CHAPTER 2

Getting ready to start

Starting and managing a successful seed enterprise requires **talent, skill, discipline** and **hard work**. Before deciding to start, you should evaluate your strengths and weaknesses as a potential owner and manager of a seed enterprise.

Ask yourself why you want to start a seed enterprise?

Before you start, you should think carefully and assess the reasons for wanting to go into a seed business. A seed enterprise is possible only if there is a market for quality seed in your area. Apart from making money the following are some other reasons for starting a seed enterprise:

- ☑ **To seize a business opportunity by filling a gap in seed supply in the absence of other suppliers.**

- ☑ **To use your knowledge, experience and resources to run an own business and make money.**

- ☑ **To expand your existing business by adding seed to it.**

What skills do you need to run a seed enterprise?

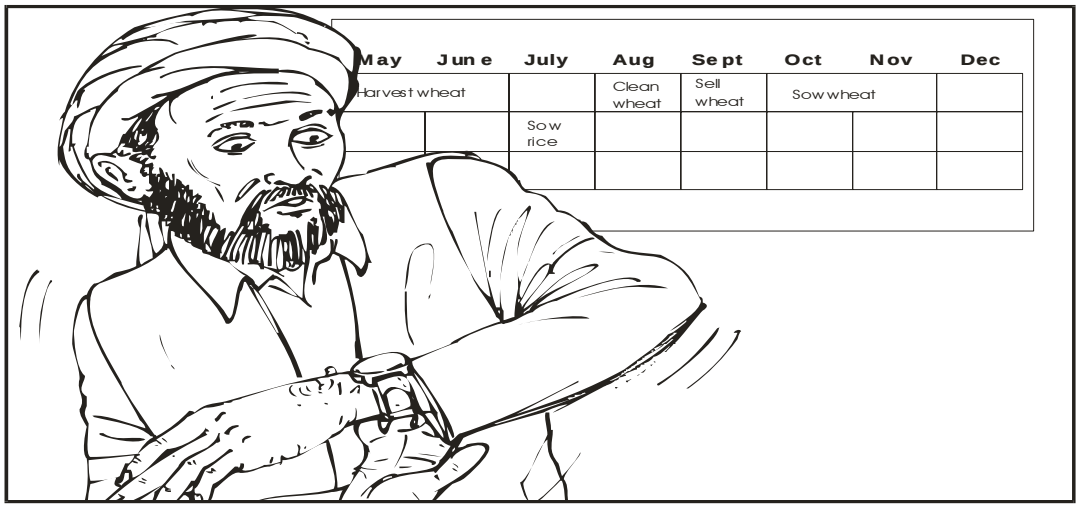
A seed enterprise can succeed only if the owner or owners have certain essential abilities. As a business owner, you must do the following:

☑ Plan, prepare and organize your business well

Careful planning, preparation and organization are essential in seed production because if you do not sow good foundation seed to start with and maintain a good crop, you cannot harvest good quality seed later on.

☑ Time is of the essence in seed production. Be ready to make quick and timely decisions and sometimes under pressure

Many activities in seed production are critically time-bound and seasonal. You need to manage your time efficiently and follow through on the details of your business at all times.
You must remain in total control of your business and must not take any factor for granted that would influence the outcome of your business.

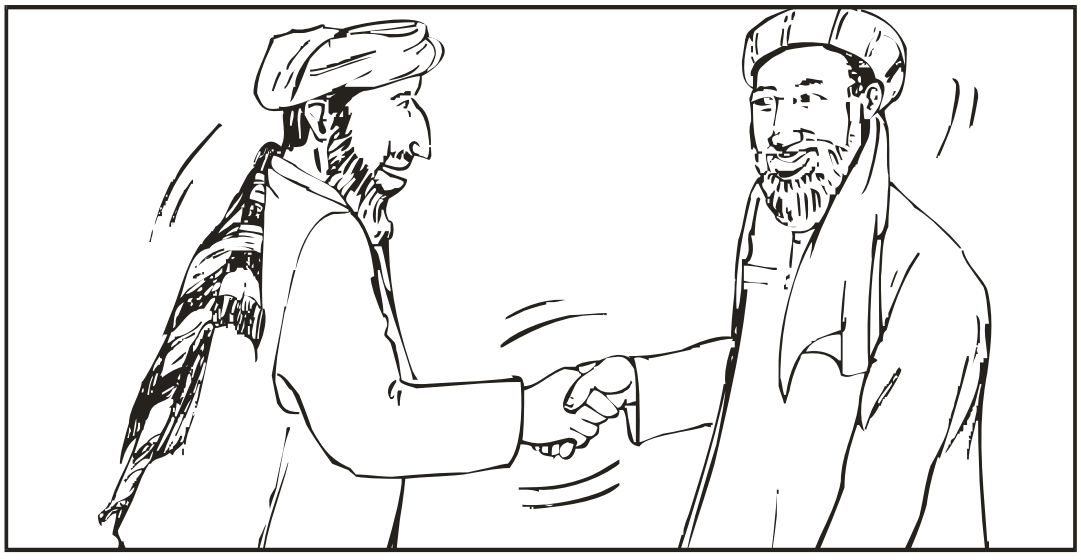


☑ Maintain strong motivation in hard times

Seed production carries many risks including unfavorable weather, outbreak of pests and diseases, price fluctuation, etc. Not every season will be a good one and you should be prepared to expect yields and profit to drop in some years. But never lose hope. In the difficult years, you should maintain motivation to minimize constraints with a hope for brighter days ahead.

