inputs, labor and trade finance. Normally, these credit transactions are settled against coffee deliveries and in some cases, where the producers are well capitalized, settled in cash payments. This is virtually impossible in Uganda where, because first, farmers are not capitalized (and sometimes are negatively capitalized due to their debts) and thus cannot borrow and repay in cash; and second, because of the weakly regulated buying, farmers can and do sell to any number of middlemen (not just those who lend them money) and thus easily avoid reimbursing credit in coffee deliveries. The net result of this is that while Uganda's farmers get the highest percentage of the FOB price, they get that price on the lowest volumes of coffee because there is no credit for inputs.

### **Global Coffee Demand:**

In light of the downturn in commodity markets and the global financial crisis, a legitimate concern for LEAD and anyone else engaging in coffee value chain financing, is whether or not the export market will endure. This is no small question given that there is no domestic demand for coffee.

Prior to the global crisis, coffee demand outstripped coffee supply by a significant margin. This was true in Arabic Coffees but more so in Robusta varieties<sup>3</sup>. Coffee is often regarded as a Giffen Good; that is that when demand should fall it may be unaffected or even increase<sup>4</sup>.

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<sup>3</sup> Author's discussion with EAFCA in 2008.

<sup>4</sup> Giffen Goods defy economic behavior because they are either essential or are luxuries that are relatively high priorities compared to other goods. Someone might forego a new BMW but is unlikely to pass on their morning coffee.



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Uganda's stock and trade is basically high quality Robusta that is essential for blending with espresso for the European market. All exporters when interviewed expressed two sentiments. The first was that they were sold forward well into 2009 (therefore their orders were secure). Secondly, while coffee prices might soften, as a result of overall depressed demand, the demand for Uganda's coffee is unlikely to fall away because it is a blending commodity and an essential coffee for large numbers of consumers.

Taking the undersupply in the global market and the nature of Uganda's exports together, it is still reasonable to expect that coffee will continue to find its export market though at lower premiums. Further, keeping in mind that transport costs are also depressed this is likely to have an offsetting effect. Though coffee prices may decrease, transport costs are also decreasing, and thus make the percentage of the coffee price that stays in Uganda higher.



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### Financial Value Chain Methodology:

INSPIRED’s methodology is to take the perspective of a financial institution and review the costs, revenues, value added, margin and timing at each transaction (buying-selling) point in the value chain. Critical analysis is conducted whereby INSPIRED reviews the cash flow data; considers qualitatively how the value chain and its actors behave; and identifies financing and operational risks from the financial institutions’ perspective. Based on the profitability of each transaction point and on the nature of the identified risks, INSPIRED then recommends financial products and/or financing strategies to service the qualified opportunities. Not all transaction points in the value chain will qualify for financing but by financing those that are immediately feasible, the entire chain will begin to function better (for example, if input suppliers supply more inputs, production and productivity will rise, increasing farmer income, processor income and exporter income; alternatively if exporters can demand more of a given commodity through accessing additional financing, higher export demand will encourage more transport, production and input supply).

### Financial Value Chains:

The following value chains are presented alphabetically by location. There is a summary of recommendation at the end of this chapter.

## BUGIRI

### Input Supply:

Margins for Coffee Input Supply - BUGIRI											
Key Inputs Unit Basis	Selling		Transport		Overhead		Cost Price per Unit	Margin per Unit	Return/Season	Period (months)	Annual Return
	Price per Unit	Cost per Unit	per Unit	Cost per Unit	per Unit	per Unit					
Fertilizer (NPK)	125,000	90,000	1,500	40	91,540	33,460		37%	6	73%	
Fertilizer (Urea)	125,000	90,000	1,500	40	91,540	33,460		37%	6	73%	
Fertilizer (CAN)	125,000	90,000	1,500	40	91,540	33,460		37%	6	73%	
Pyrenex	25,000	22,000	30	62	22,092	2,908		13%	6	26%	
Macophil	140,000	125,000	30	354	125,384	14,616		12%	6	23%	
Thionex	20,000	16,000	30	45	16,075	3,925		24%	6	49%	
Key Inputs Total Basis Per Season and Annualized											
	Quantity	Sales Revenue	Wholesale	Transport	Overhead	Total Cost	Total Margin	Return	Period (months)	Annual Return	
			Costs	Costs	Costs	Price					
Fertilizer (NPK)	10	1,250,000	900,000	15,000	396	915,396	334,604	37%	6	73%	
Fertilizer (Urea)	400	50,000,000	36,000,000	600,000	15,846	36,615,846	13,384,154	37%	6	73%	
Fertilizer (CAN)	10	1,250,000	900,000	15,000	396	915,396	334,604	37%	6	73%	
Pyrenex	960	24,000,000	21,120,000	28,800	59,882	21,208,682	2,791,318	13%	6	26%	
Macophil	2,000	280,000,000	250,000,000	60,000	708,036	250,768,036	29,231,964	12%	6	23%	
Thionex	1,000	20,000,000	16,000,000	30,000	45,388	16,075,388	3,924,612	24%	6	49%	
<b>TOTALS</b>		<b>376,500,000</b>	<b>324,920,000</b>	<b>748,800</b>	<b>829,946</b>	<b>326,498,746</b>	<b>50,001,254</b>	<b>15%</b>	<b>6</b>	<b>31%</b>	

In Bugiri, the Input Supplier interviewed was very dynamic with multiple operations in several places though the shop in Bugiri itself was only a small revenue center. The input dealer



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procured inputs directly from Kenya and China and thus was able to offer better prices while enjoying reasonable profits in the region of UGX 10M per month. Unfortunately, with respect to coffee, input sales were very meager as demand from coffee operations was negligible.

The input supplier borrows from commercial sources for importing inventory. INSPIRED does not recommend any further financing for this and similar input suppliers as it is not necessary and will have no impact on smallholder coffee production and productivity.

### Production:

Production in Bugiri was subsistence based. The average coffee garden was about two acres ranging up to a maximum of five acres. Input use was basically zero. Even the use of tarpaulins for drying was rare. The reader will notice a cost for insecticide which is actually

used to protect the coffee pickers from biting insects at the time of harvesting. Significant costs were invested in labor for weeding, mulching, etc. which was considered in short supply and expensive. As with other subsistence coffee production systems observed, returns were quite good but only relative to the small investments made. The principal buyers are middlemen who purchase the coffee even if it is wet (red cherry phase) and sun-dry the coffee in the local trading center. Problems faced by the farmers included twig borer, labor shortages, transport costs and thieves stealing coffee off the trees at night.

There is no credit available but the level of local commercialization does not support the notion that credit would be useful. Farmers themselves remarked that what they really required was training in coffee production. INSPIRED does not recommend any financing. As elsewhere, given the seasonal cash flows, a savings product would assist these farming households to manage their own risks.

Coffee Production BUGIRI		
	1 acre	5 acres
<b>Land Cultivated</b>		
Yield (kg)	884	4,420
Price Per kg	1,000	1,000
<b>Costs Per Acre</b>		
<b>Inputs</b>		
Ambush	12,000	60,000
Mulch	60,000	300,000
<b>Sub Total</b>	<b>(72,000)</b>	<b>(360,000)</b>
<b>Labor</b>		
Insecticide Application	2,000	10,000
Weeding	50,000	250,000
Pruning	35,000	175,000
Mulching	40,000	200,000
Harvesting	145,455	727,273
Bagging	11,050	55,250
Transport to Buyer	26,520	132,600
<b>Sub Total</b>	<b>(310,025)</b>	<b>(1,550,123)</b>
<b>Capital Expense</b>		
Tarpulin	20,000	100,000
Bags	8,840	44,200
<b>Sub Total</b>	<b>(28,840)</b>	<b>(144,200)</b>
<b>Total Costs</b>	<b>(410,865)</b>	<b>(2,054,323)</b>
<b>Revenue per Acre</b>	<b>884,000</b>	<b>4,420,000</b>
Margin	473,135	2,365,677
Return (per season)	115%	115%
Period Months	6	6
Annualized Return	230%	230%

COFFEE Processing - BUGIRI		
	Per KG	Per Month
Coffee processed Per Month (kg)		36,000
Processing Charge/ Kg	70	
<b>Revenues</b>		
Total Revenue	<b>70</b>	<b>2,520,000</b>
<b>Costs</b>		
Labor	6	216,000
Taxes	12	421,200
Depreciation/Maintenance	3	115,200
Utilities	15	540,000
<b>Total Cost Price</b>	<b>(36)</b>	<b>(1,292,400)</b>
<b>Total Margin</b>	<b>34</b>	<b>1,227,600</b>
<b>Return per Month</b>		<b>95%</b>
<b>Annualized Return</b>		<b>1140%</b>



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### **Processing:**

The processor interviewed had multiple areas of operation beyond Bugiri. The Bugiri operation was small but profitable (as is common for this type of business throughout Uganda). The processor is patronized by middlemen who buy kiboko from farmers and process it to FAQ for sale to truck traders. This is a cash business and, as elsewhere, with a small investment of about UGX 5M for equipment the operations yield a monthly return of UGX 1.2M. Also, as elsewhere the processor complained that his machines are not running at capacity due to low volumes delivered. In fact, the processor was running at 25% of capacity. There is little need for financing.



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### **BUSHENYI**

Although not part of the communities included in the original Terms of Reference for this value chain study, INSPIRED's consultants were in Bushenyi on unrelated business for another client. Given that Bushenyi boasted one of the few functioning public warehouses in Uganda and given that the warehouse managed coffee, INSPIRED decided to spend a few hours to learn more about it for this value chain study. The following paragraphs are not in the same format of the rest of this document as this data collection was far less formal. What were observed and are handled in turn are warehouse receipts and fair trade export.

#### **Warehouse Receipts:**

Beginning in 2006 the Ministry of Trade Tourism and Industry with assistance from the Common Fund for Commodities and the UK based Natural Resource Institute (possibly with EU funding)<sup>5</sup> established a public warehouse based in Kabwohe to clean, bulk, store, receipt and sell coffee on behalf of 10 producer cooperatives<sup>6</sup>. When INSPIRED visited the Kabwohe location, the warehouse was not open and it was in obvious disrepair. The local affiliated coffee cooperative, Muhame Cooperative Society, explained that the warehouse functioned for only three seasons and made its last purchase on 3 August 2007. It was broadly considered a failure and Muhame attributed that failure to middlemen buying the coffee before it was delivered to the warehouse. The warehouse also never was in a position to provide cash for delivered coffee<sup>7</sup>. Although banks were meant to provide finance against coffee receipts (thus providing the liquidity for the warehouse to purchase coffee in cash) and both Stanbic Bank and Standard Chartered Bank were recruited to do so, these banks simply never engaged.

INSPIRED further learned that the warehouse was meant to be under the specific control of the Ankole Cooperative Union which negotiated fair trade forward contracts with European Fair Trade buyers on behalf of the 10 member cooperatives. On the topic of warehouse receipts, the Union's Operations Manager revealed that not only did farmers not receive cash against receipts; they also were misinformed to believe that temporal arbitrage (that is depositing coffee at harvest and selling after harvest when supplies were lower) always resulted in higher price and greater profits. In the last season of operation for the Kabwohe warehouse, farmers deposited coffee and the price went down. Not only did they lose money on their coffee sales, they also were faced with paying the costly collateral management fees (which they partially defaulted on). Completely demoralized, the farmers simply ceased to support the warehouse in Kabwohe.

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<sup>5</sup> NRI was contracted by the EU to develop the Uganda Commodity Exchange and the framework for regulation and supervision for public warehouses. It could not be established if the EU funded this activity but it seems likely.

<sup>6</sup> This activity is still often cited in meetings, literature (including the Prosperity for All Manifesto) as proof positive that the warehouse receipts mechanism is feasible and successful at raising producer incomes.

<sup>7</sup> INSPIRED speculates non-payment to farmers is probably the more significant reason why farmers did not deliver versus the middlemen theory.

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### **Fair Trade Export:**

Fortunately, the visit to the Ankole Union in Ishaka was very worthwhile from the perspective of this value chain study though the warehouse receipts story was clearly a sad disaster that had been widely misrepresented as a success story. The Ankole Union currently purchases FAQ coffee from 10 primary societies (eight in Bushenyi and two in Ntungamo) representing 5,000 farmers. The Union assembles the FAQ coffee by the truck load, transports it to Kampala and grades it. Coffee of screen size 15, about 60% of the FAQ total volume, is exported to European buyers for a fair trade premium of USD 0.10 per pound paid back directly to the producers. The remaining coffee (screen sizes 12 and 18) are also sold at a premium as graded FAQ, again with premiums paid to the producers. While the FAQ market was currently UGX 2,200 per KG at the time of interview, the Union was able to pay UGX 2,550 per KG.

The European fair trade buyers currently forward contract the Union to bulk, grade and export the coffee on their behalf. The Union delivered UGX 780M worth of contracts in the past 10 months and has contracted even greater values for the coming year. The buyers provide 60% of the contract value as down payment in US Dollars which the Union has used to purchase from the member societies in cash.

