MODULE 4 - FINANCIAL MANAGEMENT

BASIC BOOKKEEPING

Proper bookkeeping is absolutely essential to any farmer organization, cooperative or exporting business. If you do not have a good overview of how much your organization can spend on its various activities, or how its money is being spent, this should be one of your first priorities. Four types of stakeholders have good reasons to require your organization to operate a proper bookkeeping system: your farmers, your government, your credit providers and your buyers.

Your farmers

As a farmer association or cooperative, you sell products on behalf of your members and thus manage your members' money. Farmers will not work with your organization unless they are confident that you are handling their money well. Maintaining correct financial records will allow you to justify your decisions as to the management of their assets at any time.

Your government

Tax authorities and regulations governing the functioning of farmer associations and companies will require that you maintain correct and up-to-date financial records.

Credit providers

Your credit providers (including buyers providing prefinancing) will require proof that you are properly managing the funds they have provided to you.

Your buyers

Even if your buyers are not entitled to look into your accounts, knowing that you respect the principles of

good bookkeeping may reassure them as to the professionalism of your organization. Buyers are not interested in working with suppliers that are likely to go bankrupt within the year or may decide to raise their prices halfway through the season because they suddenly discover they are making a loss.

The financial records of your organization may be kept by an employee (a bookkeeper or accountant), or you may outsource your bookkeeping to a professional external accountant or accounting firm. As a cooperative, you may benefit from accounting services offered by national cooperative unions. It is beyond the scope of this guide to go into the details of bookkeeping and accounting. Good courses are widely available and are worth the investment.

No transaction without receipt

A basic rule for all staff members! Every revenue or expenditure must be documented by way of a receipt or voucher, to be handed over to responsible officer. Expenditures are best documented by way of a receipt issued by the supplier of the goods or services. When this is not possible (for example in the case of a woman preparing lunch for a farmer training session organized in her village), you should issue your own receipt – signed by the supplier – to document the transaction. Cooperatives and companies generally use their own receipts to document sales. These receipts may be developed as part of the organization's overall traceability system.

COST-BENEFIT ANALYSIS

To have more insights into your minor and major costs, it is useful to make a cost-of-production analysis, which is discussed in the next paragraph. A cost-of-production analysis will allow you to:

- Determine your major costs and where you may make savings;
- Determine your minimum price;

- Determine the minimum volume you have to produce to be profitable;
- Assess potential returns on investments;
- Predict what effect big changes in your operating environment will have on your business (e.g. fuel price increases).

Step 1: List all your costs

Step 2: Divide your costs in variable and fixed

costs and per product

Step 3: Make your calculations

While the principle of cost-benefit analysis is very simple (list all costs and incomes and calculate the balance) the practice can be quite complicated. Most importantly, you should not forget anything and record all expenses.

STEP 1 - LISTING YOUR COSTS

A starting enterprise will have to predict many costs. You need to collect the prices of your inputs and estimate how many inputs you will use, estimate the salary costs of your employees, etc.

If your organization is already in business, you can consult your financial records. However, you may find that your bookkeeping methods are not up to par or do not facilitate the analysis of your organization's costs. You may need to instruct your bookkeeper to use different cost categories and inform your staff members of the correct procedures to report their expenses to the bookkeeper.

Certain costs do not appear as expenditures in financial statements, but should nevertheless be taken into account in your cost-of-production analysis. These costs include opportunity costs, amortization costs and the cost of money.

Opportunity costs

An opportunity cost is the cost of the alternative that must be forgone when choosing a certain action or making a certain decision. For example, although a farmer does not pay herself a salary, her working time has a cost since it could have been spent carrying out income-generating activities. This foregone income is called the "opportunity cost" of her time. The easiest way to quantify this opportunity cost is by estimating what the farmer could earn if she were to work on another farm. Similarly, a farmer may not consider his land to represent a cost since he has inherited it from his father; the opportunity cost of the land is the income the farmer could have earned by renting out his land.

Amortization costs

Amortization is the practice of writing off the initial costs of an asset in installments over a fixed period of time. The costs of the acquisition of a building, for example, are not all included in the financial sheets of

that year, but divided in separate installments over the course of the life expectancy of the building.

