Effect of Concentrate supplementation on Milk yield and density in Dairy Farms

Abstract
Increased human population demands better dairy production techniques for more milk and utilization of resources in high potential areas. A dairy enterprise provides food, employment and high financial returns. Milk quality is a key factor impacting on market and social welfare of the consumers. The objective of the current study was to determine the effect of homemade concentrates on milk yield and density over time. A study was designed to supplement grazing cattle with concentrates at four Districts in Kenya. Selected farmers provided two lactating cows for the study and carried out the day-to-day feeding and management. They were supplied with four bags of dairy meal, 5kg of Macluck supper dairy lick, milk record sheets and a lactometer. Study treatments were; 1-maize meal (50%) + cotton seed cake (20%) + wheat bran (24%) + fish meal (5%), 2- maize germ (44%) + cotton seed cake (22%) + wheat bran (33%), 3-Commercial Concentrates 1, 4 Commercial Concentrate 2 and 5- no concentrate. Farmer fed 2kg of concentrates in the morning and evening and recorded milk yield and density. There was significant improvement of milk yield among all the supplemented cattle over time. The study found that 89% of milk density can be predicted by the dairy cow’s dietary sources. Significant improvement was observed in milk density between Districts and individual farms. Overall feeding day was significant for density with the effect of diets being pronounced on day 22 of concentrate consumption. Diet 1 had significantly high density milk. The study showed the supply of energy, concentrates and minerals alongside sufficient basal diets as the most effective way of improving milk yield and density among dairy cattle.