Organic Dairy Farming – A New Trend in Dairy Sector

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Abstract

Organic Dairy farming means raising animals on organic feed (i.e. pastures cultivated without the use of fertilizers or pesticides), have access to pasture or outside, along with the restricted usage of antibiotics and hormones. Products obtained from Organic dairy farm are the organic dairy products. Organic farming is a system of production, a set of goal-based regulations that allow farmers to manage their own particular situations individually, while maintaining organic integrity. In this article, the benefits, conditions required, constraints involved, and managemental practices of organic dairying, along with information about the regulatory authorities concerned with the organic dairy farming were reviewed briefly to make students and farmers aware of organic dairy farming.
Key words: Organic dairy, Eco friendly dairy farming, Organic Milk.

Introduction

The organic movement is built on a fundamental principle: healthy soils lead to healthy crops, healthy animals, healthy humans, and a healthy planet. Organic crop and livestock production focuses on building soil organic matter and biology to create a sustainable, dynamic environment for producing healthy food and feed. The organic farming movement is commonly agreed to have begun in the 1940s in England with the writings of Sir Albert Howard, who learned about organic practices in India during the 1920s[1]. The reasons for producing and purchasing organic food are individual as well as complex. However, most will fall into three categories: health, community, and environment. There has been a growing concern about the conventional dairy form paradigm that relies on synthetic inputs to maximize yields; poses threats to the environment, health.

Concept of Organic dairy forming is a relative newcomer. When compared to organic fruits, vegetables, grains, and some livestock have long been mainstays of the organic movement. Organic dairy surged into the organic marketplace in the 1990s, establishing itself as a major category. [2]

The success of organic dairy can largely be attributed to several critical events, including increased consumer awareness about genetically modified corn, soybean, and other crops treated with an array of synthetic pesticides being fed to livestock; the feeding of slaughter by-products to ruminants and concerns about mad cow disease; and the increased use of synthetic medications including hormones, antibiotics, and steroids—have encouraged many consumers to seek organic dairy products. These consumers have come to rely on the assurances of certified organic dairy as a trusted source of unadulterated dairy products.

Organic dairy products are often viewed as "Gateway Products", in that consumers will make their first forays into organic purchasing by buying organic dairy products, eventually increasing their allegiance to organic products as they become increasingly food savvy. [3]

Defining Organic Dairy

Organic Dairy farming means raising animals on organic feed (i.e. pastures cultivated without the use of fertilizers or pesticides), have access to pasture or outside, along with the restricted usage of antibiotics and hormones. Products obtained from Organic dairy farm are the organic dairy products. Organic dairy farming is a system of production, a set of goal-based regulations that allow farmers to manage their own particular situations individually, while maintaining organic integrity.

Management

Organic producers of livestock products must not withhold disease treatment in order to represent the livestock product as organic. A proper herd health program should include strategies for disease prevention, parasitic control and disease treatment. All vaccinations for endemic diseases are approved. Herbal, naturopathic, homeopathic treatments are approved for use on organic animals. Antibiotic Usage

is restricted with 30 days or twice the labeled time of with drawl period. Usage of hormones was totally restricted. Sanitation practices such as Teat dips, milking sanitation chemicals are allowed. However, equipment must be double rinsed with clear (tested) water prior to milking.

In an organic dairy farm [4]:

· Cows and calves are fed 100% organic feed.

· Organic crops, hay, and pasture are grown without the use of synthetic fertilizers and pesticides that have not been carefully screened and approved for organic use.

· Land used to grow organic crops must be free of all prohibited materials for at least three (3) years prior to the first organic harvest.

· Non-natural feed additives and supplements such as vitamins and minerals must also be approved for use.

· Genetically modified organisms (GMOs, called "Excluded Methods" in the regulation) are strictly forbidden.

· Synthetic milk replacers are prohibited. Calves must be fed on organic milk only.

· All animals must have access to the outdoors (based on weather conditions). Animals over six months of age must have access to pasture during the growing season.

· Restricted usage of antibiotics (only used when cows are ill). Only approved health care products can be used.

· Organic animals may not be fed ANY slaughter by-products, urea, or manure.

· The welfare of the animals must be attended to. Certain procedures, such as tail docking, are prohibited. Other procedures, such as dehorning, must be done so as to minimize the stress to the animal.

· An organic farmer must keep sufficient records to verify his or her compliance with the standards.

· Each farm is inspected and audited every year. Any farm can be inspected unannounced at any time.

Organic Dairy Products

Organic dairy products must be from animals that have been under continuous organic management for at least one year prior to the production of the milk or milk products.

