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RESEARCH ARTICLE

COMPARISION OF ORGANIC DAIRY STANDARDS WITH THE PRACTICES FOLLOWED BY THE FARMERS

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ABSTRACT

Organic Dairy Farming is a way for increasing the export of dairy products and also to strengthen the rural farmers. India the number one milk producer in the world, to compete in the global market India has to improve its standards and quality systems. To provide a focused and well directed development of organic agriculture and quality products, Ministry of Commerce and Industry, Government of India, launched a National Program on Organic Production (NPOP) in the year 2000, which was formally notified in October 2001 under the Foreign Trade and Development Act (FTDR Act). But this has to be hastened and standardized form the very beginning by clear policy support and strategic direction from the Government of India. As, India has the potential to explore in the organic dairying, as more than 70 per cent of the practices followed by the farmers are as per organic production standards except for some of the requirements like feeding organically certifiable feed to animals, maintaining records, maintaining animals in organic holding since its birth, providing bedding materials, providing animals vitamins, trace elements and supplements from natural origin are to be fulfilled.

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INTRODUCTION

Organic dairy farming postulates raising of animals on organic feed i.e, pastures cultivated without the use of fertilizers or pesticides, along with the restricted usage of medicines, antibiotics and hormones. Though organic is in built under Indian system of farming, the certification norms prescribed by different recognized agencies found to be mandatory. Farmers are rearing the livestock in traditional manner which has close resemblance with the organic dairy farming standards. There was no conscious effort on the part of farmers to rear livestock as per organic standards. In fact, the most of the Indian farmers were not even aware of the organic concept 'per se'. Farmers of marginal, small and semi-medium operational holdings own about (87.70 %) of the livestock and the low external inputs based Indian dairy sector has better prospects to transform to organic production since majority of Indian farmers are following organic farming not by choice but by default. There is a wide scope for India to prosper in the global organic market as already exports are being done with the products like skim milk powder 44.07%, milk fats and butter 35%, whole milk powder 8.14%, cheese and fermented products 2.93%, processed cheese 2.81% and whey and other products 2.04% to the countries like UAE, Bangladesh, Nepal, Philippines, Egypt, Yemen and Saudi Arabia etc (Joshi, 2013). The market for organic foods is growing at a Compound Annual Growth Rate (CAGR) of 20 to 22 % with 2000 organic outlets operated by farmers and NGO's (Organic Trade Association, 2012). The Agriculture and Processed Products Exports Development Authority (APEDA), Indian Council of Agriculture Research (ICAR), State Agricultural Universities (SAUs), State Departments of Agriculture, State Department of Animal Husbandry coupled with the NGO's, are now working towards promoting organic production.

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MATERIALS AND METHODS

The present research study was conducted in Telangana State, Medak district was purposively selected for the study as it is having Deccan Development Society (DDS) an internationally known NGO, which is promoting organic farming. Thus, the dairy farmers of the selected district got sensitization about organic dairy farming.

Three mandals were randomly selected for the study, from which four villages were selected randomly and from each village 10 farmers were again selected randomly, constituting total of 120 farmers. An interview schedule was developed in accordance with the National Standards for Organic Production (NPOP) developed by GOI which consists of 26 practices, and the farmers were interviewed about the practices they followed and the research observations were recorded which were compared to organic production standards. To quantify the dairy farming practices followed by the respondents in comparison with the organic dairy farming standards, the overall response regarding each practice was put on a 2 point continuum.

Organic dairy farming practices which were followed recorded as 'practiced' and which were not followed as 'not practiced' and score of 2 and 1 were allotted respectively, and the comparison is measured in terms of frequencies and percentages.