Cost of money

A cost which is often overlooked in a cost-of-production analysis is the "cost of money", including interest payments on loans and bank fees. The paying back of a loan is not a cost in itself in the same way that receiving a loan or pre-financing is not an income. But the interest payment is a cost.

STEP 2 - COST CATEGORIZATION

Variable and fixed costs

Distinguish between your operation's variable and fixed costs.

Variable costs = costs that depend on the production volume

Fixed costs = costs that do not depend on the production volume

Examples of variable costs include the costs of planting material, fertilizers and casual labour for harvesting (for a producer), or the costs of products sourced from farmers, transportation or casual labour for packing (for an exporter). Examples of fixed costs are: permanent staff salaries, office costs, maintenance costs and the amortization of machinery. The "hidden" costs that are often overlooked are usually fixed costs.

Since fixed costs are indirectly related to the volume of production, the boundary between fixed and variable costs is not always very clear. For example, purchasing machinery to increase your production capacity will result in an increase in your fixed costs.

Costs per product/product category

If your organization produces or exports various products, your financial records should indicate which costs concern which products (attribution). While this may be straightforward for certain expenditures, other costs may be harder to attribute. An exporter exporting both cocoa and coffee knows how much he paid for his cocoa, and how much for his coffee; however, if both products are stored in the same warehouse, how should the amortization costs of the warehouse be divided over the two products? The attribution of fixed costs may be particularly problematic. Choose one of the following approaches:

- Only the variable costs are divided per product; the fixed costs are attributed to the overall enterprise.
 This approach allows you to analyse gross profit margins for each product, as well as the net profit for the overall operation.
- Those fixed costs that clearly concern a particular product are attributed to that product. For example, an exporter exporting both fresh and dried fruits may attribute the amortization costs of his fruit

dryer to the dried fruits only. Meanwhile, all "general" fixed costs are divided over the operation's various products according to the percentage of total revenue they represent. If the exporter in the previous example derives 60 percent of his revenues from selling fresh fruits and 40 percent of the overall management and office costs may be attributed to the fresh fruits, and 40 percent to the dried fruits.

STEP 3 - PROFIT CALCULATIONS

Overall net profitability in a given year

This is the simplest calculation; you do not even need to distinguish between fixed and variable costs, or attribute your costs to your various products. Simply add up all costs and revenues incurred or generated by your operation in a given year, and calculate the difference. The outcome should equal the difference between your opening and closing balance of money and assets.

Revenues - costs = overall net profitability

Net profitability of a particular product

The net profitability of a product is calculated as follows:

Revenue generated by the product

- variable costs of the product
- fixed costs attributed to the product

net profitability of the product

Overall gross margin

The gross margin for your operation's overall production volume is calculated as follows:

Total revenue - variable costs

gross margin of overall operation

Gross margin per unit

The gross margin per unit is calculated according to the following formula:

Price per unit - variable costs per unit

gross margin per unit

Importantly, your gross margin should always be positive. If the gross margin of one of your products is negative, the more units you sell, the more money you are loosing. You now have three options:

- Stop producing and selling the product;
- Reduce your variable costs (producing more efficiently) (see <u>Reducing costs</u>);
- Increase your sales price (see Price setting).

Do not fool yourself by shifting a product's variable costs to the fixed costs category; your net profitability will still be negative!

Analysis

Comparing your net profitability and gross margin allows you to analyse the impact of your fixed costs on the net profitability of your enterprise or products. If your gross margin is positive, but the overall profitability of your enterprise or the profitability of one of your products is negative, you have several options:

- Lower your fixed and/or variable costs (see Reducing costs);
- Increase your sales price (see Price setting);
- Increase your sales volume without increasing your fixed costs (i.e. without investments in machinery or permanent staff).

A common error is to invest heavily at the start of an operation in order to quickly reach the targeted production volume. However, this entails high fixed costs from the start, when sales volumes may still be low. We advise you to start as "lean" as possible – you can always invest in more personnel and machinery when business picks up.

Return on investment

The return on investment is what you earn per dollar (euro/franc/...) you invest in your operation.

Net profitability of a product

total costs attributed to a product

=

return on investment of a product

A product with a high profitability per unit may have a lower return on investment than a product with a low profitability per unit.

Just as you calculate return on investment, you may also calculate return on labour. The return on the farmer's own (non-salaried) labour may be used as a proxy for the cost of his labour, rather than the opportunity cost of his "theoretical" salary.

