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Putting Nitrogen Fixation to Work for Smallholder
Farmers in Africa

N2Africa



Farming as a Business

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CHAPTER 1: THE BASICS OF BUSINESS

What is a Business?

Define a business: A business is defined as a commercial activity which operates with the intention of making a profit or the provision of a service or commodity (product/service) to consumers at a profit. It means the sell (provision of value to stakeholders) of a good or service to consumers at a profit. A business has to sell a service or product that has a demand and at a profit. Factors such as pricing, packaging, quality and promotion affect market demand.

Key issues in a business

- Sell of a good (tangible) or service (intangible)
- Provision of value to stakeholders (owners, managers, employees, customers)
- The owners of the business receive profit
- There is employment of labor services (household labor or hired)
- The customers receive a commodity that satisfies their needs
- Market demand

What are the elements of a business?

1. Provision of a commodity or service

- What products are produced by the farmers and are they being offered for sale?
- Why are the farmers producing these products?
- What potential products and services can be developed for new businesses?

2. A business is profit oriented, that is products/ services are supplied at a profit

- Are the farmers making profit from sale of their commodity?
- How are profits determined?

- Are they engaged in their business of farming in the best possible way?
- Are they keeping record of expenses and incomes?

3. Sales are dependent on the market conditions.

- What is the market demand of the goods that farmers are producing today?
- Is there potential for new markets?

4. Sales are also dependent on the commodity's quality.

- What is the existing quality of the farm commodities?
- Is there potential to add value to the commodities?

5. Sales are also dependent on the commodity's pricing.

- Are the prices farmers being paid competitive or controlled by others?
- What can farmers do to improve their pricing situation?

6. Sales are also dependent on packaging.

- Is the packaging of the commodity attractive and convenient to attract buyer interest?
- What are the possibilities of improving the packaging for the products and/or services?

7. Sales are also dependent on commodity promotion.

- Are the farmers promoting their products and how effective is the promotion?
- What possible strategies can be developed to promote the sale of their products and/or services?

The stages of business growth

Farming just like any other business follows a life cycle that starts with start up or infancy, growth, maturity and decline. At each of the life

cycle stages, varying levels of resource commitments are required from the farmers.

Start up

This is the initial stage of a business and it requires huge investment in time, energy and monetary resources in building the base of the business. At this stage, there are very low revenue inflows, high innovation and risk taking behavior by the farmer. Efforts will be directed towards building inventory and the customer base. It is at this stage that most businesses just never take off.

Growth stage

Revenue base is steadily rising and functional linkage building will be taking place. There is great need to assist in production, processing and general operations to facilitate an upward growth in sales.

Maturity stage

At this stage the business is now known and it has established itself among customers. This is the stage which calls for networking and building of functional linkages to sustain upward growth in revenue and profits. Marketing becomes key and there is also a great need for product innovation.

Decline stage

Profits have reached a ceiling and sales starts falling. The market will be flooded by similar enterprises and huge cost cutting measures are put in place to preserve profits.

How do we relate farming to business?

The reason we have continued high food insecurity, low levels of income and high poverty levels in most smallholder farming communities is largely because farmers treat farming as a way of life, a tradition and culture. Some farmers treat farmers as a way of being identified in the same group with other. They practice farming

without any business mentality. If farming would be treated as business, it would be self-financing. There would be no need for government subsidies and donor aid in input schemes. Unless farmers change the way they view farming, it would never be a business to them.

Major steps in preparing for farming as a business

1. Developing a business **vision** and **strategy** (low cost producer/supplier, developing niche products, value adding products – differentiated product or additional processing)
2. Identifying and choosing the right **market** through market research
3. Resource assessment and general **feasibility** assessment (land, labor, money, technology)
4. Forging functional partnerships and strategic alliances
5. Developing an **Action Plan**

Factors affecting the success of a business

- Setting of a realistic vision and SMART (specific, measurable, achievable, realistic and time bound) objectives
- Good combination of farming business enterprises
- Good plan of business activities
- Good record keeping
- Appropriate technology
- Functional linkages
- Regular monitoring of performance – benchmarking
- Appropriate Technical and Entrepreneurship skills
- Business performance assessment
- Risk management strategies
- Synergies of enterprises
- Focus on the poverty trap

CHAPTER 2: THE BUSINESS VOCABULARY

This unit is dedicated to the discussion of commonly used business terms that will help users in understating the key concepts in farming as a business.

