**FEASIBILITY AND INVESTMENT DECISION MAKING**

**Business Concept**

Business concept is a bridge between an idea and a business, plan. It focuses one's thinking so that the entrepreneur can identify the specifics of his/her proposed venture. Converting an idea into a business concept requires thinking about how the product or service will be sold and who will buy it, the benefits of the product or service, how it is differentiated from similar ones, and methods of delivery. Business concept is an idea for a business that include basic information such as service or product, the target demography, a unique selling position that gives a company an advantage over the competitors.

Preparing a written concept statement helps unearth critical components of a venture and begins research into key factors that may be more thoroughly addressed in a business plan. As the business takes form as a concept statement, the entrepreneur can evaluate the business more effectively potential challenges and pitfalls.

Clear business concept also enables the-founder to-succinctly describe the precise nature of the business to suppliers, customers, lenders, and resource team members; an important skill for entrepreneurial success. For example, it is not sufficient to say "I want to start a management consulting company." This tells the listener little. But one can say "I plan to start a management consulting company that provides strategic planning services to mid-sized businesses in the least. Each consulting team, tailored to meet the unique needs of the client, will provide assessment and planning services to help clients improve efficiency and institute processes for innovation and change, resulting in cost reductions and sales increases."

This version tells the listener much more than the first statement and helps the potential client visualize the business and its offerings.

When describing his/her business idea, the entrepreneur should answer the following questions:

a. What is my product/service?

b. What does my product/service do?

c. How is it different or better than other products/services?

d. Who will buy the product/service?

e. Why will they buy the product/service?

f. How will the product/service be promoted and sold/offered?

g. Who are my competitors?

Often the business concept statement changes during feasibility testing and business planning as the founder learns more about the market and potential profitability of the Business. Eventually however, the entrepreneur should be able to accurately describe the essence of the business to others in two or three sentences. In some cases, a single sentence may do.

Once the business concept statement clearly defined, the more detailed work of business planning and implementation may begin

What are the Basic Concepts and Characteristics of Entrepreneurship?

Entrepreneurship is the act of setting out your own and starting a business instead of working for someone else in his business.

**Interest and Vision**

The first factor for entrepreneurial success is interest. Since entrepreneurship pays off according to performance rather than time spent on a particular effort, an entrepreneur must work in an area that interests her. Otherwise, she will not be able to maintain a high level of work ethic, and she will most likely fail. This interest must also translate into a vision for the company's growth. Even if the day-to-day activities of a business are interesting to an entrepreneur, this is not enough for success unless she can turn this interest into a vision of growth and expansion. This vision must be strong enough that she can communicate it to investors and employees.

**Skill**

All of the interest and vision cannot make up for a total lack of applicable skill, As the head of a company, whether he has employees or not, an entrepreneur must be able to wear many hats and do so effectively. For instance, if he wants to start a business that creates mobile games, he should have specialized knowledge in mobile technology, the gaming industry, game-design, mobile app marketing or programming.

**Investment**

An entrepreneur must invest in her company. This investment may be something less tangible, such as the time she spends or the skills or reputation she brings with her, but it also tends to involve a significant investment of assets with a clear value, whether they be cash, real estate or intellectual property. An entrepreneur who will not or cannot invest in her company cannot expect others to do so and cannot expect it to succeed.

**Organization and Delegation**

While many new businesses start as a one-man show, successful entrepreneurship is characterized by quick and stable growth. This means hiring other people to do specialized jobs. For this reason, entrepreneurship requires extensive organization and delegation of tasks. It is important for. entrepreneurs to pay close attention to hire the right people for the right jobs and let them do their jobs with minimal interference from management everything that goes on in their companies, but if they want their companies to succeed, they must learn.

**Risk and Rewards**

Entrepreneurship requires risk. The measurement of this risk equates to the amount of time and money you invest into your business. However, this risk also tends to relate directly to the rewards involved. An entrepreneur who invests in a franchise pays for someone else's business plan and receives a respectable income, while an entrepreneur who, undertakes ground-breaking innovations risks everything on an assumption that something revolutionary will work in the market. If such a revolutionary is wrong, she can lose everything. However, if she is right, she can suddenly become extremely wealthy.

**INDUSTRY ANALYSIS**

Industry analysis is the study of a specific market for which a company currently sells its products or plans to enters in the near future. The process of industry analysis entails studying the scope of competition, possible government intervention, sales trends, socio-economic variables, customer. satisfaction and even the ease of entry in the market. Fortunately, much of this information can be obtained through various forms of marketing research.

**Process of Industry analysis**

**SWOT Analysis**

A SWOT (strengths, weaknesses, opportunities and threats) is a marketing tool that fully examines advantages and disadvantages a company may have compared with its competitors; or by being a part of the industry. Strengths may include a strong brand name and easy access to natural resources. A company's weakness may be a lack of capital and limited access to key distribution channels. In addition, a company may see an opportunity with new technology or an easing of government regulations in the industry. However, substitute products may represent a potential threat.

**Focus groups and surveys (primary research)**

The process of industry analysis can also entail conducting primary research through focus groups and surveys. A company that uses focus groups before introducing a new product can learn a lot about a customer’s buying habits. What they buy, where they buy it or why they choose certain competitive brands. Companies can further quantify that information through phone or Internet surveys, learning how satisfied consumers are with their products with those of key competitors. Companies that fully meet the needs of the consumer will generally have the most success in the industry.

**Secondary Research**

The marketing research manager often spearheads the data collection effort, acquiring information on the market share of key competitors and market potential, the total unit and dollar sales spent in the industry. Another important statistic is whether industry sales are trending up, down or staying the same when compared with the previous years.

**ATU Studies**

An ATU' (awareness, trial and usage) study can be used to measure a company's brand and advertising awareness vs. that of its competitors. A higher brand and advertising awareness indicates that consumers are more familiar with a certain brand over others and, therefore, better recognize that brand's advertising. It helps companies compare their product. quality, value, price, service and other important variables against their competitors; and how often customers use their products vs. competitive products. It can be strong industry analysis tools when properly utilized on a continuous basis.

**Customer Profiles**

The process of industry analysis can include garnering customer profiles to determine key buying groups among companies: This information can be easily attained by adding demographic information, such as gender, age, income and household size at the end of surveys. Cross-tabulations on. demographic and usage questions can help determine the typical customer profile for ally competitors. Companies can further segment this data to distinguish between heavy and light users Customer profiles can be used to help target advertising.

**Difference between Industry & Market Analysis**

An industry exists to serve a market. If an industry becomes irrelevant to market demands, it fails. An industry is made up of a top tier of companies that produce and sell products and services to a target customer A market is made up of individual consumers. They can be categorized by their buying hablts - that which attracts them to buy certain products rather than others.

Industry analysis attempts to interpret, the overall relevance of a particular industry to the needs of its market Investors use industry analysis to determine potential profits. An industry that is losing its dominance to a new technology, for example, is not a good investment growth prospect. 'Industry analysis also examines the internal forces in the industry such as manufacturing technology, materials. sourcing and capacity to supply the demands of wholesale and retail distribution. Product differentiation among companies reveals the depth and breadth of the industry as a whole; minimal product differentiation indicates an industry at risk of consuming itself in pricing wars to attract customers. Competition among companies tends to keep an industry output relevant to its market because hot competition forces companies to be more aggressive in their market analysis, and production technology determines the cost of production. Technologically advanced companies are more able to control their costs and present their products at prices the consumer wants.

Market Analysis; Market analysis examines the market demand-in-relation to prices and product offerings, using consumer demographics and buying habits to identify trends. Market analysis and industry analysis are both used by investors and corporate managers in the projection of corporate financial performance. The market analyst's job is to project potential problems, such as creating a product that no one wants to buy, and redirect company, efforts toward products that will do better in the marketplace. Industry-leading companies use market analysis in planning the details of product lines that have a better chance of success because they more directly satisfy market demands. A market analyst also tracks how prices of products rise and fall according to the demand and follow product production volume, a factor that can limit profit margins.

**FINANCLIAL ANALYSIS (CASH FLOW)**

Cash flow is exactly what its name implies: the anticipation of cash as it flows into and out of the company. The cash flow statement is a business document which blends the balance sheet and income statement together in order to display how cash has come into and gone out of your business.

Have a full picture of a business financial performance, the income statement, the balance sheet - the cash flow statement must be carefully examined.

The income statement shows the sales and profitability of your business for a specific period of time, while the balance sheet gives you a snapshot of your overall financial condition at a point in time.

Why cash flow matters?

1. the cash flow statement is a tool to assist in financial decision making

2. One of the reasons why the cash flow statement is so helpful is that companies record transactions when they occur.

3. The cash flow statement determines whether a company has a "durable competitive advantage. It is as a means to a kind of self-examination; an honest assessment of your financial health can reveal. serious red flags in your business and it might even save it.:

5. The information contained in the cash flow statement can give you a clear indication of your liquidity.

**How to read the cash flow**

The cash flow statement is divided into segments. In order to outline pash flows, three major activities of all companies: operations, investing and financing must be carefully studied.

