Business Planning for Cooperatives

A training manual

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TABLE OF CONTENTS

1 INTRODUCTION

Many Afghan NGOs are working with formal or informal producers' organisations. Often creating a marketing cooperative is one of their project objectives. The focus in this training is on how NGOs can support farmers in creating such cooperatives in a most efficient manner.

The first question that arises then is: what is a cooperative?

> *A cooperative is a business financed, owned and managed by members which delivers services to its members.*

Farmers are both the owners and the clients of the cooperative business. As *clients* they want the coop to deliver good services. In the case of agricultural coops this can be:

- Access to quality inputs (seeds, fertilisers, CPCs)
- Access to better services (mechanisation, credit and technical advice etc.)
- Access to better markets (niche markets, market information etc.)
- Adding more value to the produce (grading, packaging and processing etc.)

These are the core functions of a coop. This is not that obvious as it seems; often people think that the main function of a coop is to 'unite farmers in order to negotiate better prices'. This is based on the rhetoric of 'together we are strong'. In practice this is not realistic as prices can only be influenced by players that have a substantial market share. This is rarely the case with coops and virtually never with newly created, small coops in poor countries.

On top of that, experience shows that coops have a hard time to survive if they only rely on trade activities based on their economics of scale. Most coops working only on buying inputs or selling produce together, are less efficient than private traders. This is due to a number of reasons:

- the number of members is generally less than the number of clients of a private trader.
- the range of products is generally much less than the range or products that private traders deal with. This is especially the case with seasonal products.
- private traders are generally more efficient in using (human) resources and they are less scrupulous in bribing officials or respecting legal requirements.

To be successful, coops have to focus on accessing *better* inputs and markets and/or *adding more value* to the produce. This requires *investments* that are generally too high for the potential members; this is where the NGO comes in. It can support the coop with investment funds. Yet, the danger is that members will feel less ownership over the process. They are tempted to rely too much on the donor contribution rather than on their own ideas, skills and motivation.

As *owners* of the coop, farmers have to manage the coop as well. While doing so they always have to reconcile two elements:

- the coop must remain a healthy and profitable business. In order to be able to compete and to survive slack periods it needs investments and financial reserves.
- in order to motivate members to invest time, energy and money in the coop they must gain from the coop in financial terms. This is done by giving dividends to the members.

So the key issue in creating a viable cooperative is to find investment opportunities that both serve the members and generate income for the coop. Like with normal companies a Business Plan is needed to convince the investors, in this case the farmers and the donor, that the investment is feasible and profitable. It should also show that the members will continue to support it, once the donor has withdrawn.

This training manual explains how to make a Business Plan. Most attention is paid to findings markets and to making an economic analysis. In the last chapter the economic analysis is translated into a simulation model that allows us to find a good balance between the three perspectives:

- Coop's perspective: What is the sustainability as a business? What are the risks?
- Members' perspective: What do they contribute and what do they get out of it?
- Donor's perspective: Is the balance between the contribution of donor and members reasonable? What pre-conditions can the donor put forward to the members and the coop to prove that they are committed to the process?

In Annex-I, one finds a more general paper on the cooperative development issues whereas Annex-II explains how to read the profit and loss of a coop from its Balance sheets.

2 BUSINESS PLANNING

2.1 Purpose of a business plan

The objectives of a business plan can be one or more of the following:

- To develop and concretise a new consistent plan based on strategic choices;
- To create a common understanding in the organisation;
- To assess the requirements and the feasibility of the new strategies;
- To identify and assess the risks involved;
- To convince potential financers (e.g. a bank or donors) to invest in the plan.

In practice most business plans are made when companies are contemplating a major investment and/ or when they need additional finances. A business plan is a *planning instrument for management* and an *assessment tool for potential investors*.

2.2 Contents of a business plan

A business plan (BP) defines the business concept, the objectives and the strategies for achieving these. It outlines how the strategies is translated into a concrete plan for the required business organisation and marketing. Finally, it translates all ideas into costs and benefits and (thus) in the financial resources needed.

The exact shape and form of a BP depends on the intended public. In any case the reader will mostly be interested to know what the core-business of the company will be, how it will ensure that it has a market, how it will operate and grow in practice, how decisions are taken, what the expected profits are and how the activities will be financed. In the specific case of cooperatives, additional information is needed on the role of the members in the activities and on the perspective of attracting more members.

In practice a business plan for a cooperative needs to address at least the following issues:

- **Business concept:** the basic activities of the coop that will ensure the profitability and sustainability of the coop and the benefits for the members.
- **Market:** on which market will the coop operate? We will look at the four P's: Product, Price, Place and Promotion. We will analyse the 3 C's: Consumers, Competitors and Controls (government licences, taxes etc.)
- **Operational plan:** supply of raw materials, logistics, storage, adding value (grading, packing), inspection and quality control, the sales process.
- **Management and organisation:** how to run the coop? What are the responsibilities and tasks of the board, the manager and the staff? How will you motivate each of them?
- **Feasibility:** what is the expected financial feasibility of the activities? What investments are needed and what will be the cash flow, the balance sheet and the Profit and Loss and the break even point?
- **Risks and assumptions:** what have been the most important assumptions in making the plan and what are the risks? How can the risks be minimised or mitigated?
- **Capital formation in a cooperative:** how can a coop attract capital and how can it retain its profits for re-investments?
- **Membership policy:** what are the membership criteria and how is membership expanded?

In some cases it will be very useful to include a paragraph on the staff and the experience, knowledge and skills that they will need.

In this manual the focus is on the four issues that are crucial to motivate and convince (potential) members and donors:

- Business Concept
- Marketing
- Management of a coop
- Financial feasibility / economic analysis

3 BUSINESS CONCEPT

The first and foremost question is what the core business of the coop will be. The core-business is the activity that motivates people to become member and that will be the financial foundation of the coop.

The basic choices are:

- Accessing better and cheaper inputs (seeds, fertilisers, CPCs)
- Accessing better services (mechanisation, credit and technical advice etc.)
- Accessing better markets (niche markets, better channels)
- Adding value to the produce (grading, packaging, and processing, etc.), and
- Using economics of scale (transporting and selling or buying together).

Within these broad categories more specific choices have to be made. These choices must be based on concrete business opportunities. Here some examples are given:

- The price of animal fodder in our district is some 50% higher in winter, compared to the price in the neighbouring district at the time of harvest. Transport costs are some 10% if a full truck load can be hauled at once. So our cooperative will collective buy the animal feed in autumn, store it in a common store and sell it to members in winter.
- The price of apples in the capital is 50% higher compared to the price in our district when they are well graded and nicely packed. The costs of grading and packing are 15% and transport costs are 5%. Next to that we will lose 15% on the price of our apples in our district as we will have to sell our low quality apples there. In total we still expect a 15% additional profit when we sell them in the capital.
- Detailed discussions with fertilisers dealers in our provincial capital have shown that we can obtain the fertilisers there 20% cheaper than in our village. This is more than enough to pay for the transport costs.
- With no feed mill in our district we rely on buying chicken feed from the capital. This means high transport costs and even higher costs for the raw materials for the feed. Having our own feed mill cost out the transport costs, will enable us to use our own cereals and pulses for that purpose. The feed produced in this way will be 15% cheaper.

It is of utmost importance to be specific and concise. A general statement like: “we will sell apples together” will not give the reader the impression that you understand the business in which you are.

Assignment

- What are the potential core businesses of your coop?

4 MARKET

4.1 Introduction

Before farmers (or donors) are willing to invest in a coop they want to know the market prospects of the business. In the case of *input- and service coops* this is easy: members have to sign an agreement that they will purchase a certain amount of services per year. In the examples quoted above: If 20 owners of intensive poultry unit with 500 chicken each sign a contract to purchase at least 18 tonnes per year (100 gr./chicken/day); a guaranteed market of 360 tonnes has been identified. Additional markets can be found with non-members who have semi-commercial poultry units. For this a market survey has to be done.

With *marketing cooperatives* things become more complicated. In theory a wholesaler or a few super-markets could agree to sign a contract with a cooperative to buy all the apples that they can produce (with an agreed maximum). In practice this is only possible if a coop already has a track record of producing high quality apples for a competitive price. With a new coop the question remains how one can be assured that a certain amount of produce can be sold profitably. To this end market research has to be done.

One of the most used definitions of marketing is:

The process of finding out what your customers want and supplying it to them at a profit.

This definition comes from industrialised countries where marketing is an important element in the strategy of major companies. They actively explore long-term trends in consumers' preferences and behaviour in order to design new products that suite the future clients' demands. The reality for virtually all (new/small) coops in poor countries is that they do not have the resources to design new products. Most find it even very hard to change the composition of the production for the sake of newly identified market opportunities. Of course, vegetables farmers can adjust their production more easily than fruit growers or livestock producers; but also in the case of vegetables starting a new crop requires investments in terms of finances, knowledge and skills.

A more realistic approach for new, small coops is to focus first on identifying the best markets for their present production, and afterwards, when the coop has positioned itself on the market and members gain more confidence, the coop can encourage their members to produce new products for new markets.

So for a new small coop the word 'marketing' generally means 'identify potential markets'. In simple words: finding out *where* they can sell *how much* of *which products* at *which prices.*
In this training we look at three basis steps in designing a marketing strategy:

1. a **market survey** to identify the potential markets for the present production. The analysis focused on the *3 Ps: Product (what to sell?), Place (where to sell?) and Price (at what rate?)*
2. a **market assessment** to see how the potential markets will develop over time. The analysis focuses on 2 Cs: *Consumers* and *Competitors*
3. a **marketing strategy** to position the produce of the coop on the selected markets.

In the first two steps much market information has to be collected. Some of this can be found in statistical reports or in other publications. Often this needs to be supplemented with information collected in interviews with market parties. This is complicated as:

- market parties do not like to provide information that might weaken their (knowledge) position on the market
- interviewees might fear that the information they provide might be used for tax purposes
- all interviewees get bored and irritated if they are asks too many factual questions; they will feel that they are part of an interrogation rather than part of a dialogue.

