

A Business Plan of
Modal Pig Production Center
at
Balambu in Kathmandu



By

Shyam S. Yadav, Livestock Dev. Officer

MA Eco. of Agri. Dev. (TU), B. Tech. Ed. Livestock (KU)

(shyamtiti@gmail.com or shyamsundayadav@hotmail.com)

Cattle Genetic Resource Center (CGRC)

Jiri, Dolakha

Contact: 049-400066, Website: www.cgrcjiri.gov.np

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PREFACE

Pig farming is one of the important activities in Nepal. It is rapidly developing, although, has been accepted socially and culturally by certain ethnic groups. It is changing gradually, probably, due to changes in lifestyle in urban areas, there is increasing meat demand in the country. Hence it is necessary to develop a well business plan before starting to produce it at a lower cost.



The business plan includes; description of farm and characteristics of the products, strategies of production/operation and marketing. It also covers strength, weakness, opportunity, and threats (SWOT) analysis and, a financial plan which envisage the financial condition of the business.

Hopefully, it will be highly useful to academicians, researchers and extension workers, policymakers, students, and commercial farmers.

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EXECUTIVE SUMMARY

An attempt was made to prepare a business plan of pig production, that has evolved from the sightseeing in Balambu and Kirtipur areas, reviewing the literature and roughly doing Strength, Weakness, Opportunity, and Threat (SWOT) analysis. In that area, there were some piglets producers but they were not producing in a systematic and strategic way. Hence, a pig farm was proposed to operate at Balambu in the joint venture including local commercial pig producer and livestock professional. The proposed farm will produce the piglets at a lower cost and under good care and management practice leading towards the good husbandry practice. There would be a herd of three Boars and 30 sows at the farm and about 4.4 hundred piglets will be produced annually for 5 years. The report says daily selling of pork in major hubs of Nepal is 23.84 metric tons with a total value of NRs 7,175,000.0, out of these Kathmandu alone covers 50 % of the total value. The pork processing industries and meat sellers stated that the pork consumption trend has increased by 10% during the previous years. The government encourages the peasants and entrepreneurs to rear pigs. Increasing demand for pork and supporting in insurance are the opportunities for the farm. But, the lower insured amount (25 to 30 thousand) may not recover the loss in case of the disease outbreak. However, preventive measures will be a tool to control it. Making involvement of local people and livestock professional, staying keep in touch with the government officials, and maintaining a good relationship with stakeholders would be the strategic objectives. Leading towards good husbandry practice as possible feeding improved forage up to a certain level would be the operational objectives. The judicious use of means and resources to achieve clearly defined goals is the success factor i.e. the art of maximization and optimal utilization of resources and means for maximization productivity and profit. The total project cost is estimated to Nrs 96,55,350.0 for five years. Similarly, investment in capital and operating costs are speculated to be NRs 21,32,000.0 and 75,23,350.0 for five years. The projection of the payback period (2.14 years), internal rate of return (67.9%) and the benefit-cost ratio (1.8) and SWOT indicators show as a profitable business.

1. INTRODUCTION

It is an attempt to prepare a business plan to fulfill the partial requirements of the one-week training entitled "Officer Level Business Plan Training" conducted from June 13 to 19, 2018 at Directorate of Livestock Services Training and Extension (DLSTE), Hariharbhawan, Lalitpur.

Pig rearing is an important enterprise and the main source of income especially for poor landless (Acharya M. P., 2016). Traditionally, pig farming was associated with certain ethnic groups, but in recent years, knowing the scope and potentiality of the swine industry, other social groups are also started to join with the business plan to make it a commercial enterprise. Due to the gradual change in food habit, pork is becoming popular and the volume of production of pigs is about 1.2 million, which is about 7% of the total meat production of the country with an increment of 2.25% annually (Paudel, 2014). Furthermore, Acharya (2016) says the pork processing industries and meat sellers stated that the pork consumption trend has increased by 10% during the previous years. It is estimated that the rate of increment of pork is higher in Kathmandu

The government of Nepal (GoN) has prioritized to develop this sector commercially. Nepal Rastra Bank has directed to commercial banks to allocate minimum 25 % of total credit to priority sector, with includes a minimum of 10 % to agriculture (NRB, 2018), a pig is an integral part of the agriculture sector. Commodity office of swine and poultry under the Department of Livestock Services (DLS) has been conducting several types of training, workshops, with certain supports. Similarly, some projects have been supporting pig and pork production.

