



Dairy farming: Accelarating sustainable agriculture

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DESCRIPTION

Dairy farming is a branch of agriculture for long-term production of milk, which is processed (either on the farm or at a dairy plant, either of which may be termed a dairy) for ultimate sale of a dairy product.

Dairy farming has a history that goes back to the early Neolithic era, around the seventh millennium BC, in many provinces of Europe and Africa. Before the 20th century, milking was done by manually on small farms.

Beginning in the early 20th century, milking was done in big scale dairy farms with innovations including rotary parlours, the milking pipeline, and automatic milking systems that were commercially advanced in the early 1990s.

Milk preservation methods have upgraded starting with the arrival of refrigeration technology in the late 19th century, which involved direct development of refrigeration and the plate heat exchanger.

These cooling methods allowed dairy farms to preserve milk by dropping spoiling due to bacterial growth and humidity.

Worldwide, leading dairy industries in many countries counting India, the United States, China, and New Zealand serve as chief producers, exporters, and importers of milk.

Since the late 20th century, there has generally been a rise in total milk production worldwide, with around 827,884,000 tonnes of milk being produced in 2017 according to the FAO.

There has been substantial concern over the amount of waste output produced by dairy industries, seen over manure disposal and air pollution caused by methane gas.

The industry's role in agricultural greenhouse gas emissions has also been prominent to link environmental consequences. Various measures have been put in place in order to control the amount of phosphorus defecated by dairy livestock.

Dairy farming in general has been analysed by animal welfare activists due to the health issues forced upon dairy cows through intensive animal farming.

Although any mammal can produce milk, commercial dairy farms are typically one-species enterprises. In developed countries, dairy farms typically consist of high producing dairy cows. Other species used in commercial dairy farming comprise goats, sheep, water buffaloes, and camels.

In Italy, donkey dairies are growing in popularity to produce an alternative milk basis for human infants. While cattle were domesticated as early as 12,000 years ago as a food source and as beasts of burden, the earliest proof of using domesticated cows for dairy production is the seventh millennium BC – the early Neolithic era – in north-western Anatolia.

Dairy farming advanced elsewhere in the world in subsequent centuries: the sixth millennium BC in Eastern Europe, the fifth millennium BC in Africa, and the fourth millennium BC in Britain and Northern Europe. In the last century or so larger farms specifying in dairy alone has emerged.

Large scale dairy farming is only viable where either a large amount of milk is essential for production of more durable dairy products such as cheese, butter, etc. or there is a significant market of people with money to buy milk, but no cows of their own.

In the 1800s von Thünen claimed that there was about a 100-mile radius surrounding a city where such fresh milk supply was economically feasible.

CONCLUSION

The milking of cows was usually a labour-intensive operation and still is in less developed countries. Small farms need several people to milk and care for only a few dozen cows, yet for many farms these employees have traditionally been the children of the farm family, giving escalation to the term "family farm".

Advances in technology have mostly headed to the radical redefinition of "family farms" in developed countries such as Australia, New Zealand, and the United States.

With farms of hundreds of cows producing large volumes of milk, the larger and more effective dairy farms are more capable to weather severe changes in milk price and operate profitably, while "traditional" family farms generally do not have the justice or income other larger scale farms do.