An exporter of fresh and dried fruits wanted to expand his dried fruits operation since he was convinced that it had a higher profitability; this was confirmed by the cost-benefit analysis of the enterprise. However, the return on investment of the enterprises' fresh fruits operation turned out to be higher than that of its dried fruits operation. The exporter therefore decided to expand his production of both fresh and dried fruits.

Analysis

While an overall enterprise may be profitable, one of the products in its product range may be making a loss. If one of your products is unprofitable, you have several options:

- Decrease your costs;
- Increase your sales price;
- Increase the sales volume of the product (if the gross margin of the product is positive and certain fixed costs may be attributed to it).

If none of these options are possible, you may:

- Eliminate the product and concentrate on your profitable products;
- "Subsidize" the loss-making product with the profits generated by your other products.

You may decide to keep less profitable or loss-making products in your product range for one of the following reasons:

- To offer your clients a full range of products: if you do not offer the non-profitable products, your clients may also stop buying the profitable products;
- A farmer association or cooperative may strive to maximize the income of its the farmers, rather than maximize its profits. However, it is in the interest of the farmers that the enterprise is economically sustainable. If the profits generated by one product are used to subsidize another product, these profits can not be used to invest in expanding the organization's operations and buy more products from farmers. These considerations should be kept in mind when discussing loss-making products with farmers.

"Separate" products which often make a loss are byproducts. For example, a fruit exporter may sell his rejected fruits on the local market; second-grade shea butter which can not be exported may be used for making soap. In such cases, the loss on the by-product should be considered as a cost in the production process of the main product. Selling the rejected products on the local market is merely a way of reducing the costs of the sorting process.

Break-even point

If your gross margin is positive, you may calculate the minimum volume which you need to sell at a given price in order to cover both variable and fixed costs – your break-even point.

Annual fixed costs
gross margin per unit
=

break-even point

Or:

Annual fixed costs

price per unit - variable costs per unit

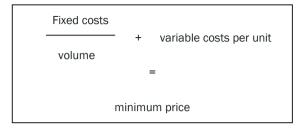
break-even point

A simple example: exporting one tonne of a certain product represents a variable cost of US\$1 000. The enterprise's annual fixed costs amount to US\$5 000. The selling price of the product is US\$1 500 per tonne. The enterprise will have to export at least $5\,000/(1\,500-1\,000)=10$

tonnes per year in order to break even.

Minimum Price

Your minimum selling price should cover at least your variable costs; however, you may also set a minimum price which, for a given volume, covers both variable and fixed costs.



A simple example: exporting one tonne of certain product represents a variable cost of US\$1 000. The enterprise's annual fixed costs amount to US\$5 000. The buyer has ordered 10 tonnes. The minimum price the enterprise should charge is $(5\,000\,/\,10) + 1\,000 = 1\,500$

 $(5\ 000\ /\ 10) + 1\ 000 = 1\ 500$ or US\$1\ 500 per tonne.

Formats for calculations

You may use various formats to calculate gross margins, net profitability, break-even points etc.

The Annexes to Module 4 provide some examples.

Annex A provides an example of the cost table used by a mango export operation to calculate its desired <u>FOB</u> price. The table does not include details of the exporter's fixed costs, but is rather based on a desired margin per exported container to cover these fixed costs.

Annex B provides an example of the cost table for a cocoa exporter's annual general meeting and farmer training sessions. While the method used in this example to calculate the break-even point is more complex, the table is more informative as it indicates the loss or profit generated by each additional exported container. The standard calculation of the break-even point is given at the end of the table.

Annex C provides a very detailed example of a costbenefit analysis for a producer growing both <u>conventional</u> and <u>organic</u> pineapples.

COST-BENEFIT ANALYSIS OF CERTIFICATION

Implementing changes in an organization's management or production methods to comply with the requirements of a <u>certification</u> scheme represents an investment. As with all investments, you should assess whether the benefits generated by the investment are likely to outweigh its costs.

Obtaining certification may allow your organization to:

- Improve its market access: certification may allow you to supply new buyers or retain your current buyers;
- Obtain a price premium;
- Obtain prefinancing (especially for certain <u>fair-trade</u> commodities).

