

ABSTRACT

Practicing best calf management practices in housing, feeding and health are important for growing the future replacement stock. This is important for sustainability of the dairy herd where a significant proportion of the national dairy herds are smallholders with poorer calf performance than is in large commercial herds. Kenya's national dairy herds comprise over 75% smallholders, some affiliated to cooperatives offering regular extension advises on best calf management practices to their members. This study tested the hypothesis that producer attitudes reflect calf management practices that are implemented in large commercial and smallholder herds. The hypothesis was tested with a sample of large commercial dairy herds and smallholder herds affiliated to cooperative societies. Producer attitudes and management practices in calf housing, feeding and health were captured regarding standard management practices on a five point scale of agreement. The responses were analyzed to reveal the underlying differences between the herds using non-parametric chi square test and Mann-Whitney U test statistics. Compared to large commercial dairy producers, smallholders expressed more negative ($p < 0.05$) attitudes towards practicing the recommended housing (calf pen disinfection, spacing in pen, bedding), feeding (colostrum feeding, concentrate supplementation) and towards health (vaccination, deworming and ecto parasite control). The negative smallholders' attitudes were reflected in poorer ($p < 0.05$) implementation of the recommended calf housing practices (pen disinfection), feeding practices (colostrum and milk feeding, concentrate supplementation and weaning procedure) and health practices (vaccination and ecto parasite control). To attain improved calf performance and sustainable dairy herds, smallholder dairy producers need change of attitude towards implementing the recommended calf management practices. In housing, the target areas are pen disinfection, housing calves in individual pens to avoid crowding and improved bedding. In feeding, the target areas are colostrum and milk feeding and concentrate supplementation while in health the target areas are vaccination, deworming and ecto parasite control practices.

Introduction Practicing best calf management practices in housing, feeding and health is important for rearing the future replacement stock. This is important for sustainability of the dairy herd where a significant proportion of the national dairy herd attain poorer calf performance. Kenya has such dairy herd in which smallholder's comprise 75% of the national herd and with poorer calf performance than in the fewer remainder medium and large commercial herds [3]. Good calf management practices enhance calf survivability and performance and subsequently, quality replacement stock for the future herd [17]. Important calf management is in housing, feeding and health. Calf housing should be well ventilated, partitioned into individual pens which are regularly disinfected, cleaned and the bedding are kept dry to provide calf comfort, good welfare and ease early disease detection of diseases. This way, good housing contributes to improved calf performances [5]. Good calf feeding practices begin with colostrum feeding, essential for passive immunity to calf. Colostrum feeding is followed with milk feeding, which has to be warm, hygienic and in enough quantity corresponding to calf body weight to support sufficient growth. Supplemental concentrate is necessary after weaning to sustain high growth rates [16, 4] .