



Evaluation of yoghurt prepared from different combinations of goat milk and sheep milk

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ABSTRACT

The present investigation was undertaken to utilize goat milk with sheep milk for preparation of yoghurt and to obtain value added product. The goat milk and sheep milk were used in the proportions of 100:00 (T₁), 75:25 (T₂), 50:50 (T₃), 25:75 (T₄) and 00:100 (T₅) for yoghurt preparation. Sheep milk in 25, 50, 75 per cent level were used as blending with goat milk for preparation of yoghurt and it significantly affected the fat, protein, SNF and ash percentage whereas lactose and acidity decreased from 25 to 100 per cent sheep milk in yoghurt. The yoghurt prepared from goat milk blended with sheep milk in proportion of 25:75 was of good quality. At this level, the goaty flavour disappeared while yoghurt prepared from combination of 100:00, 75:25 and 50:50 showed goaty flavour hence, acceptability was less. As the levels of sheep milk increased with goat milk, the overall acceptability of yoghurt was increased. The cost of production of yoghurt was increased but there was reasonable increase in nutrients due to blending of sheep milk with goat milk.

KEY WORDS : Cow milk, Goat milk, Sheep milk, Yogurt, Sensory evaluation

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INTRODUCTION

Yoghurt may be defined as the solid, custard like fermented milk product made from fortified high solids milk using a symbiotic mixture of *Streptococcus salivarius* subsp. *thermophilus* and *Lactobacillus delbrueckii* subsp. *bulgaricus* as starter. It was reported that the per capita consumption of yoghurt (in kg) in some leading countries was Bulgaria 42.2 kg, Sweden 29.1 kg, Israel 22.1 kg, Switzerland 16.9 kg, Norway 15.3 kg and France 15.2 kg (Anonymous, 1990).

Yoghurt is found nutritious over milk due to higher concentration, better digestibility and adsorption of fat, lactose protein and minerals. Therapeutic properties of yoghurt may be attributed to elaboration of bacteriocin like compounds and microbes in the starter culture which exhibit antagonism against undesirable flora (Sarkar and Mishra, 2002).

Caprine milk has advantages over bovine milk as

baby food because it imparts greater resistance against disease and is less likely to be about allergic reaction to some milk factors of mixing of goat milk to sheep milk is desirable from immunology stand point. Sheep milk contains higher per cent of fat (6.5 to 8) and protein (4 to 6) in comparison to buffalo milk. Sheep milk is also richer in total solids, minerals and lactose than cow milk, so it is ideal for cheese and yoghurt making.

MATERIALS AND METHODS

The freeze dried yoghurt cultures, *Lactobacillus bulgaricus* and *Streptococcus thermophilus* was obtained from National Cultures Collection Unit, National Dairy Research Institute, Karnal. During the investigation the cultures were maintained in 10 ml sterile skim milk media in culture tubes. The cultures were grown by inoculating them in tubes and then keeping the tubes at 37°C temperature in incubator. After coagulation the cultures were stored in the refrigerator at 6 ± 2°C and were renewed alternate day.

Fresh goat milk was obtained from NATP Project, Department of Animal Nutrition, PGIVAS, Akola and sheep milk was obtained from Cattle Breeding Farm, Borgaon manju. The milk was strained through clean muslin cloth in stainless steel pot.

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