The information on cash flows from operating shows how much money you are generating from regular operations - from the basic fundamental production and sales of goods and/or services.

It starts with the net income reported on the income statement, then adds back non-cash expenses (such as depreciation and provisions the company made for doubtful accounts) and adjusts for changes to current assets and current liabilities. For example, a sale made on credit does not affect - cash, but it would increase sales (and therefore net income) and would create an increase in accounts receivable. The related increase in. accounts receivable is deducted from net income to show the actual cash from operations.

The section on cash flows from financing activities may show that equity was issued to raise cash or to make acquisitions. While raising cash through equity may be a good thing, it's not money that your business has generated on its own, and your business may not survive long if it doesn't generate cash on its own. This section on financing will also show, whether stock issuances are outpacing or lagging stock repurchases, an issue of keen interest to your shareholders."

Are you currently investing cash in the future growth of the business through new facilities or other: capital expenditures? Are you selling assets to bring in more cash? Hopefully, your answers must be line with your overall strategic goals as a company.

Finally, metrics and ratios based on information contained in the cash flow statement can give you of clear indication of your liquidity! And it is calculated by subtracting capital expenditures from net: cash from operations.

**Record keeping and cash flow in small scale business**

A successful business rests on sound record keeping practices and solid cash flow. Without good records it is impossible to determine the financial condition or profitability of a business. Therefore, the small business owner should be familiar and recognize the importance of proper record keeping requirements and cash flow planning.

Many small business owners are very knowledgeable about their accounting procedures and quite adept in analyzing their financial records and statements.

Reasons for financial record keeping

1. Complete and accurate financial record keeping is crucial to your business success,

2. Good records provide the financial data that help you operate more efficiently, thus increasing your profitability

3. Accurate and complete records enable you, and your accountant, to identify all your business assets, liabilities, income and expenses: That information, when compared to appropriate industries averages, helps you pinpoint both the strong and weak phases of your business operations.

4. Good records are essential for the preparation of current financial statements, such as the income statement (profit and loss) and cash-flow projection. These statements, in tum, are critical for maintaining good relations with your banker: They also present a complete picture of your total business operation, which will benefit you as well.

5. Good records are critical at tax times. Poor records could cause you to underpay or overpay your taxes. In addition, good records are essential during an IRS audit, if you hope to answer questions accurately and to the satisfaction of the IRS.

Here are some of the questions that might be considered in assessing your record keeping;

- How much income are: you generating now and how much income can you expect to generate in the future?

- How much cash is tied up in accounts receivable (and thus not available to you) and for how long?

- How much do you owe for merchandise? Rent? Utilities? Equipment?

- What are your expenses, including payroll, payroll taxes, merchandise, advertising, equipment and facilities maintenance, and benefit plans for yourself and employees (such as health insurance, retirement, etc.)?

- How much "each do you have on hand? How much cash is tied up in inventory? What is your actual working-capital budget?

- How frequently do you turn over your inventory? Which of your product lines, departments or services are making a profit, which are breaking. even, and which are financial drains?

- What is your gross profit? What is your net profit? How do all of the financial data listed above compare with last year -or last quarter? How do they compare with the projections in your business plan?

- How do all the financial data compare with those of your competitors? With those of the industry?

**Cash flow planning**

Small business owners must prepare for all future events and market changes. Failure to properly plan cash flow is one of the leading causes for small business failures.

Experience has shown that many small business owners lack an understanding of basic accounting principles. Knowing the basics will help you better manage your cash flow.

The operating cycle is the system through which cash flows, from the purchase of inventory through the collection of accounts receivable. It measures the flow of assets into cash. If you are operating cycle from the purchase of supplies through the collection of receivables totals 180 days, this is the amount of time which you must finance.

Since capital providers, such as lenders, require a return on their investment, this financing will, of course, bear interest. The longer your operating cycle, the higher your financing cost will be. It is important to analyze your operating cycle and forecast your cash needs to minimize the amount which must be financed without running short of cash.

flow analysis should show whether your daily operations generate enough cash to meet your obligations and how major outflows of cash to pay your obligations relate to major inflows of cash from sales.

As a result, you can tell if inflows and outflows, from your operation combine to result in a positive cash flow or in a net drain. Any significant changes over time will also appear. Understanding this: will lead to better control of your cash flows and will allow adequate time to plan and prepare for the growth of your business.

It is best to have enough cash on hand each month to pay the cash obligations of the following month. A monthly cash-flow projection helps to identify and eliminate deficiencies or surpluses in cash and to compare actual figures to past months. .

When cash-flow deficiencies are found, business financial plans must be altered to provide more cash. When excess cash is revealed, it might indicate excessive borrowing or idle money that could be invested. The objective is to develop a plan that will provide a well-balanced cash flow.

How to maintain positive cash flow

To achieve a positive cash flow, you must have a sound plan.

A. Collecting receivables: Actively manage accounts receivable and quickly collect overdue accounts. Revenues are lost when a firm's collection policies are too passive. The longer your customer's balance remains unpaid the less likely it is that you will receive full payment. Conversely, the faster you collect on your receivables, the shorter your operating cycle will be.

B. Tightening credit requirements: As credit and terms become more stringent, more customers must pay cash for their purchases, thereby increasing the cash on hand and reducing uncorrectable accounts. While tightening credit is. helpful in the short run, it may not be advantageous in the long run. Looser credit allows more customers the opportunity to purchase your products or services. Any consequent increase in sales should be measured against a possible increase in uncorrectable. accounts.

C. Adjusting the of products price: Many small businesses fail to make a profit because they erroneously price their products or services. Pricing is the critical element in achieving a profit and maintaining positive cash flow. Before setting your prices, you must understand your product's market, distribution costs and competition. Remember, the marketplace responds rapidly to technological advances and international competition. Monitor all, factors that affect pricing on ' regular basis and adjust as necessary.

D. Taking out short-term loans: Loans from various financial institutions are often necessary for covering cash-flow problems. Revolving credit lines and equity loans are common types of credit used in this situation.

E. Increasing your sales: Increased sales 'would appear to increase cash flow. However, if large portions of your sales. are made on credit, when sales increase, your accounts receivable increase, not your cash. Meanwhile, inventory. is depleted and must be replaced. Because receivables usually will not be collected until, say, 30 days after sales, a substantial increase in sales can quickly deplete your firm's cash reserves. A computer-can facilitate tracking this critical data, as well as speed the time required to consider "what if" scenarios.

F. "Managing your expenses: Watch your' expenses carefully. It makes sense to pay: early if your suppliers offer a discount for early payment. If no discount exist and the supplier allows you 30 days to pay, take advantage of the 30 days and do not pay in 5. However, beware of penalties for late payment and the potential impact on your credit rating. You should monitor your expenses to make certain they are necessary and reasonable in amount.

G. Your cash reserve: You should always keep enough reserve cash. on hand to cover expenses and as an added cushion for security. However, it is unwise to-keep more money on hand than is necessary. Excess cash should be invested in an accessible, interest-bearing, low-risk account, such as a savings account, short-term certificate of deposit, or Treasury bill. Keeping excess cash on hand limits both your growth and the return on your investment.

H. Cash flow projections: Cash flow projections, as well as good accounting records, are important tools for a small business. They will help answer important questions about the company's financial future and provide direction. The failure to make proper projections, even if only informally, reduces the potential for long-term success.

Basic record keeping system

Good record keeping is time-consuming and yet essential for your success. A basic record keeping system, whether on paper or an off-the-shelf computer software program, should be simple to use, easy to understand, reliable, accurate, and consistent, designed to provide information on a timely basis. It generally needs:

- Accounts receivable records

- Accounts payable records

- Payroll records

- Petty cash records

- Inventory records.

Record keeping with your computer: The computer makes it easy to develop cash-flow projections and many other useful financial-planning tools. A good financial-management package will enable you to review projected inflows and outflows of cash from month to month or year to year.

2. Paper-Based: Sometimes, the simplest "system is the best, especially when first starting out. For example, consider the paper-based tools described here.

File Folder: A file folder holds loose papers together for organization and protection. File folders easily be purchased, at office supply stores. Label file folders based on what is inside by writing directly on the tabs or by writing on adhesive label

11. Hanging Folder: Use hanging folders to group several file folders together, for example, a hanging folder might be labeled "Clients" to contain a number of individual client folders. Cabinet Storage: Hanging folders are often stored in a filing cabinet. Lock the cabinet when not in use

Accordion Folder: An accordion folder opens like an accordion on top to reveal compartments storing documents. Each compartment can be labeled. Accordion: files, are designed to store documents without a filing cabinet, in a closet or on a shelf.