Therefore, one has to avoid too many - and too long questionnaires. Another concern is the resources to do market research which is usually limited in terms of manpower, time and budget. So it is important to design a limited number of interviews in such a way that the maximum amount of information is collected with a minimum amount of effort.

The following table can be used for this. Based on *what* one wants to know and to *whom* this has to be asked and *how* this will be done (= which method will be used), the actual question is formulated. As different actors can have different perspectives on the issue, one can decide before with which answer the collected information will be compared.

Table: Structure to translate the Information Needed into Questionnaires

What do you want to know?	**Who to ask?**	**How to ask? (method)**	**Question**	**Control / check**	**Answer**
What is the price of Beruti apples in Kunduz?	Consumer	Questionnaire	How much did you pay for the Beruti apples?	Trader	15 Afs./kg
		Questionnaire	How much are you willing to pay (maximum)?	Trader	20 Afs./kg.
	Trader	Questionnaire	At what price do you sell Beruti?	Consumer	15 Afs./kg
		Questionnaire	How does the price of Beruti change over the year?		Price per month
		Questionnaire	What is the maximum price people will pay?	Consumer	25 Afs./kg
		Questionnaire	At what price do you buy Beruti?	Farmer	11 Afs./kg
		Questionnaire	What is the most expensive apple variety that you sell?		Golden delicious
		Questionnaire	What is the price of this variety?		20 Afs./kg
	Farmer	Questionnaire	At what price do you sell Beruti?	Trader	7 Afs/kg
		Open interview	What is your costs price?		7 Afs/kg
What are the most demanded apple varieties and how does this reflect in the price?	Consumers	Questionnaire	Which var. do you like the most?	Trader	Golden Delicious
	Traders	Questionnaire	Which var. do you sell the most?	Customer	Beruti
		Semi-structured interview	What is your turnover (in Seer) of the five most important varieties?	Consumer	Beruti, Red delicious Golden.del;
		Semi-structured interview	What is the max. price of the top five varieties?	Consumer	24, 21, 20, 18,15 Afs./Seer

Generally, it is easy to make a very long list of what one would like to know. However one must realise that asking too many questions to interviewees leads to poor answers. Farmers and traders get tired when they are supposed to answer a large number of factual questions. Therefore, it is better to cluster the questions in such a way that each interviewee has a reasonable number of questions that have an internal logic; for example one can discuss seasonal influences with one trader (or farmer) and difference between varieties with another trader (or farmer).

Upon completion of the table, the questions that need to be asked from each actor can be simply extracted from the table. The same table can be used again when all information is collected.

4.2 Market survey

Market surveys come in all forms and shapes but here we will limit ourselves to surveying the 3 P's: what *Prices* we can expect to get for different *Products* at different *Places*.

Price
Consumers like to buy the product at the lowest possible *Price*. The *Price* is however influenced by the *Product* and the *Place*. People are willing to pay more for a piece of fruit in a luxurious hotel in the capital than on a village market; even though it is the same piece of fruit.

Another important element, especially with agriculture products, is timing. Prices change constantly, per day, per week, per month and per season. These changes are so large that average prices often have little meaning. So any serious market study identifies seasonal trends in market prices.

As *Prices* are influenced by the type of *Product*, the *Place and the timing*; price information should be collected for specific products on specific places covering all different seasons.

Product
This starts with defining the product that the coop wants to market. This could be vegetables, apples, meat or dairy products etc.. Next we have to find out what specific characteristics of these products the consumers prefer. This refers to features like:

- *Variety or type of produce* which refers to permanent features like:
  - taste,
  - shape,
  - colour, etc.
- *Quality* which refers to:
  - physical qualities:
    - lack of damage,
    - size,
    - freshness,
    - storability (potential shelf life),
  - uniformity: sorting/grading
  - internal quality e.g. organic products, fair trade
- *Packaging* which refers to features like
  - quantity per unit
  - quality of packing material
  - easiness of handling
  - attractiveness of packing material, and
  - labelling (how much information is given).

This list can be extended to include many variables depending on the product. Identifying consumer preferences can be done by interviewing final consumers or by interviewing those who are working on that market: traders, processors, vendors. Generally, one starts with a few open interviews to see what the key-issues on the market are. Asking a few producers, traders and consumers what they find most important about our product will give us a reasonable list of key-characteristics. Based on the results, a questionnaire can be made to interview more people in a structured way. In a questionnaire, product characteristics have to be linked to consumer preferences as well as to prices. One needs to find out how much people are actually paying for products of different varieties/qualities/packaging.

Place
Any agricultural product can be sold at many different places (also referred to a market channels):

To intermediaries:
- Primary trader (local rural intermediaries)
- Secondary trader (urban consolidators)
- Wholesale markets
- Kiosks and shops (general stores, groceries)
- Street vendors
- Supermarkets
- Specialised shops (airports, hotels)
- Institutions (hospitals, schools, the army).
- Processors, and
- Exporters.

To the final consumer:
- Farm gate
- Local road side markets (in village, small towns or even in big cities)
- Local markets (general and specialised ones)

In a market survey for a coop at least the following questions need to be addressed for the different market channels:
- What are the conditions to deliver/sell through these channels in terms of:
  - Product (variety; uniformity etc.; see above)
  - Quantity (minimum/ maximum)
  - Quality standards and inspection
  - Timing and other logistical issues
- What are the prices in these channels (use the price of a standard product as a reference)?
- How much is sold though these channels in the different seasons?

These topics can be found out by interviewing the relevant people. The last issue might require some additional search in statistics. If these can not be found, selected interviewees could be asked to estimate the number of people involved and their average turnover. This leads to 'guesstimates' like: in this town there are 35 medium size grocery shops and on average each sells 50 kg of apples per day during the three months of the harvest and 20 kg per day for the rest of the year.

4.3 Market assessment

A market study describes the present situation on the market. However markets change and one has to foresee risk and new opportunities arising from this. Therefore, the next step in a market research is an assessment of how markets are developing. There are two main sources of change: *Consumers* and *Competitors*. So we have to analyse these.

Consumers
There are many reasons why the preferences and taste of consumers can change:
- Population growth
- Changes in purchasing power: people have more or less money to spend on our product
- The age structure of the population can change; in rich countries the population is aging; in developing countries the consumer might get younger.
- Migration can change demand: rural-urban migration, seasonal migration; refugees etc.
- Changes in consumption patterns. People can start to prefer new foods and develop new habits; e.g. eating industrially produced bread.

Generally, as a new coop or one company we are not able to analyse all these trends by ourselves. We have to use a mixture of common sense, statistics and literature and interviewing some key actors. Semi-structured interviews are the best way of doing this.

Competition
We will not be the only player on the market. Others will offer the same products or products that are very similar to ours and that can push our product from the market (these are called substitutes). So to get an idea of the competitors we can ask a number of questions:

- Who are our competitors?
- What is their marketing strategy? Look at the 4 P's: Product, Place, Price and Promotion.
- What are their strong and weak points in their marketing strategy?
- What are other strong and weak points of them e.g. low production costs; good staff; good location; political connections; good management etc?

This kind of information can be obtained by open interviews with people who know the competitors well; e.g. traders who buy from them.

Based on such analyses we can draw two types of conclusions:

- What can we learn from them?
  - New products?
  - New marketing strategy?
- What should be our concrete strategy on the market:
  - On which markets (product; place) can we be better than them?
  - On which markets (product; place) do we have to avoid them?
  - On which markets (product; place) can we cooperate with them?

4.4 Marketing strategy

By combining all the results for the studies we have an idea of what the options are: what are the products that people like, where can we sell these and what prices can we expect in those different places. Based on this we can make an assessment of our potential profit that we can get on the different markets. This means we can compare the prices we get for different products at different places with the costs we have to make to deliver them there. The market assessment will tell us what the opportunities and risks are on those markets. How will these markets develop over time?

To combine the results of all the four analyses, we can design our marketing strategy which is based on the well known four P's: Product, Place, Price and Promotion. Basically this means we decide *which product* to sell *where* at which *price*. An additional issue is how to *promote* your product. On the aspect of product and place we have already paid sufficient attention. Here we will further explore the remaining two: Price and Promotion.

Price
Most of the time the room to influence the price of our products is very limited. The price is decided on the market where our product competes with numerous others. Still in marketing strategy we have to discuss our pricing policy. There are four ways at setting prices:

- Demand oriented pricing: the pricing is based on the supply and demand. This is rather a passive policy. Just follow the market.
- Cost oriented pricing: prices are set, based on the cost of production. This ensures that you will not make losses; but you might lose market share.
- Competition oriented pricing: the prices are based on what other competitors are offering. This can lead to a 'price war'.
- Psychological pricing: prices like 99 Afs./ Seer instead of 100 Afs./Seer.

Promotion
The marketability of a product depends on its reputation. How do people perceive the product? To which class is it associated with positive emotions and feelings? What is the reputation of the product? Via promotion campaigns the owners of a product can try to make it into a 'brand'. The way to do this differs a lot. We distinguish three levels here:

- Directly linked to the product: labelling the produce and distributing sign boards and posters in or near selling points. This is rather passive and static.
- Media campaigns: using newspapers, radio, TV, we try to increase the image of the product. This is more active and dynamic.
- Professional sales campaign: this refers to marketing and sales staff of the company actively visiting potential buyers (on trade fairs at their premises) with samples and promotional materials. Can be combined with marketing tools like discounts.

The aim of promotion is to increase the sales and to increase the price. The latter is easier to achieve in affluent societies and this is why we see more active promotion campaigns there. In most cases, in developing countries we can limit ourselves to exploring the possibilities and the costs of using the simple promotion methods directly linked to the product.

4.5 Assignment

- Select two of the analyses that are most important for you: Price, Products, Place, Consumer or Competition.
- How would you perform these two analyses (use the table structure):
    - What do you want to know?
    - How will you find out?
        - Design semi-structured interviews with experts. Who will you interview?
        - Design questionnaire for consumers and traders. Which consumers and traders will you interview? Where will you find them?
    - Which secondary literature will you consult? Where will you find this?
- How will you involve farmers, traders in designing, implementing and analysing surveys?

