

Milk Value Chain Constraints in Dakahlia Governorate, Egypt

Waleed E Abou El-Amaiem*

Aga district central veterinary hospital, Dakahlia Governorate, Egypt

*Corresponding author: Waleed E Abou El-Amaiem, Aga district central veterinary hospital, Dakahlia Governorate, Egypt, Tel: 242-325-1288; E-mail: waleedabouelamaim@gmail.com

Received date: February 06, 2014; Accepted date: March 25, 2014; Published date: March 28, 2014

Copyright: © 2014 Abou El-Amaiem WE. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

Abstract

Milk has an important role as a vehicle for rural development. Many factors are implicated in milk value chain and marketability in Egypt such as milk production practices, unorganized farmer community, seasonal fluctuation both in production and consumption, financial aspects of dairying, role of middlemen, infrastructure, price fixation and role of government agencies. Many governmental regulatory measures that affect milk marketing is present but to somewhat not applied due to lack of control. This is the first time to highlight on milk value chain constraints in Egypt by using participatory disease surveillance system in data collection.

Keywords: Value chain; Constraints; Egypt

Introduction

Milk plays a vital role in building a healthy society and can be used as a vehicle for rural development, employment and slowing down the migration of the rural population as milk and milk products provide nearly one third of world's intake of animal protein. In Egypt, Cattle and buffalo populations increase yearly by rate of 1.4-1.7%. The rate of increase in human population is higher, being about 2.2-2.5%. This means that the animal protein gap would get wider by time, especially that the demand is increasing with the increase of the per capita income (by 5-7% per year). Almost all of the Baladi cattle are in the hands of the farmers, together with perhaps 99% of the buffalo population. (Government farms produce less than 1% of the total milk production, private farms of foreign cattle less than 3%, buffalo private farms about 17%, the rest by Fellaheen). The Baladi cattle are used mainly for draft work and meat production, their milk yield is really very low, and as such the breed fits the needs of the farmer and performs comparatively well under the standards of feeding and husbandry prevalent in the Egyptian village [1].

The buffalo cow produces a reasonable amount of milk with high percentage of fat, but the calves do not perform well in fattening, the percentage of edible meat in carcass is lower than in cattle, and the meat is tougher. With the introduction of mechanization, animals will be exempted from much of the draft work, and the purpose of keeping animals is expected to change towards milk and beef production, or else to be replaced by standard dairy and beef breeds [2].

440 liters/year is the mediocre milk production per animal which is considered very low. seasonal fluctuations in feeding of livestock is responsible for this productivity, with poor feeding during summer while well feeding during winter. So, total production of milk in Egypt (which is 3.5 million tons) is not sufficient to satisfy recommended consumption levels during summer season, therefore, imports are required to cover 40% of actual market needs [3].

Materials and Methods

Demography

This study was carried out at all districts of Dakahlia governorate, Egypt (N 29° and E 25.48°) according to GPS reading. Dakahlia governorate is present in the east of the Delta of the Nile and covers about 3.459 km². it locates in a very strategic location overlooking Damietta branch of the River Nile and the Mediterranean sea coast and boarded with El-Sharkia governorate from the east, El-Kharbeya governorate from the west and Damietta governorate to the north west. The weather in this area is moderate throughout the year and the rate of rains is quite higher than that of Cairo.

Participatory disease surveillance team

The team of this study was composed of four veterinarian.

Methodology

Pre-advocacy visits were carried out to find a suitable meeting arena in each district according to the suitability of time, place, local politics and convenience for the farmers before the commencement of surveillance. All age group of farmers were interviewed for more viable results. Materials such as Geographical Positioning System (GPS, Garmin's eTrex Legend personal navigator), cardboards, counters, permanent markers, digital camera and others were used for the study. Each person was assigned a role before moving out. We always have our note taker, observer, tool applicator and the facilitator. In order to avoid bias, the team did not mention about milk value chain during the interview process. The following tools were used during the course of participatory disease surveillance : (a) Check list containing the following items: mutual introduction, identification of respondents, milk value chain and constraints (b) Scoring and Ranking, simple ranking, proportional pilling, pairwise ranking, matrix scoring and, (c) visualization including mapping, seasonal calendar and transect walk.

Results and Discussion

Milk production and marketing in Egypt: Situation analysis

Milk production and marketing in Egypt is dominated mainly by the informal private sector, consisting of various agents, each performing a specialized role at a particular point in the value chain. These consisted of producers, milk collectors, middlemen, processors, milk traders, and customers.