Currently all of the member societies are undergoing organic certification, funded with a grant from Rabo Bank, which will give them higher premiums for their coffee and will also provide the Union a comprehensive database on the production and productivity of each of the 5,000 member farmers.

While business is booming, liquidity is tight. 60% down payment is simply not enough to satisfy cash hungry smallholders given that second payments can take 60 days. Given that the entire trade is settled in US Dollar terms, this is an obvious opportunity to develop a structured trade facility with a Kampala based international bank. The sales are secured by a contract with reputable buyers; 60% of the cash is received in advance; Danida's Agricultural Loan Guarantee Company would almost certainly guarantee 50% of a loan on the balance; the facility would be dollar based leading to less than 1% effective financing costs over 60 days; and the Union is willing to assign the contract to the lender (i.e. the buyer would pay the Union through the lender and the lender would first be entitled to deduct its repayments). LEAD should definitely pursue this opportunity.



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### IBANDA

#### Input Supply:

Margins for Coffee Input Supply - Ibanda Town											
Key Inputs Unit Basis	Selling		Transport		Overhead		Cost Price per Unit	Margin per Unit	Return	Period (months)	Annual Return
	Price per Unit	Cost per Unit	Unit	Unit	Unit	Unit					
Mamba (1L)	30,000	23,000	100	100	1,500	1,500	24,600	5,400	22%	6	44%
Glyphosate (1L)	30,000	23,000	100	100	1,500	1,500	24,600	5,400	22%	6	44%
Dusban (kg)	20,000	15,500	100	100	1,000	1,000	16,600	3,400	20%	6	41%
Weedmaster (1L)	24,000	18,000	100	100	1,200	1,200	19,300	4,700	24%	6	49%

  

Business Return Per Season and Annualized											
Key Inputs Total Basis	Quantity	Sales Revenue	Wholesale		Transport Costs	Overhead Costs	Total Cost Price	Total Margin	Return	Period (months)	Annual Return
			Costs	Costs							
Mamba	500	15,000,000	11,500,000	50,000	750,000	12,300,000	2,700,000	22%	6	44%	
Glyphosate	600	18,000,000	13,800,000	60,000	900,000	14,760,000	3,240,000	22%	6	44%	
Dusban	250	5,000,000	3,875,000	25,000	250,000	4,150,000	850,000	20%	6	41%	
Weedmaster	300	7,200,000	5,400,000	30,000	360,000	5,790,000	1,410,000	24%	6	49%	
<b>TOTALS</b>		<b>45,200,000</b>	<b>34,575,000</b>	<b>165,000</b>	<b>2,260,000</b>	<b>37,000,000</b>	<b>8,200,000</b>	<b>22%</b>	<b>6</b>	<b>44%</b>	

Although there is a fair inputs business in Ibanda and in nearby Mbarara town, use of the major inputs by coffee farmers in Ibanda is rather limited. Farmers interviewed are not using fertilizers ostensibly because of high prices<sup>8</sup>. Other than the organic manure, the only purchased inputs used by coffee farmers in Ibanda are pesticides for weed control and crop protection. Thus INSPIRED’s analysis of this value chain transaction point was limited to the transaction in the inputs currently used by the coffee farmers. In future, as use of other inputs such as fertilizer increase, a re-appraisal of this value chain transaction level may be considered by LEAD. From the table above the input supplier interviewed is earning profit but the profit is not robust enough to recommend financing. Most input businesses make their real income on volumes of fertilizer which is seemingly not an option in Ibanda.

#### Production:

In Ibanda, farmer coffee fields are relatively small. The members of the producer group visited had gardens ranging from ½ and 2 acres. Farmers are showing eagerness to expand their coffee shambas as the availability of land is not a critical constraint in the area and also the opportunity to access free seedlings from one of the prominent processors is providing further impetus to expand operations. The farmers group records confirmed their eagerness toward

Coffee Production Ibanda-establishment	
<b>Land Cultivated</b>	<b>1 acre</b>
<b>Costs Per Acre</b>	
<b>Inputs</b>	
Seedlings	-
Glyphosate	(45,000)
Busban	(40,000)
Manure and transport	(160,000)
<b>Sub Total</b>	<b>(245,000)</b>
<b>Labor</b>	
Field preparation	(100,000)
Digging holes	(135,000)
Planting	(8,000)
Herbicide application	(4,000)
Pruning	(6,000)
Mulching	(140,000)
<b>Sub Total</b>	<b>(393,000)</b>
<b>Total Costs</b>	<b>(638,000)</b>

<sup>8</sup> “Ostensibly” because INPSIRED observed that the preferred alternative, organic manure, is equally expensive.



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expansion as the volumes sold indicated a positive growth trend over the past years.

In the case of new coffee field establishment, pictured in the table above, the costs are relatively high with no corresponding short-term cash inflows. Thus such establishment cannot support commercial financing for the smallholders but may only be accomplished through gradual small incremental expansion that can be managed by farmers' savings and/or use of family labor to reduce costs. Thus INSPIRED does not think there is any opportunity to develop a feasible financial product for this level of the value chain.

In case of the ongoing production activities, farmers pointed out their major problem to be accessibility of pesticides and post harvest handling materials. This value chain activity is highly liquid and profitable and should support commercial financing. However, given the high liquidity realized by the farmers at marketing, INSPIRED is of the opinion that developing appropriate savings products to enable farmers to acquire the inputs and meet other field activity

financing demands for the subsequent season is more ideal. There is no justifiable need to burden the farmers with credit since their capacity to save is well proven by the profitability in the analysis. As in the majority of the other cases, farmers lacked the basic skills in managing their production as a business, including cash flow management.

In addition, the farmers hold the opinion that establishing their own farmer-group-managed processing facility to enhance value added is highly feasible. However, given the low volumes currently produced by the farmers and the existing excess rural processing capacity, INSPIRED feels that pursuing such a strategy may not be feasible and if the farmers want to pursue this, it should rather be through savings rather than credit.

The majority of the farmers in Ibanda, through their farmer groups and depot committee, process their coffee and sell the FAQ coffee rather than selling kiboko. As the table shows, this adds substantial value to the farmers' production operations. Sales are made at the processing facility either to the processor in the case of Ankole Coffee Processors Ltd, or to the big traders with proceeds remitted to the farmers through their respective producer groups or depot committees.

Coffee Production Ibanda-established garden		
	1 acre	4 acres
<b>Land Cultivated</b>		
<b>Yield (kg)</b>	1,200	4,800
<b>Price Per kg</b>	2,200	2,200
<b>Costs</b>		
<b>Inputs</b>		
<b>Glyphosate</b>	(45,000)	(180,000)
<b>Manure</b>	(160,000)	(640,000)
<b>Dusban</b>	(40,000)	(160,000)
<b>Sub Total</b>	(245,000)	(980,000)
<b>Labor</b>		
Herbicide Application	(4,000)	(16,000)
Pruning	(6,000)	(24,000)
Mulching	(140,000)	(560,000)
Harvesting	(145,455)	(581,818)
Bagging	(6,000)	(24,000)
Hulling charges	(109,091)	(436,364)
Transport to processing facility	(6,000)	(24,000)
<b>Sub Total</b>	(410,545)	(1,642,182)
<b>Capital Expense</b>		
Tarpulin	(7,500)	(30,000)
Bags	(6,000)	(24,000)
<b>Sub Total</b>	(13,500)	(54,000)
<b>Total Costs</b>	(669,045)	(2,676,182)
<b>Revenue</b>	2,640,000	10,560,000
<b>Margin</b>	1,970,955	7,883,818
<b>Return (per season)</b>	295%	295%
<b>Period Months</b>	6	6
<b>Annualized Return</b>	589%	589%



## Livelihoods and Enterprises for Agricultural Development (LEAD)

This system, if nurtured, would provide opportunity for developing suitable financial products such as savings and structured finance facility for farmers<sup>9</sup>.

As recommended for other areas, savings products for health insurance, school fees and other social commitments would also be relevant for the producers in Ibanda and would assist them to stay the course of financing their production activities. Also, BDS training for producers can greatly enhance the financial planning and management capabilities of the farmers, which is critically important for the necessary commercialization of their ventures.

### Processing/Marketing:

While most processing is mainly by private enterprises which process on commission for the client, one of the leading processors is actually buying the FAQ processed at its facility. Those that process on commission offer limited opportunities for financing since their marginal needs for capital are very low.

Though the volumes handled and profit realized for commission processors are fairly attractive, the proprietors expressed that their main problem was poor quality kiboko delivered by farmers and traders for processing because it damaged their machinery. Though this problem is real and of utmost concern to the processors, its remedy really rests with dealing with the point from which the coffee originates; that is the farmers.

Commissioned Coffee Processing - Ibanda		
Kiboko coffee processed per month (kg)	840,000	
<b>Revenues</b>	<b>Per KG</b>	<b>Per Month</b>
Total Processing Revenue	100	84,000,000
<b>Costs</b>		
Labour	0.7	(600,000)
Depreciation/maintanance	30	(25,200,000)
Electricity	7.1	(2,000,000)
Taxes and license	1	(900,000)
Overhead costs	10	(8,400,000)
<b>Total costs</b>		(37,100,000)
<b>Total Margin</b>		46,900,000
<b>Return per Month</b>		126%
<b>Annualized Return</b>		1517%

In the case of processors who are buying the FAQ, very good volumes and profit levels are being realized. The facility visited is largely deriving its excellent performance on the goodwill of business it took over. That was the largest cooperative society in Ibanda with its excellent processing equipment and facilities in place. Further, the processor offers a cost-share for the transport costs from the farm to the factory and subsidizes the processing charges with the clear strategy of buying the outturn. This clearly attracts more coffee to his facility.

<sup>9</sup> For example, given that farmers are paid through a single marketing channel, a lender could extend credit to the farmer and recover through the buyer or processor.



## Livelihoods and Enterprises for Agricultural Development (LEAD)

Discussion with this processor identified two key problems that merit exploring the development of financial products. First, the level of working capital is inadequate to enable sufficient stocking during the peak marketing season and also to pay the farmers and traders immediately when their coffee is processed. Secondly, the processor heavily relies on hired transport for delivery of FAQ coffee to the Kampala-based buyer. This is undermining the efficiency of this vital actor in the value chain.

Though this processor does not sell the coffee on the basis of contract, its existing assets, if not encumbered, ought to provide adequate collateral for both trade finance and term finance for trucking facilities. If the buyer terms can be strengthened and the processor is able to sell on forward contract, INSPIRED would strongly encourage LEAD to assist the development of trade financing products.

<b>Coffee Processing and FAQ Purchase- Ibanda</b>		
Kiboko coffee processed per month (kg)	1,470,000	
FAQ Sold per month (kg)	823,200	
<b>Revenues</b>	<b>Per KG</b>	<b>Per Month</b>
Processing Revenue	50	73,500,000
FAQ Revenue	2,450	2,016,840,000
<b>Total Revenue</b>		<b>2,090,340,000</b>
<b>Costs</b>		
Cost of FAQ	2,200	(1,811,040,000)
Labor	0	(600,000)
Depreciation/maintanance	13	(18,375,000)
Transport from villages	7	10,500,000
Electricity	2	(3,000,000)
Taxes and license	1	(900,000)
Overhead costs	5	(7,350,000)
Bags	1	(493,920)
Transport to Kampala	70	(57,624,000)
<b>Total costs</b>		<b>(1,888,882,920)</b>
<b>Total Margin</b>		<b>201,457,080</b>
<b>Return per Month</b>		<b>11%</b>
<b>Annualized Return</b>		<b>128%</b>

Centenary Bank and/or Equity Bank in Ibanda could handle such financial products, including their effective monitoring. However, their skills at these branches would first require development to handle such high level financial products and may further require regular backup from their headquarters staff.