The observation and literature indicate that there is a greater scope of pig production in Balambu due to the availability of land on rent, a good opportunity of market and availability of infrastructure. Some of the pig farms have already been producing piglets and pork in this area. But they have been facing higher mortality due to lack of hygienic production system under the close observation of livestock professionals. The farm will be an alternative to the prevailing pig production practice.

1.1 Description of the farm

Name of organization: Modal Pig Production Center (MPPC)

Address : Balambu -8, Chandragiri.

Legal descriptions: The farm will be registered at Chandragiri Municipality and Office of the Small and Cottage Industry Development Committee at Tripureswor.

1.2 Organizational management /structure

The farm will be situated at the lower belt of the Balambu -8 in a joint venture that will include to an experienced local pig raiser, (S. M. Shyantana, Balambu –8), Livestock Professional (M. R. Adhikari) and an entrepreneur, (Shyam Yadav). The MPPC will have a small structure; one fulltime pig attendant and one seasonal pig attendant. Other activities cost will be linked to respective items. The Livestock Professional will involve in technical assistance marketing and participating in training and workshop. Fulltime attendant will be overall responsible for care and management including day to day operational activities. Accommodation will be provided at the center for the couple of attendants, which will look after the pig whole time. The opportunity will be provided to the spouse of attendants to work seasonally.

1.3 Description of product

Previously, pork was popular in the certain community only, but due to changing habit and lifestyle of urban people, it is becoming popular in other community also. The MPPC will produce good quality of piglets under close observation and intensive supervision of livestock professional in the intensive system as possible good husbandry practice.

1.4 Characteristics of the product

The product will be healthy and free from zoonotic diseases. The prevention measures; regular vaccination, drenching and laboratory tests for the certain disease of pigs and piglets will be adopted. More than 3-month aged piglets will be bought from a pig breeding farm of Kirtipur and grown it up to producing piglets. It is assumed

that the average body weight of sows and boar will be about more than 2 and 3 hundred kg respectively.

1.5 Farm status and future plan

The farm will be established in a joint venture with an initial number of 33 opening stock (30 sows and 3 boars). The firm will produce about 450 piglets annually. In addition, to some extent fattened sows will be produced. During the projected period about 2050 piglets will be produced. The extension of opening stock would be based on the performance of it.

2. MARKET AND MARKETING PLAN

2.1 Overall market

Actual consumption of meat and meat products in the country is influenced by religious, cultural and economic factors. For example, the *Newar, Gurung, Limbu, Rai, Tamang, and Magar*, in particular, are avid consumers of pork; a report portrays about only 2% of the population is estimated to be vegetarian in Kathmandu valley. However, in recent years, consumers are beyond the religion and cultural value to eat pork. Hence, meat demand in the valley is increasing along with the increase in population as well as in income. The food habit is also changing due to the increase in purchasing power of the people and the availability of diversified items of pork. Market survey says the demand for piglets is growing annually. Higher demands lead to increase price of piglets and the pork consumption trend (10%) during the previous years (Acharya, 2016).

2.2 Specific market

Pigs are being reared in outside of the ring road. There are a few small-scale pig farms are under operation. These farms need piglets for fattening. Deficit demand is even fulfilled from the outside of the valley. The scenario indicates that there is not any problem in the market for produced piglets. Acharya, (2016) says daily selling of pork in major hubs of Nepal is 23.84 metric tons with a total value of NRs 7,175,000.0, out of these Kathmandu alone covers 50 % of the total value.

2.3 Market needs and growth trend of piglets

It is reported that the requirement of piglets is fulfilled from the outside of the valley. In recent years the demand for piglets is increasing by 7% and more than that. The demand increases in *Thulo Dashain, Chaite Dashain, Purnima and Sankranti* festivals. Butchers of Kirtipur, Chandragiri and some extent of adjoining villages of Dhading district are the specific customers for the fattened pigs. Pig producers try to buy piglets to address these occasions' demand. Production practice of pig is traditional, which lacks regular vaccination, drenching and laboratory services. Hence, the center will produce good quality of piglets.

2.4 Competition

Most of the piglets are imported from the out of the valley. Only limited numbers of piglets are produced within the valley for fattening. However, 5 to 10 sows are reared by a few pig growers in Kirtipur and Chandragiri area. They are producing piglets traditionally.

