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Review Article

PIG FARMING IN HARYANA: A REVIEW

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Abstract: To meet the demand of ever growing population and nutritional security of the nation, an integrated approach for livestock farming is always needed. Pig farming in this regard is an indispensable component. As pig, next to broiler is most potential source of meat producer and more efficient feed converters as it can utilise wide variety of feed stuffs *viz.* grains, forages, damaged feeds and garbage and convert them into valuable nutritious meat. Contrary, slow growth of indigenous pig, religious taboo, lack of knowledge among farmers and poor infrastructure, hinders this farming. Although Haryana has greater significance for piggery enterprise because of its proximity to Delhi market, yet this enterprise as compared to other livestock enterprises in the state could not get the wider adaptability due to lack of knowledge about its production parameters/economic feasibility. So efforts are going on in government level to boost up the said enterprise.

Keywords: Livestock, Pig farming, Haryana, constraint, organisations.

Pig Farming: An overview

Ever growing population and nutritional scarcity put a great threat to the nation and the challenges faced by our country in solving these issues need an integrated approach for livestock farming. There was a decline in the per capita output of grain between 1970s and the first decade of the twenty-first century due to slowing down of the growth rate of food grain production. It emphasizes increased role of animal protein in human diet in present context (Anonymous, 2010). Further, to supplement animal protein to economically weaker and socially backward section of society, pork is the best option due to cost factor. During the last 40 years, global pork production increased about 3.5 times, from 24.7 million ton in 1961 to 86.6 million ton in 2002 (Hartog, 2004). In India also the pork production has increased from 0.204 MT (2007-08) to 0.236 MT (2009-10) (BAHS, 2010). It is projected that there will be great demand and growth for red meat and this growth will be highest in developing countries by 2018 (FAO, 2009). The growth of pig meat production is expected to be slightly

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higher than for the other meats. So, pig has enormous potential to address nutritional security issues in India as well as in the world.

There are many evidences which indicate that demand for pork is increasing in the metropolitan areas. Keeping national nutritional security in mind, the present shortfall in pork production in India is 45.45% (NRCP, 2011). Industry sources have indicated that Indian pork imports consisted almost entirely of processed products and estimated that annual imports on a calendar year basis were approximately 150 tons annually (Wright, 2011). If the deficiency is not met through appropriate technological support the gap is to be widened to such an extent that the country might be forced to import more pork by 2030. Overall Indian scenario if picturised, the pig farming constitutes the livelihood of rural poor belonging to the lowest socio-economic strata and they have no means to undertake scientific pig farming with improved foundation stock, proper housing, feeding and management. Sources reveal that there are various reasons for the slow growth of pig and pork production and majority are due to its adoption by socially and economically backward people, religious taboo, lack of knowledge among farmers and poor infrastructure.

Specifically speaking for Haryana traditional system of rearing local pig breeds, production pattern, housing of animals under insanitary conditions in the sheds, improper housing (either over crowded or over spacious as well as improper orientation) pose serious threat to pig farming in the state. Besides, several constraints such as technical, institutional, market infrastructure, veterinary health care, financing, insurance, etc. keep pig farming of Haryana in its underdeveloped stage (Jain and Pandey, 2000). Therefore, suitable measures are to be adopted to popularise the scientific pig breeding cum rearing of meat producing animals with adequate financial provisions are necessary to modernise the Indian pig industry and too for the state to improve the productivity of small sized rural pig farms.In view of the importance of pig farming in terms of it's contribution to rural poor and possible potentials for pig rearing in our country, Government of India has initiated measures to promote the pig farming on scientific lines under it's five year plans and constantly promoting to the states for its modernization. Also piggery husbandry need due attention at policy as well as technology levels for their promotion in the state for livelihood and nutritional security.

Present status/statistics: The state vis-à-vis The nation

The 2012 livestock census pegs the pig population of the country at 10.29 million animals. Between 2007 and 2012, this population has grown at a declining rate of -7.54% in our country. As far as Haryana is concerned, the total number of pigs as per census 2012 is 0.12

million numbers and contribute a meagre 1.44% to total livestock of the state as dairy is the prime animal business activity of the farmers. There is a 4.93% decrease in number of pigs during the inter censuses period (2007- 2012). But interestingly the number of exotic/crossbred pigs has shown a positive growth of 12.07% though indigenous pig population has a growth rate of -13.4% during the same period (2007-2012). The number of exotic/crossbred pig has increased from 0.03 million in 2003 to 0.05 million in 2012 and the number of indigenous pig has decreased from 0.08 million in 2003 to 0.07 million in 2012.

Among different districts of the state, Sonipat has the highest contribution in pig population of 8.79%. The second and third highest contributors are Jind and Rohtak with share pig population of 8.61% and 8.58%, respectively. Mahendragarh, Sirsa and Pachkula districts are towards the bottom of the share of pigs to the state. Rohtak is having the maximum population of crossbred pigs followed by Karnal, Sonipat and Kaithal. Likewise, indigenous pig population is highest for Jind followed by Hisar, sonipat and Kaithal districts. Number of pigs per thousand households are highest for Rohtak which is 52 and lowest for Sirsa (6).