5 MANAGEMENT AND ORGANIZATION

Cooperatives are special organisations because farmers are both the *owners* and the *clients* of the coop. Following is a description of the main tasks and responsibilities of the major actors in a coop:

Members

- Deliver all their products
- Buy and sell at market prices
- Invest in the coop via entrance fees, shares and preferential shares
- Participate in the General Assembly

General Assembly

- Takes all major decisions and decides on strategic issues
- Approves annual plans and budgets
- Approves annual reports
- Elects Administrative Council
- Controls and supervises Adm. Council

Administrative Council (also called Board of Directors)

- Appoints and monitors the manager
- Listens to request and complaints from the members
- Represents the cooperative to third parties and sign contracts
- Ensure annual plans, budgets and reports are made and submitted to the GA

Manager

- Manages the business
- Employs and supervises the staff
- Monitors markets
- Implements annual plan

Purchase Committee

- Identifies the best sources for inputs and other products after studying prices and quality.
- Proposes the best options to the Administrative Council
- Conducts the purchasing process based on the decision of the Adm. Council

Sales Committee

- Identifies potential buyers, by studying prices, delivery terms, quality, transport, etc.
- Solicits a decision of the Administrative Council
- Conducts the sales as decided by the Administrative Council

Accountant (often part time task)

- Responsible for financial matters: maintains an efficient finance management and control system and prepares financial reports.
- Handles the treasury (cash / bank account; co-signature with manager and chairman)

Storekeeper

- Ensures safekeeping of the products from any risk (moisture, damages, theft, misuse etc)
- Maintains a store control card and registers the flow of stock (in and out).

6 ECONOMICS

6.1 Introduction

The heart of any business plan is the economic analysis. The BP must show that the plan is financial feasible and profitable. A number of analytical tools is available to assess feasibility and profitability. Here we will focus on the Gross Margin, the Profit and the Cash flow. These tools are equally relevant for private business and cooperatives.

In order to get an understanding of the different terms we will calculate the feasibility and profitability of a marketing cooperative, step by step. In this updated manual, we use the example of the apple marketing cooperative in Badakhshan, Northern Afghanistan.

The following logical questions will be answered step by step:

1. *What is the business volume of the coop*? This is based on the number of members and the amount of business they want to do.
2. *What is the Gross Margin*? This is the difference between what the coop pays for the products that it buys and what it gets when selling those products.
3. *What is the Profit of the coop*? This is the Gross Margin minus the costs of running the coop (staff, transport, office, depreciation of the assets etc.)
4. *How much capital need to be invested*? How much money has to be invested to start the coop (investment funds) and how much working capital is needed to keep it running?

6.2 Business Volume

Our coop in Badakhshan wants to buy fertilisers and Crop Protection Chemicals (CPC) for them and to sell the apples of its members, after storing them for some months. It is expected that it will have 60 members. They need 3 bags of fertilisers each and they sell 100 Seer of apples each.

Business volume of the coop

Needs of the Farmers				
	Unit	**Farmers**	**Amount**	**Total**
Fertiliser	bag	60	3	180
Crop Protection Chemicals	kgs	60	2.5	150
Sales of apples	Seer	60	100	6,000

6.3 Gross Margin

The first step is to calculate the Gross Margin (GM). This is:

GM = *Income from Sales - Variable Costs.*

Total Income from sales is:

a. income from the fertiliser: 1,700 Afs/bag
b. income from CPC sales: 150 Afs/kg
c. income from apples' sales: 70 Afs./kg; while noting that the apples lost 10% of their weight during storage (so only 5,400 Seer are sold).

All prices are actual market prices. Often farmers and NGOs do not use actual market prices. They want to provide inputs to farmers for a price below the market price and they want to buy apples from farmers at a higher than normal price. This is the single biggest problem in coop development in poor

countries and should be strongly discouraged. In principle, a coop uses normal market prices and a coops' profit is divided at the end of the year among members. This is called dividends.

Using market prices is needed as only in this way the coop has sufficient cash reserves to perform its tasks. If the profit of the coop is immediately passed on to the members the coop does not have any financial reserves and for any new activity it has to go back to the members to get money. This is impractical and risky: once it fails, the coop is dead.

The table summarises the total.

Income (sales)

	Unit	Sales' price	Amount	Total
Fertiliser	Bag	1,700	180	306,000
CPC (s)	kg	100	150	15,000
Apples	Seer	70	5,400	378,000
			Total income	**699,000**

The *variable* costs are all costs that are directly related to the sales:

a. costs for purchasing the fertilisers: 1500 Afs/bag
b. costs for purchasing the CPC: 92 Afs/kg
c. transport costs for the fertilisers (and CPC): 15 Afs./bag
d. costs for purchasing apples from the farmers: 56 Afs./kg

The table summarises the variable costs:

Variable costs

	Unit	Costs /unit	Amount	Total
Fertiliser	Bag	1,515	180	272,700
CPC (S)	Kg	92	150	13,800
Apples	Seer	56	6,000	336,000
			Total variable costs	**622,500**

So the Gross Margin of the coop is 76.500 Afs. as the next table shows:

Gross Margin

Total income	699,000	
Total variable costs	622,500	
Gross Margin	**76,500**	**11%**

The GM is also being expressed as a percentage of the Total Income (= percentage of sales):

GM = (Income – Variable costs) / Income %

Another notion is: *Added Value*. This is the *purchase price* minus the *sales price*. So, for the fertiliser it is 1,700 – 1,500 = 200 Afs./bag. It does not consider transport, handling or processing costs. It is expressed as a percentage of the sales' price as well. In this case it is 12% (200/1,700 %).

Assignment

- What will be the main activities of your coop?
- How many members you think you can attract?
- What are the average needs of the members in:
  - Inputs
  - Marketing
  - Other services

- What will be the Gross Margins for:
  - Inputs
  - Marketing
  - Other services

6.4 Profit

The GM does not clarify whether a coop makes a profit or not, as several other costs are not included. These costs we call *fixed costs*. Fixed costs are costs that are not directly related to sales. Examples of *fixed costs* are salaries, office rent, stationeries, etc. As *fixed costs* continue even if we have no business, we must try to limit them to a minimum.

To estimate the profit we have to subtract the fixed cost from the GM:

Profit = Gross Margin - Fixed Costs

In the case of the apple coop, the *Fixed Costs* are shown in the next table:

Fixed costs

	Unit	Costs/unit	Amount	Total
Salaries				
Salary manager	Month	6	2,000	12,000
Part-time bookkeeper	Month	6	500	3,000
Costs of the shop				
Rent shop	Month	6	800	4,800
Electricity	Month	6	100	600
Security contribution	Month	6	30	180
Maintenance cost				
Maintenance store	Year	1	2,000	2,000
Depreciation costs				
Depreciation store	20 years	1	10,000	10,000
			Total fixed costs	**32,580**

Here we get more insight in what the coop actually wants to do. It will rent a shop in town to sell their apples. They will only rent it for six months per year and so they only pay a manager for six months.

The coop also wants to build or buy a store. This is why *depreciation costs* of this *asset* are included. The *depreciation* is the annual cost of the store. The actual cost of a store is much higher: 200.000 Afs.. But a store can be used for many years. In this case it is assumed that it can be used for 20 years. So the annual costs of the store are 10.000 Afs./year. In practice the coop does not really pay this amount. In practice it pays 200.000 Afs in the first year and in the next 20 years the *depreciation* of 10.000 FAs. is subtracted from its' Gross Margin and saved for the future. So after 20 years, when the store has become too old, the coop has saved sufficient money to build a new one. *Depreciation* is part of the fixed costs, as it does not change when more or less apples are kept in the store.

Note that next to depreciation, there are *maintenance costs*. This is a totally different story; these are costs that have to be paid to repair and maintain the asset, in this case the store.

Coming back to the definition of the profit:

Profit = Gross Margin - Fixed Costs

The next table shows the overall results:

Profit

Income from sales	699,000	
Variable costs	622,500	
Gross Margin	**76,500**	**11%**
Fixed costs	32,580	
Profit	**43,920**	**7%**

The profit is 7%; this is calculated as a *return to the investment*. The investment in this case is all costs: both variable and fixed costs. So in formula:

Profit = (Income – All costs) / All costs

Assignment

- What will be the fixed costs of your coop?
  - Salaries
  - Transport
  - Office costs
  - Depreciation
  - Etc.
- So what will be the profit of the cooperative?
- What investments are needed for your coop?

6.5 Capital needed

Profit calculations are all very nice, but in practice the first question of all potential members of a coop (or anybody considering to start a company) is: Where will we get the money to buy or build a store? So were to get the *investment funds*? And secondly: where will the coop get the money to buy the fertilisers that it will sell to its' members? In other words: were to get the *working capital*?

To answer these questions, one has to know *how much capital* is needed and *when.*. For this purpose a *Cash Flow analysis* has to be made that shows per month how much money is flowing in and out of the coop (or the company). Based on this we can see how much money the coop will need at each particular time.

The Cash Flow of any month is:

Incomes minus expenditures

In those months that the income is higher than the expenditures, the *Cash Flow* is positive and when expenditures exceed income the *Cash Flow* is negative.

Obviously in some months the *Cash Flow* will be negative; this is not a problem as long as we have some cash left. By adding the *Cash Flows* over all months, the *Cumulative Cash Flow* is calculated. It is the amount of cash that the organisation has at any given moment. This can never be negative; if

there is no cash, no activities can be undertaken and the organisation is bankrupt[1]. If the *Cumulative Cash Flow* becomes negative the organisation has to attract new capital. In a coop this can come from: contributions from members (entrance fee, annual membership fee) or from a bank loan.

On the next page we see the *Cash Flow* for the first year of our apple coop. The data that are used are the same as the ones shown in the tables above. One can distinguish three sections:

- Income,
- Expenditures
- Sources of capital.

In this case the coop had planned to ask its' members (60) to pay their entrance fee of 1,000 Afs. in January. In March they start to construct the store they need. When the store is completed the coop employs a manager in July and in September the input supply activities are started (fertilizer supply and pesticides etc.).