## Livelihoods and Enterprises for Agricultural Development (LEAD)

### IGANGA/KAMULI

#### Input Supply:

Margins for Coffee Input Supply - KAMULI									
Key Inputs Unit Basis	Selling		Overhead		Cost Price per Unit	Margin per Unit	Return/Season	Period (months)	Annual Return
	Price per Unit	Cost per Unit	Transport per Unit	Cost per Unit					
Fertilizer (Urea)	105,000	95,000	1,350	1,900	98,250	6,750	7%	6	14%
Endophil	10,000	7,500	27	150	7,677	2,323	30%	6	61%
Dudutox	2,500	2,000	27	40	2,067	433	21%	6	42%
Weedmaster	22,000	19,500	27	390	19,917	2,083	10%	6	21%
Agroset	21,000	18,000	27	360	18,387	2,613	14%	6	28%
Mamba	22,500	20,000	27	400	20,427	2,073	10%	6	20%
Dimethrate	1,500	1,300	27	26	1,353	147	11%	6	22%

  

Business Return Per Season and Annualized										
Key Inputs Total Basis	Quantity	Sales Revenue	Wholesale	Transport	Overhead	Total Cost	Total Margin	Return	Period (months)	Annual Return
			Costs	Costs	Costs	Price				
Fertilizer (Urea)	60	7,500,000	5,400,000	81,000	114,000	5,595,000	1,905,000	34%	6	68%
Endophil	50	500,000	375,000	1,350	7,500	383,850	116,150	30%	6	61%
Dudutox	240	600,000	480,000	6,480	9,600	496,080	103,920	21%	6	42%
Weedmaster	100	12,500,000	9,000,000	2,700	39,000	9,041,700	3,458,300	38%	6	76%
Agroset	50	1,250,000	1,100,000	1,350	18,000	1,119,350	130,650	12%	6	23%
Mamba	2,000	280,000,000	250,000,000	54,000	800,000	250,854,000	29,146,000	12%	6	23%
Dimethrate	200	4,000,000	3,200,000	5,400	5,200	3,210,600	789,400	25%	6	49%
<b>TOTALS</b>		<b>298,850,000</b>	<b>264,155,000</b>	<b>71,280</b>	<b>879,300</b>	<b>265,105,580</b>	<b>33,744,420</b>	<b>13%</b>	<b>6</b>	<b>25%</b>

The Input Supplier visited in Kamuli ran a very dynamic operation. The largest client for the business was NAADS and provided a reliable market. Given the demand from NAADS, the Input Supplier was able to receive post dated checks and leverage credit from Kampala based input dealers. From the perspective of the coffee value chain, this input supplier sold few inputs to farmers, who as elsewhere in this region are subsistence farmers, but rather sold to NAADS. This, of course, is still encouraging as NAADS' role is to promote greater commercialization of production and NAADS activities should promote demand for inputs among coffee farmers. Other than inputs on credit from dealers, this input supplier had no financing facilities. However, his experience with leveraging credit from suppliers is, in INSPIRED's opinion, the best way to finance trade. No further recommendation is made here.

#### Production-Kamuli:

Two production systems were observed in Kamuli. The first was a mixed production system whereby a large rice outgrower was using rice husks and large amounts of cow and chicken manure (from animal husbandry operations) for fertilizing and mulching his coffee. In spite of the fact that the farmer used no chemical inputs, the yields were nonetheless impressive due to the wise use of organic residual materials. Further, this farmer owned a hulling machine and a rice milling machine in Balawoli which he used to produce the rice husks for mulching and to mill his coffee and the coffee of others in the area to FAQ and thus capture a greater return. This farmers' coffee is sold directly to middlemen (and sometimes buyers from Ibero) from the processing facility.



## Livelihoods and Enterprises for Agricultural Development (LEAD)

This farming system has obvious benefits in its capacity to spread cost over various activities and while generating high revenues. Further, with multiple commercial farming activities risks are spread so that failure in any one activity will be mitigated by success in the other activities. In fact the farmer faced issues with coffee wilt disease. Another problem that this farmer faced was thieves stealing his coffee during the night. The farmer used no financing but, of course, is an ideal candidate for any commercial or MSME lender. Further, there were other farmers in the area who were trying to replicate his farming system. This clearly might provide an opportunity for the local lenders that include Centenary Bank, Finca MDI and Stanbic Bank. This financing can be provided based on the total household cash flows and requires no specialized product. Further, with mixed production systems and households owning fixed assets, lenders will have an easier time by lending against collateral and cash flows.

Coffee Production KAMULI BALAWOLI		
	1 acre	5 acres
<b>Land Cultivated</b>		
Yield (kg)	1,200	6,000
Price Per kg FAQ	2,300	2,300
<b>Costs Per Acre</b>		
<b>Labor</b>		
Processing Kiboko to FAQ	52,800	264,000
Transporting Rice Husks	60,000	300,000
Handling Rice Husks	16,000	80,000
Weeding	10,000	50,000
Pruning	10,000	50,000
Mulching	57,000	285,000
Harvesting	83,916	419,580
Bagging	15,000	75,000
Transport to Processor	24,000	120,000
<b>Sub Total</b>	<b>(328,716)</b>	<b>(1,643,580)</b>
<b>Capital Expense</b>		
Tarpulin	10,000	50,000
<b>Sub Total</b>	<b>(10,000)</b>	<b>(50,000)</b>
<b>Total Costs</b>	<b>(338,716)</b>	<b>(1,693,580)</b>
<b>Revenue per Acre</b>	<b>1,518,000</b>	<b>7,590,000</b>
Margin	1,179,284	5,896,420
Return (per season)	348%	348%
Period Months	6	6
Annualized Return	696%	696%

The second farming system observed in Kamuli was certified organic production with sales being made directly to Ibero buyers. The production system itself was low impact. Coffee trees are allowed to drop their seeds and reproduce. Labor is intensive with frequent weeding, and mulching and proper pruning and de-suckering is done using maize stocks which are residues from a mixed farming system.

Pests and diseases were cited as an ongoing problem and in spite of Ibero's commitment to pay premiums for the organic production, farmers noted that the price they received was no better than the normal price for conventional kiboko.

In the initial project with Ibero, farmers received tarpaulins and other assistance but now complained that these things were no longer provided. There was no formal financing for

Coffee Production KAMULI - KISOZI		
	1 acre	2 acres
<b>Land Cultivated</b>		
Yield (kg)	900	1,800
Price Per kg	1,100	1,100
<b>Costs Per Acre</b>		
<b>Labor</b>		
Weeding	160,000	320,000
Pruning	50,000	100,000
Mulching	130,000	260,000
Harvesting	60,000	120,000
<b>Sub Total</b>	<b>(400,000)</b>	<b>(800,000)</b>
<b>Capital Expense</b>		
Tarpulin	15,000	30,000
Bags	11,250	22,500
<b>Sub Total</b>	<b>(26,250)</b>	<b>(52,500)</b>
<b>Total Costs</b>	<b>(426,250)</b>	<b>(852,500)</b>
<b>Revenue per Acre</b>	<b>990,000</b>	<b>1,980,000</b>
Margin	563,750	1,127,500
Return (per season)	132%	132%
Period Months	6	6
Annualized Return	265%	265%



## Livelihoods and Enterprises for Agricultural Development (LEAD)

coffee production in this area. As with elsewhere, INSPIRED does not recommend credit financing for these farmers but rather encourages the development of savings products with the local financial institutions to underpin household risk management and allow for farmer re-investment.

### Production-Iganga:

The system observed in Iganga was essentially a coffee out grower scheme managed by UGACOF (Uganda's biggest coffee exporter). Production was, as elsewhere in the area, low intensity. Labor use was fairly intense though it was considered expensive due to low labor productivity. UGOCOF's role in this system was very interesting. UGACOF actually buys the red cherry as soon as it is harvested and wet processes it into parchment. UGACOF pays the farmer the equivalent kiboko price for the red cherry (two KG of red cherry produces one KG of kiboko so UGACOF pays UGX 500 for red cherry). The purpose of this system is for UGACOF to lock in volumes, maintain quality and cut out middlemen.

The farmers had borrowed previously for production from Stanbic Bank but found Stanbic very unforgiving when it came to credit recovery<sup>10</sup>. After repaying the farmers wanted never to attempt commercial borrowing again. As can be observed from the table, the margin per acre is fairly low compared to other coffee systems observed in Uganda.

<b>Coffee Production IGANGA</b>			
	<b>1 acre</b>	<b>5 acres</b>	<b>10 acres</b>
<b>Land Cultivated</b>			
<b>Yield (kg)</b>	900	4,500	9,000
<b>Price Per KG (red cherry)</b>	500	500	500
<b>Costs Per Acre</b>			
<b>Labor</b>			
Old Tree Replacement	2,000	10,000	20,000
Weeding	65,000	325,000	650,000
Pruning	40,000	200,000	400,000
Harvesting	56,000	280,000	560,000
Bagging	22,000	110,000	220,000
<b>Sub Total</b>	<b>(183,000)</b>	<b>(915,000)</b>	<b>(1,830,000)</b>
<b>Capital Expense</b>			
Tarpulin	40,000	200,000	400,000
<b>Sub Total</b>	<b>(40,000)</b>	<b>(200,000)</b>	<b>(400,000)</b>
<b>Total Costs</b>	<b>(223,000)</b>	<b>(1,115,000)</b>	<b>(2,230,000)</b>
<b>Revenue per Acre</b>	<b>450,000</b>	<b>2,250,000</b>	<b>4,500,000</b>
Margin	227,000	1,135,000	2,270,000
Return (per season)	102%	102%	102%
Period Months	6	6	6
Annualized Return	204%	204%	204%

In spite of the farmers' distaste for borrowing, the system from UGACOF might be expanded and replicated and further used to underpin credit products as it eliminates many of the danger of side-selling. As elsewhere, INSPIRED recommends the development of savings products to assist these farmers in managing household risks.

### Processing:

In Kamuli, INSPIRED attempted to meet a processor but found that the power was out in the town. Hence, the processing facilities were locked up and no one could be located to interview. This is, by itself, an interesting commentary of the stresses of doing business in rural Uganda.

<sup>10</sup> It is interesting that Stanbic agreed to lend to these small farmers and apparently without a guarantee from UGACOF.



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INPSIRED then proceeded to Kaliro and captured the data in the table (to the right) from the processor met there.

The processor's operation was small but profitable (as is common for this type of business throughout Uganda). The processor had been in business since 1990 and is patronized by middlemen who buy kiboko from farmers and process it to FAQ for sale to truck traders who deliver to Ibero, UGACOF and Kyagalanyi. This is a cash business and, as elsewhere, with a small investment of about UGX 5M for equipment the operations yield a monthly return of UGX 1.8M. Also, as elsewhere the processor complained that his machines are running at only 25% capacity due to low volumes delivered; his workers were underutilized resulting in low labor productivity; farmers often brought wet coffee that damages the huller; and his power was unreliable. There is little need for financing.

<b>COFFEE Processing - KALIRO</b>		
Coffee processed Per Month (kg)	60,000	
Processing Charge/ Kg	60	
<b>Revenues</b>	<b>Per KG</b>	<b>Per Month</b>
Total Revenue	<b>60</b>	<b>3,600,000</b>
<b>Costs</b>		
Labor	5	300,000
Taxes	5	300,000
Depreciation/Maintenance	4	240,000
Utilities	15	900,000
Total Cost Price	<b>(29)</b>	<b>(1,740,000)</b>
<b>Total Margin</b>	<b>31</b>	<b>1,860,000</b>
<b>Return per Month</b>		107%
<b>Annualized Return</b>		<b>1283%</b>



## Livelihoods and Enterprises for Agricultural Development (LEAD)

### KAPCHORWA

#### Input Supply:

Margins for Coffee Input Supply - Kapchorwa										
Key Inputs Unit Basis	Selling Price		Transport per Unit	Overhead Cost per Unit	Cost Price per Unit	Margin per Unit	Return/Season	Period (months)	Annual Return	
	per Unit	Cost per Unit								
DAP	2,400	2,000	30	20	2,050	350				
UREA	1,800	1,500	30	15	1,545	255	16%	6	33%	
CAN	1,800	1,500	30	15	1,545	255	16%	6	33%	
Round Up	20,000	18,000	35	179	18,214	1,786	10%	6	20%	
Sicorin	12,000	10,000	35	100	10,135	1,865	18%	6	37%	
Agroset	21,000	18,000	27	162	18,189	2,811	15%	6	31%	
Mamba	22,500	20,000	27	180	20,207	2,293	11%	6	23%	
Dimethrate	1,500	1,300	27	12	1,339	161	12%	6	24%	

  

Business Return Per Season and Annualized										
Key Inputs Total Basis	Quantity	Sales	Wholesale	Transport	Overhead	Total Cost	Total Margin	Return	Period (months)	Annual Return
		Revenue	Costs	Costs	Costs	Price				
DAP	10,000	24,000,000	20,000,000	10,030	201,289	20,211,319	3,788,681	19%	6	37%
UREA	6,000	10,800,000	9,000,000	180,000	91,026	9,271,026	1,528,974	16%	6	33%
CAN	4,000	7,200,000	6,000,000	120,000	60,684	6,180,684	1,019,316	16%	6	33%
Round Up	2,000	5,000,000	3,600,000	70,000	357,660	4,027,660	972,340	24%	6	48%
Sicorin	1,500	3,750,000	2,700,000	52,500	149,256	2,901,756	848,244	29%	6	58%
Agroset	100	2,500,000	2,200,000	2,700	16,200	2,218,900	281,100	13%	6	25%
Mamba	150	21,000,000	18,750,000	4,050	27,000	18,781,050	2,218,950	12%	6	24%
Dimethrate	100	2,000,000	1,600,000	2,700	1,200	1,603,900	396,100	25%	6	49%
<b>TOTALS</b>		<b>76,250,000</b>	<b>63,850,000</b>	<b>441,980</b>	<b>904,316</b>	<b>65,196,296</b>	<b>11,053,704</b>	<b>17%</b>	<b>6</b>	<b>34%</b>

Input Supply in Kapchorwa for coffee was a relatively low level business. Although fertilizer volumes are large, given that Kapchorwa is a major, relatively commercial, grain producing area, much of the fertilizer sold was for that purpose and the Input Supplier could not differentiate between input sales for grain production or input sales for other agribusinesses. Inputs were sourced both from Kenya and from Kampala. The input supplier noted that various items imported from Kenya were at times unavailable as Kenyan suppliers satisfied their local market before going to the trouble of moving inputs across the border.