The costs of certification generally include:

- Costs to comply with the scheme's requirements (e.g. at the level of production methods, democratic organization, etc.);
- Costs to prove compliance with the standard (e.g. costs related to recordkeeping, setting up an Internal Control System (ICS), etc.);
- Certification fees to be paid to the certification body;
- Labelling costs.

Annex C to this Module, providing an example of a costbenefit analysis for the parallel production of organic and conventional pineapples, may be used as a format to compare the costs and benefits of conventional and organic production operations.

Alternatively, you may list all additional costs and revenues your organization is likely to incur or generate as a result of certification, to assess whether the investment is worthwhile. While certain costs related to certification will only be incurred during the initial phase of operations, most certification expenses are recurrent (e.g. employing an ICS officer, paying certification fees, etc.).

Organic certification generally requires a <u>conversion</u> <u>period</u> of three years, during which the producer must comply with the scheme's requirements and pay certification fees, but is not yet allowed to sell labelled organic products. All extra costs incurred during the conversion period should be regarded as investment costs.

CASH FLOW ANALYSIS

A cash flow analysis allows you to decide when to make certain investments or obtain credit. Unlike a cost-benefit analysis, a cash flow analysis only looks at income and expenditures as they occur. While amortizations do not appear in the cash flow analysis, the reception and repayment of loans do.

A typical cash flow analysis looks like the following table:

	Month 1	Month 2	
Initial balance			
Income			
Expenditures			
Closing balance			

Analyzing your cash flow is generally quite straightforward; the only difficulty may be to predict when certain expenditures and incomes will occur. Monthly salary payments are easy to time, but when exactly are your buyers going to pay their bills?

The closing balances of each period indicate how much and when you can invest. For seasonal products, they indicate when your operation is likely to run out of cash and require credit to bridge the gap until the next sales earnings start coming in.

The following should be kept in mind when requesting credit:

- Money costs money: the interest to be paid on a loan will result in an increase in your cost-ofproduction;
- Operations with a year-round product cycle should only take out credit for investments in the expansion of the business. If your revenues do not cover your running costs, your business is making a loss and taking out a loan may only make the situation worse;
- Operations with a seasonal product need to buy a lot of products from their farmers upfront, but may only be paid by their buyers at the end of the season; hence the need for prefinancing (profitable enterprises may decide to use their profits to prefinance their next campaign, reducing the need to obtain credit);
- Carefully assess the timing of your credit needs and pay back your loans as quickly as you can to reduce the period over which you will need to pay interest.
 Credit providers often oblige their borrowers to spread installment payments over a long period of time. Do not accept long repayment periods if your cash flow analysis indicates that you could pay back the loan much sooner.

FROM ANALYSIS TO ACTION

In the former paragraphs we have already discussed a couple of actions that can be taken in response to certain outcomes of the financial analysis. In this paragraph we give an overview of these actions and go into more details.

COST-BENEFIT LESSONS FOR YOUR STAFF

Distinguishing between variable and fixed costs and between the various products within an enterprise's product range requires detailed expenditure reporting by all employees. Make this clear to them; employees will be more likely to comply with detailed reporting requirements (*No transaction without receipt!*) if they understand why they are necessary. Employees should be encouraged not to waste any of the organization's resources. After all, their job security depends on their employer's financial wellbeing! All employees should have some basic knowledge of the organization's major and minor cost categories. Staff members should not waste their time trying to save a few pennies, but focus their efforts on those areas where important savings can be made.

Penny wise and dollar foolish

A dried fruit processor and exporter put plastic sheets between the layers of dried fruit to prevent them from sticking together. Feedback from the buyer revealed that the plastic sheets did not cover the whole surface of the box and that some fruits were still sticking together. When the general manager investigated the problem, the line manager explained that he had instructed his staff members to use a minimum amount of plastic to save on packaging material. The general manager explained that the plastic sheets represented only a minor cost in the whole operation. The company had positioned itself in the high quality segment of the market, and any quality defects could lead customers to look for other suppliers. The cost of loosing customers could never be compensated by any savings made on packaging material.

