



## NON-CONFORMITY IN RAW MATERIAL: QUALITY PROBLEMS AND ENVIRONMENTAL IMPACTS IN A DAIRY PROCESSOR IN PARANÁ

### NÃO CONFORMIDADE NA MATÉRIA PRIMA: PROBLEMAS NA QUALIDADE E IMPACTOS AMBIENTAIS EM UM LATICÍNIO NO PARANÁ

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Environmental management has been discussed by researchers and practitioners along recent years. Relations between quality and environmental issues have been treated, since quality problems interfere on environmental impacts. In dairy system, according to a report on dairy cleaner production by FIESP (2008), processors are concerned especially with rational use of water, energy saving techniques and equipment, use of less toxic raw materials, recycling, water and effluent treatment. Some studies have highlighted the importance of agriculture (milk producers) when it comes to environmental problems along the chain, giving less relevance to dairy processing, packaging, consume phase and waste management. Thus, milk reception control in dairy companies is an important stage for environmental management. Considering the importance of coordination among agents, the aim of this paper was to analyze processor conduct concerning raw material non-conformity, linking quality and environmental issues. This qualitative research was accomplished through a study in a dairy plant in Paraná, which processes 200,000 liters of milk per day and sells products nationally. The company works with 1,500 milk suppliers on average. Legal requirements are followed along the process, and ISO 1400 implementation in the company is in progress. According to interviews with quality supervisor and industrial manager, one of the most important critical point is milk reception, and a number of non-conformities are controlled. The presence of antibiotics is the most relevant of them, since it results in material rejection. Other problems, such as acidity and cryoscopy, are less critical, since it is possible to direct input to co-products. Interviewees informed that a low amount of milk is contaminated with antibiotics (about 1% of total input). Concerning antibiotic contamination, intensive training and constant visits have been developed with producers, especially to inform them about the risks of antibiotics and to help them solving those problems. Such quality non-conformity carries to an environmental problem, being the processor legally responsible for adequate destination of contaminated milk. In this case, we observed a coordination failure that could bring environmental impacts: contaminated milk is dyed to avoid the use in other plants, and it is delivered back to producer, who do not receive for that product. The company's reverse logistics for those cases ends up there, and rural producer is in charge of adequate destination. So, processor does not have complete control on material disposal, opening space to environmental problems. Although little percentage of milks is rejected due to antibiotics, it represents about 60.000 liters monthly, which is not insignificant. We conclude that, despite company's policy directed to a proactive position through training course and visits, lack of coordination related to reverse logistics, being mainly treated as a quality problem, can cause serious environmental issues in that system.

Key words: antibiotics residues in milk, dairy critical points, environmental coordination.