



ISSN (E): 2277- 7695
ISSN (P): 2349-8242
NAAS Rating: 5.23
TPI 2021; SP-10(6): 595-598
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www.thepharmajournal.com
Received: 19-04-2021
Accepted: 21-05-2021

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Empowerment of rural youth through pig farming: A case study

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Abstract

A pig enterprise contributes in many ways to improve the livelihood of poor and vulnerable small-scale farmers. The Pig Entrepreneur was interviewed personally with the help of structured interview schedule, observation method and farm records were used to collect the primary data. The pig farming was selected purposively in order to know the economics of the enterprise like initial investment, expenditure and net profit during one year and also improvement in the entrepreneurship skills in the entrepreneur was studied. The farm earned the total income of Rs. 15,80,000/- by selling 80 numbers of adult fattened pigs, 160 numbers of piglets and sale of manure. After meeting out all the expenses incurred during the year 2020-21 the farm possesses the sum of net profit of Rs.10,27,921/- for the particular year. On an average, the monthly net income of the farmer is Rs. 85,000/- which shows the pig farm business is lucrative business with low cost due to high feed conversion efficiency and prolific nature of pigs. On an average, the monthly net income of the farmer is Rs. 85,000/- which shows the pig farm business is lucrative business with low cost due to high feed conversion efficiency and prolific nature of pigs.

Keywords: empowerment, rural youth, pig farming

Introduction

Small and medium sized livestock like poultry, sheep, goats, and in particular pigs are a viable and profitable enterprise that can be easily adopted and adapted by small-scale farmers (FAO, 2011) [2]. Pigs require little initial investment; they are prolific and are good feed to meat converters compared to other livestock such as cattle. Small-scale farmers new to pig enterprises advisably commence the activity with a focus on adequate pig confinement using simple housing structures and prevalently local feed resources. A pig enterprise contributes in many ways to improve the livelihood of poor and vulnerable small-scale farmers. Additional income is earned from the sale of animals and importantly from their products. This additional income can be used to invest in farm assets, pay for school fees and medical treatments. Pigs provide income for women, strengthening their role in families as well as in local communities. Based on these facts, the department of Veterinary and Animal Husbandry Extension Education, Veterinary College and Research Institute, Tirunelveli is offering one month Self Employment Course on Pig Farming to the rural folk through the Directorate of Distance Education, Tamil Nadu Veterinary and Animal Sciences University, Tirunelveli. In order to know the impact of the Self Employment course, a case study on empowerment of rural youth through pig farming was conducted.

Materials and Method

A case study on a successful pig entrepreneur Thiru V. Ramakrishnan, 44 year old who is residing in Kalakadu Village of Tirunelveli district, Tamil Nadu had undergone the Self Employment training course at Department of Veterinary and Animal Husbandry Extension Education, Veterinary College and Research Institute, Tirunelveli, Tamil Nadu, India and decided to start the pig farm after learning the scientific pig farming with economic benefits and marketing opportunities. He was interviewed personally with the help of structured interview schedule, observation method and farm records were used to collect the primary data. The pig farming was selected purposively in order to know the economics of the enterprise like initial investment, expenditure and net profit during one year and also improvement in the entrepreneurship skills in the entrepreneur was studied.

Results and Discussion

An entrepreneur, Thiru V. Ramakrishnan, 44 year old runs a successful pig farm with the name

“Victory White Pig Farm” which is 10 km away from Kalakadu town of Tirunelveli District. The owner resides in premises of the farm to have a good look on the farm activities. The land holding in 2.5 acres, 1 acre used for shed construction, owner’s house and garden, another 1.5 acres for green fodder cultivation likes Co-4, Co-5, Cofs29, Sesbania and Azolla plots.

The entrepreneur was purchased parents stock and adult pigs by the financial support from his family, the breed reared were Large White Yorkshire, Duroc, Landrace. There were selected based on local preferences of consumers. This unit generated income and provide employment and food security. Two labourers are appointed to look after the animal and these workers are provided with good wages, quarters and groceries.

The works carried out by the labourers were, feeding of animal in the morning and evening, cleaning and many more care of pregnant animals, care at farrowing. He was involved in health care activities, decision making and marketing related activities. The shed was constructed with concrete side wall and roof is covered with asbestoses sheet. Farm has pen and run areas, sty for male and female animal, furrowing pen and grower pen with scientific technique like guard rail, feeding trough, watering trough, sprinkler, etc.

The main purpose of pig rearing is for sale of live animal during of festival seasons, for nutrition supply to the family, to generate employment for self and in addition owner has passion towards livestock rearing. The herd was well managed with regular deworming at an interval of three month with appropriate deworming suspensions, regular vaccination schedules was followed i.e. swine fever, Foot and Mouth Disease, etc.

Entrepreneur generally fed swill feeding, hotel waste, marriage hall waste, school & college waste, vegetable waste etc. He utilises vegetarian type of swill feeding apart from these, he fed Azolla, Co5, Sesbania as green fodder. The animals were provided with adlibidum water.