☑ Have good ability to get along with different personalities

Stick to the principle that “the customer is always right”. Be prepared to maintain good relationship with your customers or others that are associated with your business whether you like some of them or not. Remember that your primary motive is to convince farmers to buy your seed and remain your loyal customers.



☑ Learn new ideas, be flexible and look ahead

Technology and the way of doing things change in the seed business. Be open to new ideas and learn about recent developments such as new varieties, changing conditions in the market place and what your competitors or other producers are doing.

Find out about useful meetings, workshops, seminars, trade shows, etc., and make sure you participate in such events.

What structure of enterprise would you prefer?

There are several ways to run a seed enterprise. You can operate it as an individual, as a family enterprise or in partnership with others such as a small group of farmers or as a cooperative. Find out about legal business requirements such as the seed policy, seed law, tax laws, registration and licensing requirements, etc. Your choice of enterprise form may sometimes depend on what is legally convenient or even allowed by law. Whichever form of business you choose will have some advantages and disadvantages including the following:

Owning and operating a seed business alone

☑ Advantages

- You make all your decisions without seeking the permission of others.
- You keep all your income to yourself.
- There are no misunderstandings with other people.

☒ Disadvantages

- You may need the skill of others but discovering this could be costly and time consuming.
- You provide all finances by yourself.
- You bear all risks and provide equipment, inputs, etc.

Running a family seed enterprise

☑ Advantages

- You keep all benefit within the family.
- Family resources could be pooled together easily.
- Greater trust and loyalty can exist between staff from one family and they can stick together in hard times.
- Family members are often very committed to success and make sacrifices because everyone has a stake in the business.
- The thought for future generations encourages long-term thinking about growth and success of the business.

☒ Disadvantages

- Rivalry among family members could jeopardize the business.

- The subject of succession can be sensitive and a source of dispute.
- Personal ties could inhibit the expression of honest opinion.
- One family member could dominate the business.
- Older members could be resistant to new ideas and change.

Joining others in a group

☑ Advantages

- Analyzing problems, sharing ideas and planning may be more effective in a group.
- More people working together could lead to greater output levels and higher revenue.
- Groups may have better access to credit at lower cost.

☒ Disadvantages

- Conflict may arise among group members if they disagree.
- Weak leadership of the group could result in business failure.
- Few key members may tend to dominate decision-making and leave others out.
- Groups may often depend too much on outside financing than on self-generated resources.

Which crops and varieties would you produce?

Not all crops can make a good seed business. The commercial success of your enterprise will be determined by the demand and profitability of the crops that you grow. Therefore, the choice of crops and varieties that you select will depend on the preferences and needs of the farmers that would buy your seed. These factors have to be assessed carefully through some form of survey or market research.

Seed enterprises hardly depend on one crop. A combination of crops is usually necessary. These should preferably be crops that the farmers can grow in rotation on the same piece of land. However, since each crop would require specific expertise, inputs or machinery, it is advisable that small businesses do not grow many crops at the same time. They should focus on 2 or maximum 3 crops. The same

applies to the number of varieties of a crop that an enterprise would handle because it is difficult to maintain varietal identity and purity when many varieties of the same crop are grown.

Although crops such as wheat and rice may be important in the farming system, enterprises often find it difficult to sell seeds of these crops because farmers can normally produce their own seed and are reluctant to buy more expensive seed from other sources. It would be better to combine such crops with more profitable alternatives like certain vegetables that require specialized seed production techniques.

Although handling more than one crop requires more work, it has the advantage of spreading the risks of failure due to adverse weather conditions, pests and diseases, price fall, etc. Another crop also brings in additional income later in the year and helps in fully utilizing your labour and other facilities the year round.

How would you decide on the scale of your business?

The scale of your business should be determined primarily by the size of the market you intend to serve and how you expect the enterprise to grow over time. The capacity you acquire in terms of staff, machinery, processing facility, storage and transport should correspond to the quantity or

value of seed you will produce. Excess and underutilized capacity will be a loss for your business and should be avoided.

What market niche would you wish to target?

Marketing is the most critical factor that determines the success of your seed business. In order to compete with other suppliers in the industry, you must know and understand your market, how it is changing and the challenges that may lie ahead.

The market for your seed is determined by the existing demand for it. If there are no farmers wanting to buy your seed, then there is no possibility of a seed business. Your market may be limited to your village, district or even your province. You must be aware of the internal and external market forces that could affect the current and future market for the seed you hope to sell. Keep in mind that marketing is a dynamic process and you should always keep your eyes and mind open and remain alert to the current and likely future needs of your farmers.

As a small enterprise, you should explore the possibility of selling quality seed of particular crops and varieties that are attractive to a specific group of prospective seed buyers. This will require a careful study of the market (farmer behaviour and pattern of seed and variety use) to find opportunities. For example, farmers in a certain location may be growing traditional long-duration varieties of a certain crop and may become attracted to shorter-duration varieties because they could harvest these in time to sow another crop and therefore benefit from double cropping. Similarly, some farmers may be looking for disease-tolerant varieties to replace their current susceptible varieties. All instances of this kind may offer unique opportunities for small seed enterprises and specific markets for them to aim at.