2.5 Target market and potential customers

The buyer would come by the farm from the urban as well as a local area to purchase the piglets. The piglets would be sold on bargaining pricing (not less than 5.5 and 6 thousand for female and male piglets respectively). It is found that the average purchasing price of piglets is 6 thousand in the market. It is assumed that the targeted market for the produced piglets would be Kirtipur, Chandragiri and adjoining part of Dhading.

2.6 Market analysis

Purchasing capacity and increasing awareness of the people regarding hygienic food intake leads to produce good quality of piglets and pork. The demand is also affected by the festival time and culture of habitats. Considering these factors the market analysis has been done as below;

	New product	Old product
New product	<ul style="list-style-type: none"> • Good quality piglets • Healthy piglets • Leading to good husbandry practice. 	<ul style="list-style-type: none"> • Inform about the quality of the piglets and zoonotic diseases.
Old market	<ul style="list-style-type: none"> • Inform and assure to the piglet's buyers about new, free from zoonotic diseases due to growing under the direct supervision of livestock professional. 	<ul style="list-style-type: none"> • Lack of good quality and healthy piglets.

2.7 Marketing plan

The demand for piglet and pork are increasing yearly. Within the year the price of meat and meat products increases in festival time. So, the fattened pigs will be sold by a festival period such as; *Thulo Dashain, Chaite Dashain, Chaite Purnima, Jestha Purnima, Saune Sankranti, Maghe Sankranti, and Gothe Mangal*. To sell in these periods pig growers targets to buy piglets to match it. First-year about 225 piglets will be produced and sold. Furthermore, about 450 piglets will be sold annually. List of pig grower will be prepared and updated to keep in touch with them periodically.

2.8 Promotional plan

Marketing promotion is the most important factor for enterprises. Due to the involvement of livestock professional in this enterprise, the opportunity to advertise our product by the governmental agencies will be coped. Launching websites and corresponding online would help the marketing of piglets.

2.9 Distribution channel

The products will be sold from the farm. There will not be any extra channel for this purpose. However, e-marketing would be launched for making easier for the buyers.

3. PRODUCTION PLAN / OPERATION

3.1 Startup operation

- Analyzing the obtained information from sightseeing and literature reviews.
- Making discussion to stakeholders.

- Making assurance of hiring land from the local people.
- Making agreement or memorandum of understanding among the business partner for launching the business.
- Moving ahead for the registration process.
- Developing management team and responsibilities.
- Hiring the helpers/laborers

3.2 Facilities

The MPPC will be located at the lower belt of Balambu -8 of Chandragiri, Kathmandu. About 2 ropanies for pasture land and 3 ropanies for civil works will be hired. Fencing would be made for biosecurity purpose. The opening stock would be 33 (3 boar and 30 sows). About 450 piglets would be produced annually. Sheds will be roofed from the color either tin or plastic-sheet. The floor will be cemented and crates will be made from GI pipes.

3.3 Rearing practices

The intensive system would be followed.

I. Feed

The ration will range from soft fiber contained grasses; Berseem, Moringa, peas, to concentrate. *Kudo* refers to cooked feed containing flour, pumpkins, potato, radish, and other vegetables. Pandit, (2013) reported that the combination of homemade a concentrate with chopped green leaves cooked together them feed to pigs give maximum return to rural farmers as small scale pig farming. The dietary mash concentrates included locally available rice police, rice bran, rice chafer, wheat bran, kitchen waste and green leaves (*Latte* leaves, *Rao* leaves, Cauliflower leaves, *Bethe* shrubs, *Jalkumbhi*, *Kachu* shrubs, *Mane* shrubs, *Gagletto* shrubs, etc.).

Feed ingredients will be bought from the market and prepared using by mixture at the center. Some hormone-like growth stimulators, antibiotic feed additives will be included in feed including mineral supplements.

II. Insurance, vaccination, medication, and supervision

Most of the pig producers in the proposed area were found unknown about pig insurance. Gaire (2017) carried out research in Makawanpur and Nawalparasi districts in inner Terai and Kaski and Kathmandu from mid-hills to explore the issues of pig insurance in Nepal and found that in overall, 43 % of the respondents have knowledge about livestock insurance, 30 % of the respondents were aware of pig insurance and only 13% of the respondents had insured their pig enterprise. However, all of the pigs at the farm will be insured to bear the possible risks.