Margins for this business are fairly low and certainly not capable of supporting financing on commercial terms. Nonetheless, volumes of product sold by the Input Supplier are above average versus the other locations visited. INSPIRED does not recommend any financier based credit products for this or similar input suppliers. However, it would be prudent to explore the possibility of facilitating credit from input dealers to input suppliers of this size as Kapchorwa is a guaranteed market for inputs and such an arrangement between dealers and this type of supplier would certainly benefit both parties.

#### Production:

Production of coffee in Kapchorwa was universally high input from the information provided by the farmers met. The coffee grown is an Arabica variety and there is basically only a single season, versus other places in Uganda where there is a main season and a *fly season*. INSPIRED met with one farmers' group and with an individual farmer, who was a group member but



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nonetheless operated on a scale of commercialization that was higher than anything else INSPIRED witnessed in this study be it in Kapchorwa or elsewhere. Both data tables are presented.

In the case of the farmers' group, coffee was grown in mature gardens ranging between one to four acres using fertilizers and herbicides in order to improve the yield and reduce the labor costs for weeding. The average garden size was 2 acres. Coffee yields were quite good and the farmers marketed their coffee to a local buyer for Job Coffees (Job would not provide details to INSPIRED regarding their buying operation). The buying station for Job was co-located with the farmers' organization which lowered transport costs and added convenience. However, deliveries came in relatively high volumes and it seems that this attracted a price premium versus other locations visited by INSPIRED. There was little expansion of coffee production given the high investment costs of starting new gardens and the cash to cash gap from planting until the trees began to yield meaningfully.

Coffee Production Kapchorwa - Selling Kiboko		
Land Cultivated	1 acre	4 acres
Yield (kg)	675	2,700
Price Per kg	2,450	2,450
<b>Costs Per Acre</b>		
<b>Inputs</b>		
NPK	110,000	440,000
Nodox	20,000	80,000
Round Up	20,000	80,000
<b>Sub Total</b>	<b>(150,000)</b>	<b>(600,000)</b>
<b>Labor</b>		
Fertilizer Application	15,000	60,000
Pestside Application	24,000	96,000
Herbicide Application	13,000	52,000
Weeding	70,000	280,000
Pruning	20,000	80,000
Mulching	20,000	80,000
Harvesting	150,000	600,000
Pulping	30,000	120,000
<b>Sub Total</b>	<b>(342,000)</b>	<b>(1,368,000)</b>
<b>Capital Expense</b>		
Tarpulin	60,000	240,000
Bags	88,000	352,000
<b>Sub Total</b>	<b>(148,000)</b>	<b>(592,000)</b>
<b>Total Costs</b>	<b>(640,000)</b>	<b>(2,560,000)</b>
<b>Revenue per Acre</b>	<b>1,653,750</b>	<b>6,615,000</b>
<b>Margin</b>	<b>1,013,750</b>	<b>4,055,000</b>
<b>Return (per season)</b>	<b>158%</b>	<b>158%</b>
<b>Period Months</b>	<b>6</b>	<b>6</b>
<b>Annualized Return</b>	<b>317%</b>	<b>317%</b>

It is important to note that the annualized figure in this table is purely for reference as there is no possibility of a second crop of coffee. Nonetheless, the semiannual return on investment is more than adequate to cover the costs of credit.

The farmers themselves had access to credit for coffee and their other crops, predominately from Centenary Bank. Further credit did not seem necessary. However, the larger commercial farmer described below was actually hand-pulping (wet processing) his own coffee which enabled him to capture a greater revenue and profit on the annual crop. With a lease product (or even a saving up product given the relatively low cost of this technology) other farmers could clearly increase their incomes.



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The more commercialized farmer was growing four acres of coffee using higher levels of fertilizers and was pulping the coffee on farm with a hand pulping machine. The farmer was not mulching in order to save the costs of labor and the costs of mulch itself. The combination of these practices produced the highest return on coffee that INSPIRED saw throughout this research. Further, by selling FAQ versus kiboko coffee the farmer was, of course, also able to capture a higher price.

The farmer was also expanding his coffee garden by a quarter acre on an annual basis. This very marginal cost is not presented in the table. Nonetheless the sense of doing this was that investment costs are held low and over the longer term greater volumes of coffee will be realized. The farmer also grew multiple crops and coffee was only one revenue stream.

This farmer also had a credit facility with Centenary Bank. He recently negotiated his interest rate to a level paid by any commercial enterprise (22% per annum) given his assets and cash flows versus his fellow farmers who are still effectively paying 48% per annum.

This farmer's financial performance speaks for itself. INSPIRED does not suggest any financial product in this case. This data is presented in order to provide a reference point of what is possible in the coffee value chain.

### Processing:

In Kapchorwa, neither Job nor Kawacom were able to comment on the costs of processing the kiboko coffee they purchased. Both referred INSPIRED to their Kampala offices. Given the uniformity of the data provided from other locations, these figures are unlikely to be remarkably different. Kawacom did note that they purchased 410MT of kiboko on a seasonal basis.

Coffee Production Kapchorwa - Selling FAQ		
	1 acre	4 acres
<b>Land Cultivated</b>		
<b>Yield (kg)</b>	1,350	5,400
<b>Price Per kg</b>	3,200	3,200
<b>Costs Per Acre</b>		
<b>Inputs</b>		
NPK	180,000	720,000
Cubox	12,000	48,000
Weedmaster	15,000	60,000
<b>Sub Total</b>	<b>(207,000)</b>	<b>(828,000)</b>
<b>Labor</b>		
Fertilizer Application	10,000	40,000
Pestsides Application	24,000	96,000
Herbicide Application	13,000	52,000
Weeding	22,000	88,000
Pruning	17,000	68,000
Harvesting	75,000	300,000
Pulping	30,000	120,000
Washing	20,000	80,000
<b>Sub Total</b>	<b>(211,000)</b>	<b>(844,000)</b>
<b>Capital Expense</b>		
Tarpulin	80,000	320,000
Bags	16,000	64,000
<b>Sub Total</b>	<b>(96,000)</b>	<b>(384,000)</b>
<b>Total Costs</b>	<b>(514,000)</b>	<b>(2,056,000)</b>
<b>Revenue per Acre</b>	<b>4,320,000</b>	<b>17,280,000</b>
<b>Margin</b>	<b>3,806,000</b>	<b>15,224,000</b>
<b>Return (per season)</b>	<b>740%</b>	<b>740%</b>
<b>Period Months</b>	<b>6</b>	<b>6</b>
<b>Annualized Return</b>	<b>1481%</b>	<b>1481%</b>



## Livelihoods and Enterprises for Agricultural Development (LEAD)

### KASESE

#### Input Supply:

Unlike other areas visited, the dedicated input supply in Kasese for coffee is non-existent. Though there are input dealers in Kasese town, with some of them handling inputs that would be relevant for coffee activities, the coffee farmers themselves have deep rooted orientation to organic coffee production. Indeed the farmers, producer organizations and one of the leading Arabica coffee buyers interviewed in Kasese are anxiously looking forward to having their operations organically certified. For this reason INSPIRED could not pursue this transaction point of the coffee value chain any further as its analysis would be inconsequential for the coffee value chain contracted by LEAD.

#### Production:

As with many other areas visited, coffee production in Kasese was largely on smallholder basis with gardens ranging between ¼ acre and 5 acres with limited opportunity for farmers to engage in field expansion owing to the acute shortage of land in the area. Farmers are instead concentrating on increasing productivity through improving the existing coffee gardens, including some limited and incremental replacement of old coffee trees.

The table on this page demonstrates the costs of production for wet processed Arabica coffee. On the following page is a table for FAQ Robusta coffee. Clearly the margins are very high. However, with investment some of the constituent costs, as described in the following paragraphs could be reduced for a higher overall smallholder return.

The production activities for both parchment (whereby coffee is wet processed to the state where the parchment is still attached) and FAQ (whereby coffee is dry hulled), though relatively costly, are highly liquid and profitable even considering the recent decline in coffee prices. In spite of the robust revenues, there are critical constituent cost issues for production that revolve around pulping capacity, distance to pulping stations and water conservation. Pulping capacity for Arabica parchment is remarkably inadequate and fuels increased costs of production due to

Coffee Production Kasese (Katabukenene)-established garden		
Land Cultivated	1 acre	3 acres
Yield (kg)	1,050	3,150
Price Per kg	3,300	3,300
<b>Costs</b>		
<b>Labor</b>		
Water conservation trenches	120,000	360,000
Stumping	6,000	18,000
Pruning	40,000	120,000
Mulching	100,000	300,000
Weeding	60,000	180,000
Harvesting	212,121	636,364
Pulping	53,030	159,091
Bagging	2,100	6,300
<b>Sub Total</b>	<b>(593,252)</b>	<b>(1,779,755)</b>
<b>Other Expenses</b>		
Transport to pulping station	106,061	318,182
Transport to Good African Coffee	52,500	157,500
PO commission	52,500	157,500
Bags	10,500	31,500
<b>Sub Total</b>	<b>(221,561)</b>	<b>(664,682)</b>
<b>Total Costs</b>	<b>(814,812)</b>	<b>(2,444,436)</b>
<b>Revenue</b>	<b>3,465,000</b>	<b>10,395,000</b>
Margin	2,650,188	7,950,564
Return (per season)	325%	325%
Period Months	6	6
Cost of production for wet processed Arabica coffee		



## Livelihoods and Enterprises for Agricultural Development (LEAD)

unavoidable wastage and high transport costs as producers must transport their coffee to the few pulping centres. Further, the capacity of the majority of the pulping equipment itself is very low and requires upgrading to accommodate the growing demand. Farmers are acknowledging the importance of water conservation and mulching as keys to increasing the production and productivity in this hilly terrain. These conservation activities are quite costly and require a prudent financing strategy.

Beyond cost of production issues, another major problem is the delay suffered by farmers to receive their sales proceeds. Farmers want to receive cash on delivery. This is the actual reason the majority of farmers sells to middlemen and refrains from bulking through depot committees. Farmers interviewed felt that if the bulking

centers provide ready cash either in part or in full for the coffee deliveries, the volumes transacted by the depot committees would substantially increase. Also, as elsewhere, farmers lacked the basic skills in managing their production as a business.

As with Ibanda and Mubende, the majority of the coffee producers in Kasese pulp their coffee with their producer groups and depot committees. This enables them to access better market with higher prices compared to their counterparts selling kiboko. These farmers are directly paid through their producer organizations. This structured marketing and payment mechanism should render the developing of low cost and low risk financial products (such as leasing for pulpers and limited revolving trade finance overdrafts for depot committees) feasible and viable.

As recommended for other areas, savings products for health insurance, school fees and other social commitments would also be relevant and assist in keeping the producers on track for financing their production versus using their cash for consumption. In addition, producers will benefit greatly from BDS training.

### **Bulking/Processing:**

Rural primary bulking both at the marketing association and the depot committees are functioning reasonably well with volumes of coffee capable of supporting commercial financing

Coffee Production Kasese (Kyarumba) established garden		
	1 acre	3 acres
<b>Land Cultivated</b>		
<b>Yield (kg)</b>	800	2,400
<b>Price Per kg</b>	2,500	2,500
<b>Costs</b>		
<b>Labor</b>		
Water conservation trenches	40,000	120,000
Mulching	100,000	300,000
Pruning	20,000	60,000
Weeding	45,000	135,000
Harvesting	215,488	646,465
Bagging	1,600	4,800
<b>Sub Total</b>	(422,088)	(1,266,265)
<b>Other Expenses</b>		
Transport to marketing centre	8,000	24,000
Hurring charges	145,455	436,364
Bags	8,000	24,000
<b>Sub Total</b>	(161,455)	(484,364)
<b>Total Costs</b>	(583,543)	(1,750,628)
<b>Revenue</b>	2,000,000	6,000,000
<b>Margin</b>	1,416,457	4,249,372
<b>Return (per season)</b>	243%	243%
Period Months		
Cost of production for FAQ Robusta coffee		



## Livelihoods and Enterprises for Agricultural Development (LEAD)

being realized. As is obvious from the table, margins are more than adequate to maintain the long term sustainability and growth of the business.

One of the leading farmers groups in the western part of Kasese has innovatively developed a system of bulking and paying for coffee deliveries by its farmer members through its Savings and Credit Cooperative (SACCO) component. On the acceptance of the farmer's coffee delivered to the Marketing Association store, the farmer is issued an acknowledgement receipt which s/he proceeds to present to the SACCO for either cash or for crediting to her/his savings account.

<b>Coffee Bulking and Marketing Kasese (Kyarumba)</b>		
FAQ bulked and marketed per month (kg)	20,000	
<b>Revenues</b>	<b>Per KG</b>	<b>Per Month</b>
Total Revenue	3,000	60,000,000
<b>Costs</b>		
Cost per KG FAQ	2,500	(50,000,000)
Labor (Loading/offloading/sorting)	22	(440,000)
Bagging	2	(40,000)
Sub Total		(50,480,000)
<b>Other costs</b>		
Transport to Kasese	20	(400,000)
Bags		(200,000)
Sub Total		(600,000)
<b>Total costs</b>		<b>(51,080,000)</b>
<b>Total Margin</b>		<b>8,920,000</b>
<b>Return per Month</b>		<b>18%</b>
<b>Annualized Return</b>		<b>214%</b>

Though the bulking and payment for coffee deliveries to this marketing association have been working fairly well, the organization felt that the working capital pressure on its internal financial capacity is overstretched. The limited capacity to pay cash to the farmers on delivery of coffee is cited as the primary reason that the majority of the farmers opt to sell their coffee to the middlemen who not only distort the market for coffee by paying very limited attention to quality and commingling good and bad coffee, but also unethically manipulate their weighing machines to under-weigh the coffee to the detriment of the producers.