Nearly 5% of the total production in the country is marketed through formal channels. The remaining 95% is produced and marketed in raw form by informal agents in the value chain. To get a comprehensive understanding of the opportunities and problems associated with the dairy enterprise in Egypt, it would be important to give here an overview of the role being played by both the informal and formal channels.

Prime factors affecting milk marketing

These factors include: Traditional production and marketing channels, milk production practices, unorganized farmer community, seasonal fluctuation, financial aspects of dairying, role of middlemen, infrastructure, price fixation and role of government agencies.

Traditional production and marketing channel

Most of the dairying process exists at small holder farms and are responsible for about 80% of the milk produced. These farms maintain 1-5 milk producing animals. These animals produces milk which is used to fulfill daily household requirements and excessive amount is sold to run daily household activities.

Milk production practices

Due to lack of proper managemental practices and poor breeding, the animal productivity tends to be very low. This results in low farm profitability and reduced national productivity.

Unorganized farmers community

Most of the dairy farming is running at traditional level regarding production and marketing process with no professional and commercial touch. Both of these activities are mostly carried out in isolation from each other. These factors particularly hamper the profitability of farm produce. On the other hand, organized marketing can enable individual farmers to fetch out maximum revenue.

Seasonal fluctuation

There is a great seasonal fluctuation hampering both production and consumption of milk in Egypt. Milk production is associated with the availability of green fodder and is at its maximum between September and may and hits a low from June to august. Alternatively, milk consumption is low during the winter and is at its peak during the summer due to consumption of milk products such as ice cream, jelly and yogurt.

Financial aspects of dairying

For small scale dairy farmers, sale of milk is a regular source of cash flow and the livestock owned by them constitutes an invaluable asset. They also minimize the loss due to crop sector and act as a blank

check in the time of need. Smallholders may have a ready access to financial services such as insurance and credit. In the absence of these services they don't have a financial recourse in times of emergency such as livestock disease or mortality.

Role of middlemen

Milk marketing in rural areas is mainly exploited by middlemen and smallholders have to rely on middlemen to market their products. Middlemen always have a monopolistic approach and can exploit farmers by paying low prices, executing binding sales contracts and not passing on gains when prices are seasonally high in response to lower supply. On the other hand, in their capacity, middlemen also gives the advantage of providing support services in the form of credit, health care and other necessary services to the farmers community to strengthen their contacts.

Infrastructure

The infrastructure of milk marketing is insufficient to ensure product quality; proper transportation of milk also requires an interconnected cold chain to maintain its quality. But, cold storage facilities are inaccessible and a large proportion of milk is lost. Main reasons behind unavailability of cold chain facilities are the high costs for cold chain operations.

Price fixation and role of government agencies

As the law generally gives broad authority to the local government in setting of foodstuff prices, through regulating the price of milk, the government can play a significant role in milk marketing. The specific law followed can be different from one place to another with in a province.

Constraints of milk supply

'Ella ban' collect milk from smallholder farms situated in far areas. This has led to saturation of supply in the province. The competition has resulted in price wars in collection zones. Moreover, factors such as lack of cold chains, adulteration, unhygienic on farm production, fragmented farm base and distance to dairy farmers affect processing operations. Consequently, none of the processing units is operating at optimal capacity.

Hence, many processors have been eying options to reduce or eliminate their reliance on individual small holders for their supply. The most favored option is to provide additional support services to medium and large farmers in return for selling bulk quantities of fresh milk to the processors.

Milk marketing and milk price

As a result of a complex collection and distribution system, the current milk quality in Egypt is below international standards. The average farm gate price of milk is LE 3.5 per kilo. It varies from LE 3 to LE 5 per kilo depending upon the season. Variation of farm gate price is not linked to the quality of the milk. One is the financial arrangement between the customer and seller. The second factor is the geographical location. In areas where livestock breeding is difficult due to absence of police and scarcity of fodders, farmers get a better price for their milk [4].

Currently, there are no policies to regulate milk prices at the farm levels. The middlemen, contractors, processors, processed unpacked milk and processed milk are the segments of the dairy value chain. The processed packed milk costs LE 12 per kilo whereas the loose milk costs LE 3-5 per kilo.