Costs: Expenses incurred in the production-marketing chain for instance cost of seeds, fertilizers, pesticides, labor, packaging and transport).

Production costs: Refers to financial and non-financial expenditures used in producing a commodity.

Variable Costs: Costs that vary with production for instance costs of inputs, wages, packaging materials and labor for agronomic activities

Fixed costs: Costs that are incurred whether or not a farmer produces and they are not related to production for instance farm rent, council fees, insurances, repairs and maintenance, permanent labour wages, interest on loan.

Income: This is money obtained after selling a crop or some livestock.

Gross output: This is the total value of a crop enterprise output. Usually the gross output includes all sales regardless of the market.

Gross Margin: This is gross output minus variable costs and it is the income realized from growing a crop after deducting the cost of producing it.

Farm profit: Income minus all costs and is obtained by removing fixed costs from whole farm gross margin.

Labor costs: Refer to total labor costs for family or hired labor used in all agronomic activities of an enterprise.

Value addition: Refers to any activity performed by a business that helps to capture a larger portion of the price that the final consumer pays or increases the price received by the business.

Marketing: Everything that the business does to identify customers, understand what goods or services they are interested in buying, and deliver the product(s) to them for a profit. It also includes researching customers, understanding competition, other products available to customers, and how all of these things impact your business.

Market: Any place where buyers and sellers of products come together to make deals.

Record-Keeping: The organized recording of information about a business used to monitor progress and improve efficiency. Uses of this information include making decisions where to sell, understanding how much money each product produced is making (profit), and monitoring costs and prices received from season to season.

Cash Flow: Any amount of money that flows into a business as income or out of the business as expenditure.

Efficiency: A process of working well, quickly and without waste.

Income Statement or Profit or Loss (P&L) Statement: This is a financial tool that is used to track (or estimate) profitability of a business and / or production activity. Requires records to be kept of all expenses and sales to calculate a final profit.

Risk: Risk is the possibility that forces beyond your control could negatively impact your business. Examples of risk include weather, drastic price changes (generally related to a substantial change in supply or demand of product), pests or diseases, theft, etc.

Risk management: Activities or decisions that minimize the risks involved in the business activity.

CHAPTER 3: BUDGETING

Any successful business venture, whether in farming or in any other venture is usually the product of careful and determined planning of decisions made and the right action at the right time. One way of planning at a farm business is through budgeting. Budgeting is the technique of estimating future income and expenditure. A budget may include just one year of a farm's operation or it may cover a period of several years. Normally an enterprise budget covers one growing season.

Uses of a Budget

1. To estimate future profit levels of the farm business by forecasting future income, expenditure and overheads.
2. To obtain an estimate of the future capital requirements of the farm business.
3. When seeking credit, a budget will indicate how much money is needed to finance production.
4. Enables comparison of budgeted expenditure with actual expenditure so as to determine variances for control purposes. Variance is the difference between actual expenditure and budgeted expenditure when looking at the expenditure side. It is also the difference between budgeted income and actual income. The farmer has to find out the reason for differences so that he/she can take action.
5. When planning an adoption of a new enterprise.
6. When planning an addition to an existing enterprise.

Preparation of an enterprise budget

Information needed to prepare an enterprise budget include the following:

- Cropping program (What crops need to be grown and their respective land areas).
- Input quantities and the rates of application (seed, fertilizers and chemicals)
- Prices of inputs
- Operations and their costs.
- Estimated yields
- Quantities expected to be sold
- Quantities expected to be retained for home consumption and seed

A hypothetical crop budget for maize

| Area (ha) | Per Ha | Total Ha |
|--------------------------------------|-----------|-----------|
| | | X |
| | | |
| Expected Yield (t) | X | X |
| Price per tonne (\$) | X | |
| Gross Output (A) | X | X |
| | | |
| Variable Costs | \$ | \$ |
| Land Preparation | X | X |
| Seed | X | X |
| Insecticides | X | X |
| Fertilizer AN 250 kg/ha @\$27/ 50 kg | X | X |
| Compound D 250kg/ha @\$29/50 kg | X | X |
| Packing Materials \$XX/ ha | X | X |
| Transport to market @0.5/bag | X | X |
| Labour | X | X |
| Miscellaneous | X | X |
| Total Variable Costs (B) | X | X |
| | | |
| Gross Margin (A-B) | X | X |
| Return per \$=GO/TVC | | X |
| Net return | | X |

Gross margin analysis

Gross margin analysis is a technique for comparing costs and income of an enterprise to appraise performance for planning.

