

COMPOSITIONAL QUALITY OF MILK AS INFLUENCED BY STAGE OF LACTATION OF GANGATIRI COWS

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ABSTRACT : The present study was undertaken on “Compositional quality of milk as influenced by stage of lactation of Gangatiri Cows” on healthy cows 12 (Gangatiri cow) selected from SHIATS dairy farm Allahabad. All cows were housed in tail to tail barn under similar management conditions. All sanitary precautions were undertaken to produce clean milk by dry full hand method of milking. Representative samples of 200 ml milk were collected in different stages viz. stage (S1-up to 100 days), stage (S2-101 to 200 days) and stage (S3-201 to 300 days). Samples of fresh milk drawn from the udder were analyzed for fat, solid not fat (SNF), total solid (T.S.), water, acidity percent and sp.gr. It was concluded that the stage of lactation had significant influence on solids not fat (SNF), acidity percentage, specific gravity and non-significant influence on fat, total solids (TS) and water of cow's milk. Therefore stage of lactation of compositional quality of milk of stage (S3-201 to 300 days) milk was better than stage (S1-up to 100 days) and stage (S2-101 to 200 days).

Key words : Gangatiri cow, milk quality, stage of lactation.

INTRODUCTION

In India, there are about 40 breeds of cattle among this cattle breed Gangatiri is one of the important dual purpose breed of North India. Average daily milk yield of Gangatiri cow ranged between 4-6 liter per day. The lactation length is of 150-250 days. Inter calving period varies between 14-24 month. Coat color of Gangatiri cow is dull white. Muzzle is black, Hump and dewlap are medium. It is known to be originated in the region along the banks of Ganga River in Eastern Uttar Pradesh and Western parts of Bihar state. Gangatiri breed has been recognized as a separate breed by NBAGR-ICAR (Accession no. 03039).

The dairy sector in India has grown substantially over the years. As the result of prudent policy intervention, India ranks first among the world's milk producing nations, achieving an annual output of 155.49 million tonnes during the year 2015-16 as compared to 146.31 million tonnes during 2014-15 recording a growth rate of 6.27%. FAO reported 1.8% increase in world milk production from 789 million tonnes in 2014 to 803 million tonnes in 2015. This represents a sustained growth in the availability of milk and milk products for growing population. Dairying has become an important secondary source of income for millions of rural families and has assumed the most important role in providing employment and income generating opportunities particularly for women and marginal farmers. The per capita availability of milk has

reached a level of 337 grams per day during the year 2015-016, which is more than the world average of 299 grams per day in 2015. Most of the milk in the Country is produced by small, marginal farmers and landless laborers (Annual Report 2016-17, Department of Animal Husbandry, Dairying & Fisheries).

Milk and its product are superb source of vital nutrients. It is assumed as nature's nearly perfect nutrients food. Milk proteins offer a high class animal protein in go on diet. Milk fat fractions are being recognized to possess remarkable anti cancer properties. Mineral and vitamin contents of milk contribute to significant human nutrition. Calcium is needed for protection against brittle bones in the latter part of life. It is now being considered an essential for prevention from blood pressure in protecting colon from cancer. Milk and milk extract products from dairy farm animals are edible and easy to digest therefore important human food.

MATERIALS AND METHODS

The present experiment entitled “Compositional quality of milk as influenced by stage of lactation of Gangatiri Cow's milk of SHIATS dairy farms of Allahabad was carried out. The period of experiment from (01 April-2015 - 01 September-2017). The cows were subjected to Californian mastitis test and 12 cows (Gangatiri cows) from SHUATS dairy farm with negative test were selected for the study. All experimental animals were