REDUCING COSTS

Reducing costs or increasing your sales volume without increasing fixed costs are two ways to increase the efficiency of your operations. Reducing costs is not easy and should be done carefully. Certain cost-cutting measures may affect the quality of your product and thus lead to a decrease in demand. When trying to reduce costs, you should look at the largest cost categories, including:

- Inputs: is it possible to find an alternative for or use less of an expensive input?
- Personnel: is it possible to do the same work with less staff, or produce more with the same number of staff members?
- Equipment and buildings: if amortizations represent an important cost for your organization, you should evaluate whether your equipment and buildings are used as efficiently as possible. May it be cheaper to rent, rather than own, your equipment? Or could you rent out your equipment when idle to earn some extra income? Could you increase your production volume without investing in new machinery (e.g. by introducing shifts)?

PRICE SETTING

As indicated earlier, your unit price should cover at least the variable costs per unit. Ideally, your minimum price should cover both variable and fixed costs for a given production volume – the maximum volume you can produce or export with your current production or export capacity. Your sales price will also depend on the volume sold to a particular buyer. Many suppliers offer discounts when buyers order large volumes, which allow them to "spread" their fixed costs over a higher number of units.

As you are unlikely to operate at your full production or export capacity, it is good practice to set a price that is considerable higher than the minimum price calculated on the basis of your maximum capacity, and then offer a discounted price (which should still be higher than your minimum price) for large orders. However, your price cannot be determined solely by internal factors; it will also be influenced by the prices practiced by your competitors. You cannot set a higher price than your competitors unless you offer a better quality product (including certification) or better services (see Module 7). If – for the same quality of products or services – your competitors' price is lower than the minimum price required to make a profit, your competitors are producing the same product in a more efficient

manner, and you will have to look for ways to reduce your production costs.

Note that the initial sales of start-up enterprises are likely to remain far below their target volumes. At the same time, these enterprises must set a competitive price to enter the market, and thus accept initial net losses. These losses should be regarded as investments costs to be earned back at a later stage when sales volumes have increased.

CONTRACT NEGOTIATIONS

Apart from the sales volume and price, many other elements of a sales contract are of crucial importance.

A contract is not written for situations where everything goes right, but for situations where something goes wrong.

Any sales contract should clearly stipulate which party is responsible in case something goes wrong. Make a list of everything that could go wrong, as well as the likelihood that it will go wrong; divide these risks into those that can be controlled or avoided and those that cannot (e.g. the destruction of your crop due to a storm). The sales contract should contain provisions regarding those risks that can be controlled or avoided, specifying who is responsible at which stage. A sales contract between an importer and an exporter generally holds the exporter responsible for any problems arising before the delivery of the goods (FOB or CIF). In turn, the exporter will have concluded a contract with his producer(s), according to which the producer(s) is/are responsible for any problems occurring at the production stage.

Problems may arise when the buyer and seller disagree as to the quality of the product upon delivery, for example when the products were sold on FOB terms and the buyer only sees his products upon arrival in the country of importation. To avoid such conflicts, quality assurance checks may be executed by third parties (e.g. SGS, BVQI, etc.) at both the packing stage in the country of origin and the point of reception in the importing country. If these checks reveal a discrepancy between the quality of the products at the stage of packing and the quality upon delivery, something may have gone wrong during transportation and the transport company may be responsible for any losses. Not surprisingly, third party quality assurance certification is widely used by traders in perishable products, including fresh fruits.

Checklist for sales contracts

The contract should clearly specify which party owns the products at each stage of the supply chain (= terms of delivery). At which point does the transfer of ownership take place? Which costs and risks are borne by the seller, and which costs and risks are borne by the buyer? Such provisions are specified by the <u>Incoterms</u>, a set of universal terms of delivery published by the <u>International Chamber of Commerce (ICC)</u> (see <<u>www.iccwbo.org/incoterms/id3040/index.html</u>>). Using the internationally accepted Incoterms avoids confusion as to the interpretation of a sales contract. For a good overview, see the CBI Export Planner, Annex 2, available at <<u>www.medibtikar.eu/IMG/pdf/Export Planner from Developing Countries to EU Markets.pdf</u>>.

The terms of payment determine when and how the buyer should pay the seller. An overview of the universal nomenclature for the various options for securing payment is given in Annex 1 of the CBI Export Planner.

The International Trade Centre (ITC) has published a number of manuals and guides concerning trade financing, see <www.intracen.org/tfs/welcome2.htm?http&&&www.intracen.org/tfs/publications/manuals.htm>.