The total meat production in the country is reported as 6.23 million tonnes in the year 20013-14 and pork contributes nearly 9% to total meat. But for Haryana, Pig meat shares a meagre 1.25% to the total meat in the state, leads by the poultry meat (96%). But comparing the growth in the meat production, the country shown a growth of 4.83% in 2013-14, the state in the same year showed a better growth of 5.46% (0.347 million tonnes in 2012-13 to 0.366 million tonnes in 2013-14) than national average. But coming to the growth of pork, the state (4.78%) lies far below than the national (7.27%) average. States/UTs-wise variation in terms of production of meat from Pig if concerned, meat production from pig is highest in the State of Uttar Pradesh with 0.173 million tonnes per year while Haryana stands far a way (16^{th} position) with only 4.60 thousand tonnes of pork. This indicates the state farmers are probably more interested in poultry meat production owing a very less pace in the growth of pork.

Piggery enterprise in Haryana

Haryana agriculture is mainly characterized as "crop cum-bovine agriculture". Since long, animal husbandry especially dairying remained as a back bone to the farmers' of Haryana state. Of late, poultry, sheep, goat and pig rearing are also gaining importance due to subdivision and fragmentation of land holdings. As already it is mentioned, the growth of pig as a meat animal is very meager as compared to the growth of other meat species in Haryana,

however, the state has greater significance for piggery enterprise because of its proximity to big Delhi market. For the last couple of years due to the expansion of NCR region, pig farming gained momentum as there is a handsome collection of profit due to availability of swill feed at a very low cost and off course proper disposal.

As per a survey (Jain and Pandey, 2000) the scheduled caste people of Haryana generally adopts the piggery farming to a great extent, and they were mostly in the category of landless without utilizing hotel wastes. Though this farming is mainly confined amongst SC farmers but farmers belonging to forward caste group (Jat, Punjabi, Sikh, Rajput, Ror and Brahmin) also adopt pig farming in the state. Report also states that forward caste farmers (65.6%) are adopting piggery as a prime enterprise for livelihood and income followed by schedule caste (26.2%) and backward caste farmers (8.2%). A majority of pig rearers from all castes, however, belong to the small farm category (farm having less than 11 sows) followed by medium (11-15 sows) and large farms (more than 18 sows).

Few reports also reveal that both landless and land holders adopts piggery enterprise in the state with the later being managing the farm in a scientific way. Further more, the size of piggery enterprise has considerably increased amongst land-holders as the size of land increases. Out of these pig rearers, a few have also utilized hotel wastes to reduce the feed costs by maintaining proper contracts with the hotel owners. Furthermore, amongst land-holders the adoption behaviour of piggery enterprise by the non-scheduled caste people is quite appreciable. A large chunk of the strata for pig rearing clearly indicates that forward caste farmers are financially more sound to adopt scientific way of rearing and because of awareness amongst educated rural youth about this growing enterprise.

Constraints of pig farming in Haryana

The various socio-economic and other constraints which affect the adoption of piggery enterprise in Haryana include institutional loan (as it is only disbursed to the scheduled castes), inadequate availability of swine fever vaccine and veterinary services, lack of proper market infrastructure both for inputs and output. These farmers also receives inadequate trainings and technical knowledge, non-scheduled castes faced problems regarding the dependable labourers (while scheduled caste people specialise the job), other social considerations (as relatives and friends dislike this occupation), nonavailability of balanced and subsidised feeds. As per the report of Jain and Pandey (2000) the housing conditions in most of the piggery farms are not properly planned and as such do not meet the prescribed standards. Insanitary conditions are mostly prevailing in the sheds. Feeding and

floor spacing are not proper (either over crowded or over spacious) and lacked in orientation. The construction of some houses is rather very costly, indeed housing can help in providing good management for production of high quality pigs. The duration of training and the level of technical knowledge is inadequate. In piggery units heavy losses are due to both the non-adoption and lack of knowledge about livestock insurance. Even, amongst the insured cases, the full claim was not given to pig rearers. Most pig farmers of the state complain that the business has no certain market in Haryana and adjoining states. They are worried about the future of their business in the absence of proper support from the government, including adequate marketing facilities and the needed infrastructure. They demand feed at subsidised rates.

Keeping in view the various constraints in pig farming, concerted efforts are needed by the administrators/policy makers to give proper thrust for development of piggery enterprise in the state. Furthermore, comprehensive training on feeding, management and health care of pigs specially practical oriented should be imparted by the different institutions/government departments from time to time. The policy implications of these findings are that the concerted efforts are needed to devise the low-cost feeding technologies and dissemination of such technologies, reduction of the mortality rate amongst piglets by providing better health care as well as feeding and management, and enhancing the litter size of sows by adopting proper breeding and reproductive management practices. Schemes are also in operation by the state government for wide spreading the pig enterprise as source of livelihood.