**Product Analysis**

A product analysis is a document which contains a proper and thorough outline of the merits and drawbacks of a particular product up for review. Such an analysis is conducted by a company, an external agency, investors or arty individual or group with a vested interest in the performance of the product. It may be carried out before or after, the release of the product and must be framed. accordingly.

**Product Analysis Template**

Before starting a new business, a business man conducts an analysis about product of competitor that are used and sale out in the market and the format which is used to prepare is called **product analysis template**. What type of ingredient used to prepare a product and find the quality to compete in the market? Product analysis template helped to find out qualities, and weakness of market product. Then new product is dispatch in market with the new feature and benefit along with the more useful life that help to capture the existing market. Product analysis highlighted all the point that is focused to prepare new product.

**Sample Product Analysis Example:**

The following is a product analysis document prepared by NIFEM Foods and Beverages Pvt. Ltd. for its product Herbal Ice Tea:

Date of product analysis: 23rd June 2012

Purpose of product analysis:

To ensure that the product is quality tested before being launched in the market on the 23rd of August 2012.

To outline its flaws and areas where there is a scope for improvement.

Nature of product: The product in question has been in development since 2011. It is a summer beverage targeted at youngsters and college campuses, designed with herbal ingredients like mint and basil, and it contains no added preservatives.

Product scores on:

The product is set to make an instant splash in the F and B market due to the brand name of the company and also due to first player advantages. Since there are no comparable Ice Tea beverages in the market currently, our product is hoped to create a buzz.

The product is priced attractively at $5 per bottle making it, affordable for the student. The product is completely prepared from organic ingredients which make it a substance of choice for the present-day health-conscious youngsters.

**LIQUID SOAP MAKING**

**Liquid Soap Ingredients**

Like hot and cold process soap, there is a lye component and an oil component.

The lye component is a bit different. Sodium hydroxide is used to make hard bar soap while potassium 'hydroxide is used to make liquid soap. Potassium hydroxide is harder to find and comes in flakes, not beads. The flakes are easier to 'work with, but are still caustic, so gloves and protective eyewear must be used. You will also need a small amount of borax. The other ingredients include, water, coconut oil, olive oil, essential oils and colours. You can source all of these ingredients organically except the potassium hydroxide.

Note: Keep in mind that all of the potassium hydroxide is eliminated during the soap making process through a reaction called saponification. It is no longer caustic at this point.

Equipment

Like hot process soap making, you will need a slow cooker, a stick blender, quart jar (I use a wide mouth jar) and plastic stirring spoons. Since this recipe is measured in ounces, you will also need a kitchen scale. Additional equipment includes a plastic potato masher and a large jar for the resting period. You may also need a thermometer, and a ladle to move your soap. You will also need additional water for diluting the soap paste and mixing with the borax for neutralizing the soap.

Recipe for Liquid Soap. \* 16.5$ ounces olive oil (find unrefined organic olive oil here)

7 ounces coconut oil (find unrefined organic coconut oil here)

$5.5$ ounces potassium hydroxide (find it here)

$16.5$ ounces distilled or filtered water (find the best water filtration systems here)

40 ounces distilled or filtered water

3 ounces borax (find it here)

6 ounces distilled or filtered water

Essential oils, optional (find $100 \%$ pure essential oils here) \_\_. colour which is optional

The Process

1. Weigh your olive oil and coconut oil and place them into the slow cooker. Turn on low.

2. in the quart jar, weigh your water. Slowly add the weighed potassium hydroxide, stirring gently as its added. Don't be surprised at any sounds or reactions you may hear. (Potassium hydroxide reacts slightly differently than sodium hydroxide in water.)

3. When the potassium hydroxide is all mixed in and the solution appears clear, add your water/potassium, hydroxide mixture to the oils. Don't worry about the temperature)

4. Carefully stir by hand for 5 minutes to be sure all the oils come into contact with all of the potassium hydroxide.

After 5 minutes, begin stirring with the stick blender. It could take up to 30 minutes to achieve "trace." (In soap making, trace is normally when the mixture is thick like vanilla pudding, but with potassium hydroxide trace might look more like applesauce.)

The mixture might look like it's going to separate, but don't stop until you have trace.

Cook in the slow cooker for about 30 minutes with the lid on. Check after 30 minutes. If it's separated, stir it back in.

Check every 30 minutes for $3-4$ hours.

During the 3–4-hour cooking stage, your soap mixture will go through several stages. They will look like this:

Trace - thick pudding to applesauce

Custard-like with small bubbles.

Watery mashed potatoes it

Taffy

Chunky to creamy petroleum jelly

Translucent petroleum jelly.

Each stage could take 30 minutes or longer.

The Rest Period

Now you can ladle your soap into a large jar. I use a gallon size glass jar for this. Secure the lid and leave it for a week or so. This allows any solid particles to settle to the bottom. When your soap is clear, pour it into smaller bottles, label and enjoy! Just be sure not to disturb the sediment on the bottom or you'll have to wait for it to settle again.

**EIGHT SIMPLE STEPS FOR NEW PRODUCT DEVELOPMENT**

The steps involved:

1. **Idea generation**

The development of a product will start with the concept. The rest of the process will ensure that ideas are tested for their viability, so in the beginning all ideas are good ideas (To a certain extent!)

Ideas can, and will come, from many different directions. The best place to start is with a SWOT analysis, (Strengths, Weaknesses, Opportunities and Threats), which incorporates current market trends. This could be:

Under-taking market research

Listening to suggestions from your target audience - including feedback on your current products' strengths and weaknesses.

Encouraging suggestions from employees and partners

Looking at your competitor's successes and failures

**2. Idea Screening**

This step is crucial to ensure that unsuitable ideas, for whatever reason, are rejected as soon as possible. Ideas need to be considered objectively, ideally by a group or committee.

Specific screening criteria need to be set for this stage, looking at affordability and market potential. These questions need to be considered carefully, to avoid product failure after considerable investment down the line.

**3. Concept Development & Testing**

You need to ask the people that matter - your customers. Using a small group of your true customer base, - those that convert - the idea needs to be tested to see their reaction. The idea should now be a concept with enough in-depth information that the consumer can visualize it.

Do they understand the concept?

Do they want or need it?

This stage gives you a chance to develop the concept further, considering their feedback, but also to start thinking about what your marketing message will be.

4. Business Analysis Once the concept has been tested and finalised, a business case needs to be put together to assess whether the new product/service will be profitable. This should include a detailed marketing strategy, highlighting the target market, product positioning and the marketing mix that will be used.

This analysis needs to include: whether there is a demand for the product, a full appraisal of the costs, competition and identification of a break-even point.

**3. Product Development**

If the new product is approved, it will be, passed to the technical and marketing development stage. This is when a prototype or a limited production model will be created. This means you can investigate exact design \& specifications and any manufacturing methods, but also gives something tangible for consumer testing, for feedback on specifics like look, feel and packaging for example.

**6. Test Marketing**

Test marketing (or market testing) is different to concept or consumer testing, in that it introduces the prototype product following the proposed marketing plan as whole rather than individual elements. This process is required to validate the whole concept and is used for further refinement of all elements, from product to marketing message.

**7. Commercialisation**

When the concept has been developed and tested, final decisions need to be made to move the product to its launch into the market. Pricing and marketing plans need to be finalised and the sales teams and distribution briefed, so that the product and company is ready for the final stage.

**8. Launch**

A detailed launch plan is needed for this stage to run smoothly and to have maximum impact. It should include decisions surrounding when and where to launch to target your primary consumer group. Finally in order, to learn from any mistakes, made, a review of the market performance is needed to access the success of the project.

product development can be made much simpler and focused, with a higher likelihood of success, by following the steps above.

**FISH FARMING**

Raising fish, also known as aquaculture, can be done on a small scale in backyard ponds, pools, or tanks. Needs for raising fish for your self-sufficient and survival food include the best fish breeds, equipment, and care? Fish are relatively easy animals to farm. They need less space per animal than other kinds of livestock. Aquaculture can be done in more places. Fish and fish protein are in great demand worldwide, and the need for more fish production is speedily growing.

Getting started with aquaculture requires a good body of water. Your lake must contain plenty of weeds, both in the water and around it. These plants will provide protection, food and shade for your fish. Also many insects, small fish and other critters that fish devour on must have vegetation for their life-cycle. Once the water, plants and foodstuff sources have-been established, it is time to introduce your fish.

Raising fish would be in a Farm Pond in Tanks and Aquarium Heaters. Typical fish grown by fish farms include salmon, catfish, tilapia, cod, carp, trout and perch. The trout is the finest fish for a novice to start up with. It's among the strongest of the fish raised on a fish farm and they have got an excellent market value.