The contract's product specifications should be clear and verifiable. "Good quality" is not objectively measurable; "less than 5 percent mould" is. For many commodities there are international standards for quality grading. If they exist, use them in your contract.

A number of organizations have developed model contracts for international trade; the Annexes to this guide (<u>Additional Resources</u>) provide a link to the various sources. For general principles governing international sales contracts, see the Unidroit Principles of International Commercial Contracts

(<www.unidroit.org/english/principles/contracts/principles2004/integralversionprinciples2004-e.pdf>), or the Database of the United Nations Convention on Contracts for the International Sale of Goods (CISG), including a Guide presenting contract clauses and documents for dealing with contract issues and tips for contract administration when the CISG applies (see <www.cisg.law.pace.edu/cisg/contracts.html>). For a general overview of both legislative texts, see

< www.tradeforum.org/news/fullstory.php/aid/508/Primer_for_Exporters:_International_Sales_Contracts_.html>.

For a list of both free and fee based online sources of contract forms, see

< www.findlaw.com/16forms/collections.html>.



INFORMATION FOR BUSINESS SUPPORT ORGANIZATIONS AND COOPERATIVES ASSISTING FARMERS IN CALCULATING THEIR COSTS OF PRODUCTION

Assisting farmer organizations in carrying out a cost-benefit analysis is especially difficult when their managers do not have the necessary educational background; helping small farmers to undertake a cost-benefit analysis of their operations is even more difficult. However, farmer organizations need to know their farmers' costs of production in order to set a suitable price, while farmers benefit from a better understanding of the profitability of their operations. In addition, fair-trade certification requires the setting of a fair minimum farm-gate price covering at least the costs of production (including the costs of complying with the fair-trade standards).

Recommendations

- Collect some background information yourself (e.g. on the cost of renting land, minimum and average wages for farm labourers, the costs of inputs etc.);
- Conduct the analysis in collaboration with a group of about ten farmers:
- If there are any literate farmers in the group, involve them first; although they are likely to be among the richer farmers and their methods may be more input-intensive than those of the average operation, they may be able to provide you with background information regarding costs of production. This information can then be discussed and verified with the other farmers;
- Conduct your analysis according to the production calendar, from the preparation of the soil to harvesting, to make the farmers – who are experts in their operations – feel at ease and avoid any omissions;

- Although farmers will mix up variable and fixed costs, you may still analyse their operations' net profitability with them, and categorize costs afterwards;
- Discuss production costs on the basis of the average plot size and convert these costs to per acre/hectare costs afterwards, as farmers are likely to overestimate costs per acre/hectare;
- Use units of measurement the farmers are comfortable with, even if these are barrels or cartloads; if possible, convert these units into metric units (kilograms, tonnes, litres, etc.), especially for production and sales volumes (e.g. convert crates to kilograms). For the chosen plot size, convert all indicators into monetary terms in order to calculate costs per acre/hectare;
- Many costs and yields will vary greatly from one year
 to another and from one farmer to the other. Try to
 agree on the extremes (what are the highest (when
 everything goes according to plan) and lowest (when
 everything goes wrong) possible yields?), then agree
 on an average;
- Explain the concept of "opportunity cost" by using examples farmers can identify themselves with. A farmer who owns his land, for example, may not have to rent land; however, he does forego any revenues he could have made by renting his land out. Likewise, a farmer working on her own land may not pay herself a wage; however, she does forego any wages she could have made by doing paid work for someone else.

Profitable vs. loss-making products

A cooperative was selling a fruit in two quality grades; grade 1 was making profits while grade 2 was making a loss. The cooperative's manager explained to its members that the organization was using the profits generated by grade 1 to cover the losses incurred by grade 2; the management wanted to stop selling grade 2 and use the profits generated by grade 1 to increase the enterprise's production volume. The farmers, however, wanted to the cooperative to continue selling grade 2 fruits, which they would otherwise have to sell on the local market or throw away. The cooperative's managers assisted the farmers in carrying out a cost-benefit analysis of their operations, which helped the farmers understand that they could increase their earnings by selling more grade 1 fruits. They agreed to lower the farm-gate price for grade 2 fruits to allow the cooperative to reduce its losses and invest in the expansion of its operations. In addition, the cooperative organized training sessions on improved production methods to ensure that more fruits would meet the grade 1 requirements.