Application of Gross Margin Analysis

From the analysis of enterprises costs and income one obtains useful information for management. Some of the uses of the gross margin analysis are:

1. It enables the farmer or extension staff to determine
 - The structure of the farm business i.e. what enterprises make up the farm business
 - The relative sizes and importance of various enterprises
 - The varying degree of profitability of the various enterprises.
 - The level of unproductive overhead costs
 - The level of variable costs.
2. Individual enterprises results can be determined. The enterprise results are yield per ha, gross output per ha
3. These individual results can be compared with
 - Results from previous years on the same farm.
 - Results from other farms in the same area.
 - Area and average results published by AGRITEX.
4. The farmer with advice from the extension staff would use the information analyzed from his performance to improve future performance.

Future performance is improved by: Increasing gross margin of existing enterprises through use of new management techniques and better husbandry to improve yields. Some of the husbandry practices to be followed include early planting, effective weed control, use of right type of fertilizers and choice of suitable varieties for the area.

| | | Maize | Soybean | Sugar bean | Ground nut | Total |
|---------------------------------|----|-------|---------|------------|------------|-----------|
| Gross output | | XX | XX | XX | XX | XX |
| Total Variable costs | | XX | XX | XX | XX | XX |
| Whole farm Gross Margin | | XX | XX | XX | XX | XX |
| Less fixed costs | | | | | | |
| Farm lease | XX | | | | | |
| Repairs & maintenances | XX | | | | | |
| Repair granary | XX | | | | | (XX) |
| Other | | | | | | |
| Sub total | | | | | | XX |
| Less capital investments | | | | | | |
| Plough purchase | XX | | | | | XX |
| Scotch cart | XX | | | | | XX |
| Wheel barrow | XX | | | | | XX |
| | | | | | | (XX) |
| Sub total | | | | | | XX |
| Less household expenses | | | | | | |
| Food | XX | | | | | |
| Clothing | XX | | | | | |
| School fees | XX | | | | | |
| Medical care | XX | | | | | |
| Miscellaneous | XX | | | | | |
| Contingency | XX | | | | | (XX) |
| Surplus | | | | | | XX |

Exercise

Using the knowledge gained in preparing a crop budget for maize by preparing crop budgets for groundnuts, soybeans and sugar beans. The gross margins from the respective crops will then be used in gross margin analysis on the whole farm budget.

CHAPTER 4: FARM RISK MANAGEMENT

Defining risk: A risk is an uncertain event or condition that if it occurs exposes a household or business to a loss or damage 'threats' or profits or gain 'opportunities'.

Risk types

Pure or insurable risk: These are insurable risks and they often result in loss or damage e.g. flood, drought, fire, earthquake, burglary, etc.

Business risk: These provide for gain or loss and such risks are manageable.

Known risks: These are risks that we know could happen and will probably happen and the impact is known for instance 1-2 days delay in weeding will result in x kgs loss in crop yield.

Known unknown risks: We know something will go wrong but do not know what the impact will be (e.g., pest infestation).

Unknown unknown risks: With these types of risks we do not know what will happen and we do not know the impact for instance drought and or flood.

Risk components

Risk event: Refers to what can happen to a business activity or project. It may happen or may not happen. It can also be good or bad.

Probability of risk event: This refers to the chances that the event will occur for instance the probability that the transporter will deliver the fertilizer on time.

Impact of risk event: What is the effect, (good or bad) on the entity should event actually occur? For example, importer fails to fertilizer from the port within the grace period, say 5 days late. At demurrage

charge of \$200/day, importer will pay \$1000. This amount represents his RISK, a negative impact or loss to his business. What will be the impacts if he manages to clear the goods in 16 days (4 days earlier)?