The next stage is to get some ova. Fish eggs need gentle handling and care if they are to prevail. Eyed ova are the easiest and more dependable way, especially for the first-timer. Many fish farmers start with ova that are already fertilized. These can be bought quite readily and arrive when they are almost ready to hate. New-born fish are called "alevins." At first, these tiny fish don't need any food. They feed off of their yolk-sae and will begin to feed on real food in about six weeks, later feed on proposed food meal at least four times daily. As they grow and become known as "fry", they required more varied, natural diet that includes insects, small fish \& crustaceans in order to grow big and healthy. Processed food can add to a natural diet, but it's no alternative.

After vi few months, the fish will be ready to move into their new home. Some aqua culturists breed their fish to this point in rearing ponds away from the main pond and the fish will need to be moved. Others use hatching trays in the large pond and the fish are allowed to swim out when they are large, enough. They should be thinned gut as they grow. Remove the small and weak ones, and put them in another area. Keeping the fish in the water with larger fish might mean they will be eaten one another, With just a medium size pond, you could even begin your own hatchery, or sell fresh fish to shops and restaurants. Also keep in mind that variety in your ponds is essential to a healthy fish population. Be careful about what you introduce. Don't over-stock your pond with any one kind of fish for a healthy balance

METHODS OF RAISENG FISH

In commercial aquaculture, there are two general strategies:

(a) Intensive and

(b) Extensive.

Extensive aquaculture is space dependent; and utilizes large ponds.

Intensive aquaculture utilizes tanks and requires a great deal of management to produce a lot of. product in a small space.

Raising fish a at home can follow either of these strategies, but will probably be lower production than commercial systems in order to reduce the amount of equipment and the amount of management that . goes into it.

Hatching trays can be constructed of perforated zinc fairly easily. Make them $11 / 2$ inches deep, and the ova will hatch out well in them. The size of hatching tray you will require will depend on the size of box you will suspend them in.

Getting started with aquaculture requires a good body of water. Your lake, must contain plenty of weeds, both is the water and around it. These plants will provide protection, food and shade for your fish. Also, many insects, small fish and other critters that fish devour on must have vegetation for their life-cycle One the water, plants and foodstuff sources have been established, it is time to introduce your fish.

Raising fish could be in a Farm Pond, in Tanks and Aquarium Heaters. Typical fish grown by fish farms include salmon, catfish, tilapia, cod, carp, trout and perch. The trout is the finest fish for a novice to start up with. It's among the strongest of the fish raised on a fish farm and they have got an excellent market value.

The next stage is to get some ova. Fish eggs need gentle handling and care if they are to prevail. Eyed ova are the easiest and more dependable way, especially for the first-timer. Many fish farmers start with ova that are already fertilized. These can be bought quite readily and arrive when they are almost ready to hate. New-born fish are called "alevins." At first, these tiny fish don't need any food. They feed off of their yolk-sac and will begin to feed on real food in about six weeks, later feed on processed food meal at least four times daily. As they grow and become known as "fry", they required more varied, natural diet that includes insects, small fish & crustaceans in order to grow big and healthy. Processed food can add to a natural diet, but it's no alternative.

After a few months, the fish will be ready to move into their new home. Some aqua-culturists breed their fish to this point in rearing ponds away from the main pond and the fish will need to be moved. Others use hatching trays in the large pond and the fish are allowed to swim out when they are large enough. They should be thinned gut as they grow. Remove the small and weak ones, and put them in another area. Keeping the fish in the water with larger fish might mean they will be eaten one another, With just a medium size pond, you could even begin your own hatchery, or sell fresh fish to shops and restaurants. Also keep in mind that variety in your ponds is essential to a healthy fish population. Be careful about what you introduce. Don't over-stock your pond with any one kind of fish for a healthy balance

**METHODS OF RAISING FISH**

In commercial aquaculture, there are two general strategies.

a) Intensive and

(b) Extensive.

Extensive aquaculture is space dependent, and utilizes large ponds.

Intensive aquaculture utilizes tanks and requires a great deal of management to produce a lot of product in a small space.

Raising fish at home can follow either of these strategies, but will probably be lower production than : commercial systems in order to reduce the amount of equipment and the amount of management that goes into it.

Hatching trays can be constructed of perforated zinc fairly easily. Make them one and half inches deep, and the ova will hatch out well in them. The size of hatching tray you will require will depend on the size of ox you will suspend them in.

When in operation in the water, the trays are loaded with ova and suspended in the boxes. They have to be positioned so that a nice current of water can move through them. Before you put ova into these boxes, you should allow them to sit in the pond. This will ensure that nothing contaminates the area when the eggs are introduced.

Young fish and eggs need to be protected from the sun and predatory animals. That's why you'll need to keep your rearing ponds near shady trees. It's also quite important to have as much tall grass and weeds as possible growing around the banks.

Netting can be put over rearing ponds to keep hungry birds out. But you will have to keep a look out over your brood-because Birds are smart. The rearing boxes need to already be resting in the ponds for several weeks before the ova are ready. The edges of the boxes will be about six inches above the water. The trays are hung inside the rearing boxes with the water level coming up to the top edge. This is where your ova will be calling home until they hatch and are strong enough to swim out into the rearing box.

The ova will need to be carefully washed before, they can be added to the, hatching tray. The technique for cleaning the ova is quite simple. A large container is filled with water and ova, the water is drained off and clean water added. This process is repeated until the water runs clear.

After cleaning, the ova can be placed on the hatching trays. This can be done by tenderly ladling the ova, a few at a time, out of the cleaning container. Hold the ladle very close to the tray and empty the ova as gently as possible. Never pour the ova from a height, the impact will certainly kill them.

Ova will hatch at a far higher rate if they are distributed into single layer. This is of very delicate procedure and requires a gentle touch. A feather is just the tool for the job. Gently running the feather over the ova will spread them out with minimal damage.

Despite taking all the necessary precautions, some of the ova will die. They can be easily identified by their white or opaque colour. Dead eggs must be removed from the hatching trays immediately. Leaving them in the trays can lead to fungus growth that can damage your entire stock.

A natural way to clear out dead ova is to introduce fresh-water shrimps to your hatching trays. They will only feast on the dead ova and will not damage live ones. These mini aquaculture housekeepers will clear out animal and plant debris int the water too.

Keeping a lid over the rearing boxes will also help to protect ova from fungus growth. Fungus loves light and a lid will cut off the light and keep growth to a minimum. A lid is also an excellent way to protect ova and young fish from predators.

In a short time, the first fish will begin to hatch. These young fish, also known as an alevin, will have a large bag on their underside. This is the yolk sac. The fish will require no food to start with. They II feed off of their sac for the next month and a half or so.

Eventually, the do-it-yourself fish farmer will see that some of his alevins have begun to move away from the pack at the bottom of the hatching trays. They'll start to swim up towards the current. Now is the time to start feeding them finely processed meals. Their yolk sacs are almost gone now and they are moving on to the next stage of their lives.

Picture of Ponds

**Raising Fish for Survival Food**

Due to the overwhelming evidence of chemicals and impurities in foreign raised fish, raising fish at home is a safer alternative than buying fish from the commercial aquaculture and fish farm.

Farm ponds are an ideal place to raise fish for food

Raising fish in a backyard pond for survival food.

If you want to ramp up production, they can be fed a commercial diet that meets your feeding philosophy. For example, there are some fine organic fish feeds available or choose a less managed approach and just let you fish eat what your pond produces. A laissez faire strategy will require a lighter stocking densify and a slower grow out but will produce virtually free food.

Raising Fish in Tanks

Home fish farming in tanks. Blue Tilapia a good breed for backyard

**Feasibility Study**

A. Feasibility study is & formal project document that shows results of the analysis, research and evaluation of a proposed project and determines if this project is technically feasible, cost-effective and profitable. The primary goal of feasibility study is to assess and prove the economic and technical viability of the business idea. A project feasibility study allows, exploring and analyzing business opportunities and making a strategic decision on the necessity to initiate the project. For each project passing through the Initiation Phase, a feasibility study should be developed in order for investor to ensure that their project is technically feasible, cost-effective and profitable. A thorough feasibility study can give you the right answer before you spend your money, time and resources on an idea that is not viable. It must therefore be conducted with an objective, unbiased approach to provide information upon which decisions can be based.

**Feasibility Study Methods**

Whether a feasibility study last for six months of six days, it should follow a four-step listed below.

**Steps Involved in Feasibility Study**

Feasibility studies can take or different forms, depending on their contexts. In large enterprises, schools, and government agencies, a feasibility study could take months or even years of work in conjunction with outside consultants. On the other hand, a small business with the right connections and resources can perform a feasibility study over the course for few days. Regardless of the time-frame involved, the project manager in charge of the feasibility study must remain impartial as he or she handles four critical tasks.

**Examine the Market**

The first step to an effective feasibility study method involves a critical analysis of the competitive landscape for a product or service. Many first-time entrepreneurs make the mistake of assuming their product has no competition. In reality, any other way in which a customer allocates money, time, or attention can be viewed as competition. The feasibility study should paint, a realistic picture of the likelihood that enough customers will be satisfied to result in a sustainable offering.