Superiority in terms of quality of products: Organic Milk is better for Health: Milk is a perfect indicator that reflects the level of pollutants and pesticides those contaminated dairy cows and as well as dairy. Variety of dairy products such as butter, butter oil, butter milk, cheese, yogurt, whole milk, skimmed milk powder, ghee and ice cream etc are used in our daily life diet. Of which milk shares a large part. Conventional milk may contain residues of hormones those used on the dairy animals (for excess milk production), pesticides, antibiotics, urea, solvents, which have a serious impact on the individual's health. In conventional dairy farms such practices were common to obtain more milk beyond their natural capacity. Inappropriate protein is fed to cows for stimulating the rapid growth or milk production. All these factors make conventional milk inferior in quality. Consumption of such milk may lead to early puberty, hypersensitivity, hormonal imbalance, and certain types of cancer in humans. [5&6] Milk from organic and non-organic dairies is having difference but organic milk is far superior to non-organic milk.

Here are the differences which make organic milk superior:

CLA: milk contains Conjugated Linoleic Acid (CLA). Function of CLA in human body is to boost immune system and reduce the growth of tumors. CLA levels in organic milk are higher because these cows eat greater amounts of grass, hay and silage. [7]

Pesticides: Organic dairy farms don't use any artificial pesticides on pastures where cows graze. While on conventional dairy farms almost 500 pesticides are used on the pastures. The main problem with the pesticides aside from their individual toxicity is that every research shows that how these chemicals react when combined, in the cocktail effect. It has more affects on the children because of their immature organ and immune systems.

Antibiotics: On conventional dairy farms, cows are given antibiotics routinely to prevent disease and infection. While on organic dairy farms first natural remedies are used for cow's illness, if it won't work then antibiotics are given. When organic cow needs to be treated with antibiotics then the 'withdrawal period' is considerably longer than that recommended for conventional farming.

GMOs & Solvents: The feed given to cows on organic dairy farms is free from GMOs (Genetically modified organisms), solvent extracts and urea. So it results in milk that is free from these substances.

Hormones: Fertility hormones are used routinely in conventional dairy farms to ensure that calves are conceived and born within defined management periods and also to synchronize batches of cows or heifers to calve around the same time. Hormones such as rBGH (Recombinent Bovine Growth Hormone) and Oxytocin were often used to increase milk production and cause easy letdown of milk

respectively. While on organic dairy farms, use of hormones was totally prohibited.

Regulating authorities

United States Department of Agriculture (USDA) launched National Organic Program (NOP) in October 2002, an authority to regulate and synchronize organic production, farming and marketing in the United States. Now, all products sold as "Organic" in the U.S. must be produced, handled, and processed according to a single standard—the NOP "Final Rule" (USDA, 2000). [8]

In India, The National Programme on Organic Production (NPOP) (under The Agricultural and Processed Food Products Export Development Authority (APEDA)) was officially launched in 2000 and notified under FTDR (Foreign Trade Development & Regulation) Act in the year 2001. The NPOP was accorded equivalency by the European Union for its regulation on Organic Agriculture EC 2092/91. [9] That means that any product certified according to NPOP can have ready access to European markets without the need for separate EU (European Union) Certification. The USDA has also recognized the accreditation system adopted by India under NPOP. [9]

The National Programme for Organic Production (NPOP) proposes to provide an institutional mechanism for the implementation of National Standards for Organic Production, through a National Accreditation Policy and Programme. The aims of the National Programme for organic production, is: (a) to provide the means of evaluation of certification programmes for organic agriculture and products as per the approved criteria. (b) to accredit certification programmes (c) certification of organic products in conformity to the National Standards for Organic Products. (d) to encourage the development of organic farming and organic processing.

Constraints for Organic Dairy Farming in India

The organic dairy sector continues to be a fast-growing segment. In order to qualify for the organic label, organic farmers are prohibited from using synthetic growth hormones (rBGH), genetically engineered organisms, antibiotics and toxic, persistent, synthetic pesticides. The standards also mandate a rigorous system for inspection, certification and verification of organic practices, all of which protect consumers who choose organic products. The future challenges are to keep supplies in line with demand, and to lower the costs faced by organic farmers [10].

Challenges:

Organic dairy farmers considered the most difficult aspects of organic milk production are the:

1. Certification paperwork and compliance cost were the most challenging,
2. Sourcing organic inputs, including grains and forages, feed supplements,
3. Replacement of heifers,
4. High costs of production and maintaining animal health,
5. Others (e.g. - natural calamities such as drought, floods etc.)

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