

Key Words: carcass gain, dressing percent, mycotoxins

- PSXIV-27 Do mycotoxin contaminated diets and yeast-derived adsorbent affect meat quality of finishing Nellore cattle in feedlot?** L. Custodio¹, L. Prados², A. Yiannikouris³, D. Figueira⁴, E. da Gloria⁵, V. Holder⁶, J. Pettigrew⁷, L. Kuritza⁶, F. Resende⁸, G. Siqueira⁸, ¹UNESP/APTA, Barretos, Brazil, ²Agencia Paulista de tecnologia dos Agronegócios (APTA), Brazil, Colina, Brazil, ³Alltech Inc, United States, ⁴UNESP/APTA, Sao Paulo, Brazil, ⁵ESALQ, Piracicaba, Brazil, ⁶Alltech, Nicholasville, KY, United States, ⁷Pettigrew Research Services, Urbana, IL, United States, ⁸Agencia Paulista de tecnologia dos Agronegócios (APTA), Brazil, Sao Roque, Brazil

The objective was to evaluate the effect of mycotoxins and yeast-derived adsorbent on meat quality of Nellore cattle finishing in feedlot. Ninety-six Nellore cattle were used, (430 ± 1.0 kg and 24 mo). The treatment design was a 2×2 factorial arrangement consisting of two diets with natural contamination (NC) or exogenous contamination (EC) and presence (10g/hd daily) or absence of yeast-derived adsorbent (YDA). The diets with NC and EC had the following contaminations levels: aflatoxin 0 and $10 \mu\text{g/kg}$, fumonisin 5114 and $5754 \mu\text{g/kg}$, trichothecenes B 0 and $42.1 \mu\text{g/kg}$, trichothecenes A 0 and $22.1 \mu\text{g/kg}$, fusaric acid 42.9 and $42.9 \mu\text{g/kg}$ and REQ 15 and $45 \mu\text{g/kg}$, respectively. The REQ is the risk equivalency quantities expressed in $\mu\text{g/kg}$ of AFB1-equivalent, which is mycotoxin concentrations interpretation according to known species specific sensitivities and normalized according to the principles of toxic equivalent factors. After 97 days of experiment, all animals were slaughtered and the carcasses were stored in a chilling chamber at 4°C . Three steaks from longissimus (2.5 cm thick) were cut between 11L*, a*, b*), cooking losses, shear force and chemical composition were analyzed. The L*, a* and b* colors were similar among factors ($P \geq 0.38$), as was the cooking loss ($P = 0.94$; 32.4, 32.5, 33.1, 31.0%, for NC, NC+YDA, EC, EC+YDA respectively) and the shear force ($P = 0.50$; 6.8, 6.9, 6.8, 6.5 kgf, respectively). The chemical composition also was unaffected ($P \geq 0.61$) by the treatments and the average of variables were 74.2% for moisture, 22.7% for CP, 1.04% for EE, and 2.10 for ash. In conclusion, at this level of contamination mycotoxin and yeast-derived adsorbent do not affect

the meat quality of finishing Nellore cattle in feedlot.

Key Words:

- PSXIV-29 Citrus aurantium flavonoid extract improves concentrate efficiency, and animal behavior of Holstein bulls fed high-concentrate diets.** M. Paniagua¹, F. Crespo², M. Serra², A. Aris³, M. Devant³, ¹Quimidroga, Barcelona, Spain, ²Interquim SA, Ferrer HealthTech, Barcelona, Spain, ³IRTA, Barcelona, Spain

This study evaluated the effects of a flavonoid extract from Citrus aurantium (Bioflavex® CA, 24% naringin) on performance, behavior and carcass quality. One hundred forty-four bulls (164.8 ± 5.91 kg BW and 135 ± 7.2 d of age) were randomly allocated to one of 8 pens and assigned to control (C) or Bioflavex® CA (BF, 0.4 kg of Bioflavex® CA per ton of concentrate). Each pen had one drinker, one separate straw feeder, and one three-space feeder where mash concentrate (main ingredients were corn, barley, wheat, and DDG; 15.7% CP and 3.27 Mcal ME/kg for growing and 13.6% CP and 3.37 Mcal ME/kg for finishing) was offered. Concentrate intake was recorded daily, and BW and animal behavior by visual scan were registered fortnightly. Animals were slaughtered after 168 d of study (12 periods of 14 d), HCW and carcass quality were recorded. Data were analyzed using a mixed-effects model with repeated measures and categorical data with a Chi-Square. Final BW (437.9 ± 1.85 kg) and concentrate intake (7.1 ± 0.13 kg/d) were not affected by treatment. Concentrate FCR tended ($P < 0.10$) to be lesser in BF (4.50 ± 0.108 kg/kg) than in C (4.72 ± 0.108 kg/kg) bulls. Percentage of animals eating concentrate during visual scan was greater ($P < 0.01$) in BF ($10.02 \% \pm 0.512$) compared with C ($7.97 \% \pm 0.512$). Oral non-nutritive behaviors, agonistic interactions (fighting, butting, and chasing) and sexual behaviors (flehmen, attempted and complete mounts) were greater ($P < 0.01$) in C than in BF bulls. In conclusion, supplementation with citrus flavonoids in bulls fed high-concentrate diets tends to improve concentrate efficiency, reduces oral non-nutritive behaviors, agonistic interactions and sexual behavior.

Key Words:

- PSXIV-34 The influence of microencapsulated plant secondary compounds (MPSC/ Activo Premium®) on performance and carcass characteristics of growing and finishing feedlot beef cattle.** S. Jalali¹, A. Budde¹, O. Guimaraes¹, R. Araujo², M. Tiedeman³, R. Goodall³, T. Engle⁴,