RESULTS

Behavioural needs of the animal

From the table 1, it was clear that Majority (80%) provided 'sufficient fresh air, daylight and resting area', (49.17%) protected 'against adverse weather conditions', (38.33%) fulfilled the 'biological and ethological needs', (24.17%) made

Table 1. Comparision between organic dairy farming standards and farmers practices
n=120

S.No.	Practices	Organic dairy farming standards	Practiced F (%)	Not practiced F (%)
I) Behavioural needs of the animal:				
1.	Movement of animals	There should be provision of sufficient free movement	29 (24.17)	91 (75.83)
2.	Resting area	Enough lying and/or resting area should be provided according to the needs of the animal	96 (80.00)	24 (20.00)
3.	Bedding material	Required bedding materials, shall be provided	12 (10.00)	108 (90.00)
4.	Air and daylight	Sufficient fresh air and natural daylight according to the needs of the animals should be provided	97 (80.83)	23 (19.17)
5.	Weather conditions	Animals should be protected against adverse weather conditions	59 (49.17)	61 (50.83)
6.	Natural behaviour	Adequate facilities shall be provided for expressing behavior in accordance with the biological and ethological needs of the species	46 (38.33)	74 (61.67)
II) Feeding:				
7.	Drinking water	Ample access to fresh water according to the needs of the animals	106 (88.33)	14 (11.67)
8.	Grazing	All animals shall have access to open air and/or grazing appropriate to the type of animal and season taking into account their age and condition	58 (48.33)	62 (51.67)
9.	Feeding strategy	Animals should be fed adequately with balanced diet in a form allowing them to execute their natural feeding behaviour and digestive needs	50 (41.67)	70 (58.33)
10.	Feed	All animals should receive 100% organically certifiable feed. If certain feeds are not available then 10-15% conventional feed are allowed.	0 (0)	120 (100)
11.	Source of feed	More than 50% of feed shall come from on-farm or be produced within the region	98 (81.67)	22 (18.33)
12.	Vitamins	Vitamins, trace elements and supplements shall be used from natural origin	19 (15.83)	101 (84.17)
13.	Cultivation of fodder	No specific standards but all animals shall have daily access to roughage	27 (22.50)	93 (77.50)
14.	Synthetic products etc.	Use of Synthetic growth promoters or stimulants, Synthetic appetizers, Preservatives, Artificial coloring agents, Urea, farm animal by-products to ruminants, animal manure or Droppings, dung, solvent extracted feed, Pure amino acids Genetically engineered organisms are not allowed.	115 (95.83)	5 (4.17)
III) Breeding:				
15.	Origin of animals	All the organic animals should be born and raised on the organic holding. When organic livestock is not available animals could be brought from conventional farm at certain age: 4weeks old calves fed with colustrum & mainly whole milk.	10 (8.33)	110 (91.67)
16.	Source of breeding stock	Breeding stock may be brought in from conventional farms at an annual rate not exceeding 10% of the adult animals of the same species in the farm.	28 (23.33)	92 (76.67)
17.	Breeds	Breeds should be chosen which are adapted to local conditions.	91 (75.83)	29 (24.17)
18.	Reproduction method	Reproduction should be natural or AI	75 (62.50)	45 (37.50)
19.	Use of high technological methods in Reproduction	Breeding shall not include high technological methods like embryo transfer, hormonal heat treatment, use of genetically engineered species/breeds	108 (90.00)	12 (10.00)
IV) Health care:				
20.	Treatment for sick and injured animals	Sick and injured animals shall be given prompt and adequate treatment	87 (72.50)	33 (27.50)
21.	Type of treatment	Natural medicines and methods, including homeopathy ayurvedic medicine and acupuncture, shall be emphasized	46 (38.33)	74 (61.67)
22.	Vaccination	Vaccine shall be used only when diseases are known or expected to be a problem in the region of the farm and where these diseases cannot be controlled by other management techniques.	72 (60.00)	48 (40.00)
23.	Hormone	No hormone should be used, except for treatment of individual animal	116 (96.67)	4 (3.33)
V) Others:				
24.	Mutilation	Mutilations are not allowed. The certification programme shall allow the exceptions like Castrations, Dehorning	112 (93.33)	8 (6.67)
25.	Record keeping	All records of the farm in details including the receipts should be kept	2 (1.67)	118 (98.33)
26.	Draft animal	Draft animals must be well cared, must be used in a humane manner that cause least possible stress and suffering. There should be maximum and m1inimum age, no over work or overloading.	106 (88.33)	14 (11.67)

provision of 'free movement', only (10.00%) of farmers provided 'bedding materials'. The farmers rear the animals in semi-intensive system is the reason for the above trend. Subrahmanyeswari and Chander (2008a), Borell and Sorensen (2004) and Pathak and Chander (2002).

