

Pig Entrepreneurship

A tale of social opposition to social prestige

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This is a success story of a farmer Shri Tej Bahadur Gangwar, who ventured into pig entrepreneurship despite the social opposition in his society but when he started to get the benefit and his economic condition rise, many others came to him to seek his technical advice to get self-employment in pig rearing. He started his piggery with 11 piglets in 2017 and now flock size has increased to more than 100. Keeping in view his venturesome in piggery, he got popularity and he was given a place in the local daily Newspaper, All India Radio Station, and awarded by IVRI for his entrepreneurship leadership in the piggery.

Keywords: Breeding management, Pig Entrepreneurship, Piglets

HAILING from a small village Pardholi district Bareilly, Uttar Pradesh, Shri Tej Bahadur Gangwar is a 52 year old successful piggery farmer who started his enterprise in 2017 after getting training from Krishi Vigyan Kendra-Indian Veterinary Research Institute, Izatnagar. Earlier like all other farmers of the village, he too was a regular farmer cultivating paddy, wheat, shatawar and sugarcane on his 6 acres of agricultural land. Even, after getting training, he never stopped to visit IVRI and discussion with the scientists to gain in-depth knowledge and practical orientation about pig rearing. He had also visited various pig enterprises established by the earlier trainees of IVRI, in and around Bareilly district. Once he developed confidence and competence he laid down the foundation of his pig enterprise amid criticism, discouragement and social opposition from fellow villagers, relatives and family members.

Despite all the social hurdles, he established pig farm just about 1km away from his own village with 11 piglets of 5 months old (10 sows + 1

boar) of Large white Yorkshire breed purchased at ₹ 5000/pig in April, 2017. He spent about ₹ 55,000 in purchasing piglets and ₹ 4 lakhs in construction of pig farm of 80 × 33 sq ft size. Later, in November 2018 the farm was extended to the size of 80 × 70 sq ft in view of increasing the litter size and sounder of swine. The size of each shed/cabin was kept 8 × 12 sq ft. wherein he contains individual pregnant boar and breeding sows. Hence, the total sheds/cabin in his pig farm is 29 of 8 × 12 sq ft size.

Production Profile of Pig Farm

All the piglets he purchased initially became adult at the age of 8-9 months which resulted in breeding and caused pregnancy in all the sows. At the age of 14-16 months in the last week of October 2017 all the sow gave birth to the piglets. The litter size was 9-11 per sows (one sow gave birth to 3 piglets only) and about 90 pigs were added in one year of his pig farm which was a boom in the growth of his pig entrepreneurship. First time, all the old pigs and 50 piglets were sold out at ₹ 112/kg

adult pig and ₹ 2,700/piglets of two month old) and earned ₹ 2,58,000 within a year in last week of December 2017. The maximum number of pig reach to 150 in farm. Since 2018, on an average he sale about 60 adult animals and 250 piglets per year and earn approximately ₹ 10 lakhs per annum.

Housing Management

The total size of the pig farm is 80 × 70 sq ft which has 29 cabins of 8 × 12 sq ft in which all the pregnant gilts and breeding boars are housed individually and remaining pigs are accommodated together. The floor of the cabin is pakka with two troughs for water and feeding. The half of the cabin has the roof of asbestos sheets and half is open for better ventilation and space for pig. Each shed/cabin of pregnant gilts has the railing guard to save the newborn piglets.

Feeding Management

Generally, he practise various type of feeding i.e. homemade feed, potato based feed, sugarcane juice plus feed and chicken waste which are generally given to various categories of pig viz.,