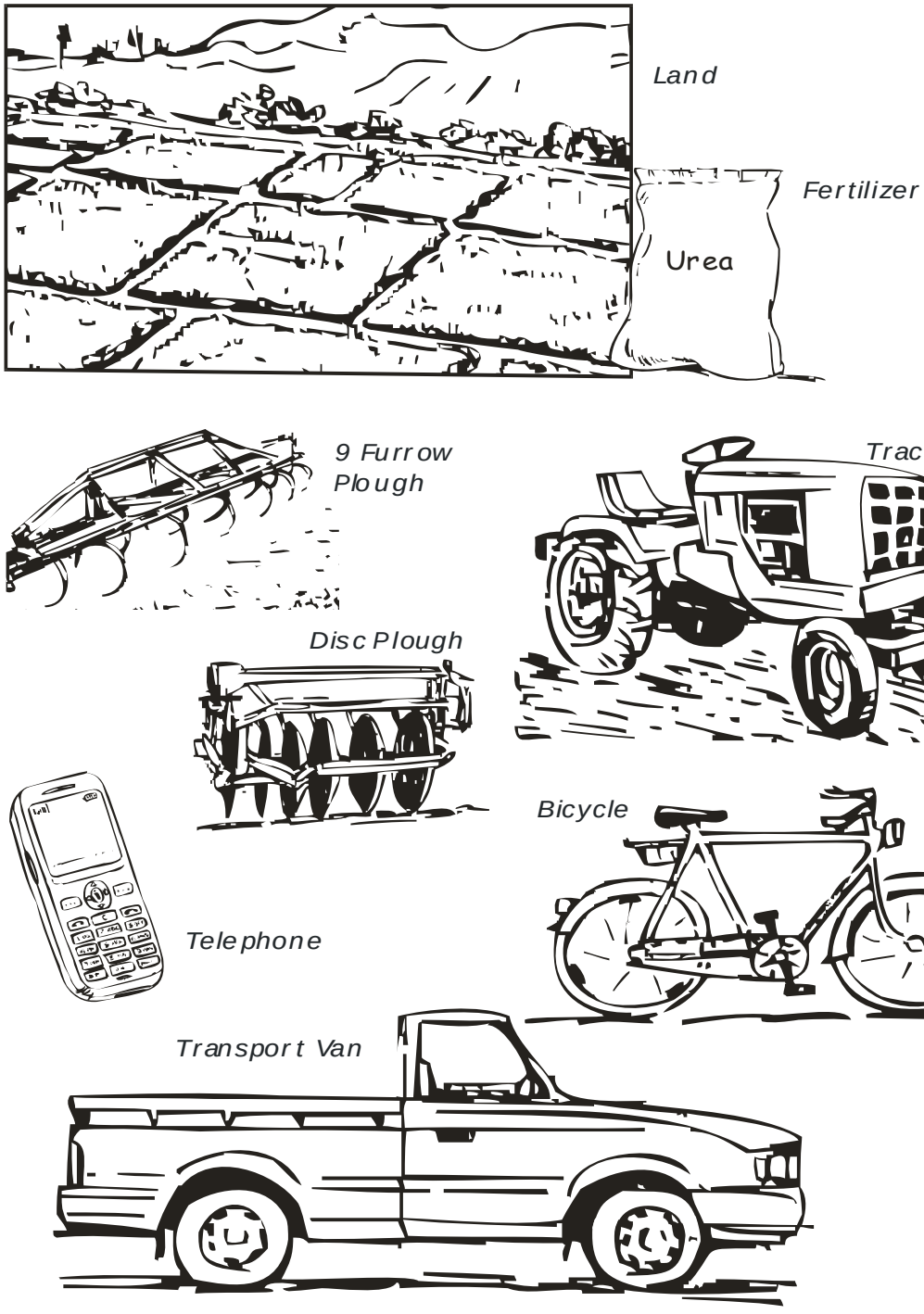
Once you identify your market niche, try to answer questions such as the following:

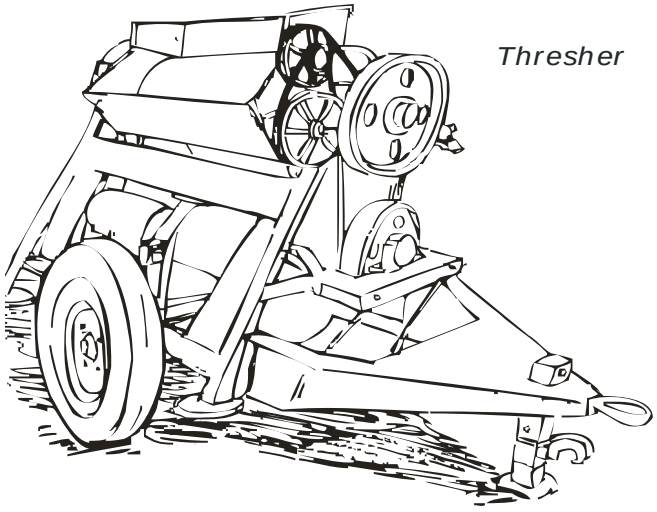
- Seed of which crops and varieties would you like to produce and sell?
- Would you be able to deliver better quality seed and service than other existing suppliers?
- Would your seed fill a need in the farming community?
- What packaging material and sizes (kg) would you use?
- What kind of competition would you expect and what comparative advantage do you have over other suppliers which would enable you to cope with such competition?
- Would you be able to create more demand for your seed and expand your business?