Based on these initial assumptions the *Cumulative Cash Flow* (CCF) of the apple coop in the first year is calculated. The results are given in Table-1. The message of this table is very clear: as could be expected the coop needs a lot of money to invest in the store and to buy the inputs and the planned contribution of the members is by far not enough to cover these costs. Actually the coop needs an additional 432.553 Afs. (the maximum negative CCF in October) to cover all planned costs.

So where to get this capital? In theory the 60 members should pay an additional 7.210 Afs entrance- or membership fee. This is too much, considering their very limited household budgets. However they can cover part of the costs of building the store by providing the necessary materials and unskilled labor. In this way they can contribute 50.000 Afs. Secondly they can decide to advance the *working capital* in the first year. In practice: they will pay the inputs beforehand; so the coop collects the money first and then purchases the inputs. When they market the apples it works the other way around: members provide the apples to the coop and get paid after the apples have been sold.

In Table-2 we see the results of the CCF when these additional contributions of the members have been included. We see that there is still a negative CCF. The last step could be for a donor to assist these farmers with 100,000 Afs. to construct the store[2]. Such a support should be based on clear pre-conditions towards the farmers' own contribution. In this case they have to collect the 60,000 Afs before the donor provides the 100,000 Afs. and they have to repay half of it at the end of the year. In such cases the donor is advised to ensure that it becomes the owner of the store; when the coops fails to take off properly, the donor can still sell the store. In Table-3 we see that the coop indeed has a positive CCF throughout the year. At the end of the year it has 49,920 Afs. in cash.

Table-4 gives the CCF for year 2. The activities are the same but there are differences as well:

- The opening balance is 49,920 Afs.
- The farmers do not have to pay an entrance fee.
- There are no costs of the store and no NGO contribution; actually the NGO gets its second and final repayment of 50.000 Afs. at the end of the year.
- The farmers no longer have to give their apples without being paid.
- The farmers get their first dividends: 600 Afs. per member. This means that in this second year they pay 100 Afs./month from July onwards, but in December they get this back.

[1] Indeed the biggest constraints for most companies are that they are not able to produce products for a profitable price. For most of them the main problem is that they do not have the capital to invest for production capacity; so a cash-flow problem.
[2] In theory this can also be borrowed from a bank: in practice this is *not* an option as the coop has no collateral to offer and no track record on repaying loans. Farmers themselves as well are generally reluctant to apply for a loan for a coop.

The same principles apply in the third year and fourth; see Table-5 and Table-6. The only difference is that the dividend is increased to 72,000 in the third year (1.200 Afs./member) and 96,000 Afs. in the fourth year (1.600 Afs./member).

Assignment

- Calculate in Excel the cash flow of your cooperative for the first year.
  - Income: specify the incomes from all activities for each of the months
  - Expenditures:
    - specify all variable costs in the month that they really occur
    - specify all fixed costs[3] in the month that they really occur
  - Capital: Specify the potential members contributions (entrance fee; membership fee)
  - Calculate the CCF
  - If the CCF becomes negative, you have to find ways to get money; either from farmers or from the NGO.
- Copy the worksheet and make the cash flow for year-2
- Continue with year-3 and year-4.

[3] obviously **not** any deprecation as these are not real expenditures

Table-1: CASH FLOW OF THE APPLE COOP IN THE FIRST YEAR

	Amount	Price	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
INCOME														
Fertilisers	180	1,700	0	0	0	0	0	0	0	0	0	306,000	0	0
CPC (pesticides)	150	100	0	0	0	0	0	0	0	0	0	15,000	0	0
Apples	5,400	70	0	0	0	0	0	0	0	0	0	0	378,000	0
Total income			0	0	0	0	0	0	0	0	0	321,000	378,000	0
EXPENDITURES														
Fertilisers	180	1,515	0	0	0	0	0	0	0	0	272,700	0	0	0
CPC (pesticides)	150	92	0	0	0	0	0	0	0	0	13,800	0	0	0
Apples	6,000	56	0	0	0	0	0	0	0	0	0	336,000	0	0
		200,00												
Costs store	1	0	0	0	200,000	0	0	0	0	0	0	0	0	0
Salary manager	1	2,500	0	0	0	0	0	0	2,500	2,500	2,500	2,500	2,500	2,500
Other running costs	1	1,263	0	0	0	0	0	0	1,263	1,263	1,263	1,263	1,263	1,263
Total expenditures			0	0	200,000	0	0	0	3,763	3,763	290,263	339,763	3,763	3,763
SOURCES OF CAPITAL														
Entrance fee	60	1,000	60,000	0	0	0	0	0	0	0	0	0	0	0
Membership fee	60	100	0	0	0	0	0	0	6,000	6,000	6,000	6,000	6,000	6,000
CASH FLOW PER MONTH			60,000	0	-200,000	0	0	0	2,237	2,237	-284,263	-12,763	380,237	2,237
CUMULATIVE CASH FLOW			60,000	60,000	-140,000	-140,000	-140,000	140,000	-137,763	-135,527	-419,790	-432,553	-52,317	-50,080

Conclusion: The planned contribution of members is not enough to cover all costs. The coop needs an additional 432.553 Afs. (max. neg. CCF in October).

Table-2: CUMULATIVE CASH FLOW WITH MORE REALISTIC MEMBERS' CONTRIBUTION

SOURCES OF CAPITAL														
Entrance fee	60	1,000	60,000	0	0	0	0	0	0	0	0	0	0	0
Membership fee	60	100	0	0	0	0	0	0	6,000	6,000	6,000	6,000	6,000	6,000
Advance members			0	0	50,000	0	0	0	0	286,500	336,000	0	0	0
Repay members			0	0	0	0	0	0	0	0	0	286,500	336,000	0
CASH FLOW PER MONTH			60,000	0	-150,000	0	0	0	2,237	288,737	51,737	-299,263	44,237	2,237
CUMULATIVE CASH FLOW			60,000	60,000	-90,000	-90,000	-90,000	-90,000	-87,763	200,973	252,710	-46,553	-2,317	-80

Conclusion: the CCF is much better, but still not sufficient. Donor support is needed to ensure a store can be build.

Table-3: COMPLETE (POSITIVE) CASH FLOW OF THE APPLE COOP IN THE FIRST YEAR

	Amount	Price	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
INCOME														
Fertilisers	180	1,700	0	0	0	0	0	0	0	0	0	306,000	0	0
CPC (pesticides)	150	100	0	0	0	0	0	0	0	0	0	15,000	0	0
Apples	5,400	70	0	0	0	0	0	0	0	0	0	0	378,000	0
Total income			0	0	0	0	0	0	0	0	0	321,000	378,000	0
EXPENDITURES														
Fertilisers	180	1,515	0	0	0	0	0	0	0	0	272,700	0	0	0
CPC (pesticides)	150	92	0	0	0	0	0	0	0	0	13,800	0	0	0
Apples	6,000	56	0	0	0	0	0	0	0	0	0	336,000	0	0
		200,00												
Costs store	1	0	0	0	200,000	0	0	0	0	0	0	0	0	0
Salary manager	1	2,500	0	0	0	0	0	0	2,500	2,500	2,500	2,500	2,500	2,500
Other running costs	1	1,263	0	0	0	0	0	0	1,263	1,263	1,263	1,263	1,263	1,263
Total expenditures			0	0	200,000	0	0	0	3,763	3,763	290,263	339,763	3,763	3,763
SOURCES OF CAPITAL														
Entrance fee	60	1,000	60,000	0	0	0	0	0	0	0	0	0	0	0
Membership fee	60	100	0	0	0	0	0	0	6,000	6,000	6,000	6,000	6,000	6,000
Advance members			0	0	50,000	0	0	0	0	286,500	336,000	0	0	0
Repay members			0	0	0	0	0	0	0	0	0	286,500	336,000	0
Donor contribution			0	0	100,000	0	0	0	0	0	0	0	0	0
Repay donor			0	0	0	0	0	0	0	0	0	0	0	50,000
CASH FLOW PER MONTH			60,000	0	-50,000	0	0	0	2,237	288,737	51,737	-299,263	44,237	-47,763
CUMULATIVE CASH FLOW			60,000	60,000	10,000	10,000	1,000	10,000	12,237	300,973	352,710	53,447	97,683	49,920

Table-4: COMPLETE (POSITIVE) CASH FLOW OF THE APPLE COOP IN THE SECOND YEAR

	Amount	Price	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
INCOME														
Fertilisers	180	1,700	0	0	0	0	0	0	0	0	0	306,000	0	0
CPC (pesticides)	150	100	0	0	0	0	0	0	0	0	0	15,000	0	0
Apples	5,400	70	0	0	0	0	0	0	0	0	0	0	378,000	0
Total income			0	0	0	0	0	0	0	0	0	321,000	378,000	0
EXPENDITURES														
Fertilisers	180	1,515	0	0	0	0	0	0	0	0	272,700	0	0	0
CPC (pesticides)	150	92	0	0	0	0	0	0	0	0	13,800	0	0	0
Apples	6,000	56	0	0	0	0	0	0	0	0	0	336,000	0	0
		200,00												
Costs store	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Salary manager	1	2,500	0	0	0	0	0	0	2,500	2,500	2,500	2,500	2,500	2,500
Other running costs	1	1,263	0	0	0	0	0	0	1,263	1,263	1,263	1,263	1,263	1,263
Total expenditures			0	0	0	0	0	0	3,763	3,763	290,263	339,763	3,763	3,763
SOURCES OF CAPITAL														
Entrance fee	60	1,000	0	0	0	0	0	0	0	0	0	0	0	0
Membership fee	60	100	0	0	0	0	0	0	6,000	6,000	6,000	6,000	6,000	6,000
Advance members			0	0	0	0	0	0	0	0	0	0	0	36,000
Repay members			0	0	0	0	0	0	0	0	286,500	0	0	0
Donor contribution			0	0	0	0	0	0	0	0	0	0	286,500	0
Repay donor			0	0	0	0	0	0	0	0	0	0	0	50,000
CASH FLOW PER MONTH			0	0	0	0	0	0	2,237	2,237	2,237	-12,763	93,737	-83,763
CUMULATIVE CASH FLOW			49,920	49,920	49,920	49,920	49,920	49,920	52,157	54,393	56,630	43,867	137,603	53,840

