
A Review on Organic Livestock Farming

Vijay Pandey, Deepak Kumar

Department of Zoology, CCS University, Meerut, Uttar Pradesh, India

ABSTRACT

Organic livestock farming has set itself the objective of establishing environmentally friendly production, sustaining animals in good health, realizing high standards of animal welfare, and generating high-quality goods based on production guidelines. Organic cattle farming satisfies the desires of a growing number of consumers who are critical of conventional production methods by working toward these objectives. The paper provides a summary of the current state of the art for the various issues. The basic principles of organic farming are presented, along with the opportunities and constraints for achieving one's own goals. The fundamental principles of organic farming are suitable to significantly minimize environmental contamination and nutrient losses on the farm level in terms of environmental protection. Regarding the health of dairy cows in both organic and conventional dairy farms, comparative studies show that currently there seem to be no fundamental differences between the production methods. In terms of animal welfare, organic livestock farming offers a number of prerequisites for healthy living conditions for farm animals. It is based on minimal criteria that go beyond the requirements of the law. There isn't much proof that the production process has an impact on product quality that is tied to the system. Conclusion: The advantages of the fundamental criteria are primarily related to environmentally friendly production and the concern for animal welfare, whereas the concerns for animal health and product quality are more influenced by the individual farm management than by the production process. The idea that organic livestock production places additional demands on the management of the farm, including a larger chance of failure, is supported by data. Consequently, quality control initiatives.

Keywords: *Organic livestock farming, environmentally friendly production, Animal health, Animal welfare, Product quality*

INTRODUCTION

Organic livestock farming is one among various farming systems that are close to nature & ethics. The use of veterinary drugs & synthetic products in conventional animal farming is continuously increasing the threat to human health. Organic livestock farming method is a land-based activity. In order to avoid environmental pollution, particularly natural sources such as the soil & water, organic production of livestock must in principle present for a close relationship between such production and the land. Organic livestock farming not only proves to maintain health & welfare of animals. But is also playing an important role in providing benefits regarding the health of consumers, profit to the producers and sustainability of the environment. Certified organic animals are generally reared by feeding on pastures, fully organic nutrition is provided that is grown and processed by avoiding the use of synthetic pesticides & herbicides. Animals are reared without the use of any genetic modifications & antibiotics or artificial hormones are allowed only when no other option is available that too to a limited extent [1]. The demand for organic livestock farming is increasing tremendously with the attendant expansion of organic livestock product markets. The presence of developing countries like Brazil & Argentina in exporting the organic livestock products

provides welcome opportunities for the other developing countries like India. In order to increase export of organic livestock farming products and develop strong domestic markets a lot of challenges must be overcome by the developing countries [2]. Organic livestock farming has a greater demand & scope in the present global scenario due to more focus on sustainability. Despite its benefits, there are several debatable questions like the circulation of disease organisms, use of medicines & management, etc. regarding organic livestock farming in which further research & re-consideration is needed [2].

Characteristics of Organic Livestock Production Systems

Organic livestock management shall aim to use natural breeding methods, minimize stress, prevent disease, progressively eliminate the use of chemical allopathic veterinary drugs, and maintain animal health & welfare [3].

Breeds and Breeding

There is a large range of organic farming enterprises. There are farms that focus on scale economies & maximum production efficiency per animal or per hectare. Other farms focus on product quality, self-sufficiency, direct marketing or niche market, etc. These different types of farms may need livestock breeds with different characteristics. At present, organic farmers worldwide keep livestock according to circumstances where breed choice has been based on information from conventional production systems. Such livestock could not be optimally adapted to an organic, low-input farming system [3].

When animals are genetically adapted to specific or extreme conditions, they will be more productive and production costs will be lower. Also, selecting breeds suitable for the local environment will also safeguard animal health and welfare. Production in intensive systems is associated with high-energy concentrate feeding & regular, prophylactic veterinary treatments and the use of exotic livestock breeds. Livestock breeds developed for use under these circumstances. Organic forage-based livestock systems may need special breeds. Highly productive dairy cows, for example, may endure physiological problems under organic conditions, as they need concentrate [4].

Feeds and Feeding

- 1) Livestock should be fed with 100 percent physically grown feeds.
- 2) More than 50 percent should come from farms or formed in the region.
- 3) Sufficient green fodder must be supplied.
- 4) Sufficient clean & potable drinking water should be provided.
- 5) Use of synthetic growth promoters, synthetic appetizers, preservatives, synthetic coloring agents, synthetic amino acids, emulsifiers, urea etc. is prohibited.

Housing

- 1) Animals should not be caged, tethered in buildings.
- 2) Animals should have enough area to graze.
- 3) Housing must allow sufficient movement.
- 4) The maximum amount of fresh air & daylight should be provided.
- 5) Should be reared in herds or flocks of appropriate size.
- 6) Dry litter material must be used as bedding.
- 7) Group penning is arranged.

