

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

CLIMATIC ZONING FOR DAIRY CATTLE IN SANTA CATARINA

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Dairy cattle is an important activity in the national agriculture scenario. Santa Catarina being a state with an effective participation in this context. The state does not have a specific climatic zoning for the activity, so the objective of this study was to characterize the thermal condition of the environment for cattle breeding in Santa Catarina, Brazil. Data from nine years (2008-2016) were obtained from the meteorological stations of the National Institute of Meteorology for eight regions of Santa Catarina. The regions were identified according to the agroecological and socioeconomic zoning of the state, being represented in the study as region 1B (Florianópolis), 2B (Araranguá), 2C and 3C (São Miguel d'Oeste), 2A (Ituporanga), 3A (Joaçaba), 3C (Xanxerê), 3B (Rio Negrinho), 3A (Curitibanos) and 4A (São Joaquim). The temperature and humidity index (ITU) was calculated from 06:00 to 18:00 hours. Milk Production Decline (DPL) was estimated for three average levels of production (10, 20 and 30 kg.day⁻¹) with the equation "DPL= -1,075-1,736×PN+0,02474×PN×ITU"(PN= Normal Production Level; kg.day⁻¹). Then was carried out the identification of the occurrence of critical periods for the production. The values of ITU were considered in the amplitudes between: 75 and 78 signaling alert to the producers; 79-83 means danger; equal to or greater than 84 characterizes emergency. Geographic aspects related to the ITU were also identified, and the municipalities that obtained results above and below the limit during the period studied were identified. The mean values of ITU found did not exceed the tolerance threshold for cattle, and were favorable for milk production. The highest incidence of average ITUs close to those classified as alert to producers was concentrated in the months of December, January and February. The absolute maximum ITU was 94 for the 2C and 3C region, while in other regions, even in the hottest months of the year, the average ITU remained below 66 (region 4A). Regarding DPL, when more productive is the animal, more it will be to decline with thermal stress. For cows with normal production of 10, 20 and 30 kg.day⁻¹ the value of ITU when started production losses was 71.6, 72.3 and 74.5, respectively. No long periods were considered critical production, only episodes isolated in time and space. Although climatic zoning in the state of Santa Catarina was positive for the activity, there were critical periods, which certainly reflect losses in production. Therefore, it is indispensable to combine the local context with adequate management strategies, in order to maximize the potential of the chosen production system.

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