Table-5: COMPLETE (POSITIVE) CASH FLOW OF THE APPLE COOP IN THE THIRD YEAR

	Amount	Price	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
INCOME														
Fertilisers	180	1,700	0	0	0	0	0	0	0	0	0	306,000	0	0
CPC (pesticides)	150	100	0	0	0	0	0	0	0	0	0	15,000	0	0
Apples	5,400	70	0	0	0	0	0	0	0	0	0	0	378,000	0
Total income			0	0	0	0	0	0	0	0	0	321,000	378,000	0
EXPENDITURES														
Fertilisers	180	1,515	0	0	0	0	0	0	0	0	272,700	0	0	0
CPC (pesticides)	150	92	0	0	0	0	0	0	0	0	13,800	0	0	0
Apples	6,000	56	0	0	0	0	0	0	0	0	0	336,000	0	0
		200,00												
Costs store	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Salary manager	1	2,500	0	0	0	0	0	0	2,500	2,500	2,500	2,500	2,500	2,500
Other running costs	1	1,263	0	0	0	0	0	0	1,263	1,263	1,263	1,263	1,263	1,263
Total expenditures			0	0	0	0	0	0	3,763	3,763	290,263	339,763	3,763	3,763
SOURCES OF CAPITAL														
Entrance fee	60	1,000	0	0	0	0	0	0	0	0	0	0	0	0
Membership fee	60	100	0	0	0	0	0	0	6,000	6,000	6,000	6,000	6,000	6,000
Advance members			0	0	0	0	0	0	0	0	0	0	0	72,000
Repay members			0	0	0	0	0	0	0	0	286,500	0	0	0
Donor contribution			0	0	0	0	0	0	0	0	0	0	286,500	0
Repay donor			0	0	0	0	0	0	0	0	0	0	0	0
CASH FLOW PER MONTH			0	0	0	0	0	0	2,237	2,237	2,237	-12,763	93,737	-69,763
CUMULATIVE CASH FLOW			53,840	53,840	53,840	53,840	53,840	53,840	56,077	58,313	60,550	47,787	141,523	71,760

Table-6: COMPLETE (POSITIVE) CASH FLOW OF THE APPLE COOP IN THE FOURTH YEAR

	Amount	Price	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
INCOME														
Fertilisers	180	1,700	0	0	0	0	0	0	0	0	0	306,000	0	0
CPC (pesticides)	150	100	0	0	0	0	0	0	0	0	0	15,000	0	0
Apples	5,400	70	0	0	0	0	0	0	0	0	0	0	378,000	0
Total income			0	0	0	0	0	0	0	0	0	321,000	378,000	0
EXPENDITURES														
Fertilisers	180	1,515	0	0	0	0	0	0	0	0	272,700	0	0	0
CPC (pesticides)	150	92	0	0	0	0	0	0	0	0	13,800	0	0	0
Apples	6,000	56	0	0	0	0	0	0	0	0	0	336,000	0	0
		200,00												
Costs store	1	0	0	0	0	0	0	0	0	0	0	0	0	0
Salary manager	1	2,500	0	0	0	0	0	0	2,500	2,500	2,500	2,500	2,500	2,500
Other running costs	1	1,263	0	0	0	0	0	0	1,263	1,263	1,263	1,263	1,263	1,263
Total expenditures			0	0	0	0	0	0	3,763	3,763	290,263	339,763	3,763	3,763
SOURCES OF CAPITAL														
Entrance fee	60	1,000	0	0	0	0	0	0	0	0	0	0	0	0
Membership fee	60	100	0	0	0	0	0	0	6,000	6,000	6,000	6,000	6,000	6,000
Advance members			0	0	0	0	0	0	0	0	0	0	0	96,000
Repay members			0	0	0	0	0	0	0	0	286,500	0	0	0
Donor contribution			0	0	0	0	0	0	0	0	0	0	286,500	0
Repay donor			0	0	0	0	0	0	0	0	0	0	0	0
CASH FLOW PER MONTH			0	0	0	0	0	0	2,237	2,237	2,237	-12,763	93,737	-93,763
CUMULATIVE CASH FLOW			71,760	71,760	71,760	71,760	71,760	71,760	73,997	76,233	78,470	65,707	159,443	65,680

7 USING THE BUSINESS PLAN

7.1 Stages in creating a coop

Making such a Business Plan is an important step in the whole process of creating a cooperative, but it is not the only one. The next table shows a more general overview of all aspects. In the left column the steps in the development of the organisation are specified and on the right side the steps in developing the business.

Five stages in developing a cooperative

	Organisation development	**Business Development**
Create a common vision	• Formulate a common, long term vision	• Define long term economic perspective and potential gains for the members
Explore opinions and facts	• Situation analysis (social aspect) • Clarify expectations (vis-à-vis donors and other actors) • Identify potential members • Define criteria for good leaders	• Value Chain Analysis • Market survey and assessment • Specify running cost of coop • Analyse profits and Cash Flow of potential activities • Develop simulation model on economics of the coop • Use model to discuss with - and train farmers on - the underlying economics • Use model to design Internal Economic Relations • Assess feasibility and risks of the proposed activities
Commitments of members and markets	• Elect preliminary leaders and define their tasks • Clarify and quantify member commitment	• Link with entrepreneurs (raw material supply and markets) • Negotiate preliminary deals with the entrepreneurs • Secure possible donor's support
Concrete planning	• Formulate statutes and by-laws • Founding meeting to approve statutes, by-laws and BP and to elect Board of Directors (BoD) and Audit Committee	Make a Business Plan, covering: • Business Concept • Market • Operational plan • Management and organisation • Investments and financial plan • Risk and assumptions
Implementation	• Register the coop • Board selects and appoints manager • Manager appoints staff • Sign member contract • Search more members	• Formalise business relations and contracts • Cash in membership fees and share value • Credit application (if necessary) • Setup the administration etc.

We see that the data collection of the Business Planning is done in the second stage. At that stage analyses are made of the Value Chains, of markets, of running costs, of profits and of the CCF of potential activities. Based on these an economic simulation model is made of the economics of the cooperative. In the next paragraph, we will explain how this can be done. In essence such a model allows us to explore different scenarios and options. What happens if the coop has less or more members? What happens to the profit of the coop if prices change?

The simulation model can also be used to discuss with farmers how to shape their 'internal economic relations' with the coop: how much membership fee do they need to pay? What kind of dividends can they expect? This is very important as only farmers who have a very clear idea about these issues will be motivated to devote their time and energy to the coop.

Only after all assumptions, risks and scenarios are explored and understood by all, the next stage can be started: getting commitment of all the players: both of the members and of the market (the commercial partners). Unfortunately in practice this is often done too early; too often NGOs first create a coop and later decide what exactly it could do. Some donors even put this as a pre-condition: if you create a coop then we will support it. This is unproductive because as long as the BP is not very clear, the farmers will not be motivated to create it. Actually their motivation to create a coop will often be (limited) to obtaining the promised donor support. This is not the right motivation.

A coop should only be created once it is sure that people are motivated to invest in it. This motivation should come from a clear understanding of the potential gains. Doing it at this stage also has the advantage that it enable other types of leaders to come to the fore. If one creates a coop without a clear idea of what it will do, farmers tend to elect the 'usual suspect' as their leaders. Those are generally village leaders as they are most skilled in dealing with outsiders like donors. However, if farmers are asked to elect leaders after the business plan has been made clear, they'll elect other leaders; those with the required technical, economic, managerial and marketing skills. These are generally much better leaders for a cooperative.

So the economic simulation model is of utmost importance; it does not only explore the economic feasibility of a coop, it is also crucial in facilitating the decision making by farmers and the donor. The next paragraph explains how the Cumulative Cash Flow (CCF) can be turned into a simulation model. The last paragraph then elaborates how it can be used to balance the interests of the farmers, the coop and the donor.

7.2 Turning the CCF into an economic simulation model

The Cumulative Cash Flow is the foundation of the economic simulation model. To do this an additional worksheet is needed: the Decision Making Worksheet (the DMW).

First of all, all parameters that influence the financial outcome of the coop are listed on the DMW. In the case of the apple coop these are all prices (purchase and sales prices of both inputs and apples), storage losses, contributions of members and donors etc.. All these are assumptions and all have to be listed on the DWM. The next table gives an overview:

Assumptions

Members		
Number of farmers	60	People
Entrance fee	1000	Afs.
Membership	100	Afs/month
Av. Fertiliser need	3	Kg/member
Av. Chemical need	2.5	Kg/member
Average prod. Farmer	100	Kg of apples
Technology Losses	10%	In 3 months
Prices		
Sale price apples	70	Afs./kg
Purchase price apples	56	Afs./kg
Sale price fertiliser	1,700	Afs./kg
Purchase price fertiliser	1515	Afs./kg
Sale price medicine	100	Afs./kg
Purchase price medicine	92	Afs./kg
Donor		
Donor contribution store	100,000	Afs.
Repayment donor YR 1	50,000	Afs.
Repayment donor YR 2	50,000	Afs.

Then all assumptions are linked to the CCF of each year. This is done by replacing the absolute values initially entered in the CCF worksheets by a link to the relevant cell in the Decision Making Worksheet. When doing this, the cells in the CCF worksheets have to be given a colour. This colour tells the user not change the value here (but only on the Decision Making Worksheet).

The second step is to list all the parameters that can be used as an indicator of the feasibility of the coop. In the case of the apple coop, the most important one is the Cash available in the month of October of each of the years. Other critical moments are the months that the store has to be built and the cash at the end of the year. The following table gives an overview:

Outcomes
Cash (in Afs.) as per:

June Year 1	10,000
Reserve end year 1	49,920
October Year 2	43,867
October Year 3	47,787
October Year 4	65,707

In this case the links are made the-other-way-around: the cells on the DMW copy the values from the relevant cells in the CCF of each year.

In this way the CCF was turned into an economic simulation model: changing the basic assumptions immediately leads to a changed outcome. In this way, we can simulate the reality and perform many sensitivity analyses in a short time.