Vaccination and medication are required to prevent and treat disease. Each pig will be vaccinated according to requirements. Anthelmintics will be used to treat/prevent internal parasites. Similarly, medicine will be used for external parasites. NRs 1200 will be spent for this purpose per pig per year. Supervision by the livestock professional will be implemented as at least two days a week. The frequency of the supervision will be changed according to its requirement.

III. Measures of lowering cost of production

There are some measures that will reduce cost of production of pig;

- Keeping genetically superior breed of pig.
- Reducing longer farrowing interval period.
- Supplying up to certain level of good forage.
- Fixing or replacing broken feeders on time to prevent the loss of feed.
- Keeping in mind feed loss during feed.
- Feeding different feed according to age and requirement.
- Selling piglets on time and focusing for breeding purpose.
- Bench marking farm's biological and financial performance.
- Culling unproductive pig on time.
- Taking prevention measure for inbreeding.
- Focusing on record keeping.

3.6 Positive aspects and possible risks

Positive aspects

- Supporting of farms with soft loans and grants by different levels of government organizations.
- The government has been encouraging peasants and entrepreneurs to rear pigs by providing financial support in insurance.
- Participating in training and tours specially conducted by the local authority.

Possible risks

- The outbreak of diseases and profit of the farm may be affected in case of a sudden change in the government economic policy.
- Hardy procedure of the soft loan.
- Pork husbandry is not accepted by the most of the communities.

4. STRATEGIES

4.1 Vision

To help in increasing availability of piglets in Balambu and be a well known of good quality of piglets producer center.

4.2 Mission

The farm will increase the piglets in the Balambu area through a combination of high quality of supplying piglets.

4.3 Goal

- Supply regularly the healthy piglets to pig growers in the community.

4.4 Objectives

I. General objectives

- Analyze the financial aspect of piglet production.

- Demonstrate to rear piglet production.
- Ensure the high quality of the product.

II. Strategic objectives

- Make involvement of technical personnel and local people on the farm to tackle technical and locally emerged problems respectively.
- Sell weaned piglets especially to pig growers and governmental organization as well as non-governmental organization.
- Stay keep in touch to stakeholders as well as personnel of government.
- Increasing involvement in training, visit, and tour conducted by the governmental organizations.

III. Operational objectives

- Drench and get laboratory service regularly.
- Assign social, cultural and feed related responsibility to the local partner.
- Assign technical responsibility to livestock professional.
- Growing Moringa and other forage.
- Provide feed additives.

4.5 Strengths, weaknesses, opportunities and threats (SWOT) analysis

Piglets production is an all-inclusive activity, related to meat animals; care and management, housing, medication, and feeding. Before making the decision, whether to invest in livestock farming or not, one should carefully analyze the associated risk factors, which is made in this business plan. A SWOT analysis helps in analyzing these factors, which can play an important role in making the decision.

4.5.1 Strengths

- Source of farmyard manure.
- Working in team; high experienced pig raiser, livestock professional and entrepreneur.
- Having capacity to grow and adapt within the pig farming entrepreneurs.

4.5.2 Weaknesses

- High cost of feed.

4.5.3 Threats

- The entry of new entrepreneurs.
- The sudden change in government rules and regulations.
- Different zoonotic diseases outbreak may occur.
- Piggery manure and effluent may threaten human health.
- Environment pollution from manure accumulation; water, land and air pollution.

4.5.4 Opportunities

- Higher demand for meat and meat products.
- Pig production is the prioritized program of the government in which various supports are available for farmers including insurance support.
- Farmyard manure can be used for agriculture practice.
- Lack of competitor farm and availability of laborer locally.
- NRB has directed to allocate the loan amount to the agriculture sector as a soft loan.

On the basis of above information of SWOT analysis, an inference can be drawn that the strengths and opportunities outweigh the weaknesses and threats.

4.5 Key success factors

Many studies show the potentiality of pig production in semi-urban areas. Weight, growth, and efficiency are major factors influencing the economical meat production. Litter production is highly complex as it includes farm management, feeding, housing diseases control and hygienic production. Farm management practices include providing nutritious feed, comfortable shed/barn with well ventilated, clean drinking water, and administering of drenching and vaccination regularly including laboratory services. The judicious use of means and resources to achieve clearly defined goals is the success factor i.e. the art of maximization and optimal utilization of resources and

means for maximization productivity and profit. The selection of piglets during the purchasing period is also a crucial factor which needs to get technical assistance from the livestock professionals and experts. The multiplier effect of the above consideration may lead to successful and profitable farms. In addition, the following points are taken as key success factors.