How much money will you need for your enterprise?

The amount of money you need will depend largely on the kind of equipment, facilities and materials needed for the enterprise. You must be able to estimate the costs of these items.

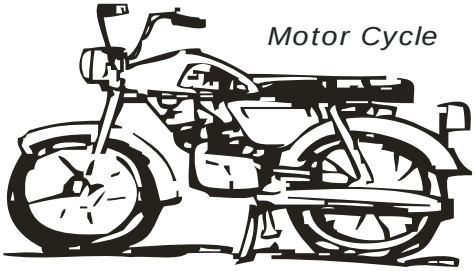
Producing quality seed requires inputs and specialized equipment and facilities in addition to those that are used in normal grain production. You should identify which of these you will use and find out how much they will cost and how you will raise money to buy them. Amongst the items a small seed enterprise would require include the following:


Land
Fertilizer
Urea
9 Furrow Plough
Tractor
Disc Plough
Bicycle
Telephone
Transport Van

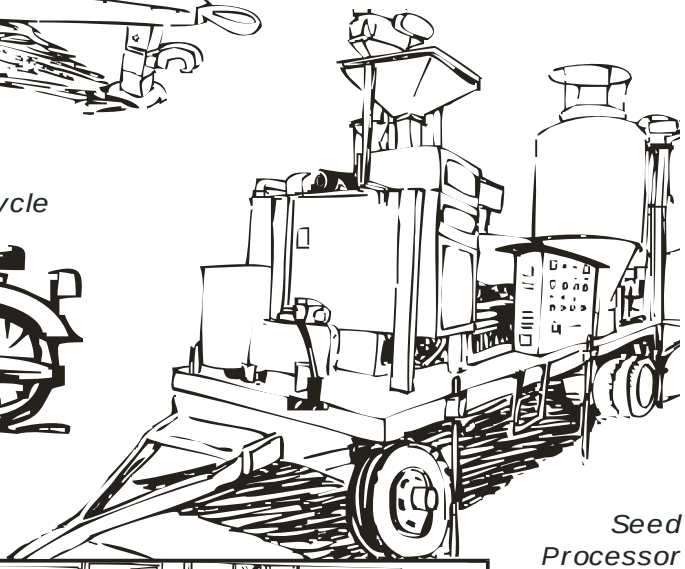


Thresher

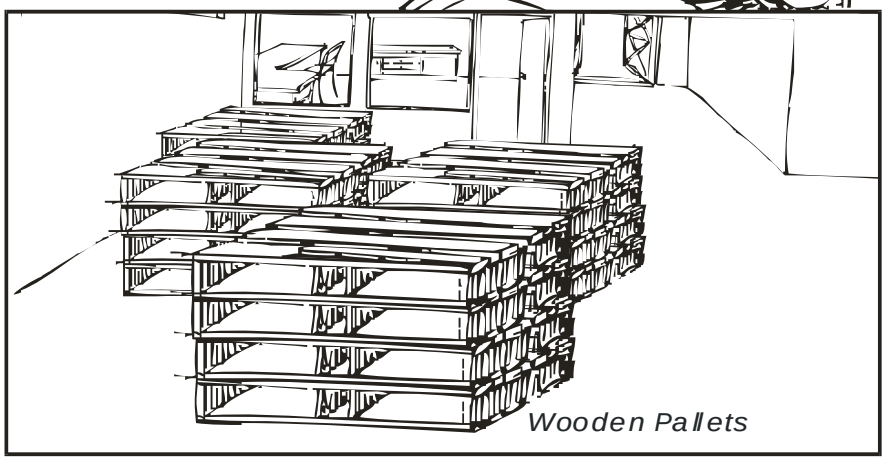
Fumigation tablets
and seed treatment



Motor Cycle



Seed
Processor



Wooden Pallets

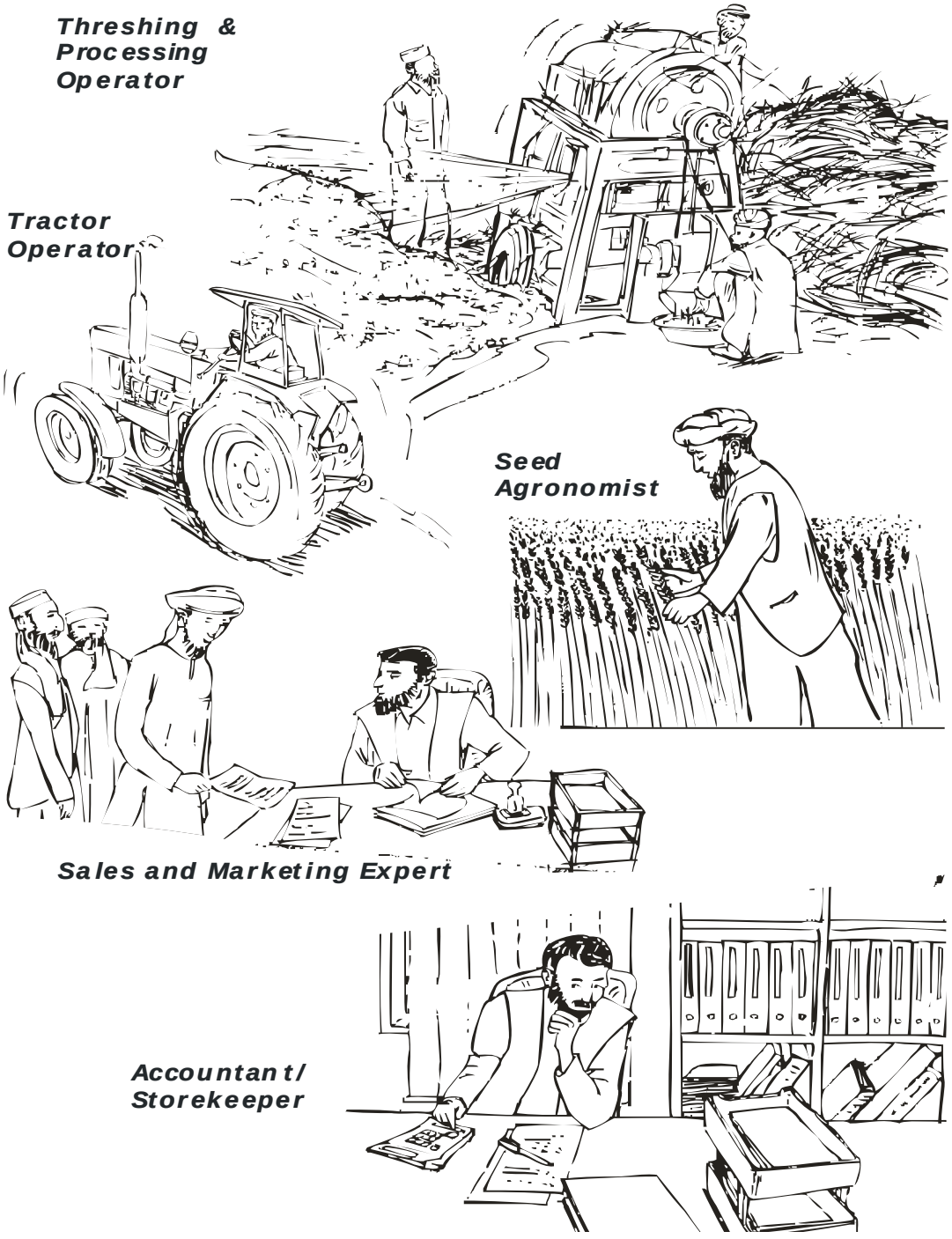
Storage
Facility

How will you obtain the required funds?

You should assess whether you would be able to fund the enterprise from your own source or need support or credit from an agency, or loan from a financial institution such as a bank. If you choose to take a loan, you must determine whether your enterprise will make enough money to repay the loan and service charges while leaving you with some reasonable profit to share with members of the enterprise or invest further in your business.

How would your enterprise be managed and controlled?

To run a seed enterprise successfully, you will need persons with specialized skills and expertise. If you will run the enterprise on your own, you may need to seek the services of others having skills and expertise that you do not possess. In a group, these functions could be carried out by specific members within the group. Amongst such key functions would include the following:


Threshing & Processing Operator
Tractor Operator
Seed Agronomist
Sales and Marketing Expert
Accountant/ Storekeeper

Having people with the right skills and technical knowledge is not a guarantee that everything will go well. Every group enterprise should be guided by agreed rules and regulations that are thoroughly understood by all members of the group. Penalties for non-obliging members should also be specified. In fact, in some countries, formal by-laws or constitutions may be legally required as part of the registration process of small private enterprises.

What risks would your enterprise likely face?