Around a third of the total milk produced by the rural families flows out to urban consumers and processing industries. half of the milk or more collected by urban traders and processing industries comes from small herd families. The family's resolve to sell milk and the amount to sell is clearly poverty driven. Small farmers sell milk as they have no other source of cash income. Milk in urban areas is accessible in two ways: freed, unprocessed milk and packed processed milk, Each type has its own price.

The unprocessed milk passes through the middle persons before it reaches the urban retailers. The price of milk increases by LE 0.5 per kilo at each stage of sale. The 'Ella ban' generally have undocumented contracts with farmers for regular milk supply. They pay farmers an average price of LE 2.5 per liters. Transportation generally costs LE 0.5-1 per kilo.

Large dairy shops also produce butter and ghee. Processing plants have also introduced a number of dairy products such as yogurt, honey yogurt, flavored milk, cream, butter, ghee, cheese and ice cream. The quantities sold however in small quantities except for cheese and yogurt. Industrial processing units in addition to the traditional traders of sweetmeats, milk, yogurt, ghee, cheese and other milk products have been set up. Most of the processing capacity is concentrated near larger markets and away from potential sources of milk.

Legislative and regulatory measures

These measures that affect the milk market in Egypt are dictated primarily by the salient features of laws that govern the milk industry.

How to get maximum advantage out of this precious commodity

The government has directed the concerned departments to increase the export earning from livestock products. However, there are certain constraints that hinder the growth of this sector. In the developed countries where markets are allowed to operate freely, unhindered by local and international control mechanism, market forces would regulate production. For industrial goods, free trade has been encouraged by World Trade Organization (WTO), which benefits the industrial countries standards for export purposes.

However, the current international trading system for livestock products , performs in different ways; for example, livestock products cannot be exported to other countries where livestock diseases declared as "A", present in the country. Also livestock items have to be processed and packed according to international standards.

To increase exportation of our livestock products, we should develop a vision industry for milk and meat processing and packaging.

So, following steps should be performed to assist export of these items such as, (1) usage of processed milk may be spur through various means of media and use of raw milk may be dispirted, (2) time period be fixed for large milk producers and cooperatives to install pasteurized milk plants and later completely ban the sale of raw milk in large cities and districts. Special service centers for dairy development be set up for milk collection and veterinary aid.

For increasing milk yield, the genetic potentials for the existing livestock should be improved by good selection of best bull mothers, milk gathering could be improved through collection points and better transport to encourage the farming community to raise better livestock following incentives may be considered: credit facilities on easy terms be provided for export oriented activities in this sector, feed mills for livestock be set up and raw feed use be discouraged, farmers be trained for modern commercial farming for high milk production and livestock shows be organized at provincial and national levels.

Proposed future strategies regarding milk marketing

The authorities realistically should further assert on the following issues. The fundamental issues of food safety that must be addressed in the existing marketing system where milk from the peri-urban sector is mostly sold directly to households where both pasteurization or chilling were absent. Food safety regulations and hygiene standards should be considered because of public health considerations, improving the efficiency smallholder production unit, involvement of community based animal health outreach research bringing together ceremony skills from arrange of institutions, the poor distribution infrastructure should be substituted by cold chains or chillers, development of commercial market outlets by government, a mortal merchandise like milk requires a good road system and cold chain system that allows timely delivery to processing plants, depth analysis of current systems; improved feed supply; nutritional management of the dairy buffalo/cow in a whole farm systems context; analysis of the current marketing systems and opportunities to form community cooperatives thorough analysis of the socio-economic and biophysical features leading to effective transfer of technologies, there should be a better coordination between the Dairy Development and Animal Husbandry Departments, The on farm processing and marketing of milk and milk products is a segment of the dairy industry that has recently received significant consideration by farm families throughout the world and the price should be fixed realistically-the cost of production and a decent margin should be kept in mind.

References

1. Mostageer A (1989) Milk production in Egypt. *Options Méditerranéennes- Série Séminaires* 6: 31-34.
2. Abou El-Amaiem WE (2009) Some studies on post parturient metabolic disorders in buffaloes with special reference to ketosis. Master Thesis, Mansoura University (Internal Medicine).
3. Youssef I (2000) Milk Battle. *Al Ahram Weekly On-line*.
4. Tariq M, Mustafa MI, Iqbal A, Nawaz H (2008) Milk Marketing and value chain constraints Pak. *J Agri Sci* 45.