As in the case of structured marketing for parchment coffee, there is also a structured marketing system for FAQ, through the marketing association. This should also provide a starting point for developing relevant financial products. Products could include equipment loans to the association's farmers groups and revolving trade overdraft for the marketing associations. The organization has already successfully piloted a coffee pulper lending mechanism to its farmer groups with a loan from Rabo Bank. This experience can be replicated and scaled up by LEAD.

Either the Centenary Bank branch in Kasese and or the Equity Bank branch in Bwera, both of which are in reasonable proximity to the bulking center, could feasibly offer and support such facilities. As recommended elsewhere, another idea to lock in deliveries would be forward contracts with community based enforcement that could reduce the middlemen's influence. Farmers could agree to deliver a percentage of their crop through the depot committee and/or marketing association, otherwise face a strict penalty agreed broadly within the community. Eventually, this might underpin borrowing against contracts once stable and sustainable volumes are realized.



## Livelihoods and Enterprises for Agricultural Development (LEAD)

### Exporters:

Two businesses visited in Kasese were relatively new entrants in the coffee export business though both operations have long experience with other aspects of the coffee trade. One business was started by an entrepreneur with experience in managing exports for other firms. The other business has extensive knowledge of the coffee niche markets, especially for roasted organic coffee. The first firm exports on a contract basis. While the second firm is also an exporter, it was difficult to ascertain if the business was selling on contract basis or otherwise. The volumes traded, though still relatively low, are steadily picking up. The following paragraphs pertain to the first exporter, pictured in the table, who was more forthcoming with information.

Coffee Marketing/Exports Kasese		
FAQ exported per month (kg)	105,000	
Revenues	Per KG	Per Month
<b>Total Revenue</b>	4,225	443,625,000
<b>Costs</b>		
Cost per Kg FAQ	3,000	(315,000,000)
Offloading	2	(210,000)
Loading	4	(420,000)
Sorting	35	(3,675,000)
Hulling	60	(6,300,000)
De-stoning and grading	250	(26,250,000)
Transport storage & insurance FOT	95	(9,975,000)
Loss on hurring and grading	30	(3,150,000)
Bags		(2,625,000)
<b>Total costs</b>		(367,605,000)
<b>Total Margin</b>		76,020,000
<b>Return per Month</b>		24%
<b>Annualized Return</b>		290%

The major problem expressed by this firm was the inadequate working capital to buy sufficient volume during the peak marketing period. The exporter has only been able to access limited off-shore financing at very high cost due to costly inefficient sourcing. Efforts to access funding from local banks have not been successful partly because the exporter is a new business and partly because of lack of collateral. The situation has worsened of late because the exporter's buyer has delayed payments for the delivered coffee. The exporter also reported that the outsourcing costs for grading the coffee are very high and that he would earn meaningful savings if he could access his own grading equipment<sup>11</sup>. This exporter could also benefit from term financing for small trucking capacity due to the high hired transport costs to Kampala.

In terms of financing opportunities for exporters, the exporters interviewed would benefit from a structured trade finance product for working capital and a term financing product such as a lease for transport. In the case of the first exporter, the buyer contracts would provide fair collateral to the lender if lending is properly structured. By having their own trucking, the exporters would be more efficient and able to steadily grow their businesses. Also the fact that these operations are rural creates the opportunity to create real rural impact and also to gradually create opportunities for feasible low risk downstream value chain financing.

<sup>11</sup> INSPIRED does not necessarily agree with the exporter's opinion that grading equipment is a good and obvious investment. Kampala has excess grading capacity which implies that grading costs should be competitive. Further, there is little benefit to grading at field level as both the large screen coffee and small screen coffee must be exported (and hence transported) through Kampala anyway.



## Livelihoods and Enterprises for Agricultural Development (LEAD)

### MASAKA

#### Input Supply:

Input suppliers in Masaka were fairly sophisticated. Of the two interviewed, one imported fertilizers directly from Nairobi by the container load for significant cost savings while the other dealt in high volumes procured through multiple mechanisms (credit purchase from Kampala suppliers (0% interest, payable in 15 days), cash purchase from truck traders, barter purchase from Kenyan suppliers) to enable sourcing the fertilizer at the lowest prevailing price. Volumes of coffee inputs sold were high and both suppliers estimated that their businesses could still be doubled.

Margins for Coffee Input Supply - Masaka (direct import from Kenya)									
Key Inputs Unit Basis	Selling Price		Transport per Unit	Overhead Cost per Unit	Cost Price per Unit	Margin per Unit	Return	Period (months)	Annual Return
	per Unit	Cost per Unit							
Fertilizer (NPK 50 KG)	85,000	65,610	7,800	850	74,260	10,740	14%	6	29%
Fertilizer (CAN 50 KG)	69,000	44,000	7,800	690	52,490	16,510	31%	6	63%
Weedmaster (1L)	13,500	12,500	-	135	12,635	865	7%	6	14%

  

Business Return Per Season and Annualized										
Key Inputs Total Basis	Quantity	Sales Revenue	Wholesale Costs	Transport Costs	Overhead Costs	Total Cost Price	Total Margin	Return	Period (months)	Annual Return
Fertilizer (CAN 50 KG)	1,000	69,000,000	44,000,000	7,800,000	690,000	52,490,000	16,510,000	31%	6	63%
Weedmaster (1L)	1,000	13,500,000	12,500,000	-	135,000	12,635,000	865,000	7%	6	14%
<b>TOTALS</b>		<b>252,500,000</b>	<b>187,720,000</b>	<b>23,400,000</b>	<b>2,525,000</b>	<b>213,645,000</b>	<b>38,855,000</b>	<b>18%</b>	<b>6</b>	<b>36%</b>

Margins for Coffee Input Supply - Masaka (Kampala procurement)									
Key Inputs Unit Basis	Selling Price		Transport per Unit	Overhead Cost per Unit	Cost Price per Unit	Margin per Unit	Return	Period (months)	Annual Return
	per Unit	Cost per Unit							
Fertilizer (NPK 50 KG)	85,000	75,000	4,000	800	79,800	5,200	7%	6	13%
Fertilizer (Urea 50 KG)	100,000	90,000	4,000	1,000	95,000	5,000	5%	6	11%
Roundup (1L)	21,000	18,000	100	50	18,150	2,850	16%	6	31%
Weedmaster (1L)	14,000	12,000	100	33	12,133	1,867	15%	6	31%

  

Business Return Per Season and Annualized										
Key Inputs Total Basis	Quantity	Sales Revenue	Wholesale Costs	Transport Costs	Overhead Costs	Total Cost Price	Total Margin	Return	Period (months)	Annual Return
Fertilizer (Urea 50 KG)	250	25,000,000	22,500,000	1,000,000	250,000	23,750,000	1,250,000	5%	6	11%
Roundup (1L)	400	8,400,000	7,200,000	40,000	20,000	7,260,000	1,140,000	16%	6	31%
Weedmaster (1L)	10,000	140,000,000	120,000,000	1,000,000	330,000	121,330,000	18,670,000	15%	6	31%
<b>TOTALS</b>		<b>241,400,000</b>	<b>209,700,000</b>	<b>5,240,000</b>	<b>1,240,000</b>	<b>216,180,000</b>	<b>25,220,000</b>	<b>12%</b>	<b>6</b>	<b>23%</b>

Comparing the two businesses clearly shows a strong case for direct procurement from Nairobi. Although the levels of investment in inventory, UGX 214M for procurement from Kampala and UGX 216M for procurement from Nairobi, were very similar, the input supplier procuring from Nairobi realized 50% greater profit. Ironically, the input supplier procuring from Kampala actually ran a much more professional operation. Inputs were well stocked and organized; books of account were proper; she was able to procure on credit terms; she had good relationships with suppliers of complementary products; and she had good product knowledge. The other stockist



## Livelihoods and Enterprises for Agricultural Development (LEAD)

maintained a poorly organized shop where the inventory was not properly handled and kept very loose records. From a lender’s perspective, the less profitable business would certainly be the safer credit risk.

The input supplier that procured from Nairobi felt that structured trade credit, loaned in dollars and payable through international banks would be a great assistance to her business and she further felt that she could easily double her sales volume if she had the inventory that credit would enable. This concept is certainly worth pursuing with banks having operations in both Kenya and Uganda.

The input supplier that procured from Kampala was averse to the idea of accessing credit and was averse to the risk of overstocking fertilizer as prices had been so volatile. This is perhaps simply a more conservative, less entrepreneurial, overall approach to doing business.

Clearly, if large forward orders of fertilizers could be made for coffee farmers, either through input suppliers or through producer organizations, significant cost savings can be realized by going directly to Kenyan suppliers. Farmers interviewed around Masaka universally understood the benefit of using chemical inputs. As is discussed below, all of them also were willing to purchase inputs at harvest in order to guarantee that they had them on hand for the next season. Adding the pieces:

- The farmers’ qualified demand;
- The input supplier’s Kenya-Uganda import model; and
- The high probability of being able to finance the procurement chain in US Dollars through regional banks;

results in a highly feasible structured trade strategy that could increase productivity at minimal cost and risk.

### **Production:**

The farmers’ groups interviewed in Masaka (essentially in Bigasa) were highly motivated and understood how to achieve commercial levels of production which differentiated them from many of the other regions visited in the course of this study. The area received considerable technical assistance from APEP and Ibero Coffee in terms of commercializing production and it seems to be showing impact.

There were fair amounts of available land for expansion of production and the farmers understood clearly what was required to open up that land. While the costs of opening

Coffee Establishment Masaka-Bigasa	
Land Cultivated	1 acre
<b>Costs Per Acre</b>	
<b>Inputs</b>	
Seedlings	337,500
Fertilizer (Urea)	160,000
Herbicide (Weedmaster)	24,000
Manure	150,000
Mulch	120,000
<b>Sub Total</b>	<b>(791,500)</b>
<b>Labor</b>	
Field Preparation	500,000
Digging holes	120,000
Transport Seedlings	100,000
Planting	90,000
Weeding (4X)	120,000
Pruning	35,000
Herbicide Application	10,000
<b>Sub Total</b>	<b>(975,000)</b>
<b>Total Costs</b>	<b>(1,766,500)</b>



## Livelihoods and Enterprises for Agricultural Development (LEAD)

land are significant, if global coffee prices remain strong, amortizing the costs of expansion over several seasons or years is quite feasible. In order to realize this activity, either land under cultivation should be added to incrementally, financed from harvest profits (say 0.25 acres seasonally to avoid stress on household income), or a saving-up product could be introduced whereby some percentage of the farmer's profit is set aside at harvest until there is adequate liquidity to execute the expansion on an acre or several acres. The latter suggestion is perhaps less feasible as land prices and costs of services are subject to significant inflation.

Ongoing production on established coffee gardens was also fairly commercial, though scale was small. Farmers interviewed all knew the costs and benefits of using inputs but each also admitted that when cash flows were constrained the first thing they abandoned was investment in their coffee production. The farmers interviewed estimated that 15% of them and their colleagues used fertilizer regularly though all knew the benefits. In terms of constraints, all felt that

even if they wanted inputs the local supply was inadequate. Not only fertilizer but also tarpaulins, herbicides and sprayers were in short supply. Farmers universally appreciated the idea of a harvest time savings product for inputs for the following season. All agreed that if they could be paid partially in cash and partially with a package of inputs (fertilizer, herbicide and tarpaulins) at harvest that would be the best solution for locking in their income for the subsequent season. Hence, INSPIRED recommends that a saving product for forward purchase of coffee inputs at harvest time, through producer organizations or through input suppliers, be developed for Masaka.

### **Bulking/Processing:**

Bulking in Masaka is done through producer organizations. There is some fair trade purchasing that takes place through Ibero Coffee exporters. However, as with elsewhere, the majority of the coffee is sold through middlemen who buy the coffee at a deep discount for cash in advance of harvest or who buy the coffee from rural processing facilities as the farmers bring the coffee for processing from kiboko to FAQ.