- Good quality of piglets and increased litter size.
- Involvement of local people and technical personnel.
- Experienced manpower.
- Strong coordination with government organizations and other stakeholders as well as local personnel

4.6 Competitor analysis

There is not any commercial pig production farm under operation. So, it may not need to analyze it immediately. However, a few pig producers are rearing some pig traditionally for their livelihood.

4.7 Quality assurance

To make a qualitative product our slogan will be “quality is our duty” for that regular vaccination, drenching/ deworming (at least 3 times a year), and controlling external parasites will be taken into account. Drenching, vaccination and laboratory support will enhance the health piglets and pigs.

5. FINANCIAL PLAN

5.1 Cash flow

Items	Units	Unit cost (Rs.)	Quantity					Value (Rs.)				
			2019	2020	2021	2022	2023	2019	2020	2021	2022	2023
Investment Costs												
A. Civil works/construction												
1. Shed I for sow (10 X 15 m)	Sqmt	2,500	150					375,000	-	-	-	-
2. Shed I for sow and boar (10 X 12 m)	Sqmt	2,500	120					300,000	-	-	-	-
3. Shed for weaned piglets (10 X 15) X 2 cum store	Sqmt	2,500	300					750,000	-	-	-	-
4. Farrowing pen	Sqmt	2,500	22					55,000	-	-	-	-
5. Sick pen	Sqmt	2,500	8					20,000	-	-	-	-
6. Farrowing crate in the farrowing pen	LS	5,000	8					40,000	-	-	-	-
7. Electricity fitting	LS	5,000	8					40,000	-	-	-	-
8. Fencing for biosecurity	LS	100,000	1					100,000	-	-	-	-
Sub- Total								1,680,000	-	-	-	-
Machinery and Equipment												
Grander/mixture machines/ accessories fixing	Set	200,000	1					200,000	-	-	-	-
Water tanks (10000 lit cap) and pipes fittings	LS	100,000	1					100,000	-	-	-	-
Feeders and drinkers	LS	100,000	1					100,000	-	-	-	-
Other equipment	LS	12,000	1					12,000	-	-	-	-
Wooden boxes in the farrowing pen with bulbs	LS	5,000	8					40,000	-	-	-	-
Sub- Total								452,000	-	-	-	-
Total Investment								2,132,000	-	-	-	-
Operating Cost and other inputs												
Feed ingredients	Kg	25	39,105	39,105	38,610	38,610	38,610	977,625	977,625	965,250	965,250	965,250
Medicines/vaccines etc	LS	1,200	33	33	33	33	33	39,600	39,600	39,600	39,600	39,600
Forage inputs and cultivation	Ropani	4,000	2	2	2	2	2	8,000	8,000	8,000	8,000	8,000
Purchasing Boar	No.	15,000	3					12,000	-	-	-	-
Purchasing of gilts	No.	5,800	30					120,000	-	-	-	-
Farm reg.	LS	10,000	1					10,000	-	-	-	-
Land rent	Ropani	6,000	5	5	5	5	5	20,000	22,000	23,000	24,000	25,000