Risk is any factor that may cause problems or loss to your seed enterprise. You must think of all the possible risks or things that may go wrong and be prepared to minimize the possible damage these may cause to your enterprise in the event that they happen.

The following are examples of risks seed enterprises may face:

- Technical or production risk (e.g. Breakdown of equipment, fall in quality of seed in storage, etc.)

- Financial risk (e.g., limited money to purchase needed equipment and materials, or to pay salaries and wages)

- Marketing risk (e.g., fall in market share due to increasing competition, importation of cheaper alternatives from other countries)

- Management risk (e.g., dominating effects of few key people in a small-scale seed enterprise).

These different types of risk and their likely impacts must be carefully assessed before starting your enterprise and

Corrective measures anticipated.

What other important pre-conditions should you consider?

There are still other factors you should take into account before becoming finally sure you are ready to start your seed enterprise.

- What will you name your enterprise?

  It is important for you to give an attractive name to your enterprise; a name that your customers can remember and call easily.

- What logo and slogan will you use for the enterprise?

  The name, logo and slogan should go hand-in-hand. The logo should be simple and cheap to print on paper, bags, etc.

- Where will your enterprise be located?

  You should locate your enterprise within easy reach of your farmers and suitable for promotional purposes.

- How will you compensate yourself or members of the group?

Your answers to the above will help you in developing a comprehensive business plan, which will be your next task once you become convinced that you are ready to start your seed enterprise. The business plan should be well-thought out, since it will guide your business operations, its management and capital needs.

Exercises and discussion points

1. Which two crops in your area will require critical management of time for seed production when they are grown one after another? What steps would you take in order to be most time efficient and productive in growing these crops?

2. What business structure is most suitable for seed production in your community and why? What are the strengths of this structure? Which limitations would this structure have and how would you overcome these?