- 8) The indoor area is complemented by an outdoor area that must be at least 75 percent of the indoor area.

Prevention of Disease

- 1) Selection of breeds to avoid exact diseases. The indigenous breeds are resistant to most of the disease as compared to exotic breeds.
- 2) Animals should be raised in a manner that promotes good resistance against diseases & infections.
- 3) Availability of good value feed in outdoor areas strengthens the natural immune system.
- 4) Adequate space allowance avoids overcrowding & prevents health problems associated with it.
- 5) Vaccines should be used when diseases cannot be controlled by other management techniques [3].

Treatment

- 1) Avoid reliance upon routine or prophylactic makes use of conventional veterinary medicines.
- 2) Non-allopathic medicines, herbal medicines & methods, including Homoeopathy, Ayurvedic medicine and acupuncture should be emphasized.
- 3) Conventional veterinary medicines are allowed in case of an emergency. If used, the with-holding period for livestock products should be twice the legal essential period [4].

Challenges

Developing countries are already producing a wide range of organic products & many are thriving well. Though, most of them are often faced by a number of constraints, such as:

- 1) Lack of technical know-how, for example, organic farming practices & production methods. In most developing countries, practical support is oriented towards using technologies that can enhance productivity per unit input and time. The practical knowledge, how about organic livestock farming is restricted to private companies that have access to export & limited local markets.
- 2) Lack of market information, for example, which products to grow, which markets & distribution channels to choose, competition, market access. Although most of the population in the developing countries become aware of the health & environmental hazard of inorganic agricultural products, there are no extensive promotion works concerning the negative impacts of these products & initiation of the use of organic ones. In addition, most governments in developing countries are promoting the common conventional production systems which could hamper the market information about the accessibility of organic agricultural products.
- 3) Organically produced foods have to meet strict regulations. Entering this profitable market is not easy. Farmers are denied contact to developed country organic markets for two to three years after beginning organic management since such countries will not certify land & livestock as organic before that time, arguing that it is essential for the purging of chemical residues.
- 4) Intensive management & this is why farming is mostly done on a smaller scale.
- 5) Organic farming is still faced with the difficulty of higher labor input in its operation. Other studies show that the major reason why organic farming requires more labor is to carry out manual & mechanical tasks essential to growth. The preparation for sale on the farm or on the market involves more labor on organic holdings. In fact, this could be a

challenge to organic livestock farming because of the rising flow of the labor force from rural agriculture to urban areas where they could enjoy a better payment.

- 6) Organic farming is still hampered by the requirement of clarity: Consumers were not always sure about what was actually covered by organic farming and the restrictions it implied. The reasons for the confusion lay, among further things, in the existence of a number of different “schools” or philosophies, the need of harmonized terminology, the nonstandard presentation of products & the tendency to blur the distinctions between concepts such as organic, natural, wholesome & so on. The situation was worsened by cases of fraudulent utilize of labeling referring to organic methods. In the future, organic livestock products will gain contact to lucrative local markets because of the growing income, urbanization & the increasing demand of animal products and these together with the information on the inclination to the requirements of organic livestock products, will make opportunity for the deceitful use of labeling [5].

Factors Influencing Organic Livestock Farming Success

Regulation and certification bodies:

With regard to the legislative side, it is extremely important to note that regulations on organic production embrace a wide variety of organic farms; they agree to use different animal breeds, structures, agro-ecosystem management, feeding strategies, & marketing strategies. As a consequence, organic the livestock farm’s success & perspectives are really different from one place to another. For example, found that the situation in North Germany was in contrast to the region in the south, where the variability of amount & proportion of the different feed types is predominantly independent of the milk yield. Many factors form these differences, such as the ecosystems on which farms are based and consumers’ demands & willingness to pay [5].

Animal nutrition: Legislation and market

Animal nutrition constitutes the main pillar of organic livestock production. Therefore, found that feeding strategies among Wisconsin organic dairy farms were the main determinants of herd milk production and income over feed costs. This could serve current organic farmers & transition farmers when considering feeding management changes needed to meet organic pasture rule necessities or dealing with dietary supplementation challenges. In relation to organic feedstuffs, the mainly important obstacles are the difficulty to find them & their prices. This situation is forced by the farms’ high external dependence of feedstuff due to the decoupling between crops & livestock. These facts decrease the organic livestock farms’ adaptability, & their access to feed additives and materials of high quality. As a result, the organic livestock farming sector faces a big challenge that, along with other factors, has to lead to a situation characterized by organic livestock farms without organic products, which decreases their profitability & future perspectives of success. This has been observed also in beef cattle, dairy cow farms, or other species. One possible result of overcoming this barrier would be the use of local agricultural by-products for animal nutrition since their price is generally low, and according to, they allow adding to their economic value, while providing an environmentally sound technique for disposal of the by-product materials. Moreover, it would lead to either an increase in the incomes for the organic business that sells such by-products or a decrease in the expenditure related to their disposal [5].