Fig. 1. Feeds for the pigs

pregnant, breeding, piglet and reared for meat. Shri Tej Bahadur prepared the pig's feed himself (Fig. 1) by mixing 15-20 kg maize, 15-20 kg soya cake, 30 kg broken rice, 1 kg salt and 2 kg mineral mixture to prepare 100 kg feed. He provides about 2.5 kg feed per adult pig twice a day. For the good health and growth of piglet the ratio of soya cake increases by reducing the rice polish. However, during winter (December to February) to reduce the cost of feed he practise feeding sugarcane juice three times a day @ 4-5 litres/ male pig, along with 500 mg of rice polished and salt for the pigs being reared for the meat purpose only and for this he installed sugarcane crusher at his pig farm and crushed about 10-12 quintal of sugarcane/day. He reported the feeding of sugarcane juice to the pig reared for meat purpose which gained the weight about 10-15 kg/month. In case of non-availability of sugarcane juice, he feed chicken waste, which he collects from the city, free of cost. At the time of data collection, he had 47 pigs (30 Sow + 17 Boar, 14 for meat and 3 for breeding purpose) and was feeding boiled potato (40 kg/day) plus 10 kg of feed and salt mix with 50 litres of water and feed in the morning only to all the pigs and

second feeding comprised only homemade feed. Potato is purchases at ₹ 400/quintal from the vegetable market. Besides, he also feeds unutilized, more ripened and rejected guava of his own orchard, after boiling them. The piglets are allowed to drink sow's milk up to 45 days. To fulfil the requirement of calcium he uses lime water for which he dissolved 10 kg of lime in 14 litres of water and kept as such for over a night and then on next day 40 litres of water is added. After 48 hrs, about 1.5 litres of this lime water is mixed in feed daily for the 47 pigs and if this lime water is finished, he prepares again. He also feeds Bajra Napier Hybrid (CO4 & CO5 varieties) as green fodder grown in his farm due to the extension intervention of IVRI. On an average about ₹ 1,300 to 1,500/day is spent on pig feed.

General Management

Cleaning operations are followed once a day in the morning only and all the waste of the pig farm are channelized into a fish pond which is made adjacent to the pig farm. He disinfects his farm fortnightly by applying lime. He followed the breeding system very strategically by avoiding severe winter (December to February/March) for farrowing and

in this way he protects the pigs specifically piglets from the severe cold. The castration in pig he does himself at age of 20-25 day of piglets.

Breeding Management

The female pig of 7-8 months and male pigs of 9-10 months are generally ready for breeding. He never contains an old stock of boar and sow for the second farrowing and always prefers to have new stock in farm which reduces the cost of feeding and getting the healthy piglets from new stock. He followed the breeding in such a way so that farrowing could not take place in winter. Hence, the mating is generally followed during December-June to avoid the farrowing in winter to reduce the mortality in farm and to minimize the expenditure on veterinary care (Fig. 2).

Health Management

At the age of 10 days, new born piglet are dewormed. Afterwards, all the piglets are dewormed at the age of 20, 40 and 90 days (Fig. 3). Then, pigs are dewormed on regular basis (every three months) for the control of internal parasite. He too administered iron injection and Vit B-complex at the age of 4 and 5 days and then again on 14 and 15 days of



Fig. 2. Matting of pigs



Fig. 3. Deworming and vaccination

new born piglet, respectively for mineral supplementation and to check the vitamin deficiency. Following good health and feeding management practices the mortality rate is reported low at about 2% and as such no diseases outbreak has been reported in his pig farm due to well veterinary care and vaccination. On an average about ₹ 1,000/month is incurred as expenses on veterinary care. In the initial year, he was taking the help of veterinarian but afterwards all the health management practices, as mentioned, he does himself.

Marketing

His main outlet for selling the pigs is the local market in Bareilly district which is easily accessible to him. Once the adult male pig touches market weight and the piglets have reached up to two months of age, they are sold out. Piglet is sold at ₹ 2,700/animal whereas the adult pig is sold out at ₹ 112/kg. He has well

established contact with the meat sellers in Bareilly city to whom he sold the pig reared for meat purpose. The local people too are his customers who over period of time despite opposing him initially, have started piggery enterprise and buying the piglets from him. He does not have any problem as far as marketing of pig is concerned.