**Review Technical Requirements**

Understanding the needs of the marketplace does not always guarantee the ability to meet customers' expectations. Including this analysis in the feasibility study method puts the overall requirements for a successful project into the proper context. In many cases, a study can help determine whether the project sponsor will require more resources internally or whether an outside vendor or partnership can handle the tasks more effectively.

**Explore the Business Model**

Having assessed the current market need and a team's ability to execute, a feasibility study can look at the long-term viability of the overall business model. This feasibility study method relies heavily on tools like scenario planning to ensure long-term success. Project managers can discover whether the business model actually offers enough profit potential to make this initiative worthwhile. Likewise, study administrators can examine whether the new product or service under consideration requires such a significant change as to make it untenable within a business.

**Look for an Escape Route**

is a dirty word among many venture capital firms. Investors like to know that they will make a profit, and they want to have a strong ideas about when they, can cash the check. Common feasibility study methods include an analysis of potential exit strategies, especially for investors, and other stakeholders that may want to move on. Study leaders can investigate how a project will evolve over multiple iterations, and whether it relies too heavily oil key personnel.

In planning on conducting a feasibility study, one will need to include the following important elements:

1. The Project Scope which is used to define the business scope and of opportunity to be harnesses. The problem well stated is half-solved is very apropos. The scope shouldbe definitive and to the point; rambling narrative serves no purpose and can actually confuse project participants. It is also necessary to define the parts of the business affected either directly or indirectly, including project participants and end-user areas affected by the project.
2. **The Current Analysis** is used ta define and understand the current method of implementation, such as a system, a product, etc. From this analysis, it is not uncommon to discover there is actually nothing wrong with the current system or product other than some misunderstandings regarding if or , perhaps it needs some simple modifications as opposed to a major overhaul. Also, the strengths land weaknesses of the current approach are identified (pros and cons). In addition, there may very well be elements of the current system or product that may:be used in its successor thus saving time and money later on. Without such analysis, this may never be discovered.

3. **The requirements**: This component represents two groups of requirements; including technical (requirements and organizational requirements. If there is potential market and demand for the product or service then you reed to identify what technical and resource requirements are needed for new venture. You will need to define your requirements depending on the objective of your project. Project managers that h understate the physical and fiscal resources required for a new product or service often end up with failed projects or unfulfilled promises.

4. **The Approach** represents the recommended solution or course of action to satisfy the requirements. Here, various alternatives are considered along with an explanation as to why the prefers selected. In terms of design related projects, it is here where whole rough designs (e.g., renderings") are developed in order to determine viability. It is also at this point where the use of existing strictures and commercial alternatives are considered.

5. **Evaluation**: Examines the cost effectiveness of the selected approach and the estimated total col st. of the project. Other alternatives will also be estimated for comparison purposes. After the total cost of the project has been calculated, an evaluation and cost summary will be prepared to include a on investment, cost /benefit analysis etc.

1. **Review** : Finally, all the above elements will be assembled into a feasibility study and a formal review will be conducted. The review will be used verify the accuracy of the feasibility study and to make a project decision. If the feasibility study is approved make sure that all the involved parties sign the feasibility study.

**Advantages of feasibility**

The feasibility studies can do more than just help executives choose which projects, but also managers involved in a feasibility study can actually use much of the same data to shape the project planning process.

1. **Understanding Demand:** Feasibility studies always analyze whether a real demand exists for a product or a service

2. **Assessing Resources:** Another of the advantages of feasibility studies is the opportunity to catalog the current resources available for a project and co estimate the aced for additional resources. Feasibitity studies that recommend against projects often cite a lack of human resources or financial capital. This kind of result gives a project manager the opportunity to reset expectations based on real budgets and headcount.

3. **Marketing Feasibility**: during the evaluation process, project managers learn whether the market is already over saturated with stronger competitors. Company leaders can also discover any potential legal roadblocks invoking trademarks, patents, or other intellectual property rights.

4. **Marking a Timeline:** one of the biggest advantages of a feasibility study is the validation of a prospective timeline. When moving into a formal project planning phase, a project manager can use data generated by the study to help set milestones and deadlines. A quality feasibility study examines the timetable suggested by project sponsors for potential delays of breakdowns. When project managers use a study as the basis for making timeline decisions, they run the least risk of being overruled by anxious stakeholders.

**Investment Decision Making**

Here are five steps to making better investment decisions:

- Choose a purely data-driven investment process.

- Establish procedures to systematically review and improve your process.

- Focus on the process, not the results. If the process is good, good results will follow.

- Focus on what could go wrong. A strong defence is the key to winning.

- Eat your pwn cooking. This one is really for investment managers. If your process is not good enough for you, it is not good enough for your clients.

**Factors influencing Investment Decision Making**

An investment is the current commitment of money of other resources in the expectation of reaping, future benefits. (Kane and Marcus 2005) There are various factors which affect the financial decision making of an individual of which risk tolerance is a crucial factor that influences a wide range of financial decisions.

Investment pattern of individuals and investment decisions are influenced by demographic variables and risk tolerance. In reality it is observed that many a times there is a gap between individual's perceived return and actual return. The mistake lies in the decision making process which is influenced by the risk tolerance of an individual.

Research indicates that people tend to overestimate their actual level of risk tolerance because of the desire to appear socially acceptable. Understanding investment patterns and financial decision making has always been of great interest to researchers and financial service providers and planners.

**Strong Reasons Why Small Businesses Fail**

1. **Lack of Managerial Skill**

When a small business owner lacks the managerial skill required to drive the business to greater heights, that business is bound to fail. Building a business without the necessary managerial skill in place is a futile adventure. An entrepreneur that wants to succeed must be able to effectively handle the employees, cash flow, production line and so on; or better still; the business owner must be able to hire a good manager to run the business:

2. **Wrong Business Decisions**

This is common to every human being irrespective of your field. Sometime ago a friend of mine, after carrying out critical analysis on a particular situation came up with a decision he considered favourable, But on implementing that decision, it back fired and at the end of the day, my friend had several lawsuits dangling on his neck. So whenever you have decided on an action to be implemented on your business, consider asking friends, business partners and professionals for advice: It is going to save you the stress of cleaning up the mess resulting from wrong business decision taken.

"Before making an important decision, get as much as you can of the best information available and review it carefully, analyze it and draw up worst case scenarios. Add up the plus or minus factors, discuss it with your.team and do. what your guts tell you to do." - The Mafia Manager

3. **Harsh Government Fiscal, Economic and Monetary Policy**

This is an open killer of both big and small businesses. As an entrepreneur, you must be on guard to bulletproof your business against the ever changing government fiscal and monetary policies. Since you cannot influence or alter the government's decisions, you must be ever prepared to swiftly adjust your business to prevent it from being hit by the adverse effect of unfavorable government policies. Instances of such government policies you must be on guard against are business taxes, double taxation, duties and levies, inflation, exchange rates and so on.

"How fast a company can respond in an emergency is a measure of its corporate reflexes," - Bill Gates

4. **Inability to Move Swiftly With Trend and Changing Technology**

It is obvious that some people hate change, some resist change while others embrace change. Change is constant, so it is either you align your business with the trend and ride to the top or you remain stagnant and eventually fold up. You also need to constantly upgrade your technological strengths as swiftly as possible. "Your greatest and most powerful business survival strategy is going to be the speed at which you handle the speed of change. As an entrepreneur, you must be on your toes sniffing the air for available trends and new technologies you can take advantage of. Examples of great industrial trends and technologies are computers, e-shops on the internet; automated accounting, e-payment and so on. Remember trend is your friend, not your enemy.

5. **Weak management**

This is the fundamental reason why small businesses fail to survive. A standing rule in the business world is this:"The success or failure rate of any business is directly proportional to the strength and level of professionalism of the management."

From the first day of business, a very strong management is needed to ensure the survival of your business. You might say employing professionals such as attorneys and accountant is very expensive but they will will do your business good in the long run. The speed at which your business grows is directly proportional to the overall strategy deployed on that business and the team behind the creation of that strategy.

6**. Fierce Competition**

Most small business owners are afraid of competition because many profitable ventures have been forced to shut down due to fierce competition, I want to let you know that even if you are the inventor of an idea, that will not stop competitors from coming in. So your best bet is to keep an eye on your competitors, utilize every available innovative idea and make your customers happy. You can also implement some of the best protective firewalls to keeping your competitors at bay. These firewalls are: Trademarks, Patents and Copyright

7. **Wrong Business Location**

The location of a business is such an important factor that can never be over emphasized. If your business is located in an interior area than your competitor's, you: are bound to fail. Factors to consider when 'choosing a business location are road network, nearness, to high traffic zone, accessibility and patronage level of customers, population, demographics and so on. For example, imagine a business that sells motivational books located in brothel. What do you expect? Nothing, but outright failure.