3. What are the most important sources of funds available in your community for starting a new seed enterprise? Are these sufficient? If not, where else would you go to seek additional funds? What would you need to convince your borrower to give you the money you want?

Notes

Notes

CHAPTER 3

Understanding costs and benefits in seed production

Why is it important to know your costs?

Knowing your costs, setting the right price for your seed and estimating potential profit level are the basic elements of any business. It is only when you know your total cost that you can decide on a reasonable price for the seed you sell.

It is important to remember that before you start the enterprise, you should have sufficient money to pay for all the items you need and the running costs during the year. Note that your first income will only come when you have harvested and sold your first seed crop. This means that you must have money to start with. A part of this money may come from your own source or it may come as a loan. If you take a loan, you should think carefully whether you will be able to repay the loan plus any service charges and still make a reasonable profit. All this will require careful estimation of the scale of your business, all the costs you expect to incur, your expected income or benefits, and expected level of profit.

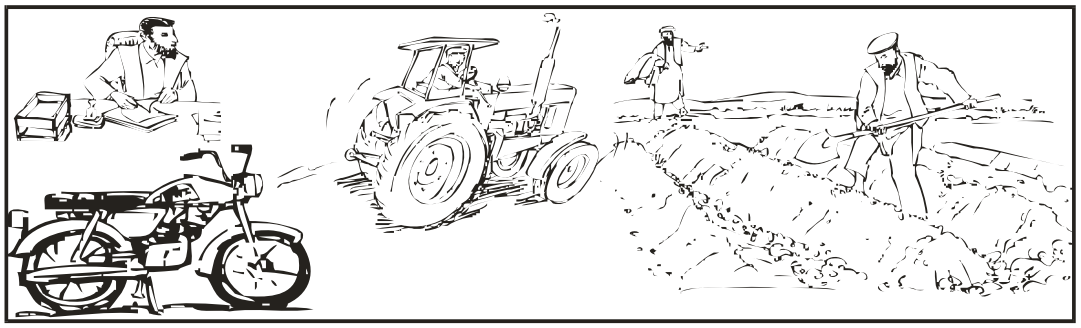
In calculating your costs, you should not ignore or underestimate any elements that contribute to the costs of your business such as the labour and time you or other members of the group or family will contribute to the business. Your enterprise could run into difficulty if you overestimate your profit because you have not taken certain elements of costs into account.

What are the main types of costs a seed enterprise incurs?

There are 2 main categories of costs small enterprises incur:

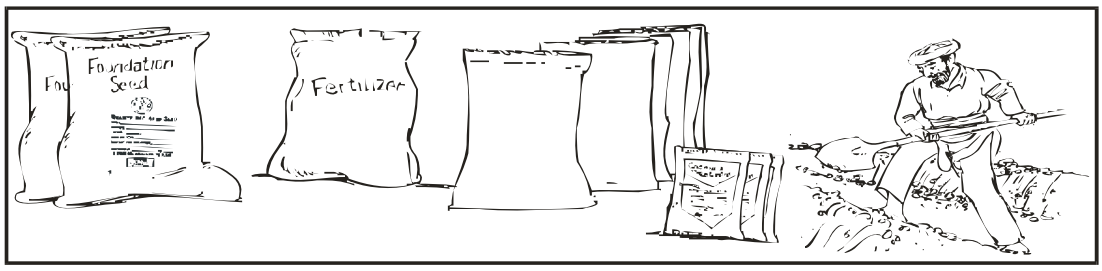
(i) *Fixed Costs*

These costs remain the same and do not change with the amount of seed you produce. These include salaries of the workers, rent of property, cost of machinery and equipment.



(ii) *Variable Costs*

These costs will tend to increase or decrease with changes in the quantity of seed you produce. Examples include the amounts of foundation seed, fertilizer, labour input, packaging and seed treatment material you use.



To be efficient, you must operate at optimum capacity by producing and selling as much seed as possible. You will become more cost effective if you spread your fixed costs over as large a seed volume as possible.

Why is it important to estimate the potential profitability of your enterprise?

You cannot start a seed enterprise if you are not sure that you will generate a profit. To make profit, your expected income from seed sales must exceed the total amount of money you will spend in producing the seed. Before you start your seed enterprise, you must assess whether you will be able to make sufficient profit. This means that you have to estimate in advance your total cost and total expected income, and hence your margin or profit.

How do you estimate the potential profitability of your enterprise?

Let us assume that your enterprise will produce a wheat crop, which will be followed by a rice crop in the same year and on the same piece of land. The following examples show 5 steps you should follow in estimating your total costs, the revenue you will make and the potential profit you would expect.

Step 1: Calculating the depreciation of your fixed assets

An asset is anything of value that is owned by your business. Fixed assets are long-term items acquired for the day-to-day operations of the enterprise and which you do not expect to convert into cash within a short period of time; for example, machinery and equipment, buildings and furniture. You must therefore be in a position to replace such assets at the end of their useful life if you are to continue your business. It is mainly for this purpose that you need to calculate the depreciation cost.

In calculating depreciation, you want to spread the costs of your capital items over their expected economic lives. The depreciation cost will represent the amount of money you

should set aside each year to account for the loss in value of the fixed assets with the passage of time. You should use this money in addition to the end or salvage value of the asset to replace the asset in question at the end of its economic life. The following formula is used in calculating depreciation:

$$D = \frac{(P-SV)}{Y}$$

Where D= annual depreciation in $ per year, P= purchase price in $, SV= salvage value in $, and Y= years of service or economic life.