Items	Units	Unit cost (Rs.)	Quantity					Value (Rs.)				
			2019	2020	2021	2022	2023	2019	2020	2021	2022	2023
Sub- Total								1,187,225	1,047,225	1,035,850	1,036,850	1,037,850
Human Resources Cost												
Pig attendants	Person	144,000	1	1	1	1	1	144,000	144,000	144,000	144,000	144,000
Seasonal Employment												
Pig attendants or for forage cultivation	Person	72,000	1	1	1	1	1	72,000	72,000	72,000	72,000	72,000
Sub- Total								216,000	216,000	216,000	216,000	216,000
Lease, Power, Fuel & Utilities												
Land for forage cultivation	Ropani	2	10,000	11,000	12,000	13,000	13,500	20,000	22,000	24,000	26,000	27,000
Land for the shed and another purpose (Ropani)	Ropani	3	10,000	11,000	12,000	13,000	13,500	30,000	36,300	39,600	42,900	44,550
Electricity (Nrs 1000 / per month initially)	LS	1	12,000	12,000	12,000	13,000	13,500	12,000	12,000	12,000	13,000	13,500
Water tanks	LS	1	12,000	12,000	12,000	13,000	13,500	12,000	12,000	12,000	13,000	13,500
Sub- Total								42,000	48,300	51,600	55,900	58,050
Marketing & Distribution Costs												
Launching websites /training/workshop attaining	LS	1	50000	50000	50000	50000	50000	50,000	50,000	50,000	50,000	50,000
Stationery and other inputs	LS	1	10000	1000	10000	10000	10000	10,000	1,000	10,000	10,000	10,000
Insurance amount beard by farm	LS	1	10500	10500	10500	10500	10500	10,500	10,500	10,500	10,500	10,500
Unforeseen expenditure	LS	1	40000	40000	40000	40000	40000	40,000	40,000	40,000	40,000	40,000
Communication	LS	1	12000	12000	12000	12000	12000	12,000	12,000	12,000	12,000	12,000
Sub- Total								122,500	113,500	122,500	122,500	122,500
Maintenance Costs												
Civil Structures (1.5% of Structures)								25,200	25,200	25,200	25,200	25,200
Machinery & Equipment (5% of Machinery)								22,600	22,600	22,600	22,600	22,600
Sub- Total								47,800	47,800	47,800	47,800	47,800
Total Operating Cost								1,615,525	1,472,825	1,473,750	1,479,050	1,482,200
Tax on profit								-	-	578,111	631,270	682,352
Total Cash Outflow (Investment + Operating Cost+ Tax)								3,747,525	1,472,825	2,051,861	2,110,320	2,164,552
Revenues												
Piglets selling (male)								678,000	1,417,782	1,488,671	1,563,105	1,641,260
Piglets selling (female)								616,000	1,241,884	1,303,978	1,369,177	1,504,488
Boars selling at the end of the scheme												273,489
Sows selling at the end of the scheme												2,187,911
Manure, feed sacks and manure	LS	1	50,000	53,000	56,000	58,000	60,000	50,000	53,000	56,000	58,000	60,000

Items	Units	Unit cost (Rs.)	Quantity					Value (Rs.)				
			2019	2020	2021	2022	2023	2019	2020	2021	2022	2023
Culled sows selling	LS							-	630,000	661,500	694,575	-
Total Revenues (Net of VAT & duties)								1,344,000	3,342,666	3,510,149	3,684,856	5,667,149
Net Cash Flows								(2,403,525)	1,869,841	1,458,288	1,574,536	3,502,596
Cumulative Cash Flow								(2,403,525)	(533,684)	924,604	2,499,140	6,001,736
Discount Factor (7%)	1.07							0.9346	0.8734	0.8163	0.7629	0.7130
Discounted Net Cash Flow								(2,246,285)	1,633,191	1,190,397	1,201,206	2,497,303
Discounted Cumulative Cash Flow								(2,246,285)	(613,094)	577,304	1,778,510	4,275,812
NPV @ 7%												4,275,812
Payback Period												2.14
IRR												67.93%
BCR												1.82

Note

- Working capital will be managed from the three partners and cash-inflow will be utilized in the respective years.
- The basic cash flow should include all the cash inflow and outflow from the business.
- The cash outflow from operating cost and cash inflow from revenues may differ from profit and loss account as profit and loss account are prepared on an accrual basis (Based on transaction, not on a cash basis).
- Purchasing of piglets can also be calculated under the heading of investment cost.

Calculation of Working Capital Requirement

- The salvage or remaining value of fixed assets is the money that could be received by selling the fixed assets at the end of the project.
- Discount factor represents the time value of money.
- The net present value represents the actual worth of the project after considering the time value of money
- IRR represents the discount factor where the net present value is zero.
- The payback period is the period in years for the project to return the investment made.