As is true throughout coffee areas in rural Uganda, there were numerous primary processing facilities. These facilities process on commission for farmers, middlemen and exporters. What

Established Coffee Production Masaka-Bigasa		
Land Cultivated	1 acre	4 acres
Yield (kg)	1,800	7,200
Price Per kg	1,100	1,100
<b>Costs Per Acre</b>		
<b>Inputs</b>		
Fertilizer (Urea)	80,000	320,000
Herbicide (Weedmaster)	24,000	96,000
<b>Sub Total</b>	<b>(104,000)</b>	<b>(416,000)</b>
<b>Labor</b>		
Herbicide Application	10,000	40,000
Pruning	35,000	140,000
Mulching	120,000	480,000
Harvesting	229,091	916,364
Transport to home	49,091	196,364
Transport to processors	31,765	127,059
<b>Sub Total</b>	<b>(474,947)</b>	<b>(1,899,786)</b>
<b>Capital Expense</b>		
Tarpulin	11,250	45,000
Bags	22,500	90,000
<b>Sub Total</b>	<b>(33,750)</b>	<b>(135,000)</b>
<b>Total Costs</b>	<b>(612,697)</b>	<b>(2,450,786)</b>
<b>Revenue per Acre</b>	<b>1,980,000</b>	<b>7,920,000</b>
Margin	1,367,303	5,469,214
Return (per season)	223%	223%
Period Months	6	6
Annualized Return	446%	446%



## Livelihoods and Enterprises for Agricultural Development (LEAD)

appeared to be unique in Masaka was that many of these did processing for Ibero coffee buyers in order to save Ibero from paying the transport costs of moving the full weight kiboko coffee to Kampala and to save Ibero the effort needed to resort coffee resulting from buying from middlemen who often adulterate their FAQ coffee with coffee that is not properly dried or even with foreign matter.

COFFEE Processing - Masaka-Bukomamsimbi		
Coffee processed Per Month (kg)	39,000	
Processing Charge/ Kg	70	
<b>Revenues</b>	<b>Per KG</b>	<b>Per Month</b>
Total Revenue	70	2,730,000
<b>Processing Costs</b>	(42)	(1,638,000)
<b>Total Margin</b>	28	1,092,000
Return per Month		67%
Annualized Return		800%

As can be seen in the table, this business is adequately profitable. Because of the low initial investment (about UGX 5M for the equipment) and given the daily cash flows of the business, there is little necessity for financing at this level of the value chain<sup>12</sup>.

<sup>12</sup> INSPIRED considered the possibility of investing in rural grading to keep a greater proportion of FOB price among rural smallholders but found little actual benefit in the idea versus the cost.



## Livelihoods and Enterprises for Agricultural Development (LEAD)

### MITYANA

#### Input Supply:

Margins for Coffee Input Supply - Mityana									
Key Inputs Unit Basis	Selling Price per Unit	Cost per Unit	Transport per Unit	Overhead Cost per Unit	Cost Price per Unit	Margin per Unit	Return	Period (months)	Annual Return
Seedlings	350	120	150	60	330	20	6%	6	12%
Fertilizer (NPK 50 KG)	110,000	80,000	5,000	3,000	88,000	22,000	25%	6	50%
Fertilizer (DAP 50 KG)	120,000	90,000	5,000	3,000	98,000	22,000	22%	6	45%
Fertilizer (Urea 50 KG)	100,000	80,000	5,000	3,000	88,000	12,000	14%	6	27%
Roundup (1L)	21,000	18,000	80	30	18,110	2,890	16%	6	32%
Weedmaster (1L)	15,000	12,500	80	30	12,610	2,390	19%	6	38%
Pinup (1L)	17,000	14,000	80	30	14,110	2,890	20%	6	41%

  

Business Return Per Season and Annualized										
Key Inputs Total Basis	Quantity	Sales Revenue	Wholesale Costs	Transport Costs	Overhead Costs	Total Cost Price	Total Margin	Return	Period (months)	Annual Return
Seedlings	55,000	19,250,000	6,600,000	8,250,000	3,300,000	18,150,000	1,100,000	6%	6	12%
Fertilizer (NPK 50 KG)	3,000	330,000,000	240,000,000	15,000,000	9,000,000	264,000,000	66,000,000	25%	6	50%
Fertilizer (DAP 50 KG)	400	48,000,000	36,000,000	2,000,000	1,200,000	39,200,000	8,800,000	22%	6	45%
Fertilizer (Urea 50 KG)	300	30,000,000	24,000,000	1,500,000	900,000	26,400,000	3,600,000	14%	6	27%
Roundup (1L)	1,000	21,000,000	18,000,000	80,000	30,000	18,110,000	2,890,000	16%	6	32%
Weedmaster (1L)	2,500	37,500,000	31,250,000	200,000	75,000	31,525,000	5,975,000	19%	6	38%
Pinup (1L)	1,500	25,500,000	21,000,000	120,000	45,000	21,165,000	4,335,000	20%	6	41%
<b>TOTALS</b>		<b>511,250,000</b>	<b>376,850,000</b>	<b>27,150,000</b>	<b>14,550,000</b>	<b>418,550,000</b>	<b>92,700,000</b>	<b>22%</b>	<b>6</b>	<b>44%</b>

In Mityana there was a highly commercialized input supplier who had worked for 18 years and received training from IDEA and APEP. The input supplier had her own nursery, bought bulk inputs and retailed them to both government and private farmers. The input supplier had multiple retail operations and also sold through rural stockists. Seasonal return for her business was approximately 22% on an investment of UGX 419M, which annualizes to a 44% return. Clearly, this level of profitability can support commercial financing at current levels of 19% to 24% per annum. However, access to credit was limited (the supplier was borrowing against collateral and not against cash flows although cash flows were robust). It should be noted that while there was evidence that coffee farmers were using fertilizers, the data from the input supplier is more general and indicates total significant input sales for all types of production, not only coffee.

The input supplier lacked access to appropriately structured credit which led her to the use of moneylenders while driving up costs and lowering profitability for all actors in the chain. Further, liquidity management was a problem as the input supplier needs massive amounts of cash up front in advance of the season and then needs very little in wane months.

Short term finance against cash flows is possible and desirable. Further, if producers could be encouraged and managed to place a forward order for fertilizer and other inputs at harvest, in cash, overall volumes would be higher and average costs for fertilizer would be lower. This



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would smooth cash flows<sup>13</sup> as well as allow the input suppliers to have sales both pre and post season.

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<sup>13</sup> Currently the input suppliers must stock fertilizer only for planting season twice per year which requires huge liquidity. If they could stock fertilizer for both planting and harvest times, they would stock four times annually and thus lower their average liquidity requirements.



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### Production:

Production in greater Mityana was largely subsistence with all farmers interviewed claiming that they used improved inputs but also observing that they failed to purchase inputs regularly due to cash flow problems. The majority of producers are smallholders producing 1½ acres of coffee or less. Farmers short term cash needs far outstripped the benefits of selling coffee at a premium at harvest thus continuing the problems of low commercialization. Most cash needs are met by selling coffee secured by land titles to middlemen at low prices before harvest.

Establishing new plantations is a costly venture. As long as coffee prices are high, amortizing this cost over several seasons or years is possible. LEAD could consider the development of a structured savings product to set aside some percentage of each season's harvest to eventually be invested in expanded production.

Ongoing production is quite profitable as the sunk costs are already taken into account. Returns of 175% per season, annualizing to 350% are certainly robust and encouraging (though based in part on high international prices). While farmers all would like credit and these cash flows appear to be capable of easily supporting credit, the influence of multiple middlemen, the absolute dominance of moneylenders in these communities and the notorious poor repayment discipline of coffee farmers discourage any consideration of extending them credit through commercial means. However, savings products offer an option worth considering. Savings products for inputs at time of harvest, providing either the inputs themselves or a voucher to buy the inputs, would lock in higher productivity. Complicated, though interesting, opportunities might also be to offer savings products (at harvest time) for school fees and health insurance and thus mitigate the problems of both borrowing on usurious terms from middlemen

Coffee Production Mityana-establishment	
Land Cultivated	1 acre
<b>Costs Per Acre</b>	
<b>Inputs</b>	
Seedlings	132,000
Fertilizer Urea	140,000
Weedmaster	40,000
<b>Sub Total</b>	<b>(312,000)</b>
<b>Labor</b>	
Digging holes	88,000
Planting	44,000
Ploughing	50,000
Herbicide Application	10,000
Pruning	44,000
Mulching	80,000
<b>Sub Total</b>	<b>(350,000)</b>
<b>Total Costs</b>	<b>(662,000)</b>

Coffee Production Mityana-established garden		
Land Cultivated	1 acre	4 acres
Yield (kg)	1,100	4,400
Price Per kg	1,100	1,100
<b>Costs Per Acre</b>		
<b>Inputs</b>		
Fertilizer Urea	70,000	280,000
Weedmaster	40,000	160,000
<b>Sub Total</b>	<b>(110,000)</b>	<b>(440,000)</b>
<b>Labor</b>		
Herbicide Application	10,000	40,000
Pruning	44,000	176,000
Mulching	80,000	320,000
Harvesting	153,846	615,385
Bagging	13,750	55,000
Transport to processors	6,875	27,500
<b>Sub Total</b>	<b>(308,471)</b>	<b>(1,233,885)</b>
<b>Capital Expense</b>		
Tarpulin	7,500	30,000
Bags	13,750	55,000
<b>Sub Total</b>	<b>(21,250)</b>	<b>(85,000)</b>
<b>Total Costs</b>	<b>(439,721)</b>	<b>(1,758,885)</b>
<b>Revenue per Acre</b>	<b>1,210,000</b>	<b>4,840,000</b>
Margin	770,279	3,081,115
Return (per season)	175%	175%
Period Months	6	6
Annualized Return	350%	350%



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and cash being drawn away from productive purposes for consumption. Finally, producers would also benefit greatly from BDS training in terms of keeping good basic records and understanding their own gross margins.

### **Bulking/Processing:**

Rural Primary Bulking was functioning well. However, for Depot Committees, coffee deliveries were far less than could be expected basically due to the role of moneylenders and middlemen buying the crop before it arrived at the depot. Depot Committees felt that their inability to pay cash on delivery, normally paying after seven days, discouraged member deliveries<sup>14</sup>. Further, the depot committee wanted to furnish inputs but could not do so because of financial constraints. Beyond the Depot Committees, rural dry processing was functioning very well. The business is conducted on a cash basis and was profitable. The processor interviewed complained about tight competition, which of course, is better for producers as it holds costs down.

COFFEE Processing - MITYANA		
Coffee processed Per Month (kg)	360,000	
Processing Charge/ Kg	70	
<b>Revenues</b>	<b>Per KG</b>	<b>Per Month</b>
Total Revenue	70	25,200,000
<b>Processing Costs</b>	(50)	(18,000,000)
<b>Total Margin</b>	20	7,200,000
<b>Return per Month</b>		40%
<b>Annualized Return</b>		480%

Depot committees could be provided a revolving overdraft for **small amounts** of finance (UGX 2M or less) payable by buyers for adequate liquidity. It is unclear if this small float can be offered on commercial terms given the high administration costs for commercial lenders to monitor such a small loan deep in a rural area. Another idea to lock in deliveries would be forward contracts with community based enforcement that could reduce the middlemen's influence. Farmers could agree to deliver a percentage of their crop through the depot committee, otherwise face a strict penalty agreed broadly within the community. Eventually, this might underpin borrowing against contracts if volumes became significant. In terms of financing opportunities for processors, their current business neither requires nor is interested in borrowing. However, large processors with buyer contracts could use term financing to upgrade by procuring grading machines and delivering a higher quality of coffee at a lower cost to Kampala buyers. This is an obvious leasing opportunity.

<sup>14</sup> While depot committees' inability to pay cash on delivery for coffee deliveries is widely held to be the most significant reason for farmers' non delivery to the depots, INSPIRED is not convinced it is true. Depot committees normally pay within seven days and claim to offer far superior prices (even second payments after processing to FAQ) that middlemen do not offer. Farmers selling to depot committees may have to wait seven days but can expect a 40% premium on their coffee. Who wouldn't be willing to wait seven days for a 40% price premium? It is likely that farmers don't deliver because they are indebted to the very middlemen to whom they are selling; or, alternatively, that farmers don't deliver because they find it easier to bring their coffee to local mills and sell the FAQ outturn then and there to waiting buyers for a premium.



## Livelihoods and Enterprises for Agricultural Development (LEAD)

### MUBENDE

#### Input Supply:

Margins for Coffee Input Supply - Mubende (Bukuya)										
Key Inputs Unit Basis	Selling Price per Unit	Cost per Unit	Transport per Unit	Overhead Cost per Unit	Cost Price per Unit	Margin per Unit	Return	Period (months)	Annual Return	
Mamba (1L)	18,000	15,500	60	360	15,920	2,080	13%	6	26%	
Glyphosate (1L)	18,000	15,500	60	360	15,920	2,080	13%	6	26%	
Roundup (1L)	18,000	15,500	60	360	15,920	2,080	13%	6	26%	
Weedmaster (1L)	17,000	12,000	60	340	12,400	4,600	37%	6	74%	
Business Return Per Season and Annualized										
Key Inputs Total Basis	Quantity	Sales Revenue	Wholesale Costs	Transport Costs	Overhead Costs	Total Cost Price	Total Margin	Return	Period (months)	Annual Return
Mamba (1L)	120	2,160,000	1,860,000	7,200	43,200	1,910,400	249,600	13%	6	26%
Glyphosate (1L)	96	1,728,000	1,488,000	5,760	34,560	1,528,320	199,680	13%	6	26%
Roundup (1L)	150	2,700,000	2,325,000	9,000	54,000	2,388,000	312,000	13%	6	26%
Weedmaster (1L)	110	1,870,000	1,320,000	6,600	37,400	1,364,000	506,000	37%	6	74%
<b>TOTALS</b>		<b>8,458,000</b>	<b>6,993,000</b>	<b>28,560</b>	<b>169,160</b>	<b>7,190,720</b>	<b>1,267,280</b>	<b>18%</b>	<b>6</b>	<b>35%</b>

As can be seen in the table above, supply in Bukuya of coffee inputs is almost non-existent. The input dealers themselves did not even know that their inputs were used for coffee or how they were used. No fertilizer was on offer. Margins were thin and input supplier total profit only averages about UGX 200,000 monthly. Depot Committees supplied herbicides and small amounts of fertilizers. Farmers felt that the Depot Committees should supply coffee inputs on credit, though INSPIRED rather recommends a savings product for this purpose. No financial product is recommended by INSPIRED at this value chain transaction point though a savings product for inputs is covered under production.