8. **Lack of Knowledge, and Experience in the Chosen Field** You can't succeed in a field where you have no knowledge and experience about. "Risk comes from not knowing what you are doing."

9. **Bad Debt**

When a business man gives much credit to the customers. That business is bound to fail. One key role of an entrepreneur is to keep an eagle eye on the cash flow. Since a business must never be short, of cash and customers too must be kept loyal, the business owner must establish a certain credit limit and a fixed time from date of purchase to pay up.

"There is one paradoxical characteristic every entrepreneuximust possess to succeed. An entrepreneur mus't be able to persuade his debtors to pay their debts promptly and at the same, must tactically delay payments to his creditors."

10. **Insufficient Fund**s: Raising capital is the primary duty of an entrepreneur because cash flow is the life blood, of business. Insufficient capital can kill even the most profitable business. In a case where there is insufficient capital and the business is finding it difficult to access funds from bank and investors; the entrepreneur must resolve to bootstrap financing, which is working with the limited cash, eliminating unnecessary expenses, establishing a credit line from suppliers and producing only on demand to avoid tying up resources.

11. **Internal Fraudulent Activities**

Bad employees can be a chief cause of failure of any business. When an illegal business transactions and cash siphoning is being carried out by employees at the expense of the business, that business is bound to face liquidation.-Sa an entrepreneur must keep a keen.eye on the activities of employees with respect to the business.:

"There will be times when you will have to Б̈e abrasive, even brutal to members of your staff. Don’t worry that your people will say bad things about you because of this. They already have. But in general, try to be pleasant and accommodating. Try to please the greatest number who work for you that you can; antagonize the fewest.

12. **Lack of Entrepreneurial Skill**

I will prefer to call this the ultimate reason why small businesses fail. When an entrepreneur lacks the necessary skills such as leadership skill, cash flow management, sales, persistence and self belief and so on; such an entrepreneur is bound to fail. An entrepreneur is the head and pilot of the business. Consider an airplane being flown by an inexperienced young pilot? The outcome can be better imagined.

In conclusion, these are the 12 chief reasons why small businesses fail. Having noted each one of them, you can strive to avoid them; while growing your business.

What are the Basic Concepts and Characteristics of Entrepreneurship?

Entrepreneurship is the act of setting out on your own and starting a business instead of working for someone else in his business.

**Interest and Vision**

The first factor for entrepreneurial success is interest. Since entrepreneurship pays off according to performance rather than time spent on a particular effort, an entrepreneur must work in an area that interests her. Otherwise, she will not be able to maintain a high level of work ethic, and she will most likely fail. This interest must, also translate into a vision for the company's growth. Even if the day-to-day activities of a business are interesting to an entrepreneur, this is not enough for success unless she can this interest into a vision of growth and expansion. This vision must be strong enough that she can communicate it to investors and employees.

**Skill**

All of the interest and vision cannot make up for a total lack of applicable skill. As the head of a company, whether he has employees or not, an entrepreneur must be able to wear many hats and do so effectively. For instance, if he wants to start a business that creates mobile games, he should have specialized knowledge in mobile technology, the gaming industry; game design, mobile app marketing or programming.

**Investment**

An entrepreneur must invest in her company. This investment may be something less tangible, such as the time she spends or the skills or reputation she brings with her, but it also tends to involve a significant investment of assets with a clear value, whether they be cash, real estate or intellectual property. An entrepreneur who will not or cannot invest in her company cannot expect others to do so end cannot expect it to succeed.

**Organization and Delegation.**

While many new businesses start as a one-man show, successful entrepreneurship is characterized by quick and stable growth. This means hiring other people to do specialized jobs. For this reason, entrepreneurship requires extensive organization" and delegation of tasks. It is important for entrepreneurs to pay close attention to-hire the right people for the right jobs and let them do their jobs with minimal interference from management everything that goes on in their companies, but if they want their companies to succeed, they must learn.

**Risk and Rewards**

Entrepreneurship requires risk. The measurement of this risk equates to the amount of time and money you invest into your business. However, this risk also tends to relate directly to the rewards involved. An entrepreneur who invests in a franchise pays, for someone else's business plan and receives a respectable income, while of entrepreneur who undertakes groundbreaking innovations risks everything on an assumption that something revolutionary will work in the market. If such a revolutionary is wrong, she can lose everything. However, if she is right, she can suddenly become extremely wealthy.

**SNAIL FARMING IN NIGERIA**

Snail farming can be very profitable in Ghana, Kenya, Cameroon, South Africa, and Nigeria. Yet, it is one of the most neglected animal rearing business in these countries. Snail farming provides one of the finest opportunity to make money within a short period of time. But why are Africans not yet fully engaged in this money making animal rearing? The reason is ignorance. In Australia and USA, many supermarkets and stores. Meaning it is a lucrative business over there.

Just like in many other aspects of farming in these countries, Africans are yet to discover the great money making potential in snail rearing business and that is why we suffer in hunger and poverty. We neglect where the money is and keep pursuing it where it is not, going from one city to the other looking for one petty China made goods after another to trade on.

Making profit annually in snail rearing is possible if you do it well and get it right.

What is Snail?:Land snails belong to the class of Molluscan, Gastropod. It is popularly known in Nigeria as Eju, Igbin, etc. There are so many species of snails but the types we are considering the ones that are suitable for commercial Snail Farming in Africa.

Suitable Snail Species for Snail Farming

1. Achatina fulica - The East African land snail, or giant African land snail, scientific name Achatina fulica, is a species of large, air-breathing land snail, a terrestrial pulmonate gastropod mollusk in the family Achatinidae. It is the smallest in size among all the desirable species for rearing in Africa. Achatina fulica has a narrow, conical, shell, which is twice as long as it is wide and contains 7 to 9 whorls when fully grown. The shell is generally reddish-brown in colour with weak yellowish,vertical markings but colouration varies with environmental, conditions and diet. A light coffee colour is common. Adults of the species may exceed 20 cm in shell length but generally average about 5 to 10 cm. The average weight of the snail is approximately 32 grams (Cooling 2005).

2. Achatina Achatina - Achatina achatina, common name the giant Ghana snail, also known as the giant tiger land snail, is a species of very large, air-breathing land snail, a terrestrial, pulmonate "gastropod" mollusk in' the family Achatinidae. Giant African land snails are hemraphrodites, meaning they possess both the female and male reproductive organs. Two snails are still needed for breeding, but they are very prolific breeders.

Similar to the other species in the genus, Achatina achatina's shell can attain a length of 200 mm and maximum diameter of 100 mm. They may possess between 7-8 whorls and the shell is often broadly ovate. The body of the animal is silver-brown in colour although albino morphs may exist.

3. Apchachatina Marginata - Archachatina marginata, common hame the giant West A thetat matu ing a species of air-breathing tropical land snail; a terrestrial pulmonate. gastropod mollusk in the family. Achatinidae. They can grow up to 20 cm long, and live, up to 10 years.

Among these three species, Achatina Achatina is the most desirable for farmers because:

1. It grows so big to become the biggest snail species in the world.

2. High yield capacity

Achatina Achaina has its origin from Nigeria, get to Liberia from Nigeria and then Ghana

The other species are very good too but, our focus is on Achatina Achatina and Archachatina Marginata because, they are easy to find in Nigeria.

Achatina-Achatina is very good for commercialization as well, because of its profitability. This is because of the volume of eggs it lays at once. Each achatina lays 300 to 500 eggs at a time in clutches, three times a year. Therefore, if you start a farm with about 1000 snails, in one year you would be getting about 1: 5 million snails going by the number of eggs they produces.

**How to setup snail farm in a small scale level**

Things to consider are,

1. Snail Farming Environment $T$ Snails are easily dehydrated, and wind increase the rate of moisture loose in snail which in turn, leads to the dryness of the animal. To prevent snails from losing. water so quickly, your snaileries (the snail house) must be located in environment that is protected from wind.

A low plain, downhill site surrounded with enough trees is perfect for snail farming. Plantains and bananas plants can be planted around your snail farm to prevent the impact of wind.

2. Type of Soil for Snail Farming - Not all soils are suitable for snail rearing because they need some component and chemical substances to survive. The shell of the snail is,mainly calcium and it derives most of them from the soil, lay eggs on the soil and drink water out of the soil. Therefore the suitable soil for snail farming must contain these elements. The soil must not be waterlogged, not too dry, or acidic but must be well balanced. The most desirable soil for snail is sandy-loamy soil with low water holding capacity. Clayey soil must be avoided.

3. Getting the Sails for Farming - To start up a snail farm, it is advisable to get snails directly from the forest instead of buying from the market after they' have been exposed to 'sunlight and have dehydrated. Snails drink a lot of water, dehydration and the stresses can reduce their fertility capacity

Snail farmer could pick the snails from the bush with a very simple technique; clear a little portion of land during rainy season and sprinkle spicy fruits like pineapple, pawpaw, plantain, banana etc at about 5 o’ clock in the evening, when you go back there about 7pm or 8pm, you will pick up snails for rearing. Repeat the procedure until you get enough quantity.

