


Chapter 1

Dissemination of Best Practices in Milking Associated With Better Milk Quality

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EXECUTIVE SUMMARY

In the first stage of the study a literature review was performed, along with a study of the normative instructions (NI) related to the quality of milk, as well as maximum limits of quality indicators, such as somatic cell count (SCC) or standard plate count (SPC) and total bacterial count (TBC). These all represent factors that consequently generate milk quality, as any variation in milk production will affect production costs. The case studies were performed through on site observations at the properties using interview techniques between the researcher and producer, as through the dissemination of knowledge and development of the producers in the application of tools for Quality Improvement for Process Control with milk quality parameters as SPC, SCC and TBC in line with Normative Instruction 62, in force at the time of implementation of the projects in the regions surrounding Goiânia-GO and Pontal-MG, as well as good milking practices.

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INTRODUCTION

The worldwide production of milk in 2021, even after considering the problems faced with the COVID-19 pandemic, presented a slight increase of 1.1%, reaching 887 million tons. This increase is attributed to the expansion in production in India and Pakistan as a result of the continual increase in the number of dairy herds, as well as availability of forage aided by favorable monsoon rains (OECD/FAO,2022).

However, the importation of dairy products does not follow the same pattern of growth, especially in the question of powdered milk, owing to problems linked to markets closure due to COVID, physical distance between countries, economic depression, along with falls in the price of petroleum. The worldwide production of milk breaks down as follows 81% derived from cows, 15% from buffalos and 4% from a combination of goats, sheep and camels. The United States, India, Brazil and Germany are the highest milk producers worldwide, while New Zealand, the European Union and the United States are the main dairy exporters. The increases in world dairy trade were pushed mainly by the strong demand in the People's Republic of China (henceforth "China"), the highest worldwide importer of dairy products (OECD/FAO, 2020, 2022).

China, even under pressure from COVID, has been working since 2018 in the consolidation of its countrywide dairy production, and through such has improved reliability and efficiency in its scale of production, via the implemented standardization. These factors have produced an increase in the internal consumption of milk from 2020, along with generating consumer confidence regarding the product (OECD/FAO,2021).

In the case of Brazil, according to the Brazilian Institute of Geography and Statistics, the industry and activity of dairy production produces an important economic and social contribution in Brazil, where it is considered as the fifth largest milk producer worldwide with an estimated 25.5 billion liters being industrialized in Brazil, in 2020 alone. This activity presents itself as one of the principle economic sources of the country, as it plays a significant role in generating employment and income, with the highest percentage of small and medium producers in the dairy production chain. In consonance with the aforementioned, there are an estimated one million dairy producers in the field, who collectively generate millions of jobs along the various segments of the expanded chain. These factors constitute greatly toward the structuring of the rural economy, as well as providing support to the livelihoods of farmers (OECD/FAO, 2021).

Dairy farming plays a significant role toward social economic development. Across the whole world, around 150 million families work in the production of milk. The majority of these consist of smallholder farmers in developing countries, where this is the main activity for their livelihoods (OECD/FAO, 2021).

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