Scope of piggery in integrated farming system

Though most of the people in Haryana are vegetarian, but it stands 2nd in fish productivity in our country due to hard efforts of the farmers of the state. As to make the fish farming more profitable low cost enriched feed is required which can best be exploited from the Pig-Fish integrated system where pig dung will serve the best way as a input for fish farming. The pig dung as an organic manure for fish culture has certain advantages over cattle manure. The waste produced by 20-30 pigs is equivalent to one ton of Ammonium Sulphate applied to the soil. The pigs are fed largely on kitchen waste, aquatic plants and crop byproducts. At present, fish-pig integration is practiced in all the developing countries. The pig sties should provide adequate protection from adverse weather conditions as modern piggeries include mostly the exotic breeds. A run or courtyard adjacent to the pig house is essential. The size of the pig house depends on the number of pigs to be reared. Floor space is provided @3-4 m^2 for every pig weighing 70-90 kg. The pig sties are built mostly at the pond

sites and even over the ponds. The washings from the pigsties containing dung and urine are either channelised directly into the pond or composed before its application. The boars, sows and finishing stocks are housed separately. Maize, groundnut, wheat- bran, fishmeal, mineral mixture provide base for concentrated feed mixture. In advanced countries, garbage is widely used to economize pork production and provided after pre-cooking when pig dung is applied to a pond. It enhances the biological productivity of the pond. A portion of dung is directly consumed by some fish also. The excreta voided by 35-40 pigs is found adequate to fertilize one hectare of water. Integrated fish-pig farming is a viable and feasible scientific approach to augment fish production at low cost.

Integrated farming systems with fishery as a component are still in a pre-adoption stage in Haryana. The State Government may establish model integrated farming units with piggery which complement one another and effectively utilize available resources. The farmers may be incentivized to opt for integrated farming systems.

Government institutions for pig farming in Haryana

State government of Haryana has basically two Pig breeding farms located one at Hisar and other at Ambala city. The Government Pig Breeding Farms, Ambala and Hisar, not only supplied the piglets of exotic breeds (Yorkshire and Landrace) to the pig rearers but also imparted short duration training to them. The production parameters of pigs maintained at these farms also provide milestones to the pig rearers towards the adoption of this enterprise. The state Government provides swine fever vaccines, exotic breeds of pigs to the rearers from Government Pig Breeding Farms of Ambala and Hisar; and subsidized loan.

The Krishi Vigyan Kendra, a research centre at Tepla village near Ambala, has played an important role in increasing pig rearing business in rural areas by providing a two-week training on pig production and management to un-employed youth, apart from providing good quality piglets to farmers, breeding services to people in business, helping farmers to make feeds and providing infrastructure to them.

Long back in 1960s and 70s, the then College of Animal Science (Initially under PAU and then part of HAU) maintained a good stock of Middle White Yorkshire, a very suited English breed to local environment, for research and training purposes. Various nutritional and managemental works had been carried by researchers and scientists in pig nutrition (Vidya Sagar, 1967 and Satyaprakash, 1974).

Policy and legislation impacting Pigs

On the national level, the Indian government, through the National Bank for

Agriculture and Rural Development (NABARD), has a loan facility for agribusiness projects like a pig farm or a meat-processing enterprise. Pig farms in the country are classified into commercial and non-commercial. Those in the commercial category qualify for up to Rs. 10 million in loans, provided they can put the required collateral. The non-commercial category, on the other hand, involves pig-breeding projects for the low-income segment of the population. These projects are more of dole-outs than anything else. Some states also have their own incentive programs for the livestock industry. Haryana for example, offers up to 50 percent in subsidy to pig farms with national government loans, on top of other concessions in the purchase of sheds, feeds, piglets, etc. For the non-commercial sector, the government subsidizes up to 30 percent of the cost of these materials. The government also picks up the tab for up to 50 percent of the cost of vaccine for the farm animals. (Bhardwaj 2008).

Haryana government has also launched schemes for providing employment opportunities to the scheduled caste families for different livestock units including pig. Under Special Component Plan Scheme, the government is promoting to establish the piggery enterprise as under medium term objectives to provide self employment, to raise the socio economic status of the SC families. Also the budget are allocated to establish the mini piggery unit (5 sows:1 boar) under annual objective plan. The said scheme is credit based for which Commercial banks under Agricultural finance the commercial units. The department holds 11 days training regarding piggery at every sub division in the state for the interested farmers to start up piggery as an enterprise.

Conclusions

Pig farming has a special significance and plays an important role in improving the socio-economic status of a sizeable section of the weaker community. Although Haryana has greater significance for piggery enterprise because of its proximity to Delhi market, expansion of NCR, establishment of multi national companies, availability of handsome amount of kitchen waste etc. Yet this enterprise as compared to other livestock enterprises in the state could not get the wider adaptability due to lack of knowledge about its production parameters/economic feasibility. So every efforts are needed in all sectors including conjoint involvement of the state government, the university, the farmers', different industries concerned with pig and its product, there is no doubt about that our state becomes a prominent hub for the piggery enterprise in near future.

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