CHARACTERIZATION OF COMPOST BARN SYSTEMS IN DAIRY FARMS IN CAPARAÓ CAPIXABA

CARACTERIZAÇÃO DE SISTEMAS COMPOST BARN EM PROPRIEDADES LEITEIRAS DO CAPARAÓ CAPIXABA

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Abstract

Compost barn (CB) systems provide comfort and well-being to animals that are confined there, directly influencing their productivity. In this type of system, the animals are kept in a shed, with a straw bed, which is turned over several times a day to promote composting. Animals kept in this system are better able to express their genetic potential, since there is a reduction in heat stress and energy expenditure in the search for food. The objectives of this work were to characterize the milk producing units (MPU) that use the CB production system in two municipalities in the Caparaó region of the state of Espírito Santo, and to identify the benefits and satisfaction of producers with the adoption of the system. Visits were made to six MPUs that adopt the CB system in the municipalities of Guaçuí and Dores do Rio Preto in February 2022, to collect technical information through the application of a questionnaire. The longest time of adoption of the CB system among the properties visited was 5 years and the most recent was less than 1 year. Two of them are small properties (up to 80 hectares) and the others are medium properties with up to 150 hectares.. The others were classified as medium properties. When asked about the decision to adopt CB, the criterion mentioned most was to avoid clay (5), followed by mastitis control (4), labor savings (3) and less heat stress (3). Only half of the producers said they had adopted system with the elaboration of a project, but all of them reported having visited other properties to learn how the system works beforehand. The average size of the herd on the properties visited was 41.6 head. The animals remained full-time in the CB on five of the farms (83%), while on the other farm the animals spent the night in the pasture. In all the properties visited, the animal category was lactating cows. The average area of the barns was 555 m², the smallest with 120 m² and the largest with 1,560 m². The smallest area occupied per animal was 10.7 m²/head and the largest was 20 m²/head. As for the roof, in 66.7% of the properties it was made of zinc sheeting and in 33.3% of fiber cement tiles, irrespective of the use of louvers. The average height of the bed was 53 cm and the most used material was sawdust, in all of the properties. In one of them, coffee straw was also used together with sawdust. The implement most used to turn the bed was a tractor (66.7%) and the turning in 83.3% of the properties was done twice a day. In 66.7% of the properties, the litter was turned during milking. In all of the farms, the milking parlor was attached to the CB. Regarding milk production, 80% of the producers had an improvement in volume and quality of milk, thus demonstrating good results. However, one of the interviewed producers reported serious problems with mastitis when first starting to use the installation, since he did not have the necessary knowledge for the proper management of the litter, which caused great losses in the production and death of animals. The benefits of the system were the possibility of solving the environmental liabilities generated by the large volume of manure that is produced by the cows and also the reduction of the cost of fertilization of the corn crop with the use of litter. In addition, there was improvement in the handling of animals; cleaning around the barn; ease of measurement of heat; and reduction of tick incidence, positively impacting milk production costs. There was improvement in the handling of animals; cleaning around the shed; ease in the observation of heat; and reduction of tick incidence positively impacting milk production costs.

Keywords

Animal welfare, Production, Sustainability.