5.2 Profit and loss account

Description	Value					Remarks
	2019	2020	2021	2022	2023	
Total Annual Revenues	1,344,000	3,342,666	3,510,149	3,684,856	5,667,149	
Value Added Tax						
Net revenue	1,344,000	3,342,666	3,510,149	3,684,856	5,667,149	
Cost of revenue (Operating Cost)	(605,000)	1,371,575	1,369,913	1,367,422	3,179,441	
Operating profit (Gross)	1,949,000	1,971,091	2,140,236	2,317,435	2,487,708	
Depreciation	213,200	213,200	213,200	213,200	213,200	
Profit before finance charges	1,735,800	1,757,891	1,927,036	2,104,235	2,274,508	
Finance charges	-	-	-	-	-	
Profit before tax	1,735,800	1,757,891	1,927,036	2,104,235	2,274,508	
Income tax@30%	-	-	578,111	631,270	682,352	
Net profit	1,735,800	1,757,891	1,348,926	1,472,964	1,592,156	
Dividend paid						
Retained earning	1,735,800	1,757,891	1,348,926	1,472,964	1,592,156	
Ratio Analysis						
Return on Investment (ROI) %	81%	82%	63%	69%	75%	
Gross margin (GM) %	145%	59%	61%	63%	44%	
Net profit (NP) %	129%	53%	38%	40%	28%	

Basis for Calculation

ROI= Net profit/ Investment*100

GM= Net Operating Profit (Gross)/ Total Revenue*100

NP = Net profit/ Total Revenue*100

Note

- The profit and loss account should show the revenue, cost, and profit made by the project that is a financial performance for each year.
- The profit and loss account is accounted on an accrual basis (Based on the actual transaction rather than on receipt or payment of cash)
- The revenue should be based on the marketing/sales plan and production plan of the project

5.3 Calculation of depreciation

Particular	2019	2020	2021	2022	2023	Remarks
Opening Balance						
Land						
Civil Work	1,680,000	1,512,000	1,344,000	1,176,000	1,008,000	
Machinery and Equipment	452,000	406,800	361,600	316,400	271,200	
Less: Depreciation						
Depreciation on Civil Work (5%- 20 years)	168,000	168,000	168,000	168,000	168,000	
Depreciation on Machinery & Equipment (10%- 10 years)	45,200	45,200	45,200	45,200	45,200	
Less: Disposal						
Closing Balance						
Land						
Civil Work	1,512,000	1,344,000	1,176,000	1,008,000	840,000	
Machinery and Equipment	406,800	361,600	316,400	271,200	226,000	

5.4 Balance sheet

Description	Value (Rs.)					Remarks
	2019	2020	2021	2022	2023	
Assets						
Current Assets						
Cash	(1,809,913)	59,928	1,518,216	3,092,752	6,595,348	
Accounts Receivable-Debtors						
Inventory Stock	2,220,525	2,321,775	2,425,613	2,537,241	840,000	
Total Current Assets	410,613	2,381,703	3,943,829	5,629,993	7,435,348	
Long-term Assets						
Net Fixed Assets	1,918,800	1,705,600	1,492,400	1,279,200	1,066,000	
Total Long Term Assets	1,918,800	1,705,600	1,492,400	1,279,200	1,066,000	
Total Assets	2,329,413	4,087,303	5,436,229	6,909,193	8,501,348	
Paid-in-Equity	593,613	593,613	593,613	593,613	593,613	
Retain Earnings	1,735,800	3,493,691	4,842,616	6,315,580	7,907,736	
Total Equity & Reserve	2,329,413	4,087,303	5,436,229	6,909,193	8,501,348	
Total Liabilities and Equity	2,329,413	4,087,303	5,436,229	6,909,193	8,501,348	
Revenue/ Fixed Assets (%)	70%	196%	235%	288%	532%	
Return on Assets (%)	58%	82%	65%	53%	67%	

5.5 Inventory

Particular	Year					Remarks
	2019	2020	2021	2022	2023	
Boars values	225,000	236,250	248,063	260,466		
Sows values	1,800,000	1,890,000	1,984,500	2,083,725		
Feed ingredients	195,525	195,525	193,050	193,050		
Salvage value from infrastructures					840,000	
Total	2,220,525	2,321,775	2,425,613	2,537,241	840,000	

Note

- It is assumed that all the business transactions will be done in cash. As a result, there are no debtors or payables.
- We have not calculated the current ratio as there is no current liability
- Return on assets: Total Revenue/ Total Assets
- Not calculated debt/equity ratio as no debt has been taken from outside.
- Paid inequity represents the money invested by the proponent for business development and working capital.
- Cash and Bank Balances represent the equity paid, grants and net cash flow.