The animals were grouped according to their age, sex, deteething was provided in the farm. Iron tonics were given to piglets, artificial light was also provided to piglets in incubation period. Sprinklers are used to reduce the pig heat during summer season. Breeding of pigs was practiced within the farm, male to female ratio was maintained 1:10 respectively this resulted in better fertility rate in the farm. The precautions measures were taken during the diseases outbreaks like isolation of diseased animal, disinfection of shed. The diseased carcass was deep buried with the larger of lime or salt in the farm dump yard.

Table 1: Capital investment/Fixed Investment

Sl. No.	Particulars	Investment (Rs.)
1	Purchase of animals 2 Boars at the rate of Rs. 15,000 each/- 10 Sows at the rate of Rs. 15,000 each/- 30 Piglets at the rate of Rs. 3,000 each/-	2,70,000
2	Investment on shed (1000 sq. ft.)	2,50,000
3	Equipment cost (Small feed grinder, Cages, Sprikler, Automatic drinker nipples etc.)	1,50,000
4	Vehicle Cost (Tata-Ace small tempo by second hand)	1,30,000
Total Fixed Investment		8,00,000

Table 1. illustrates that the entrepreneur has started the business in the year 2015 with total amount of Rs. 8,00,000/- among the total invested he spent Rs. 2,70,000/- to purchase the animals. Initially he purchased 10 Sows at the cost Rs. 15,000/- each, 2 boars at the cost of Rs. 15,000/- each and 30 piglets at the cost of Rs. 3,000/- each. The animal shed with store was constructed with 1000 sq. ft. in which floor space was allotted viz., 50 sq.ft/boar, 40 sq.ft/Sow, 15 sq.ft for a

piglet and a total of 50 sq.ft for store room. Out of Total fixed investment, the animal shed was constructed for Rs. 2,50,000/-. Equipment like boar cages, guard rails, automatic drinker and small feed grinder and cleaning equipment were purchased totally for Rs. 1,50,000/-. A second-hand Tata-ace tempo was purchased for sum of Rs. 1,30,000/- to collect swill feed from nearby hotels, vegetable markets and student hostels.

Table 2: Variable cost/Recurring expenditure for one year (2020 - 21)

Sl. No.	Particular	Expenditure (Rs.)	Percentage
1	Concentrate feed cost (Own feed) per year	41,240	11.40%
2	Green fodder and Azolla cultivation in the farm land per year	10,000	02.77%
3	Swill feeding/transport charge per annum (Rs. 6000/month)	72,000	19.91%
4	Medicine and Veterinary expenditure per year	30,000	08.30%
5	Labour wages per year	1,92,000	53.09%
6	Electricity bill per year	14,400	03.98%
7	Miscellaneous expenditure per year	2,000	00.55%
Total Variable Cost		Rs. 3,61,640	100.00%

The cost that does vary with the level of production is called variable cost or recurring cost. These are the explicit type of cost in which the entrepreneur has to pay others in order to purchase the goods or services. From the Table. 2. It is evident that the Labour wages in the farm occupies 53.09% (Rs. 1,92,000/-) of total variable cost which shows that successful pig farm require enough and efficient labour in order gain the profit by optimum productivity. Followed by swill feed collection/transport charges holds 19.91% (Rs.

72,000/-) of total variable cost. Swill feed is one of the major reason for the profitability in the pig farms because it reduces the total amount spent on other type of feeds like concentrates which occupies majority of cost in livestock farms. Preparation of own concentrate feed at farm level takes 11.40% (Rs. 41,240/-) of total variable cost. Minimum requirement of concentrate feed is fed to animal because nutrient requirement of animals is met out by usage of swill feeds which is the major reason to reduce the feed cost in pig

farms. Amount spent towards the purchase of medicine and veterinary services was 8.30% (Rs. 30,000/-) of total variable cost. Electricity charges, green fodder and Azolla cultivation

charges and miscellaneous charges in the farm is 3.99%, 2.77% and 0.55% of total variable cost respectively.

Table 3: Fixed cost for one year (2020-21)

Sl. No.	Particular	Amount (Rs.)
1	Interest on fixed capital (12% per annum)	96,000
2	Insurance Cost (4% of animal cost)	10,800
3	Depreciation on Building (2% per annum)	4,612
4	Depreciation on Equipment (15% per annum)	12,288
5	Depreciation on Vehicle (15% per annum)	6,739
6	Implicit cost of family labours (Rs. 5,000/Month)	60,000
	Total Fixed Cost	1,90,439

The cost that does not vary with the level of production is called fixed cost and majority of these cost are need not to be paid out to others to purchase any goods and services rather implicitly the entrepreneur pay himself for using his own resources like own money, buildings, equipment and family labour and opportunity cost etc. Table. 3 explained about the fixed cost in which except insurance cost all are implicit cost

because these implicit cost has to be incurred for the usage of self-owned resources as mentioned earlier and insurance cost is an explicit cost that does not vary with the level of production so it is included in fixed cost. From the Table 3. It is evident that directly and indirectly the business has spent Rs. 1,90,439/- towards the usage of fixed assets during the particular year 2020-21.

