



Veterinary public health and food safety: Milk Hygiene: Integrated food chain safety and quality control

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Introduction

In the dairy industry integrated food chain management is internationally recognised as the foundation for both food safety and quality control. Similar to meat hygiene, the dairy food chain can be divided into pre-harvest, harvest and post-harvest phases. The pre-harvest phase is on the farm and all commercial dairy producers must be registered in line with the Health Act provisions for milking parlours. This function usually falls under local municipalities and is done by environmental health professionals. The role of the veterinarian is to ensure herd health, but while private practitioners concentrate mainly on production diseases, such as mastitis and fertility, the state veterinary services are focused more on the control of notifiable diseases such as brucellosis and bovine tuberculosis. Herd or farm status accreditation is important but may be given at different levels by different stakeholders, including retailers. Good agricultural practice (GAP) is closely linked to good hygiene practice on dairy farms. Milk and milk products produced and processed by the informal sector usually may not enter the formal food chain.

The bulk of dairy products originates from dairy cows, although commercial goat and sheep dairies may also contribute. The harvesting phase starts in the milking

parlour where the animals are milked. On farm monitoring of milk quality is usually linked to bulk milk tank testing and suboptimal findings are usually referred back to veterinarians. Many of the problems with milk hygiene are linked to activities and machinery in the milking parlour, such as incorrect vacuum pressures, incorrect milking procedures and poor animal handling facilities or hygiene. Knowledge required to interpret these findings includes the normal composition of milk, and causes of contamination and decreased shelf life.

The post-harvesting phase includes pasteurisation and homogenisation as well as the manufacture of dairy products, such as cream, butter, cheese and yoghurt. Although this phase is usually monitored by the Department of Health, quality and safety of dairy products for import and export remain mainly a veterinary responsibility. This module describes and critically analyses the regulatory framework, within which dairy production and processing occur.

The integrated food chain management approach for dairy production and processing includes food safety and quality auditing. International regulatory norms and guidelines for dairy products are mainly linked to the Codex Alimentarius Milk Hygiene document. Auditing



of dairy production and processing that is aligned to the International Standards Organisation (ISO 22000 and ISO 28000) as well as those of retailers, are also discussed.

Other relevant information

- Milk Hygiene: Zoonoses and the dairy industry
- Milk Hygiene: Welfare of the dairy animal
- Milk Hygiene: Residues and contaminants
- Milk Hygiene: Biosecurity and environmental impact.

