EFFECTS OF PRODUCTION SYSTEMS ON THE HIRED LABOR COSTS IN TROPICAL DAIRY FARMS

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RESUMO

Hired labor can represent 13% of the accrual operating cost in dairy farms. Therefore, the facilities must be structured aiming at greater work efficiency to reduce the hiring of more employees. Thus, our objective was to compare the hired labor costs of dairy operations in Compost Bedded Pack (CBP), Free Stall (FS), and Drylot (DL) systems. We collected data from 960 Brazilian farms over 120 consecutive months. The production level of the farms ranged from 150 to 10,000 L of milk/day. Milk production of the farms was calculated by converting revenue beef sales (surplus animals) to the equivalent amount in milk with the same revenue and called the equivalent milk production equivalent (MYeq). Hired labor cost was modeled for two animal production categories: milking cows (MC) and non-milking animals (NMA). We used a regression model that included linear and quadratic parameters, and we added the production system as a fixed variable for all parameters tested with this model. Consultant, year, herd, and herd × system interaction were included in the model as random variables. Hired labor costs ($/farm/year) for MC were quadratically (convex) related to MYeq ($P < 0.001$). The hired labor cost of the three systems was similar for MYeq up to 5,000 L/day. When MYeq was greater than 7,100 L/day, DL costs increased sharply and surpassed other systems. For NMA, hired labor were linearly affected by MYeq and the production system affected the regression slope ($P < 0.001$). FS required the most hired labor, followed by DL and CB. Overall, drylot system demands a lot of area as the number of animals increases. Therefore, in drylot farms with high milk production, it requires a greater number of employees to lead the animals to the milking parlor, to clean and maintain the stalls in which the animals are housed when compared to the compost bedded pack and free stall systems. Thus, the costs of hiring employees will be greater for drylot for farms that exceed a production of 7,100 L/day of milk yield equivalent. In conclusion, drylot is the system that generates greater hired labor costs as milk production increases.

PALAVRAS-CHAVE: Nutrition and production of ruminants, Compost bedded pack, Drylot, Free stall, Labor

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