Another way could be to pick up snail eggs littered in the market place where it is sold and through a technique, check the fertility of the eggs, because some of them must have lost fertility due to the exposure to sunlight. The eggs are later put inside a container containing wet sand and covered with cocoyam leaf. Between 21 to 28 days, the eggs would hatch into baby snails. You start feeding them and gradually you raise a snail farm."

4. The Snail House is called a Snailry. It can be a patch of fence-protected ground, sheltered from the wind or a covered box if you are breeding in small scale.

For larger population of snails, you can dug a trench or make a concrete pen with soil deep of about 10 inches, and cover it with screen or wire all around to prevent the snails from escaping: Remember that snails can reproduce fast and become pests when their breeding is uncontrolled.

Snails love dark and cold places, but make sure the humidity does not drop to levels harmful to the snails. You can use fresh leaves and cloth that is regularly wet to regulate the temperature.

Also, the wire is useful in keeping away rats and snakes or other predators from-eating the snails in your snail farm. But aside from these bigger predators, you should be wary about smaller ones like ants and termites. Your construction must have these predators in mind.

5. Snail Foods and Feeding - Snails especially Achatina mainly feeds on green leaves and fruits though they can utilize other ranges of foods. Feed your snails with leaves, fruits, or even formula from the feed store. Aside from food to grow tissues, snails need calcium to grow shells.

Leaves: Cocoyam leaves, pawpaw leaves, okra leaves, cassava leaves, eggplant leaves, cabbage and lettuce leaves.

Fruits: Mango, eggplant, pawpaw, banana, tomatoes, oil palm fruits, pears and cucumber.

Once they start growing $\lambda$ separate the big ones from the small ones. It takes more than a year for the Achatina type to grow to harvest size. Others mature in two years. Harvesting - It is economically wise to harvest matured snails and not to harvest them at once but to (eep few for breeding. To know if your snails are already matured enough, check ther brims of the sheil. If it is matured, enough, the 'brim should be thicker and harder than other parts of thershell:'

**SOURCES OF START-UP CAPITAL**

To get enough start-up capital is essential for a successful business. Lack of sufficient capital in the beginning of a business is akin to starting a journey with empty pocket and to reach the destination is made impossible. When calculating the 'capital you need, plan that everything will take twice as long comp cost twice as much as you expect. If you do not raise enough capital initially to cushion your company and sales are slow or emergencies occur, it will be nearly impossible to raise more money just to keep the business going. Add at least 50 percent to the initial capital for the start-up capital after developing business budget that can sustain the business. It is virtually impossible to have too much money. Roger Downie stressed that , start-up capital should at a minimum cover all plant, equipment, and leasehold costs - plus at least -up capital should at a minimum cover all plant, including the owner's salary. Having little or no six months' worth of projected operating costs, Questions to ask when raising business capital

1. How much capital do I need?
2. How do raise capital
3. 3. What is the Value of My Company?
4. Generally, a valuation considers four questions:
5. 1. How much is the company worth today?
6. 11. How much could it be worth in the future?
7. 111. How long will it take to create the future value?
8. 1v. What is the likelihood of achieving success?
9. 4. Who might be interested in investing in my company?
10. What are my legal responsibilities to potential investors?

**SOURCES OF RAISING START-UP CAPITAL**

1. Bootstrapping; this is self-funding. It is when an entrepreneur invest his own personal money into his business

**Advantages**

A. "Bootstrapping will afford an entrepreneur to focus on the essentials. Having a massive sum of money and investors can accommodate wasteful spending. When bootstrapping, you are more analytical on what you spend money on.

B. Bootstrapping allows an entrepreneur to have complete control over his business without sharing

C. There is no need for approval before spending

D. As the owner, it allows you to have a better opportunity for determining what skills you should : look for when building your team.

E. Choosing your management team carefully is possible.

F. Bootstrapping forces creativity, there is sense of commitment.

**HOW TO MAKE BOOSTRAPPENG EFFECTIVE**

A. Build your business on budget

B. Save time and plan as much as possible.

C. Be financially disciplined

D. Lowering the hiring cost at first, be more involved in the business yourself

E. Learn from others (sales and implementation).

F. Ensure valuable products with good team..

2. Friends, and families; through donations, Personal loans or using their skills to get things done.

3. Private lenders; an entrepreneur must obtain capital from private fender of good reputation that will not stand as hindrance to your business on the long run.

4. Crowd funding was created in the jump start our business start-up acct of 2012 (JOBS). Through simple registration procedure and limited financial information one can obtain financial assistance.

5. Angels and seed investors; you, can access them through network or from internet, with a solid business plan to convince them.

6. Credit cards can be used for short-run. Use your personal credit card balance and do not borrrow other credit cards

**THE MANAGEMENT TEAM**

The group of individuals that operate at the higher levels of an organization saddled with day-to-day responsibility, managing other individuals and maintaining responsibility for key business functions is called the management team. They are collection of the top leaders that works together to make the company successful which are responsible to the chief executive officer of the company (CEO).

They are, to put together the business strategy and ensuring the business objectives are met. An organization may operate with one or several layers of the management team. The power of an excellent management team lies in assisting individual team member to overcome his or her communicate work together in unity for the progress of the company). A CEO needs to set and communicate the overall vision, recruit and retain the best talent possible, and make sure the company never runs out of cash.

Various team members of the management team are to support each other. They can challenge each other, they can question each other, directly help each other. Their role is not just to achieve their own goals, but to make sure that the goals of their colleagues are achieved as well.

**Purposes' of a management team**:

- Each member has two hats: that of a member of the management team, and a leader of their team or business.

- Members support and challenge one another.

- The CEO uses the help of the management team to get things done so that they do not end up trying to do everything themselves.

- The team works continuously on the company strategy, preparing proposals for the board of directors.

these three, functions are performed by the management team;

1) Create an environment for success

(2) Nip problems in the bud, or prevent them entirely.

(3) Exploit big opportunities.

The Three Functions of a Management Team

1. Create an environment for success: Do people like to come to work everyday?. When they get there, do they know what they're supposed to do, and how it connects to the company's beyond you as a leader.

2. Nip problems in the bud, or prevent them entirely: Are you building an enduring organization about your business's vulnerabilities? Do you go into a dark spending enough time thinking and make sure you're cognizant of all the main potential threats to your livelihood? What can you do to spot smoke as an early warning detection of fire?

3. Exploit big opportunities: Do you know the top 5 things that will make your company successful? Are you constantly on the lookout for signs that it’s time to invest more heavily in them? Are you nimble enough to make those investments when the time is right and have you developed the intellectual or infrastructural underpinnings to make those investments matter?

Selection of candidate for management team

Several things must be considered before selecting the management team;

Does the person possess the expected skills?

Does the person have the passion for the business?

Does the person demonstrate the required strength in the business?

**PROCESSING OF LOCUST BEAN**

Processing of locust bean fruits to food condiment, involves different unit operations after harvesting, such unit operations include depodding, removal of the yellowish pulp to produce locust bean seeds. Other processing operations-are cleaning, boiling, dehulling, washing, re-cooking, and then fermentation to produce the food condiment which is used as soup seasoning/spices (flavoring agent etc)

Economic importance in the processing of locust beans it is a good source of nutrient, highly acceptable by the customers with good price and lastly serves as employment opportunities for people which can be in small or large scale

**PROCESSING STEPS**

1. Depodding of the locust bean fruits are mostly done by hand by the processor, though it has been concluded' that threshing machine used for cowpea could be used for removing the locust bean seeds coated with yellowish pulp from the pod.
2. The seeds of the locust bean ere embedded in a yellowish pulpy material and seeds needed to be separated from this yellowish pulpy material before it can be further processed into fermented locust bean.
3. The separations are either done by drying the pulp or done by washing it in water to remove the yellowish pulp from the seeds.
4. Cleaning of the locust bean seeds which have to do with removal of any foreign materials prior to further processing. It is still done manually by use of wind to winnow it or washing in water. Cooking of locust bean seeds; the bean is encased in a hard, tough and relatively thick coat that has semi permeable characteristics. Easy movement of water through the coat is restricted. The adhesive strength that binds the coat to the seed is relatively high (Aniyi, 2004). Hence cooking is necessary to soften the firmly attached seed coat for easy dehulling. Cooking is done in a locally made aluminum cast-iron pot using fire, wood as source of heat. This unit operation takes 24h, which can be estimated to 50% of time used in processing of locust bean fruits to food condiment.,
5. Dehulling occurs when firmly attached, seeds coats which has been softened during cooking is removed for fermentation process. This unit operation is traditionally carried out either by action of abrasion of the cooked locust bean seeds and sea sand using hand or feet, or using of mortar and pestle to dehull. Most processors, who produce fermented locust bean in large-scale are still using these traditional methods of dehulling, although locust bean dehulling machine has been developed by (Audu et al., 2004) to ease the dehulling process. However, it is yet to be adopted by the processors.
6. Separation of locust bean cotyledon from its coat proceeds dehulling operation. This operation involves the use of local sieve in flowing water or inside a bowl of water to remove the hull from the locust bean cotyledon. These methods are still commonly used by the processors then wash the dehulled locust bean further operation.
7. Re-cooking of the dehulled seeds. The essence of re-cooking the dehulled seeds is to hasten fermentation process, using locally made aluminum cast iron pot and fire wood as source of heat.
8. The production of fermented locust bean has remained a traditional family art practiced in homes with rudimentary utensils, such as calabash, clothes or leaves for covering to produce a strong smelling food condiment/flavoring agent, this method is seen to be unhygienic and heeds attention.