Opportunities for Organic Livestock Farming in Developing Countries Acceptance by Consumers:

Most consumers wish organic foods because they declare it is tastier, as well as healthier both for themselves & the environment. Consumers are ready to pay additional for organic products. Another reason for Organic products prominence is the opposition to genetically customized food. Under organic livestock production process, consumers expect organic milk, meat, poultry, eggs and leather products, etc. To come from farms that have been inspected to prove that they meet rigorous standards, which permit the use of organic feed, prohibit the use of prophylactic antibiotics & give animal contact to the outdoors, fresh air and sunlight [6].

Consumer demand for certified organic products is mostly concentrated in North America & Europe with the two regions contributing 96 percent of global revenues of certified organic products. Besides a large variety of organic crop products, major livestock products sold are eggs & dairy products. Even though there is less availability & lack of certification process of organic livestock products in developing countries, most of the people, particularly those living around urban areas in are aware of the beneficiary aspects of organic products & thrive to use these products for consumption. Once if the government of these countries endorses organic livestock farming as a policy and if awareness formed & technical assistance is provided among the communities of both urban & rural areas, people tend to produce more of the organic livestock products so this will increase the supply & compensate the price of products [6].

Encourages Biodiversity

Organic livestock farming provides energy for microbial activity & this has been suggested as an indicator of change for soil properties because the size & activity of the microbial quotient is directly related to the amount & quality of carbon available. Organic livestock farms often explore biodiversity than conventional farms since it is usually with more trees, a wider diversity of crops & many different natural predators, which control pests & help prevent disease [7].

Livestock farmers could tend to think of insects as pests

mosquitoes & various flies come to mind. Yet dung beetles & other similar insects help to take manure into the soil, where it feeds the microorganisms & eventually the pasture plants. Pollinators that assist the ecosystem function are beneficial to livestock & insects are vital to the food chain. You can encourage insects by having a diversity of flowering plants & by not using broad-spectrum insecticides [7].

Benefits of Organic Livestock Farming

- 1) Environment: Organic farmers & ranchers use practices that reduce impacts on the off-farm environment. They implement plans to avoid manure runoff, instead of using compost as fertilizer it to conserve nutrients. As well, farmers use sustainable practices such as crop rotation & cover crops to maintain soil fertility and protect soil & water quality.
- 2) Animal health: Pasture-based diets develop ruminants' digestive health, making the rumen less acidic. This lower acidity increases the number of beneficial microorganisms that help ferment ruminants' high-fiber diet. Pasture-based systems have been exposed to reduce hock lesions and other lameness, mastitis, veterinary expenses, & cull rates.

- 3) Although livestock is generally the last part of the farm to be certified organic, they are often central to the farm & can contribute to its success. Livestock plays an even critical role in organic farms than they do on conventional farms.
- 4) Nutrient cycling: a process in which nutrients are returned to the soil through manure & compost. Amending soils with animal manures can increase microbial biomass, enzymatic activity & alter the structure of the microbial community.
- 5) Incorporation of feed crops, such as alfalfa, grasses into crop rotations assists to build soil organic matter. Increasing cropping options, adding diversity of the agro-ecosystem.
- 6) Weed control: feed crops can be used to suppress & control weeds and animals can be used to graze out weeds on crops or pastures [8].

Steps required for Certification

- 1) The local certification group has to be contacted to know their standards as they vary from area to area & type of production.
- 2) Study the standards & check by the certification agency if there is anything that is not clear.
- 3) Submit a completed application & fees to the certification agency. Confidentiality is secure.
- 4) The certification agency's certification group will consider the application & if anything is in order, will hire a third party inspector to create an on-farm assessment periodically.
- 5) The inspector submits a comprehensive report & committee member's made a decision based on the report & sells products as 'certified organic'. Some agencies charge licensing fees & have official stickers or labels, which may be purchased.

The followings are the National Standards for Organic Livestock Production (NSOLP) In India [10]:

- 1) Landscape
- 2) Fertilization Policy
- 3) Animal husbandry management
- 4) Length of the conversion period
- 5) Brought –in Animals
- 6) Breeds & Breeding
- 7) Mutilations
- 8) Animal Nutrition
- 9) Veterinary Medicine
- 10) Transport and Slaughter

CONCLUSION

Since organic livestock rearing and organic livestock products preparation are yet to take a leap in India, there are possibilities of entrepreneurial opportunities in all spheres of the organic value chain, right from production through certification, value addition, marketing and consumption.

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