Table 4: Total cost for one year (2020-21)

Sl. No.	Particular	Amount
1	Total Cost (Total fixed cost at particular year + Total Variable cost at particular year)	= 1,90,439+ 3,61,640 = 5,52,079

Total cost is calculated by summing up total fixed cost during the year with total variable cost during the year. From the

table 4 it is evident that total cost incurred to operate the farm during the year 2020-21 is Rs. 5,52,079/-.

Table 5: Income during one year (2020-21)

Sl. No.	Particular	Income (Rs.)
1	Sale of piglet (20 sows x 8 piglets per sow x 10 kg per piglet x Rs. 300/kg body weight)	4,80,000
2	Sale of adult pigs at 90 – 100 kg body weight (10 sows x on average 8 adult pigs per sow x on average 90 kg per adult pig x Rs. 150/kg body weight)	10,80,000
3	Sale of manure Rs. 2,000/tractor load (10 tractors load)	20,000
	Total Income	15,80,000

Table - 5 presented the income earned during the particular year. The farm started with 10 sows and 2 boars as parents stocks in the year 2015 and currently the farm is operated with 30 sows and 6 boars as parents stock.

Currently the farm selling the piglets (10 kg.) obtained from 20 sows and piglets produced from remaining 10 sows are used for fattening purpose and the adults fattened pigs are sold at 90 – 100 kg body weight. On an average 8 piglets per sow is obtained per furrowing. From the table 5 it is evident that income earned from piglets is Rs. 4,80,000/- per annum

and income earned from adult fattened pig is Rs. 10,80,000/- per annum. Manure is used for own farm for cultivation of green fodder and remaining manure is sold outside. Income earned from the manure is Rs. 20,000/- per annum. At the end of the year the total income earned from the pig farm per year is Rs. 15,80,000/-. Since Pigs are having shorter generation interval and high prolific nature as per Boopathy *et al.*, (2016) [3] apart from this total income, the farms inventory have 240 numbers of 2-3 months old piglets from second furrowing of parents stock because short.

Table 6: Net Income for one year (2020-21)

Sl. No.	Particular	Amount (Rs.)
1	Net Profit/year (Total Income/year - Total cost/Year)	= 15,80,000 - 5,52,079 =10,27,921/-
2	Net Income/month	= 85,660/-

Net profit or Net Income is the amount available to the farm business after meeting out all the expenses during the particular year. Net profit or Net Income is calculated by subtracting the total cost/year from total Income/year. Table 6

shows that the Net Profit earned from the particular year is Rs. 10,27,921/- and Net Profit/month is Rs. 85,660/-. Net profit from the table.6 is evident that the pig is operated in successful and highly profitable manner.

Table 7: Status of family before and after starting on enterprise

Before		After	
1	Low expenditure on education	1	More expenditure on education
2	Low standard of living	2	Improved standard of living
3	Old house	3	House renovated
4	Not much social recognition	4	More social recognition

It was also evident that the economic and social status certainly improved after he has taken up this pig farming (Table-7). Initially, his expenditure on education for children was less but after starting this enterprise, his disposal of expenditure on education improved i.e., the children were sent to residency schools for their higher education to the city, purchased land, has removed his house and achieve better social recognition. The common entrepreneurs were inspired by her family members by observing others in family, paying attention to their operation to take up their enterprise which is in similar finding of Berth and Therol (1999).

The farming also have some constraints like unavailability of medicine in sufficient quantities like swine fever vaccine etc., But this constraint was taken care by cultivating their own pasture, sale of animal in peak and non-peak season compensated the loss during peak season. The entrepreneurs have attended training programme in Veterinary College and Research Institute to get updated with latest technologies.

Conclusion

The farm started with 10 sows and 2 boars as parents stocks in the year 2015 with the initial total capital investment of Rs. 8,00,000/- and currently the farm is operated with 30 sows and 6 boars as parents stock. At the end of the year, total cost to operate the farm is Rs. 5,52,079/-. The farm earned the total income of Rs. 15,80,000/- by selling 80 numbers of adult fattened pigs, 160 numbers of piglets and sale of manure. After meeting out all the expenses incurred during the year 2020-21 the farm possesses the sum of net profit of Rs. 10,27,921/- for the particular year. On an average, the monthly net income of the farmer is Rs. 85,000/- which shows the pig farm business is lucrative business with low cost due to high feed conversion efficiency and prolific nature of pigs. Apart from this Net Profit during the year, the farms' inventory have 240 numbers of 2-3 months old piglets from second furlowing of parents stock which would give additional gross income of Rs. 7,20,000/- within 1-5 months ahead of next production cycle. It can be concluded from this case study that, the entrepreneur is interested to carry out the farming activity as it generated good income, improved living standards and improved both economic and social status.

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