5.6 Summary of projection

Particular	I	II	III	IV	V	Total
Total investment in capital	2132000					2132000
Total operating cost	1615525	1472825	1473750	1479050	1482200	7523350
Total cost	3747525	1472825	1473750	1479050	1482200	9655350
Total revenue	1344000	3342666	3510149	3684856	5667149	17548820
BCR						1.82
Total no. of piglets production	225	450	450	450	450	2025
Per unit cost of piglets						4767.231
Per unit revenue from piglets						8664.551

5.7 Cost table

Items	Units	Unit cost (NRs.)	Required Quantity	Total Cost (Quotes)	Shared to Eligible Items (Rs.)				Business contribution to Ineligible Items
					Business Contribution	%	Bank Loan	%	
Investment Costs									
Civil Works									
Shed and other works				1,680,000					
Sub- Total				1,680,000					
Machinery and Equipment									
Equipment and other				452,000					
Sub- Total				452,000					
Other Investment (Description)									
Limited " <u>working Capital</u> " to cover <u>materials inputs</u> which are required to bring the business in operation (In this case it is estimated for 6 months)	Months	98,935							
Sub- Total									
Total Business Development Cost (NRs.)				2,132,000					
Grand Total				2,132,000					

5.8 Stock and other projection

Particular	Year					Remarks
	I	II	III	IV	V	
A. Herd size						
Total opening stock pig	33	33	33	33	33	
Opening stock of boar	3	3	3	3	3	
Opening stock of gilt	30	30	30	30	30	
Mortality of adult (3%)	1	1	1	1	1	
Sow after mortality	29	29	29	29	29	
No. of farrowing	25	25	25	25	25	
No. of piglets	250	500	500	500	500	
No. of piglets after mortality (10%)	225	450	450	450	450	
No. of male piglets for saleable	113	225.0	225.0	225.0	225.0	
No. of female piglets for saleable	112	225.0	225.0	225.0	225.0	
B. Feed requirements and its per-unit price						
Required concentrate (3,5 kg / pig for 6 month) kg	20790	20790	20790	20790	20790	
Required concentrate (3 kg / pig for 6 month) kg	18315	18315	17820	17820	17820	
Total required concentrate (kg)	39105	39105	38610	38610	38610	
Raw materials cost of feed ingredients Nrs	977625	1006954	1037162	1068277	1100326	
C. Medicines/vaccines etc						
Medical cost (NRs), per unit	1200	1236	1273	1311	1351	
Medical expenses (NRs)	39600	40788	42012	43272	44570	
D. Selling price						
Male piglets per unit	6000	6300	6615	6946	7293	
Female piglets per unit	5500	5775	6064	6367	6685	
Culled sows price per unit	60000	63000	66150	69458	72930	
No. of sows (culled)		10	10	10		
No. of female for selling after stock replacement	112	215.0	215.0	215.0	225.0	
E. Revenue						
Selling male piglets	678000	1417782	1488671	1563105	1641260	
Selling female piglets	616000	1241884	1303978	1369177	1504488	
Selling sows at the end of the scheme					2187911	
Selling boar at the end of the scheme					180000	
Selling culled sows		630000	661500	694575	0	
F. Insurance						
Amount for insurance of boars	90000	90000	90000	90000	90000	
The amount for insurance of sows	750000	750000	750000	750000	750000	
Amount for premium 5% of total insurance amount	42000	42000	42000	42000	42000	
Amount granted by government	31500	31500	31500	31500	31500	
Amount beard by farm	10500	10500	10500	10500	10500	

5.9 Techno-economic parameters

SN	Description	Average	Remarks
A.	Production Traits		
	Farrowing interval (Months)	6.0	
	Farrowing %age	86.2	
	Average no. of litter per farrowing	12.0	
	No. of farrowing per year	2.0	1 for the first year
	Sex ratio	1.0	
	Mortality (%) Adults	3.0	
	Mortality (%) piglets	10	
	Saleable age of piglets (months)	2.0	
B.	Expenditure norms / Space requirement (sqmt.per head)		
	Boar or sow	8.0 /8.0	
	Hog/Gilts	2.5	
	Kids	1.0	
	a) Cost of green fodder cultivation (Rs./ropani/year)	4,000	
	b) Land required (ropani)	5	
	b) Land rent/ ropani	4000	
	Labour (No.), fulltime and seasonal	1 and 1	
	Labor wages (Rs.per month) fulltime or seasonal	12000 and 12000	
	Insurance (5 % of the insurance value)		
	Boer or sow	10% and 10%	
	Veterinary aid (Rs./adult/year)	1200	
	Water, electricity and other misc. expenses (Rs./adult/month)	50	

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