ABSTRACTS
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39 Effect of lactobacilli on cheese. K Nauth[1], [1]*Nauth Consulting Inc., Wheeling, IL.*

The process of manufacture of cheese of a given a composition is better understood compared to the development of characteristic cheese flavor, body and texture. Transformation of cheese curd to mature cheese involves microbiological shifts and complex biochemical inter-conversions at sub-optimal pH and temperature during ripening. It is generally agreed that during the cheese ripening process, the added starters (lactococci, streptococci and lactobacilli) disappear or are greatly reduced in numbers and the adventitious mesophillic lactobacilli become the dominant population. It is believed that these lactobacilli play a role in flavor development of cheese. Despite many attempts, the biochemical processes resulting in the positive impact of these lactobacilli on cheese are not well worked out. On the other hand, considerable progress has been made on understanding of the microbiological and biochemical aspects of cheese defects such as acid, slit defect, lactate crystals, fruity flavors, and biogenic amines production associated with these organisms. However, much of the information is from yester years when milk quality and subsequent handling and heat-treatment of milk varied from plant to plant. Due to food safety concerns, a large proportion of cheese is now produced from pasteurized milk. Such cheese has a different microbiological profile and a milder flavor. A fair amount of information on proteolysis and peptidolysis in cheese, or cheese slurry systems is discussed in literature but this alone is not sufficient to evaluate and qualify lactobacilli as adjuncts to cheese ripening. Research is needed to study and identify the role of naturally occurring or added non-starter lactobacilli and develop criteria for qualifying these as adjuncts for different cheese types.

Key Words: Cheese, Lactobacilli, Non starter lactobacilli