Consider the following examples of fixed assets for which annual depreciation is calculated, given the purchase values, expected economic life and estimated salvage or end values:

Item	Purchase cost (US$)	Economic life (years)	Salvage value (US$)	Annual depreciation (US$)
Tractor	10300	10	5000	530
Accessories for tractor	2500	10	1000	150
Air compressor for tractor	380	10	100	30
Implements for tractor	2390	10	1000	90
Thresher	200	10	500	150
Seed drill	500	10	100	40
Harvester (windrower)	1700	10	500	120
Seed cleaner	80000	20	10000	3500
Ridging and ditch machine	240	15	100	10
Transport van	10000	10	5000	500
Motor cycle	600	5	200	80
Store	40000	50	5000	700
Furniture and fixtures	300	10	50	25
Total annual depreciation				**5895**

Step 2: Calculating administrative costs

There are some indirect costs in seed production such as administrative charges, materials-related costs (machinery repairs and maintenance, electricity, insurance, rent), and some categories of labor cost (supervision and store keeping) which are clearly costs for producing the seed but which are difficult to associate directly with a unit of seed

produced or area cultivated. For practical reasons, these are usually classified as indirect materials costs and indirect labor costs, and are grouped together as the administrative cost or production overhead cost. The following example outlines administrative costs in a small-scale seed enterprise.

Item	Value in (US$)	Item	Value in (US$)
Office supplies	500	Wages for office labor	1000
Salary for cashier/accountant	800	Vehicle operation cost	2000
Salary for tractor driver/operator	800	Promotion and marketing cost	500
Sub-total administration charges			5600

Step 3: Calculating how much it costs to grow wheat seed (per jerib and hectare)

Apart from depreciation and administrative (overhead) charges, are direct costs associated with cultivating one jerib (0.2 ha) and one hectare of land. The following example outlines the production costs, first for wheat and then for rice. In the example, the rice crop is grown after the wheat crop on the same piece of land, as is practiced in some parts of Afghanistan.

Item	Unit	Qty	Unit cost (Afs)	Unit cost (US$)	Total ($/J)	Total ($/ha)
Disc plowing (fuel and lubricants, casual labor, etc	J	1	200	4.14	4.14	20.70
Cultivator harrowing (fuel, casual labor, etc)	J	1	200	4.14	4.14	20.70
Foundation seed	Seer	5	80	1.66	8.28	41.41
DAP fertilizer	Bag	0.5	900	18.63	9.32	46.58
Urea fertilizer (labor)	Bag	1	450	9.32	9.32	46.58
Fertilizer application, bird control, security, etc	J	1	500	10.35	10.35	51.76
Weed control: cost of herbicide & application	J	1	200	4.14	4.14	20.70
Roguing	J	1	100	2.07	2.07	10.35
Harvesting: fuel and lubricants, casual labor, etc	J	1	200	4.14	4.14	20.70
Threshing: fuel and lubricants, casual labor, etc	J	1	200	4.14	4.14	20.70
Transportation (fuel, casual labor)	J	1	100	2.07	2.07	10.35
Seed cleaning	J	1	150	3.11	3.11	15.53
Seed treatment: Thiram powder	J	1	50	1.04	1.04	5.18
Cost of bags	J	1	100	2.07	2.07	10.35
Storage (fumigation, inspection, etc)	J	1	100	2.07	2.07	10.35
Contingencies	J	1	100	2.07	2.07	10.35
Total cost	J	1	J		72.46	362.32

Note that 1 seer = kg of seed.
US $1=48.3 Afs.

Step 4: Calculating how much it costs to grow rice seed (per jerib and hectare)

Item	Unit	Qty	Unit cost (Afs)	Unit cost (US$)	Tot ($/	Tot ($/h
Nursery preparation	J	1	50	1.04	1.04	5.18
Foundation seed	Seer	2.5	100	2.07	5.18	25.88
Disc ploughing, leveling and ridging	J	1	600	12.42	12.42	62.11
Uprooting seedling & carrying to planting site	J	1	400	8.28	8.28	41.41
DAP fertilizer	Bag	0.5	900	18.63	9.32	46.58
Urea fertilizer	Bag	1	450	9.32	9.32	46.58
Crop management (irrigation, fertilization, etc)	J	1	1000	20.70	20.70	103.52
Weed control by hand	J	1	300	6.21	6.21	31.06
Roguing	J	1	100	2.07	2.07	10.35
Harvesting (fuel, maintenance and labor)	J	1	200	4.14	4.14	20.70
Threshing (fuel and casual labor)	J	1	200	4.14	4.14	20.70
Transport (fuel, maintenance and labor)	J	1	100	2.07	2.07	10.35
Seed cleaning	J	1	150	3.11	3.11	15.53
Seed treatment: vitavax 5	Pack	1	50	1.04	1.04	5.18
Cost of bags	J	1	120	2.48	2.48	12.42
Storage (fumigation, inspection ,etc)	J	1	100	2.07	2.07	10.35
Contingencies	J	1	100	2.07	2.07	10.35
Total cost			J	1	95.65	478.26

Step 5: Calculating the profit margin for growing wheat and rice seed on 100 jeribs or 20 hectares of land

In this final step, you add up all the costs involved in producing both wheat and rice seed on 100 jeribs of land in one year (i.e., depreciation costs + administrative charges + wheat seed multiplication costs + rice seed multiplication costs). To estimate your profit, you should compare your total cost with the total income you expect from your seed sales. This means that you have to estimate the yield you expect from both crops and the price at which you expect to sell your seed to the farmers or organizations.