Economics of pig farming

Fishery integrated with Piggery

He has set up a small integrated fish farm (40 × 40 sq ft) wherein, the pig farm wastes are efficiently utilised as feed for the fish and the overflowed water of the fish pond is used in irrigation of agricultural land which is well connected through irrigation channel (Fig. 4). The feed expenditure on fishery is nill and every year he gets about 2.5 quintals of fish and sells @ ₹ 125/kg. While cleaning the fish pond, once a year,

the pig waste deposited in the bottom is used as manure in agriculture.

Besides piggery, he has planted guava orchard on 4 acres of land and has grown *shatavari* (*Asparagus racemosus*) as intercrop since 2016 and first fruiting of guava he got in 2018. He leased out guava orchard at ₹ 4.0 lakhs/year for the months of May-April. Although, the first-year

Table 1. Total Fixed cost incurred in pig rearing

Total Fixed cost (TFC) Items	Rupees (₹)
Purchase of pig stock (11) @ 55,000/piglet	5,000
Construction of shed	5,00,000
Total investment (₹/annum)	5,55,000
Depreciation of shed @ (5%)	25,000
Depreciation on a animal purchase @ (10%)	5,500
Investment @ (12%)	66,000
TFC (₹/day)	239.72



Fig. 4. Piggery integration with fish rearing

Table 2. Total Variable cost incurred in pig rearing

Variable cost (TVC)	₹/day
Feeding cost	1500
Veterinary cost	40
Labour charges	300
Miscellaneous	160
TVC (₹/day)	2,000
Total cost (TC) (₹/day)	2,239.72

production of guava orchard was sold out in ₹ 100,000 only. Further, he got 17-18 quintal yield of shatawari which was sold at ₹ 12,000/quintal (dry product), hence about ₹ 2,04,000 he earned from shatawari in 1.6 years. Besides these, small scale production of vermicompost made of cow dung is applied in the orchard which is the beginning for him to move towards organic agriculture.

Shri Tej Bahadur Gangwar was honoured by the Minister of State (Independent Charge) Shri Santosh Kumar Gangwar (Fig. 5).

Employment

His pig entrepreneurship has created employment opportunities for the youth in his own village. He has employed a youth, only for half-day, in his pig farm and paying the salary of ₹ 8,000/month for the various operation on pig farm. Shri Tej Bahadur along with his son, who is Bachelor in Commerce, is also engaged in performing various operations on pig enterprise.

Conclusion

Running a pig enterprise, Shri Tej Bahadur's life has changed in ways of getting good profit, better income besides high level of social status in village, farming community and among the line departmental officials. He is planning to convert guava orchard into organic and also wish to start goat farming and cultivation of Mosambi (sweet lime) in two acres of land to have more avenue of entrepreneurship at the village level. He will also introduced, in his pig

Table 3. Income measures

Items for total revenue	Total no. of sale	₹/annum
Selling of piglets (Rs 2700 per piglet)	250	6,75,000
Selling of adult pig (₹ 112/kg)	60	15,00,000
Total return/annum		21,75,000
Total return/day		5958.90
Gross margin (₹/day)		3,958
Net income (₹/day)		3718.28
B:C Ratio		2.8
Profit margin		62.40%



Fig. 5. Achievements of Shri Tej Bahadur Gangwar

farm, the new variety of pig i.e. *Landilly* developed by ICAR-IVRI. He is one happy pig farmer who is definitely content with his work and is determined to see himself doing more progress day by day. On an average two youths/farmers visit his farm weekly to seek his advice for establishing the pig enterprises. He is a source of inspiration for the youth whom he encourages not to just lean over government jobs when they can wonderfully start their own enterprise. He said that this all would not have been possible without his son Shri Pradeep Gangwar who left his private job to assist him in this enterprise. But, despite achieving success in his endeavour, it has not been a smooth journey. He was

strongly opposed for his decision and actions by the villagers but now having succeeded, he has become an inspiration and job creator for the rural youth. He has been awarded by ICAR-IVRI for his venturesome in scientific agriculture and piggery which has driven him to further achieve the impossible. A video film has also been made on him covering pig enterprise and is available on YouTube (<https://www.youtube.com/watch?v=j885tFYvqHg&t=129s>) which has been viewed by 9792 viewers in a year.

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