At a glance;

a) Locust bean pods removal (Depodding)

b) Removal of yellowish pulp :

c) Pre-dehulling; Cleaning and Drying

d) Locust bean seeds (Boiling)

e) Winnowing

f) Dehulling

g) Washing

h) Recooking

i) Fermentation

Food condiment is made ready for the consumers

**LIQUID SOAP PRODUCTION**

**Introduction**

Liquid soap production is popular in Nigeria amidst the small business enterprises because of the availability of raw materials and easy process of production. The demand is on high rate in the society because of its multipurpose use; for washing car, utensils, clothing, cleaning of tiles, surfaces, misete. There are various kinds of liquid soap such as hand and body use, Quite a number of people do produce liquid soap for personal house use.

Objective of this chapter

i) Highlight all the liquid soap chemicals

ii) List the materials involved in liquid soap production

iii) Explain the process of mixing the chemicals

iv) State precautions in liquid soap making

v) Enumerate the function of each liquid soap chemical

**Chemicals for Liquid soap production:**

)Sulphunic acid

\*Caustic Soda

\*Soda Ash

\*Nitrosol (for instant production) or Antisol (Soak in water for two days before use)

\*Texapon

\*Sodium Trio- phosphate (S.T.P.P)

\*Sodium laurate sulphate (S.L.S)

\*Formaline

\*Perfume

\*Colorant (Colour of your choice)

\*Water

**Materials or tools needed for liquid soap production: local production**

\*Nose mask

\* Hand gloves

\*Stirring rod/stick and plastic spoon

\* Measuring cups :

\*Plastic bowls and buckets for mixing (small and big).

\*Bottles for packing

\* Funnel

\* Hand towel

\* Brand label with phone number and address

**Process of liquid soap production ( 10 Litres)**

Dissolve Nitrosol in 5 litres of water to form paste (palp or custard texture)

Dissolve Caustic soda with 1 / 2 litre of water for 30 minutes

Dissolve Soda Ash with 1 / 2 litre of water for 30 minutes

Dissolve STPP with two tins of milk cup

Dissolve dry colorant with two tins of milk cup

Dissolve SLS with two tins of milk cup

Pour Sulphonic acid in a bowl, add texapon and three litres of water and stir well for 10 minutes

Procedure for mixing:

- Add the dissolved sulphonic acid and texapon into the Nitrosol and stir very well

- Add the dissolved caustic soda and stir very well

- Add the dissolved caustic soda and stir very well

- Add the dissolved STPP and stir very well.

-Add the dissolved SLS and stir very well.

-Add the formalin

-Add some quantity of water until desirable thickness is achieved.

**Functions of the soap making chemicals**

* Caustic soda: for stain remover.
* Nitrosol: thicken paste agent.
* Formalin:preservative agent
* Fragrance: pleasant/attractive odour
* STPP: for softening and anti-spotting agent
* SLS:foam booster
* Sulphonic acid: it neutralizes the effect of caustic soda.

**Precautions**

* Avoid direct acid contact with any of the body parts.
* Avoid spilling on eye.
* Always wear glove to protect your hands.
* Keep chemicals out of the reach of children.

Revision Questions

1. Highlight all the liquid soap chemicals.
2. List the materials involved in liquid soap production.
3. Explain the process of mixing the chemicals
4. State precautions in liquid soap making
5. Enumerate the function of each liquid soap chemical

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**INTRODUCTION TO BEE KEEPING**

Bee keeping, is an occupation of keeping and managing bees thereby harvesting the products (Honey, bee wax propolis) etc for processing into various form for different uses, locally and for export.

In the olden days, bees live in hollow trees, rock crevice, a dark hidden space.

There they stored their food (pollen and honey) and also nurse the broad (egg; larva and pupae).

Modern technology, through the research of some scientist, where the nature and behavior of bees are examined closely, has made beekeeping as profession that is easy. Anyone, old or young, can keep bees with profit. The labour involved in bee keeping is light.

Bees can be kept at any place where there is sufficient bee pasture of shrubs fruit trees, orchards cultivated crops.

Each hive, depending on it's size yield 10 - 25kg honey combs (about 50 kg beer bottles) annually. In richer vegetation, a hive may yield 25-50kg honey combs.

The older colonies yield more than the newly settled ones. Ripe honey contains 18% water; 80% sugar (glucose and fructose), vitamins and minerals.

Honey has different colour, clearness, viscosity and taste are never the same depending on the reason. bee colony and vegetation where it is raised.

Honey may be white or amber, sweet or bitter, and or granulated.

**DEFINITION OF TERMS**

**APIARY:** a place with at least one or more colonies.

**HIVE**: An Artificial shelter for the bees.

**BEE COLONY**: This is a complete biological unit and normally consist of one queen, thousand of workers, a few drones and combs which may consist of honey, pollen, and brood.

**COMB:** A hanging sheet of wax with cells on both sides.

**BEE WAX**: the building materials for combs produced in special glands of young bees.

**CAPPED BROOD**: Cells closed by a thin layers of wax and pollen under which mature larvae change into pupae.

**CELLS**: the little hexagonal sections on both sides of the comb containing brood, pollen or honey. **DRONES**: the male bees which develop for unfertilized eggs.

**PROPOLIS**: Sealing materials collected by bees mainly out of plant gums. Also used to make the entrances smaller for the protection of the colony. It is transported to the hive using the hind legs. **ORIENTATION FLIGHT**: flight made by the workers and queens to familiarize themselves with the land marks around the hives so that they do no: get lost.

**POLLEN**: the brightly coloured powder produced abundantly by flowers, rich in protein, fat, minerals, vitamins. Good for rearing brood. Also important part of the diet for adult bees.

**ADVANTAGES OF BEE KEEPING**

1) It requites little capital to start (depending on the size of the farm).

2) It dues not take up valuable land or water body; it only occupies small portion of land.

4) Basic bee keeping techniques are very easy to learn and master.

5) Equipment involved are made locally e.g, bee-hive, bee smoker, bee dress, bee-veil, hive tool, honey-presser.

6) Veterinary attention is not required.

7) It will increase the internal generated revenue for the centre.

8) It is a profitable venture

All over the world, beekeeping is a serious economic pursuit practised on a commercial scale. Any developing nation like Nigeria cannot afford to ignore this rewarding aspect of agriculture.

**SETTING AN APIARY**

The place where hive are placed is paramount o the bee keeper. If the interest is to increase honey yields and profit margin, 30 to 40 can be placed into the apiary for a start. African bees are defensive in nature, hence one must be kept away from the public or place where they cannot sting anyone. Bees require food sources that are nectar and pollen therefore they must be able to find good sources within their vicinity at least 2 km while bees can fly many kilometers to look for their food.

**THE BEE COLONY**

Hondpheas itive in a herme of wax comb. The wax comb will be bulit by them (werkere). These slis: it wall cells are very streng ahd houge the broed (immature beee) duplog develepment and vided stropg apaee for hpney apd pollan.

**THE DRONES**

The drones are larger and fatter than the queen or the workers. Their body are not as long as the queen. He does not have legs fit to carry pollen and he is unable to produce wax. He has not stinger to protect itself.

**THE WORKERS**

There are 5,000 to 75,000 workers bees in a colony. They built the entire house and field work. They go out to bring in water, pollen, nectar and propolis (bee glue), some build the wax comb, some nurse the young bees and control the temperature of the hive. It takes 21 days for a worker to grow from egg into adult. The workers have the stinger which when it stings, the stingers (venom) remain and the bee dies.

1. The dearth season: April to lune

2. Build-up season: June to August

3. Nectar-flow season: September to November

4. Honey-flow season: Nov/Dec to Feb/March

**ORGANISATION OF HONEY**

CASTES: A colony of bees consists of A queen, which is normally the only breeding female in the colony. Large number of female worker bees, typically 30,000-50000 in number a number of males drone, ranging from thousands in a strong hive in spring to very few during dearth or cold season.

In a bee colony, there are male and female bees. The male bee is called the drone; while the female is called the worker. A number of drones are reared and tolerated in a colony where their presence.