To make a reliable estimate of yield, you must use your experience in past years as a basis, and then taking into account certain factors and prevailing conditions in the current year such as rainfall pattern, pests and disease infestation, temperature range, etc. As regards selling price, your forecast level will depend on production costs, price levels in past years, expected grain prices, prices charged by other

suppliers, the margin you wish to get, etc. Therefore, your selling price = (Total production cost + margin). Your net margin may be subject to a certain tax rate depending on the policy of the government.

Item	Value in (US$)	Item	Value in (US$)
Annual depreciation charges (fixed costs)		**Administration charges (Fixed costs)**	
Tractor	530	Office supplies	500
Accessories for tractor	150	Salary for cashier / accountant	800
Air compressor for tractor	30	Salary for tractor driver / operator	800
Implements for tractor	90	Wages for office labor	1000
Thresher	150	Van operation	2000
Seed drill	40	Promotion and marketing	500
Harvesting machine	120	**Sub-total administration charges**	5600
Seed cleaner	3500	**Total fixed cost**	11495
Ridging and ditch making machine	10		
Transport van	500		
Motor cycle	80		
Store	700	**Seed multiplication costs: wheat (20 he)**	7246
Furniture and fixtures	25	**Seed multiplication costs: rice (20 he)**	9565
Sub-total depreciation charges	**5895**	**Sub total seed multiplication cost**	16811
Total production cost	**28306**		
Value of processed wheat seed from 20 ha: (10,500 seers @ Afs 80/seer or US$ 1.66/seer)			17430
Value of processed rice seed from 20 ha: (14,300 seers @ Afs 100/seer or US$ 2,07/seer			29601
Total value of output (processed wheat and rice seed)			47031
Net margin (US$)			**18725**
Net margin (%)			**66.2%**

If your enterprise contracts other farmers as growers to produce seed, then all field multiplication costs will rest with the growers. In such a case, your basic production cost will be the farmgate price you will pay for raw or non-cleaned seed you buy from the growers. This procurement price would normally amount to the prevailing market price for ordinary grain plus an agreed premium (e.g. 15%) above the grain price. Your enterprise would have to take care of seed processing costs including transportation. Under these circumstances, your selling price will be based on the raw seed procurement cost, the depreciation charges of your fixed assets, the administrative charges, the processing cost, and the margin you expect to get.

An enterprise which contracts farmers for seed production must be in a position to have enough cash on hand at harvest time in order to buy raw seed readily from the growers. This volume of cash will be the greatest cost of the business and must be available at the right time.

Item	Value in (US$)	Item	Value in (US$)
Annual depreciation charges (fixed costs)		**Administration charges (fixed costs)**	
Tractor	530	Office supplies	500
Accessories for tractor	150	Salary for cashier / accountant	800
Air compressor for tractor	30	Salary for tractor driver / operator	800
Implements for tractor	90	Wages for office labor	1000
Thresher	150	Van operation	2000
Seed drill	40	Promotion and marketing	500
Harvesting machine	120	**Sub-total administration charges**	**5600**
Seed cleaner	3500	**Total fixed cost**	**11495**
Ridging and ditch making machine	10		
Transport van	500	**Buying 12,000 seer raw wheat Seed @ Afs 30 ($0.65) from growers**	**7500**
Motor cycle	80	**Buying 16,000 seer raw rice seed @ Afs 35 ($0.70) from growers**	**11667**
Store	700	**Processing 12,000 seer (84 tons) wheat seed @ $3.7 per ton**	**311**
Furniture and fixtures	25	**Processing 16,000 seer (112 tons) wheat seed @ $2.8 per ton**	**314**
		Seed treatment, bags and storage costs for 84 tons wheat seed	**482**
		Seed treatment, bags and storage costs 112 tons rice seed	**516**
Sub-total depreciation charges	**5895**	**Sub total raw seed procurement and post-harvest handling cost**	**20790**
Total production cost			**32285**
Value of processed wheat seed from 20 ha: (10,500 seers @ Afs 80/seer or US$ 1.66/seer)			17430
Value of processed rice seed from 20 ha: (14,300 seers @ Afs 100/seer or US$ 2,07/seer			29601
Total value of output (processed wheat and rice seed)			47031
Net margin (US$)			**14746**
Net margin (%)			**45.7%**

Exercises and discussion points

1. Why do you think it is important to spread fixed costs over as much seed as possible? What should you do to keep your fixed costs at the lowest level possible?

2. Suppose you buy a new tractor at $10,000 and a van at $15,000 and both are to last 10 years, at the end of which you intend to sell them at $1,000 and $1,500 respectively. Calculate the total annual depreciation of these assets. Under which conditions do you think it would be difficult to buy a new replacement tractor and van using the accumulated depreciation and salvage values at the end of 10 years?

3. If the total production cost of an enterprise is $50,000 and the total revenue from seed sales is $75,000, calculate the net percentage margin of the enterprise.

4. What rate of tax do you think small-scale seed enterprises should pay to the government and why?

Notes

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