Assignment:
- add a Decision Making Worksheet to your Excel file
- List the assumptions on the DMW
- Link the relevant cells in the CCF of each year to the assumption on the DMW
- List the crucial outcomes on the DMW
- Link the outcomes to the relevant cells in the CCF of each year

7.3 Using the economic simulation model

This simulation can be used in two ways:
- for decision making and planning
- for training farmers and coop management in what the crucial parameters are.

The simulation model allows us to analyse its performance from different angles:
- from the coops' point of view
- from the farmers' point of view
- from the donors' point of view.

i. Coops view

For the coop the main issue is the sustainability of the organisation. How can it assure it will survive? Although the averages might look OK, there are many risks. Therefore, a *sensitivity analysis* has to be made. This means: one has to calculate what will happen if substantial change occur in the main parameters that influence the Cash Flow of the coop. This means for examples changes in:
- Number of members
- Prices
- Amounts of fertiliser each member needs

- Amount of apples members have to sell
- Losses in the store, etc

Here we deal with one question, as an example: what happens if the coop has only 40 members? This means that in the simulation model the number of members is adjusted from 60 to 40. The results can be seen in the next table with the outcomes:

Main outcomes
Cash (in Afs.) as per:

June Year 1	-10,000
Reserve end year 1	-7,580
October Year 2	-16,633
October Year 3	-38,213
October Year 4	-33,793

The conclusion: the coop will be bankrupt immediately. This is obvious: having 40 members paying 1.000 Afs. as entrance fee in January of the first year, combined with 100,000 Afs. from the donor is not sufficient to cover the 150,000 Afs. needed to build the store. We also see that in year 3 and 4 the lack of capital is worsening.

Next the simulation model can assist us in further experimentation. If the coop lacks 10,000 Afs to build the store, what would happen if the donors add this same amount? So the donor contribution in the simulation model is increased with 20,000 and the repayment is kept as before (repay half of it at the end of year and the other half after year 2). These are the results:

Main outcomes
Cash (in Afs.) as per:

June Year 1	10,000
Reserve end year 1	2,420
October Year 2	-6,633
October Year 3	-38,213
October Year 4	-33,793

The cash position improves until the second year, but in the long run the coop lacks the cash to operate. In other words: the additional support of the donor solved the short term problem of *investment funds*, but it did not change the profitability. The latter can be understood because the *profit* is the *Gross Margin* minus the *variable* and the *fixed costs*. Changing the way the store is financed (the donor provides 20,000 more i.s.o. the members) does not change the GM or the costs.

So to make the coop profitable the costs have to be reduced. The easiest way is to stop paying the dividends to the members. If that is done the results are:

Outcome
Cash (in Afs.) as per:

June Year 1	10,000
Reserve end year 1	2,420
October Year 2	-6,633
October Year 3	-14,213
October Year 4	38,207

Indeed this solves the problem in the long run; in October of Year-4, the coop has sufficient cash. However in year 2 and 3 it will not have sufficient cash.

A last step would be to see what the minimum number of members is to ensure a positive CCF with the assumptions that the donors contributes 120,000 and that members accept not to have any dividends. By trial and error this turns out to be 43.

In a similar way all other parameters can be adjusted. Both in a positive (more apples; better sales prices for apples) and in a negative sense (lower sales prices; higher losses in the store etc.). Doing so will give you a good impression of what the crucial parameters are for the coop to survive.

Warning: it is all too easy to adjust the parameters in such a way that the coop becomes profitable. In every case you have to assess whether the change is realistic and feasible. It is easy to include more members; but is this realistic in the sense that there are more interested farmers in the area? And is it feasible in the sense that the store is large enough to store more produce?

Assignment:

- What are the most crucial assumptions for the profitability and sustainability of your coop?
- Develop different scenarios for these assumptions (e.g. what happens if we have 20% less members or when the prices are 20% lower than expected).
- Use the DMW to determine the outcomes under these scenarios.
- Formulate the minimum requirements to have a robust coop.
- Are the minimum requirements realistic and feasible?

ii. Farmers view

The first criterion for farmers to invest in a cooperative is whether they will get the services they need (the perspective of farmers as a *client*). The Business Plan should convince the farmers that this indeed is the case. The second criterion for farmers is whether the coop will make profit; here they use the perspective of being *owner* of the coop. The simulation model can explain and explore the profit for *member-owners*. The next table summarises what members invest and get out of it. This can be done at two levels: the *cash* and the *value.* The next table gives an overview:

Farmers as *owners* view

	Year 1	Year 2	Year 3	Year 4
Cash balance				
Contribution	1,600	600	600	600
Dividend	0	600	1,200	1,600
Annual cash balance	-1,600	0	600	1,000
Cumulative contribution	1,600	2,200	2,800	3,400
Cumulative dividend	0	600	1,800	3,400
Cum. cash balance	**-1,600**	**-1,600**	**-1,000**	**0**
Value balance				
Value of assets in coop	3,167	3,000	2,833	2,667
Cash in coop	832	897	1,196	1,095
Total value	**3,999**	**3,897**	**4,029**	**3,761**
Overall balance				
Net value created	**2,399**	**2,297**	**3,029**	**3,761**

Under the cash balance we see that the net contribution of farmers in the first year is 1,600 Afs while in the fourth year they have a net gain of 1,000 Afs. Their cumulative cash balance after four years is zero. From the fifth year onwards they will probably have a net cash gain from the coop.

As owners of the coop, members have their share in its *balance value* as well. The value of the coop consists of the *book value of its assets* (in this case the store) and the *cash* at the end of the year. The value of the store decreases over time (with 10,000 Afs./year; indeed this is the *depreciation*). In the

table the total value of the coop remains more or less equal over time. This is not purely accidental. It reflects the tendency to give more dividends to farmers, whenever there is sufficient money. As all people prefer 'a bird in hand is more worth than two in the bushes'.

Of course the *cash in the coop* and the *dividends* are directly linked. If more *dividends are* paid, less *cash* is remaining. So it is better to look at the *overall balance:* the total of the *cash balance* and the *value balance.* This can also be coined the *Net value* created. We can observe in the table that this is increasing annually. In the next table we look more closely at the value created per year. This time the focus is not on the individual members, but on the coop as a whole.

Value created

	Year 1	**Year 2**	**Year 3**	**Year 4**
Net value created/member	2,399	2,297	3,029	3,761
Total Net value (60 members)	143,920	137,840	181,760	225,680
Remaining debt to donor	50,000			
Value from coop	93,920	137,840	181,760	225,680
Value created by coop per year	**93,920**	**43,920**	**43,920**	**43,920**

We see that the coop creates an additional value of 43,920 Afs. per year. Logically, this *annual added value created* is the same as the *profit* calculated in par. 6.4. Only in year 1 the added value created is 93,920; this is the normal annual profit plus 50,000 Afs. The latter reflects the value of materials and voluntary labour the members contributed to the construction of the store.

The *net value created* or *profit* should set a limit to the *dividends* that are paid to *farmer-owners*. An annual 43,920 Afs. of profit means that per member 732 Afs. profit is made. So paying a dividend of 1,600 Afs. in year 4 is irresponsible; its means the coop divides 'profits' that it did not make. What happens in practice that the coop does not save the 10,000 Afs. of *depreciation* but distributes it to its members. In other words: part of the cash of the coop at the end of year 4 (65,680 Afs.) should be allocated to the *investment funds*. After 4 years of depreciating the store with 10,000 Afs./year, the *capital reserves* should be 40,000 Afs.

The farmers' perspective can also be generated on the DMW: again first the assumptions per year are listed (in this case the entrance and membership fees have already been taken up in the general assumptions; so only the dividend has to be added). Then the CCF is linked to these assumptions. Secondly the outcomes are listed. Some can be calculated directly from data on the DMW: cumulative contribution, cumulative dividend and cumulative cash balance. Some others have to taken from the CCF of each of the years: value of the assets and the cash in the coop. All outcomes of the value created can be simply calculated from data available on the DMW.

Assignment:

- What do the farmers invest in your coop and what do they get out of it in the first 4 years?
- Is this an acceptable balance?
- If not: how to adjust the situation?

iii. Donor's view

The contribution of the donor will depend on a number of factors:

- What is their target group?
- How does the coop fit into the objectives of the programme (s) they run?
- What other activities are they undertaken in the area or in the Value Chain?

In practice many NGO's fail to effectively support the creation of a coop. The following is a rough outline of events that form the base for these failures:

- The NGO has no clear idea about the feasibility of a coop; neither have the farmers.
- To overcome the hesitation (due a lack of clarity) of the farmers, the coop promises and provides them with too much support. This is engraved by the pressure on NGOs to reach concrete project objectives and budget deadlines.
- Due to this, the discussions quickly focus on short term investment needs (the store).
- The long term profitability however remains unclear; so farmers still wonder if the coop can compete in terms of quality and prices with private actors?
- The lack of clarity and the over-kill of support by the NGO makes the farmers lazy: they just lean back and watch the NGO work hard.
- Once the investment is completed the real work starts, but by then the NGO support is phased out as the project is finished. As most farmers never committed themselves to the initiative, it is very hard to mobilise their ideas, skills and money at this stage.

The economic simulation model can assist NGOs to avoid these pitfalls. By clarifying the feasibility of a coop, it allows the NGO to determine it owns contribution and to formulate pre-conditions for their support to farmers as well. These can be in several forms and shapes. In our case these can be:

- Amount in cash that farmers have to contribute as entrance fee before anything else starts (in put case 60,000 Afs.)
- Contribution of farmers in building the store (in our case some local materials and unskilled labour)
- Repayment of the grant according to schedule (or the agreed part of it).

These are obvious pre-conditions. They are often applied; even by NGOs that do not have a clear idea about the feasibility of a coop. Yet, there are many more options to ensure more farmers' participation; especially when the NGO makes sure that it remains the owner of the asset until the coop has fulfilled a number of pre-conditions. These can be:

- Agreed economic targets in the area of turnover, profit and investment. If members do not sell their apples via the coop, or if they do not invest in the sorting machine agreed in the BP, or when they take more dividend than the profit made, then the NGO can sell the store (e.g. to a private trader who might run the store more efficiently)
- Transparency and participation: e.g. minutes of meetings and clear communication of decisions to members
- Membership: any coop should be open for new members.