What are the challenges that we face in farming as a business?

1. Drought and floods
2. Poor infrastructure
3. Capital limitations
4. Market uncertainties
5. Crop failure

Understanding farm risk management

The fundamental role of risk management is to either reduce the probability and impacts of negative risks ‘threats’ or increase the probability of positive risks ‘opportunities’.

Steps in Risk management

| <i>Responding to risk:</i> | <i>Responding to positive risks:</i> |
|--|--|
| <ol style="list-style-type: none">1. Accept2. Avoid3. Mitigate4. Transfer | <ol style="list-style-type: none">1. Share2. Exploit3. Enhance4. Accept |

The 6-step risk management model

At each and every stage of the risk management model, there is need to document and communicate

1. Plan risk management
2. Identify risks
3. Perform qualitative risk assessment

4. Perform quantitative risk assessment
5. Plan risk responses
6. Monitor and control

How to minimize risk in farming as a business

1. Crop diversification
2. Appropriate land management
3. Group mobilization for procurement of inputs to reduce costs
4. Bulk selling to share costs and improve profits
5. Linkages to credit and savings facilities.
6. Linkages to out-growers schemes for production and marketing contracts.
7. Plan your business
8. Grow what you know
9. Set aside profits from each season as savings.
10. Keep written records of costs, prices, profits, planting times, harvesting time etc. to maximize business efficiency.
11. Store some harvest to speculate on price changes. Storage is “Value-Adding” activity.
12. Follow markets.
13. Take advantage of volumes

CHAPTER 5: RECORD KEEPING

The art of record keeping refers to the recording of all transactions involving payments and receiving of money by a business with a view of processing it in the future.

Why do we need to keep records?

We keep records for the following reasons:

1. To get an understanding of how business is done at the farm and also as evidence to others on how business is going on at the farm.
2. For planning purposes for instance controlling cash and budgeting. They also show the strengths and weaknesses of the business and thus help future planning.
3. Records act as basis for measuring financial success and progress of the farm over time. The records give a factual basis for comparison with past years with goals that have been set with the performance of other farmers, enterprises or operations.
4. They show the evidence of how a farm is doing its business and in so doing help when applying for credit from financial institutions.

Requirements for a successful Recording Scheme

1. Records must be accurate and up date.
2. Records must provide detailed and useful information.
3. Records must not be complicated and time consuming.
4. The time lag between data collection and analysis should not be too long as the data can easily become less useful.
5. Individual records and results must be confidential to the farmer and must not be used in a manner detrimental to his interests.

Types of records for farmers:

- A. Physical records
- B. Financial Records
- C. Livestock records

A. Physical farm records

1. Hectares to be grown to a crop
2. Input quantities
3. Total fertilizers purchased and their types
4. Fertilizer usage
5. Total yield
6. Quantities sold to output markets and locally
7. Quantities retained for home consumption or stock feeds
8. Assets on the farm at the beginning and end of year
9. Livestock physical records

B. Financial Records

1. Expenditure on inputs for all enterprises on the farm
2. Capital expenditure – on permanent developments e.g. roads, fences, buildings, equipment
3. Expenditure on overheads
4. Personal expenditure
5. Income from sale of crops/livestock
6. Other farm income – from minor enterprises or other activities by the farmer.
7. Personal income – not directly related to farm business.
8. Sources of financial records – invoices and receipts

C. Livestock Records

1. No and classes at the beginning: for example bulls, calves, cows, heifers, calves.
2. Changes in numbers through births, purchases, transfers e.g. lobola, deaths, sales , slaughters, transfer cut
3. Changes in classes of animals
4. Number of classes at end of season
5. Sales numbers and amount of money
6. Purchase numbers and amount of money
7. Expenditure on veterinary dips, feeds, labour and inputs connected with a livestock enterprise.

Reasons and uses for farm financial records:

- Evaluate profitability of the entire business / farm or of a particular product (for example to determine if you made money on only your groundnuts or if you made money on both your groundnuts and maize).
- To be able to plan for future seasons (with records you can see what a certain product cost you to grow and when you had those expenses).
- To find out which crops make money and how much and which crops actually lose money.
- To manage your cash and know how much you have and where it has gone