Feeding

It was confirmed that, majority (88.33%) of respondents provided 'ample access to fresh water', (81.67%) '(>50%) of the feed should be provided from on-farm or within the region', (48.33%) had 'access for grazing', (41.67%) 'provided balanced diet to the animals', (22.50%) provided 'daily access to roughage', only (15.83 %) gave 'vitamins, trace elements and supplements from natural origin', (95.83 %) did not used 'synthetic products', none of them gave '(100%) organically certifiable feed'. The farmers always prefer to feed animals traditionally with the available feed inputs in their farm rather than buying a commercial feed, was the reason for above trend. Vetouli *et al*. (2012), Subrahmanyeswari and Chander (2008c) and Pathak and Chander (2002).

Breeding

75.83 percent reported that 'breeds are adapted to local conditions', (62.50%) 'reproduced through natural breeding or AI'. (23.33%) 'breeding stock may be brought in from conventional farms', (90%) 'reproduction shall not include high technological methods', as none of the farms are in organic holding (8.33%) of the farmers brought the calves at 4 weeks from conventional farm. Most of the farmers reared indigenous breeds which were readily adapted to local conditions and their inclination was towards natural service were the reasons for above trend. Subrahmanyeswari and Chander (2013), Subrahmanyeswari and Chander (2008c) and Pathak and Chander (2002).

Health care

72.50 per cent provided 'prompt treatment to sick and injured animals', (60.00%) followed 'vaccination schedule', (96.67%) did not used 'hormone treatment', (38.33%) used natural medicine. The above trend might be due to the farmers utmost care to animal health care, prevention of diseases through availing government provided vaccinations and treating the animals by the indigenous traditional knowledge which is followed since ages. Subrahmanyeswari and Chander (2008c), Pathak and Chander (2002), Sutherland *et al*. (2013).

Others

The respondents (88.33 %) opined that 'draft animals must be well cared', only in large farms 'mutilations are carried out' by 6.67 per cent (Pathak and Chander 2002). Only (1.67 %) 'maintained records' who were carrying out dairy farming at large scale.This may be due to illiteracy. Lokhande *et al*, (2012) and Pathak and Chander (2002).

DISCUSSION

Integrated Farming

Majority of the farmers practiced Integrated farming system with 78.30 %having small and marginal land and 70.83 % of animals having 1-6 animals. As small land and livestock holding is predominated in India, priority for livestock rearing is for proper utilisation of farm by products and nutrient recycling and meeting the nutritional requirement of the family rather than marketing.

Awareness

Farmers should be made aware that the practices they are following are organic in nature for more than 70% and its demand in the market; with little efforts on their part that is providing bedding material, maintaining records, giving organic certified feed and vitamins, trace elements and supplements from natural origin they can be certified as organic dairy farmers.

Certification

The farmers who are registered in DDS are certified as organic under group certification. They are practicing the traditional farming practices. The farmers due to their illiteracy and lack of knowledge they are not aware that the practices they are following are organic and its demand in the market for organic products. Thus they are not getting remunerative prices for the products, which is discouraging them to go for organic dairy production. Farmers are not individually certified by the DDS. The Government has to take efforts to make the certification process simpler and easier to encourage the farmers to get certified individually. Though dairy has long distance to travel to reach organic dairy standards with the support of Government and stepwise approach it is not impossible. India, being the largest producer of milk in the world, with 127.3 million tones of milk products (2011-12 Animal Husbandry dept), our country can venture into global organic market. The rich livestock diversity, high tolerance to disease and stress offer more opportunities for converting them to organic dairy farming as more than 70% of the practices followed are as per standards except for some of the basic requirements like feeding organically certifiable feed to animals, maintaining records, maintaining animals in organic holding since its birth, providing bedding materials, providing animals vitamins, trace elements and supplements from natural origin are to be fulfilled.

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