#### Production:

Producers were growing between ¼ acre and 5 acres of coffee and showed some eagerness to increase their production and productivity. Again, establishing new coffee plantations was costly and would require the ability to amortize the costs over multiple seasons or years. Further, the feasibility of this is strongly influenced by coffee prices. That is, it is strongly feasible if coffee prices remain robust and less feasible otherwise.

For ongoing production, cash flows are good, as they are elsewhere. Generally, farmers complained that fertilizer prices were prohibitive and thus did not use fertilizers. They felt that planting with organic fertilizer was a superior idea though they were not certified as organic producers and thus attracted no premium in spite of the lower productivity. An interesting trend in Mubende was that farmers processed their kiboko coffee into FAQ coffee in collaboration with their depot

Land Cultivated	1 acre
<b>Costs Per Acre</b>	
<b>Inputs</b>	
Seedlings	129,000
Manure	120,000
Fertilizer Urea	100,000
Glyphosate	54,000
<b>Sub Total</b>	<b>(403,000)</b>
<b>Labor</b>	
Slashing	80,000
Spraying (preplanting)	3,800
Spraying - weed control	7,600
Field preparation	60,000
Digging holes	129,000
Planting	86,000
Mulching	100,000
Herbicide Application	10,000
Pruning	25,000
<b>Sub Total</b>	<b>(350,000)</b>
<b>Total Costs</b>	<b>(753,000)</b>



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committee through a local milling facility. This is reflected in the table on ongoing production (following page). This unique relationship enabled them to capture a much higher profit versus farmers interviewed in other parts of Uganda. Obviously, with higher incomes, management of credit and other financial services becomes more feasible.

Producers felt that they had inadequate access to cash or low interest, properly structured credit<sup>15</sup> to purchase basic implements such as wheel barrows for moving organic material, herbicides for weed control and tarpaulins for drying harvested coffee. As with Mityana, farmers also lacked the basic skills in managing their production as a business.

Farmers understand the importance of inputs (herbicides and organic manures). However, input suppliers do not understand the market opportunity for themselves from these farmers. Farmers felt that the Depot Committees could supply inputs on credit, though INSPIRED suggests a savings product for inputs including implements and herbicides to be offered at harvest for providing the necessities for the subsequent season. Other savings products for health insurance and school fees would also be relevant and assist in keeping the producers on track for financing their production versus using their cash for consumption. As elsewhere, producers will benefit greatly from BDS training.

Coffee Production Mubende-established garden		
	1 acre	4 acres
<b>Land Cultivated</b>		
<b>Yield (kg)</b>	1,300	5,200
<b>Price Per kg</b>	2,110	2,110
<b>Costs</b>		
<b>Inputs</b>		
Fertilizer Urea	100,000	400,000
Glyphosate	54,000	216,000
Manure	120,000	480,000
<b>Sub Total</b>	(154,000)	(616,000)
<b>Labor</b>		
Herbicide Application	7,600	30,400
Fertiliser (UREA) application	3,000	
Pruning	40,000	160,000
Mulching	100,000	400,000
Harvesting	78,788	315,152
Bagging	10,833	43,333
Transport to processors (DC)	21,667	86,667
<b>Sub Total</b>	(261,888)	(1,047,552)
<b>Capital Expense</b>		
Tarpulin	7,500	30,000
Bags	13,000	52,000
<b>Sub Total</b>	(20,500)	(82,000)
<b>Other costs</b>		
Processing costs Kiboko to FAQ	(91,000)	(364,000)
<b>Total Costs</b>	(436,388)	(1,745,552)
<b>Revenue</b>	2,743,000	10,972,000
<b>Margin</b>	2,306,612	9,226,448
Return (per season)	529%	529%
Period Months	6	6
Annualized Return	1057%	1057%

### **Bulking/Processing:**

Rural primary bulking at Depot Committees is functioning. However, coffee deliveries were far less than could be expected basically due to the role of moneylenders and middlemen buying the crop before it arrived at the Depot Committee. The Depot Committee, as elsewhere, stated that their inability to pay cash on delivery exacerbated this problem (see footnote under Mityana). The committee was using some of its members' savings to buy coffee on cash terms but this financing was quite meager.

<sup>15</sup> Some farmers had borrowed from their local SACCO and found interest rates too high and the structure of the loan requiring monthly payments inconsistent with their production cycle.



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Other than the Depot Committee, primary dry processors were processing on average outturn 10,000 bags (600 MT) of FAQ coffee per month at peak production. The processor interviewed was also buying the FAQ outturn on cash terms for sale to exporters in Kampala. Lack of adequate and affordable hired transport and electricity for milling machines were considered critical constraints for the processor. Further throughput volumes were often considered too low and effectively utilize led to very high costs per unit processed.

COFFEE Processing - Mubende (Bukuya)		
Kiboko coffee processed per month (kg)	144,000	
FAQ processed per month (kg)	72,000	
<b>Revenues</b>	<b>Per KG</b>	<b>Per Month</b>
Total Revenue	<b>3,200</b>	<b>230,400,000</b>
<b>Costs</b>		
Cost per Kg Kiboko	<b>1,400</b>	<b>201,600,000</b>
Labour	<b>5</b>	<b>720,000</b>
Depreciation/maintanance	<b>8</b>	<b>1,152,000</b>
Electricity	<b>5</b>	<b>720,000</b>
Bags	<b>12</b>	<b>840,000</b>
Taxes and license	<b>3</b>	<b>432,000</b>
Transport to Kampala	<b>30</b>	<b>2,376,000</b>
Total costs		<b>(207,840,000)</b>
Total Margin		<b>22,560,000</b>
Return per Month		<b>11%</b>
Annualized Return		<b>134%</b>

Depot Committees could be provided a revolving overdraft for **small amounts** of finance (UGX 2M or less) repayable by coffee buyers for adequate liquidity. In the location visited, Bukuya, there is a nearby branch of Equity Bank which would make monitoring such a facility (even a small facility) feasible. As recommended elsewhere, another idea to lock in deliveries would be forward contracts with community based enforcement that could reduce the middlemen's influence. Farmers could agree to deliver a percentage of their crop through the Depot Committee, otherwise face a strict penalty agreed broadly within the community. Eventually, this might underpin borrowing against contracts if volumes became significant.

In terms of financing opportunities for processors, the processor interviewed would benefit from a term financing product such as a lease for transport. With a seven ton or ten ton truck, the processor's business would be much more effective and likely to attract higher volumes.



## Livelihoods and Enterprises for Agricultural Development (LEAD)

### MUKONO

#### Input Supply:

Margins for Coffee Input Supply - MUKONO										
Key Inputs Unit Basis	Selling		Transport per Unit	Overhead Cost per Unit	Cost Price per Unit	Margin per Unit	Return/Season	Period (months)	Annual Return	
	Price per Unit	Cost per Unit								
Fertilizer (NPK)	125,000	90,000	1,350	721	92,071	32,929	36%	6	72%	
Fertilizer (DAP)	125,000	95,000	1,350	761	97,111	27,889	29%	6	57%	
Fertilizer (Urea)	100,000	70,000	1,350	563	71,913	28,087	39%	6	78%	
Roundup	22,000	19,500	27	184	19,711	2,289	12%	6	23%	
Mamba	19,000	16,500	27	156	16,683	2,317	14%	6	28%	
Weedmaster	15,000	13,000	27	123	13,150	1,850	14%	6	28%	
Rocket	3,500	2,600	27	25	2,652	848	32%	6	64%	

  

Business Return Per Season and Annualized										
Key Inputs Total Basis	Quantity	Sales Revenue	Wholesale Costs	Transport Costs	Overhead Costs	Total Cost Price	Total Margin	Return	Period (months)	Annual Return
Fertilizer (DAP)	16	2,000,000	1,520,000	21,600	12,174	1,553,774	446,226	29%	6	57%
Fertilizer (Urea)	8	800,000	560,000	10,800	4,508	575,308	224,692	39%	6	78%
Roundup	800	17,600,000	15,600,000	21,600	147,445	15,769,045	1,830,955	12%	6	23%
Mamba	400	7,600,000	6,600,000	10,800	62,396	6,673,196	926,804	14%	6	28%
Weedmaster	960	14,400,000	12,480,000	25,920	118,037	12,623,957	1,776,043	14%	6	28%
Rocket	1,200	4,200,000	3,120,000	32,400	29,754	3,182,154	1,017,846	32%	6	64%
<b>TOTALS</b>		<b>48,600,000</b>	<b>41,320,000</b>	<b>144,720</b>	<b>385,858</b>	<b>41,850,578</b>	<b>6,749,422</b>	<b>16%</b>	<b>6</b>	<b>32%</b>

Input Supply in Mukono is a very low level business. As can be seen from the table above, the input supplier visited is earning only a 32% annual return and even though the return seems high, the actual cash value of this return is little more than UGX 1M per month. The input supplier himself was working on a meager business and complained that rising rental payments might drive him out of the market. The business had multiple relationships with wholesalers (FICA, Victoria Seeds, Mt. Elgon, Bukola, East African Seeds, Nsanja, etc). When looking at the business turnover versus the numbers of farmers in the region, it is clear that the input supplier has penetrated far less than 1% of the potential market.

The same input supplier had another shop for animal husbandry inputs that was a better business and had borrowed UGX 5M for 12 months from Centenary Bank but based on cash flow analysis was struggling to pay that facility. Clearly, input suppliers have access to credit but the level of business probably does not warrant expanding this financing.

In terms of the coffee value chain itself, following the meeting with the input supplier, INSPIRED learned that the farmers do not buy improved inputs for their coffee production. This confirms the weak demand for input supply. Further, there is an organic coffee production movement around Mukono that further encumbers the effective demand for inputs.

#### Production:

Production in Mukono is largely done on old plantations and coffee production seems not to be expanding in spite of the fact that additional land is available. The average garden size was about



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one acre though there are a few farmers who grow on larger gardens ranging up to seven acres. Productivity is low. The farmers do not use improved inputs and rarely replace trees that are no longer very productive. While costs were estimated by the farmers for standard garden maintenance (pruning and de-suckering), during the interviews it was quite clear that these activities were not carried out regularly. Other activities such as mulching were simply not done. This low level of effort is clearly reflected in the low yields. Returns were high (240% per season) but this return was on very low investments. Farmers complained that labor was in short supply and

Coffee Production Mukono			
	1 acre	5 acres	7 acres
Land Cultivated			
Yield (kg)	660	3,300	4,620
Price Per kg	1,200	1,200	1,200
<b>Costs Per Acre</b>			
<b>Inputs</b>			
Old tree Replacement	2,000	10,000	14,000
Weedmaster	40,000	200,000	280,000
<b>Sub Total</b>	<b>(42,000)</b>	<b>(210,000)</b>	<b>(294,000)</b>
<b>Labor</b>			
Herbicide Application	5,000	25,000	35,000
Pruning	20,000	100,000	140,000
Harvesting	136,364	681,818	954,545
Bagging	3,300	16,500	23,100
Transport to Buyers	8,250	41,250	57,750
<b>Sub Total</b>	<b>(172,914)</b>	<b>(864,568)</b>	<b>(1,210,395)</b>
<b>Capital Expense</b>			
Tarpulin	10,000	50,000	70,000
Bags	8,250	41,250	57,750
<b>Sub Total</b>	<b>(18,250)</b>	<b>(91,250)</b>	<b>(127,750)</b>
<b>Total Costs</b>	<b>(233,164)</b>	<b>(1,165,818)</b>	<b>(1,632,145)</b>
<b>Revenue per Acre</b>	<b>792,000</b>	<b>3,960,000</b>	<b>5,544,000</b>
Margin	558,836	2,794,182	3,911,855
Return (per season)	240%	240%	240%
Period Months	6	6	6
Annualized Return	479%	479%	479%

expensive; that treatment for their gardens against twig borer was unavailable; and that transport was in short supply for coffee input supply. Their coffee is actually purchased at local collection centers or at farm-gate by Kyagalanyi which minimizes transport costs. When reviewing the effort invested in the coffee gardens it is obvious that these farmers are not commercially oriented but rather rely on their coffee as a pure benefit.