The last point deserves special attention. Interestingly many NGO staff and farmers think that when a coop gets more members, the profit per member will go down. Of course the opposite is the case: more members lead to higher profits for each member. In our simulation a coop with 60 members creates a net value of 3,761 Afs./member in 4 years; with 70 members this is 3,953 Afs./member. Again one has to assess whether this is feasible (is the store big enough etc.); but the economic principles is that a the fixed costs (e.g. the salary of the manager) are used more efficiently.

Assignment:

- What are the overall objectives for you (as donors/ NGO) to support the coop development?
- What does the donor have to invest in your coop?
- Is the expected donor contribution in balance with its overall objectives and with the contribution of the farmers and other partners?
- Which pre-conditions should the donor formulate for its contribution?
- How can these pre-conditions be checked?
- What can be the sanction if the pre-conditions are not fulfilled?
- Is it feasible and desirable that the donor becomes owner of the assets it finances? If so: how and under which pre-conditions can it hand these over to the coop?

ANNEX-I UNDERSTANDING MARKETING COOPERATIVES

Introduction

There are two major schools of thought on what the essence of a cooperatives is. One looks at coops purely from a utilitarian point of view and focus on the economic aspects of coops. The other takes a more normative approach: they see a coop as a tool to empower resource poor farmers.

The 7 cooperative principles of the International Cooperative Association lean toward the normative school. The principles include issues like 'concern for the community' and 'education of members'. The utilitarian school focuses first of all on the economic aspects. Their definition of a cooperative is: "*Cooperatives are member-controlled associations for producing goods and services in which members share the risks and profits of a jointly established and owned economic enterprise.*"

The contradiction between the two approaches is partly a matter of timing; in practice mature coops do care for the communities of which they are part, but to become mature, a coop must first of all deal with the economic aspects. Our focus here is how coops can become mature; hence on the economic aspects.

In the definition of coops given above we recognise three main principles:

a. the **member-owner principle**. The people who use the services from the coop are the members and they own the coop. As owners they are also obliged to finance the business. This is done via direct investments of members and via re-investing the profit of the coop. As owners the members are also liable for the losses of a coop (it is possible that local legislation limits this liability somehow).
b. the **member-control principle**. As owners, members control the activities of the coop. The (annual) general assembly is the highest authority. It makes and approves the statutes of the coop and governs accordingly. It elects the Administrative Council for running the coop (also called 'Board' or 'Board of Directors'). Mostly the principle of one-man, one vote is applied; sometimes the voting rights are shared according to the participation of the members (so those doing more business via the coop get more voting rights). In all cases the maximum amount of voting rights that an individual can have is limited.
c. the **member-benefits principle**. Members unite in a coop to get services that they otherwise would not be able to get (e.g. access to credit or to markets). Next they get their share of the profit of the coop; practically always in proportion to their use of the services of the coop (this is also called: the patronage principle).

These principles are always readily understood by farmers as they focus on what members get in return for their membership: services/ownership/control/dividend. Yet, this is only half of the picture: to make a coop work, the members need to *commit themselves to purchase the services of the coop*. A coop can only make profit when it has a sufficient turnover. So members must sign a contract with the coop stipulating their mutual obligations. These can be shaped in many different ways, e.g.:

***Input Cooperatives*:**

- the coop will deliver all the inputs of which an X amount is requested by members
- a member has to buy at least an X amount of inputs per ha per year
- a member is not allowed to purchase any input outside, except from the coop.
- members accept that the coop uses a 5% make up on all inputs, next to allocating the actual costs as much as possible to each of the input.

Service Coops:

- the coop delivers services to the members; e.g. land preparation or harvesting
- members agree to buy at least an X number of services per year or an X percentage of their service needs

***Marketing Cooperatives*:**

- the coop accepts to sell all the produce that members deliver;
- members must bring only high quality produce
- members must deliver at least 50% of his product; or X ton per ha per year
- members are not allowed to sell any of their produce outside the coop.
- members accept to pay all the actual costs and a 5% commission for the coop.

These commitments of its members are the foundation of a coop. It allows the coop to generate sufficient economies of scale, to plan its business carefully and to become reliable business partners to others. In some coops the commitment of members is so high that they agree that they will pay a penalty if they leave the coop.

Advantages of a cooperative

Cooperatives have a number of distinguished advantages. Sometimes these are all lumped together in a single idea: together we are stronger. Although this is correct, it is not very helpful for understanding the exact nature of the advantages for a farmer to join a coop. Here we shortly discuss a number of much advocated advantages of coops.

Improved bargaining power:
As farmers combine their demand for inputs or their supply of produce, they can bargain more favourable prices.

The idea that a marketing coop will be able to bargain better prices for its members is an idea greatly exploited and promoted by farmers' leaders and politicians, but like a company a coop will first have to build up a considerable market share (and a good reputation) before it can influence prices. This means in practice that newly emerging coops are not able to bargain better prices.

In practice it is easier for an input supply coop to buy inputs at a (substantially) lower price than for a marketing coop to sell the produce of their members at a higher price. The reason is that a buyer is nearly always in a stronger bargaining position than a seller, simply as he can refuse to buy. If an input supplying company is not willing to reduce its prices for the coop (normally something like 10-15%) the coop will go to his competitor. Secondly an input supplier is in a better position to lower his price, as he knows his profit margin beforehand. A merchant purchasing agricultural products is not sure of the price for which he can sell. So his margin is unknown, but he is aware that the purchase price determines to a large extend the margin he can make. This makes him reluctant to increase his farm-gate price, even for larger amounts.

A special aspect of increasing the bargaining power is when a coop manages to avoid so-called 'linked markets'. This is the case when a merchant pre-finances the production on the pre-condition that the farmer sells the yield to him at a lower price. In such a case a credit association can liberate farmers from the moneylender and increase his bargaining power substantially.

Higher prices should not always be contributed to increasing bargaining power; e.g. when a processor is willing to buy from the coop against a slightly higher price, one has to subtract the cost of the coop to collect all the produce to see if the actual profit for the farmer is indeed higher. Here the internal efficiency of the coop is the key to success, rather than the increased bargaining power.

Improved access to inputs/services or access against reduced costs
Coops can help farmers to get access to services that they would not be able to get otherwise or they can obtain the same services against lower costs; e.g. when 50 farmers hire one big truck to bring all their produce to a market in town, this is cheaper than organising their own transport individually.

The underlying principle is *economies of scale*. This is particularly applicable if coops can give farmers access to inputs or technologies that they can not access individually. For some this is the first criterion to assess whether a coop will be feasible or not. They argue that (normally) coops are less efficient than private businesses and therefore cannot compete with private entrepreneurs when it comes to standard services or goods. In simple words: Coops can only beat private entrepreneurs when the coop can do something that private entrepreneurs can not do.

Market access
Offering larger quantities of produce enables a coop to enter markets that are not accessible for individual farmers. For example processing industries often are not able to deal with many small farmers, but they can deal with one coop channelling all the produce of a large group of farmers.

Increased market transparency
By their very nature coops are transparent organisations. Both farmers and other actors on the market watch carefully what they do and in this way they create a kind of benchmark for prices and they can contribute substantially to the transparency on the market.

Better quality products
Coops can assist greatly in improving the quality of agricultural products. This can be done by establishing and enforcing quality standards and by providing quality guarantees to buyers.

Increased added value of the produce
Coops can increase the added value of the produce; e.g. by grading, cleaning, packing, packaging and processing it. Grading and cleaning are the easiest things to do, as they usually do not involve too much costs. Packing and packaging are more costly but the individual members bear the costs. Processing requires larger investments and these have to be paid for by all the members collectively. It is less directly linked to farming and it is much harder for small farmers in developing countries to control the management of a processing unit.

Potential for political action
Coops have played an important role in empowering farmers. Yet, most of the times this is not the motivation for farmers to become members. In practice in developing countries, any form of cooperation of a (large) number of farmers is a political fact. Still the actual power of a coop depends nearly entirely on its economic power.

Increases community strength
Mature coops do contribute to the development of their community. A successful coop makes people feel proud and confident. Especially leaders of coops can learn much on issues like leadership, management, and business development etc. Coops can also be instrumental in initiating other new initiatives in a community, but one should be careful, as this can easily be detrimental to the original activities of the coop. Often one observes that one organisation can only do one thing properly. Especially in poor communities where ‘everything’ is linked with local power structures and local politics, a multi-functional organisation watched with more suspicion by the elite and they are more inclined to fight for the control over it (which most of the times is not beneficial to the farmers).

Disadvantages of cooperatives

Cooperatives have some inherently weak aspects: decision making and attracting finance. Next to that there are several risks involved in creating a cooperative.

Decision making
Since all the members have to decide on all the major policy issues, therefore, the decision making process gets slower, time consuming and sometimes even uncertain.

Internal communication
All members have to be kept informed. Meetings have to be organised (and paid). Again a cumbersome process in many less developed countries.

Inefficiency
Coops in developing countries risk being less efficient than private entrepreneurs as they tend to:

- have too much staff to which they pay too high salaries
- have no incentive system for their staff
- have too much overhead costs as they operate only for short periods (e.g. fruit marketing)
- be unable to pay bribes (e.g. to governmental officials, police etc.).
- have difficulties to get very powerful or very poor members paying for the services.

Attracting finance
Coops initially will not borrow money on the free capital market. They have to work with their own capital in order to remain independent and farmer-oriented in their decision making. Only later, when the coop has built up its own assets it can mortgage those with banks in order to have more cash to increase its turn over.

Coops have two ways to attract capital from their members: ordinary shares (also called membership fee) and preferential shares. The first is equal for members and is the base for their vote power. Preferential shares are different: each member can decide whether or not to buy these shares. They do not provide any decision making power, but they are a kind of loan from to members to the coop. Normally, the coop repays the loan to the member. In Western countries these preferential shares command an interest; in Afghanistan this is not possible. To avoid interest, they can be used for specific activities in which the profit (or loss) is shared between the coop and the owner of the preferential shares.

