



CHARACTERIZATION OF DAIRY COWS DUNG IN A VOLUNTARY MILKING SYSTEM

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The animals, when accessing the milking parlor, have the behavior of dung on the floor. This residue must be removed daily to maintain the hygiene standards of the facility and the health of the humans and animals. Therefore, knowledge of physical characteristics such as diameter and weight of dung from lactating cows is essential to propose actions related to the management of this waste. This knowledge is not common in the technical literature, even more so when it comes to milking parlors with a robotic system and in an integrated crop-livestock-forest system. This study aimed to characterize the dung of lactating cows of a robotic milking parlor in an integrated crop-livestock-forest system. The Delaval VMS™ V300 was installed at Embrapa Pecuaria Sudeste, Sao Carlos-SP, where the animals have voluntary access at any time of the day to the milking system. 69 dung samples were collected. Immediately after the animal had dunged, the sample was measured in terms of diameter using a measuring tape. Then the dung was scraped off in its whole with a shovel and weighed on a scale. The average diameter of the dung was 28.4 cm (+/- 3.0 cm), with a minimum of 23 cm and a maximum of 38 cm. This average diameter is equivalent to an area of 0.0634 m². From knowing the average diameter of the dung and the amount of it in the milking parlor, it is possible to calculate the total area occupied by the waste and thus optimize scraping and washing practices. The average weight of dung was 2.1 kg (+/- 0.5 kg), with a minimum of 1.3 kg and a maximum of 3.1 kg. It is known that the production of dung by an animal is the result of several factors such as genetics, feeding, installation, and management, among others. The mass of dung to be handled is important information for sizing storage structures and/or dung treatment systems. From the determination of what would be the standard dung of lactating cows, the decision-making on the management of this residue will be more assertive, which will mean a lower cost of this management.