Until these farmers commercialize to a greater degree, INSPIRED will refrain from recommending a financing strategy for their coffee production. Nonetheless, coffee does produce reasonable seasonal cash flows that could be captured by a savings product by a local financial institution such as Faulu. This product may have little impact on coffee production and marketing but would certainly assist in the risk management strategy for these households.

### **Bulking/Processing:**

Kyagalanyi Coffee operates a bulking and processing station in Mukono. They are the principal buyer in the area and buy from both farmers and middlemen. Kyagalanyi also tries to provide extension services and maintain demonstration facilities to improve and commercial production and yields from smallholders. As a point of interest, Kyagalanyi reported that farmers do not sell their coffee as groups as they remember negative experiences with cooperative marketing from the past. This forces the processor to deal with farmers on an individual basis and also does not bode well for organizing farmers in the future.



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Kyagalanyi charges only UGX 50 per KG of kiboko processed which is much lower than the average of UGX 70 per KG observed elsewhere. This is probably a bid to attract greater volumes to their processing facility so that they have a ready supply of FAQ for purchase. They do in fact purchase all of the outturn of the milling facility though they state that the owner of the coffee has the option to pay the UGX 50 fee per KG and take the outturn back.

COFFEE Processing - MUKONO (Kyagalanyi)		
Coffee processed Per Month (kg)	67,000	
Processing Charge/ Kg	50	
<b>Revenues</b>	<b>Per KG</b>	<b>Per Month</b>
Total Revenue	50	3,350,000
<b>Costs</b>		
Labor	16	1,072,000
Taxes	11	
Depreciation/Maintenance	4	268,000
Utilities	15	1,005,000
<b>Total Cost Price</b>	<b>(46)</b>	<b>(2,345,000)</b>
<b>Total Margin</b>	<b>4</b>	<b>1,005,000</b>
<b>Return per Month</b>	9%	43%
<b>Annualized Return</b>	<b>104%</b>	<b>514%</b>

Kyagalanyi expressed that they often considered advancing inputs against coffee deliveries but were discouraged by the risk of side-selling. Therefore, organic production seemed to be their best option for maximizing their revenue while avoiding the risks of extending credit. INSPIRED further observed that while organic production is obviously the best strategy from Kyagalanyi's perspective, it may not nonetheless serve the farmers. This is because though organic production is possible and true by default, the facilities for *improved organic* production (manure, compost pits, etc.) were not being promoted and therefore yields are likely to remain very low.

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### **Summary Recommendations:**

Recommendations are both broad and specific. The broad recommendations are provided first and the specific recommendations are covered on a location-by-location basis.

### **Broad Recommendations:**

#### **INPUT SAVINGS:**

Throughout the discussions of the various locations, it was quite clear that nearly all of the input businesses were running at barely sustainable levels while coffee farmers, by and large, expressed the need to purchase inputs but almost universally lacked the cash to do so when necessary. Further all farmers interviewed agreed that if they had access to the necessary inputs at time of harvest, they would be content to receive payment both in cash and in kind as inputs. This situation lends itself perfectly to the design and roll out of a savings product for coffee producers.

It would be easiest to begin with farmers in areas where fertilizer use has been embraced. The simplest concept would be to offer sales of vouchers for fertilizers when coffee is delivered (with the full moral support of LEAD to build farmer confidence) based on a price negotiated with a Kenya based supplier. The cash from the voucher sales will be consolidated by a financial institution (one with operations in both Uganda and Kenya). The value of the voucher will include the cost of fertilizer, the cost of transport, the cost of customs tariffs, a margin for the input supplier and a margin for the financial institution. Fertilizer, purchased at wholesale, bulk prices, will be delivered through the input suppliers and redeemed with the vouchers.

Bearing in mind that not all input needs are identical for all farmers (those in Mubende needed manure, mulch and wheelbarrows while those in Masaka wanted NPK) one product will not service the whole of Uganda. Nonetheless, if this works for fertilizer, it can be extended as a savings methodology to handle other inputs as well.

#### **BROAD SAVINGS and INSURANCE:**

In interviews with farmers, the other major reason cited for low input use and/or weak agricultural practices, beyond unavailability of the inputs themselves as addressed above, was that household needs during the season diverted cash away from the coffee activity. To address this problem, INSPIRED recommends that LEAD work with financial institutions to develop a savings strategy and savings products to be offered at harvest time that will guarantee that cash will be available for key activities that can be anticipated. Such products could include school fees savings (discounted prepayment through a voucher or something similar), Christmas clubs, etc. Secondly, for expenses that cannot be anticipated (illnesses and burials) INSPIRED



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recommends that LEAD liaise with insurance providers such as Opportunity International and/or MicroCare, to develop insurance products that can be retailed at coffee harvest.

### Specific Recommendations:

Location	Recommendation
Bugiri	Savings and Insurance for producers at harvest time only.
Bushenyi	US Dollar based structured trade export finance for the Ankole Coffee Union supporting their existing export against forward contracts.
Ibanda	Savings and Insurance for producers at harvest time; Production Finance against coffee deliveries feasible on a limited pilot scale with local SACCO; Trade Finance and truck Leasing for processors.
Iganga and Kamuli	Savings and Insurance for producers at harvest time; For few large producers, normal Agricultural Production Loans.
Kapchorwa	Savings and Insurance for producers at harvest time; Small Leases or Saving Up product for small scale pulpers for producers; Saving Up to buy out Kyagalanyi's wet processing station.
Kasese	Savings and Insurance for producers at harvest time; Leasing or Saving Up products for small scale pulpers for producers; Trade Finance against coffee deliveries for Depot Committees; Vehicle Leasing for Exporters to collect and transport coffee.
Masaka	Savings and Insurance for producers at harvest time; Structured Trade Finance Product for importing fertilizer for input suppliers; New Trade Loan Product for input suppliers based on cash flow rather than collateral.
Mityana	Savings and Insurance for producers at harvest time; Structured Trade Finance Product for importing fertilizer for input suppliers; New Trade Loan Product for input suppliers based on cash flow rather than collateral; Trade Finance against contracts for processors; Lease Finance for development of local grading capacity.
Mubende	Savings and Insurance for producers at harvest time; Trade Finance against coffee deliveries for Depot Committees; Truck Leasing for processors to transport coffee.
Mukono	Savings and Insurance for producers at harvest time.



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### Annex—Exporter Interviews:

#### Ibero:

Ibero Coffee Exporters are a fully owned subsidiary of the Neumann Coffee Group. Also affiliated to Neumann is the NKG Coffee Alliance Trust (co-located with Ibero) and EDE consulting who are both engaged in supporting improved production and marketing of smallholder coffee from a civil society perspective.

Ibero is the fourth largest exporter of Uganda's coffee and exported approximately 280,000 bags (17,000 MT) in the past year. The vast majority of this coffee was graded conventional FAQ Robusta to buyers servicing the roasting market for espresso in Southern Europe. Some small percentage of this coffee was certified organic (approximately 40 MT) though this market is likely to be more important in the coming years.

The vast majority (85%) of the coffee Ibero buys comes from coffee traders who deliver the FAQ coffee to their Kampala plant. As the coffee arrives, Ibero samples each bag. On the basis of the samples, Ibero determines the moisture content, foreign matter content, percentage of each screen size of bean and the percentage of damaged and/or low quality beans. From the sampling results, Ibero discounts the FAQ value of the coffee from the current market price to cover the costs of drying and grading the coffee to a uniform export quality product. The trader is then paid in cash the full value of the discounted FAQ coffee. The remainder of the coffee Ibero buys (15%) is graded by other coffee exporters and is usually used to fill shortfalls in open orders. Some very small percent of the coffee Ibero buys is purchased directly from producer organizations in a few of the regions where EDE and NKG operate.

For the most part, Ibero does not buy at field level buying stations because risks for the security for cash and risks of adulteration are far greater than the potential benefit. Traders are in a highly competitive market to supply Ibero, know the communities better than they do and thus are better positioned to reliably provide coffee for a small margin. Ibero does not, will not, has not, pre-financed coffee buyers. Neither does Ibero offer contracts for procurement. The middlemen are viewed as effective and no further incentives beyond cash on delivery are necessary.

The price that Ibero offers for FAQ is based on their price for FOB Mombasa delivery less their margin, the costs of transport and the costs of freight forwarding. Ibero is paid on a cash against documents basis. Their operation is highly liquid with large amounts of cash (transacted through banks) coming in and out of the Kampala operation daily.

Transport of the coffee from Kampala to the port of Mombasa is handled with contracted freight carriers. This market is also competitive and Ibero saw no incentive for investing in its own transport.



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### **Kawacom:**

Kawacom (U) Ltd., is a fully owned subsidiary of Ecom Agroindustrial Corporation and is a large exporter of both Robusta and Arabica coffee varieties, both wet and dry processed. Like other larger exporters, Kawacom participates in various certification programs to assist coffee growers and guarantee corporate social responsibility to their buyers including Utz Kapeh and Ceres Organic certification.

Kawacom is the third largest exporter of Uganda's coffee and exported approximately 435,000 bags (26,000 MT) in the past year. The majority of this coffee was graded conventional FAQ Robusta to European buyers, though significant amounts of Arabica were also exported. There were significant and growing exports of certified organic and Utz Kapeh certified coffees from project areas in Bushenyi, Paida, Kapchorwa, Sipi and Kasese. Kawacom did note however that these certifications were only as good as the market in that if the price of straight convention coffee was higher (because other coffee buyers were short) the certified farmers were just as happy to sell their coffee as conventional coffee.

Like other exporters, the majority of the coffee purchased by Kawacom is bought from coffee traders delivering FAQ to their two export processing operations (one for Arabica and the other for Robusta). As coffee arrives at their facilities, Kawacom samples each bag and determines price per KG of FAQ after making deductions based on the percentage of moisture, damaged and discolored beans, etc., versus FAQ standards. The traders are paid by check for full value of coffee delivered. As with other exporters, Kawacom compensates for shortfalls by buying from other exporters or from middlemen who sell graded coffee. Kawacom also buys from rural buying posts, washing stations they own, and have a small network of field officers that buy coffee during harvest season. Buying centers pay the same FAQ price that Kawacom's Kampala buyers pay (which may create a preference for traders to sell their FAQ at field level to avoid the transport costs to Kampala).

Kawacom does not extend purchasing credit to its buying agents. The entire operation is cash based with cash being paid for all purchases whether from small farmers or other exporters. Prices offered reflect the various export market prices (FOB or CIF Mombasa or FOT Sudan) as established by the contract price Kawacom receives. This price is then discounted for transport, freight forwarding and Kawacom's margin.

Export transport is contracted out and Kawacom saw no benefit in owning its own transport.

Kawacom has developed and will continue to develop its own rural wet processing stations. The firm saw that transport for the farmers to the station was a possible impediment to the success of this operation. Beyond this, Kawacom commented that the other high priority issues it faces, and share with other exporters, are: nursery production, Robusta productivity and scale of



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production. As a last comment, Kawacom expressed disappointment in the research efficiency for solving Uganda's coffee pest problems.

### **Kyagalanyi:**

Kyagalanyi (U) Ltd., is a fully owned subsidiary of Volcafe. Though it is fully owned, it operates its full buying and selling operation independently within the company. Kyagalanyi ranks as first or second, depending on the month, among Uganda's largest exporters of Robusta and Arabica coffees (both wet and dry processed). Kyagalanyi concentrates on exporting a quality product and considers certifications a secondary consideration. In the last year, Kyagalanyi exported 513,000 bags (31,000 MT).

Kyagalanyi concentrates on Robusta coffees but also is actively engaged in developing natural Arabica coffees, particularly Drugars. Kyagalanyi has made progress on developing higher quality, more reliable Robusta coffee production outside of Mukono with its own mother garden for seedlings and a dedicated buying station that differentiates price according to quality. Kyagalanyi is also developing washing stations to improve their ability to source Arabicas outside of Mbale.

Kyagalanyi buys the majority of its coffee as FAQ at its Kampala facility. Kyagalanyi also operates permanent field offices which buy coffee during the harvest season in Nyakanoni, and Mbale. Seasonal buying stations are also operated in Mbarara, Masaka, Rukungiri, Jinja and Luwero. Unlike other buyers, Kyagalanyi posts a daily buying price for FAQ coffees with differentials listed. The buying price is 90% of the full value of FAQ and the supplier will receive a higher price depending on the quality of their sample (or a lower price). Kyagalanyi has found that this has positively impacted the quality of the deliveries they receive from their suppliers. Like other exporters, Kyagalanyi does not pre-finance buyers but conducts all business and settlement on a cash basis.

Export transport is contracted out and Kyagalanyi saw no benefit in owning its own vehicles.

Kyagalanyi expressed a strong interest to pursue a direct relationship with financial institutions to assist in financing its out-growers. It also expressed a strong interest in providing a reliable venue for supplying key inputs to farmers at harvest time deducted from the value of the cash payments for the coffee delivered. Finally, Kyagalanyi mentioned that they were setting up wet processing stations in various places that they wanted the farmers to own in the short to medium term. When asked if they felt that a savings-based buy out of the facilities over a five year period would work, they concurred that it would.