ZOOTECNIA BRASIL
Centro de Convenções da PUC-GO | Goiânia-GO
27 a 30 de agosto de 2018

55ª REUNIÃO ANUAL DA SOCIEDADE BRASILEIRA DE ZOOTECNIA

ZOOTEC 28º CONGRESSO BRASILEIRO DE ZOOTECNIA

CONSTRUINDO SABERES, FORMANDO PESSOAS E TRANSFORMANDO A PRODUÇÃO ANIMAL

PRODUCTION SYSTEM AND GEOGRAPHIC MAPPING OF THE INCIDENCE OF ALBENDAZOLE RESIDUES IN CATTLE

Édipo Henrique FERNANDES*[1], Juliana Heloisa Pine Américo PINHEIRO[2], Camila BROSSI[3], Genaro Cvabodni MIRANDA-DE LA LAMA[4], Rafael Silvio Bonilha PINHEIRO[1]

*corresponding author: ehfernandes88@gmail.com
[1]Universidade Estadual Paulista - UNESP, Ilha Solteira, São Paulo, Brasil
[2]Universidade Brasil, São Paulo, São Paulo, Brasil
[3]Universidade de São Paulo, Pirassununga, São Paulo, Brasil
[4]Universidad Autónoma Metropolitana, Lerma, Estado de México, México

Due to the appearance of reports of violations of albendazole residues in exported Brazilian meat products, due to the alert for its toxic effect and the higher requirement imposed by the consumer, the objective was to map the production systems in pasture and in feedlot, as well as the geographic regions regarding the incidence of albendazole residues in cattle slaughtered in Brazil. The study was located in 17 beef cattle establishments inspected by the Federal Inspection Service in different geographic regions of Brazil. Soon after the slaughter of the animals, liver, kidney and muscle samples were collected from 510 properties in all regions of the national territory. The method of analysis applied was high performance liquid chromatography (HPLC) coupled to sequential mass spectrometry. The response analyzes were submitted to the generalized linear mixed model and the occurrence variables were also submitted to the Chi-Square and Fisher's test at 5% probability. There was detection of albendazole residues in the bovine tissues of 10 properties, being 1.98% of the animals sampled, and all the animals detected had residue depletion in the hepatic tissue. Considering only the animals detected, the occurrence of albendazole residue depletion was 1.19% for animals raised in pasture, and 0.79% for animals in feedlot. The mean concentration of albendazole residues in liver samples was 100.20 and 54.33 µg/kg, for animals from a feedlot and pasture production system, respectively. With such detection results, it is suggested that the producers consider the relevance of the application of a dose of vermifuge to the animals prior to termination, and that the production system did not influence the incidence of albendazole residues in bovine slaughtered. The Midwest and Southeast regions were the only ones to present occurrence of residue detection, being 1.34% and 7.69%, respectively, differing statistically. Considering these Brazilian regions, the mean concentration of residues of albendazole found was 49.35 and 90.8 µg/kg, for the Midwest and Southeast regions, respectively, and presenting a significant difference. The detection of residues when compared to the geographic location reinforces the particularity of the regionalization of Brazilian livestock breeding and the failure to comply with some necessary safety practices stipulated for the anthelmintic albendazole.

Keywords: beef cattle, feedlot, pasture production, veterinary products, food safety.