Preferential shares are essential in ensuring that both big and small farmers can join a coop; but often farmers do not know this. Failure to mobilise preferential shares means that either the additional financial power of better off members is not used (by setting the membership fee or ordinary share very low) or very few farmers become members (as only they can not pay the high membership fee).

Risks of cultural misfit
Modern coops have developed in the context of Western European culture and transplanting them to less developed countries means that there is a risk that the management and decision making culture does not fit. In cultures with a high power distance it is very difficult for members of the coop to prevent the manager and/or board members using the resources of the coop for their personal benefits.

In ex-communist countries farmers have great problems in understanding the difference between the position of the chairman (or president) and that of the manager (or executive director). In their tradition the ‘president’ was the all powerful man and so in newly created coops there is a great risks that the elected president is using the organisation for his own benefits.

In many less developed countries all aspects of life are politicised. This makes it very difficult to make a distinction between 'policy decisions' that are supposed to be taken by the board and 'management decisions' (or technical decisions) that the manager can take.

Another special issue is that often farmers do not understand the aspect of 'open membership'. Especially when a project supports a group of farmers with assets (e.g. a tractor or a store) these farmers can react by trying to prevent other farmers to become member in order to ensure that they remain the owners of the assets.

Legalistic thinking
For very understandable reasons people in ex-communist countries have great difficulty to appreciate the word 'cooperative' and many farmers have a very blurred picture of what it means. In most countries the legal framework for coops has been revised, but this is often still far from perfect both in theory and in practice.

Complex administration
A coop works with the capital of its members. This means that at all times a coop should have a good record of how much each member is entitled to. So if profits are retained this has to be recorded properly and the cash management should be as such that people who want to leave the coop can be given the amount of money they are entitled to.

Political sensitiveness
Creating a cooperative can be seen by the 'established order' as a threat; this counts both for local traders or businessmen as well as for local (informal) authorities. Farmers are often dependent on these locally powerful people and therefore their reluctance to join a coop is understandable.

Supporting farmers to create a cooperative

Many project and programmes support farmers in creating a cooperative. Usually this initiates a complicated "game of expectations". Farmers expect the project to do all the investments and the project expects the farmers to do the same. Generally the farmers 'win' in the sense that they can convince the project that they really like to work together in a cooperative, but they do not have the means to invest in it. In that early stage of the process: both partners agree that 'traders are exploiting the farmers' and that a coop will 'empower the farmers and therefore lead to higher prices'.

As the farmers have no money, the project starts to invest for the farmers: they provide them with assets like a tractor, a sorting line, a store etc. However as time passes by the needs of the coop for support tend to increase rather than to decrease. All too often then it appears that:

- the coop does not get really better prices
- the coop cannot compete as it has too much staff and operates inefficiently
- farmers do not deliver to the coop or do not pay for the services of the coop
- the quality of the produce delivered by farmers it too poor.
- Etc.

Many coops go bankrupt at this stage; sometime they can be revived in a second round of support, based on a reform plan. One of the biggest fallacies in this game is that donors *insist* on creating a formal cooperative before they can provide support. This means that too much attention is paid to the formal processes and not enough to practical issues and to the trust among the (potential) members.

When projects are not very, very careful, a series of logical moves are initiated when they start to talk about creating a cooperative:

- farmers understand that a formal organisation is required by the donor
- yet farmers hesitate to join as they see it as politically complicated and as they have limited confidence in the decision making process, in the (potential) staff, in the

administration and in the real gains that they will get. It is one thing to say in a meeting that traders are 'exploiters', it is another to put your money in a coop to bypass this trader
- to overcome the hesitation of farmers, the profit of the coop should be substantial; in practice 25% additional profit on additional investments
- to get substantial profit requires substantial investment
- yet the farmers do not have money and few understand how a coop can attract money
- with few farmers being immediately enthusiastic and willing to invest, the project will pay too much of the initial investment
- with the low own contribution of the farmers, the level of 'ownership' is limited and the risk for a few leaders to capture the investment is high. Indeed sometimes the first few members of a coop supported by a project try to avoid others to become member.

Natural development path of a marketing coop.

Another path of creating a cooperative is to start with Informal Groups. Different names are used for this: Interest Groups, Farmers Associations, Sales Groups, and Producer Groups. These can be very useful when it comes to extension services and mutual learning processes. They can also be used for organising sales together. They have limitations as well:

- often there is a lot of free-riding: a few people do all the work as informal leaders in the village but their reward is limited. In the case of Afghanistan sometimes the 'social reward' or other 'fringe benefits' can be sufficient; but many times these are not enough to sustain the group after the project withdraws
- the additional gains are limited
- potential trading partners might not take the group serious
- quality issues can not be controlled
- there are no sanctions
- Etc.

Next week we will deal in more detail with how to support the creation of a marketing coop; here we can say that it needs a systematic, long term approach (3 years or more) with a maximum emphasis on 'ownership by farmers' and 'adding value by the coop'. Yet, looking from the coop point of view we can say that experience has shown that the next steps might lead to a successful marketing coop:

- Buying inputs together is the easiest thing to do. All coops should work on this.
- Improve the quality by grading based on internal standards enforced by an internal independent inspection. This ensures the coop a better market position while these activities are relatively cheap too (as most work is done by members and cash expenditures are limited). What is needed discipline and trust (among members and in leaders/ independent inspectors.)
- Improved packing/ advertisements. In line with the above this strengthens the market position, but it is more expensive.
- Aim for some form of exclusivity. This is the best guarantee for long term success. This can be in different forms and shapes:
    - exclusive quality / quality guarantees
    - using exclusive seeds / varieties / products
    - ensuring all members bring all produce
    - having access to exclusive knowledge or expertise
    - delivering large quantities that are interesting for the large industries
    - isolation of the area (so transport costs prohibit others to enter the market

- Add value to the produce: by-pass other actors in the chain (vertical integration). This is a first natural climax of a coop. When a coop has been operating successfully in the market for some years, the next logical step is to try to capture also the added value of the processing. Two factors make this step a huge one: the high capital requirements and the

difficulties for farmers to check the management. In practice this can lead to a second coop, being born out of the first.

- Develop new products and reverse the chain: the coop no longer seeks to sell the produce of its members but induces its members to grow those products for which they create a market.

ANNEX-II: UNDERSTANDING BALANCE SHEETS

Although this is not part of our training, it is good to explain how a balance sheet of a coop (or of any company) is made and how it can be read. In a balance sheet *all assets* and *all liabilities* are balanced against each other. *Assets* are everything that the coop owns; it can be physical assets (property and equipment) and cash. *Liabilities* are the sources from which these *assets* have been paid.

It is clear that *all assets* have to be balanced by *all liabilities* as everything that a coop owns must have been paid for. This is why it is called a balance sheet. In the case of a coop the *assets* can be paid from the membership fees, from its reserves (which is from earlier made profits) or from a loan.

The easiest part of balance sheets are the *assets*. It is simply the total value of all assets that the coop has. However (*physical) assets* wear out and their value is reduced over time; this is called *depreciation*. So their *book value* on the annual *balance sheet* has to be reduced with the same amount as the *depreciation*. On the *balance sheet* this is balanced by the fact that on the side of the *liabilities* the profit decreases with the same amount (remember that the profit is the Gross Margin *minus* all costs and depreciation is part of the costs).

In our case, at the end of every year we can also compose the *balance sheet* of our apple coop. On one side it shows what the coops owns (*assets*) and on the other side how they paid for this (*liabilities*). In the first year the following balance sheet can be made:

- ***Assets*:**
  - *book value* of store: 190.000
  - *cash*: 49,920

  Total **239,920 Afs.**

- ***Liabilities*:**
  - Farmers' contributions in year 1: 146.000
  - Debt to the NGO: 50.000
  - Profit of year 1: 43.920

  Total **239.920 Afs.**

The profit is the difference between the assets and all other liabilities. In other words: the profit is all that the coop has minus all that was paid to obtain that.

So the profit can be calculated in two ways: be specifying all expenditure and incomes of all activities as we did in par. 6.4 or by looking at the balance sheets:

***Profit = all assets – all known liabilities*.**

In this case the profit is 239,920 - 146,000 – 50,000 = 43.920 Afs. Indeed the same as calculated in par. 6.4.

If one has a simple business with a few activities the method of par. 6.4 is more easy and gives a more direct insight in the relevant issues (prices; costs etc.). In case one deals with a very complex business it become virtually impossible to allocate all fixed costs correctly to each activity (or profit centre) and it is easier to simply keep track of the value of the assets and then calculate a lump-sum profit for the whole organisation. Of course this gives less insight in the profitability of each of the activities.

Looking at the balance sheet at the end of the second year we see:

- ***Assets*:**
  - *book value* of store: 180.000
  - *cash*: 53,840
  - ***Total*** **233,840 Afs.**
- ***Liabilities*:**
  - farmers' contributions in year 1: 146.000
  - farmers' contribution in year 2: 0
  - profit of year 1: 43.920
  - profit of year 2: 43,920
  - **Total** **233,840 Afs.**

The profit of the second year is the difference between all *assets* and the already *known liabilities*. Again, it is 43.920 Afs.. The reason is that in this second year exactly the same activities have been undertaken with the same prices as in the first year. So logically the profit is the same. Note that the contribution of the farmers in the second year was zero; they paid 36,000 as membership fees, but at the end of the year they received the same amount as dividend.

The profit can be calculated in yet another way as well. The value of the assets at the end of the year 1 was 239,920. However, the coop had a debt of 50,000 Afs. So the net value of the assets was 189.920 Afs. At the end of year 2 the value increased to 233,840 Afs and there were no more debts. So the net value of assets owned by the coop increase with 43,920 (233,840 *minus* 189,920). Indeed the profit made on the operational activities.

One can understand that when an organisation (a coop or a company) has many different activities it is nearly impossible to calculate the profit in the way we did for apples. The reasons are that prices change every day and that it is very difficult to assess how much of the fixed overhead costs have to be allocated to specific activities. So the easiest solution is to calculate the profit via the balance sheet: as the difference between the value of all *assets* minus the known *liabilities*. So this is what bookkeepers do all over the world. Unfortunately the way they do this and the way they communicate about it make it often very difficult for farmers or NGO staff to understand it.