of CTRL and YM treatments, but had the highest numeric values of intake and daily gain. Yeast culture decreased the feed efficiency and monensin was not able to improve it. No advantage was related on the Nellore performance with the use of monensin and/or yeast culture in sunflower-oil diet compared to the control diet.

**Key words:** Bos indicus; daily gain weight; intake; lipid; micro-ingredients.

PB057

## EFECTO DEL HONGO *Arthrobotrys oligospora* SOBRE LA POBLACIÓN DE LARVAS DE TERCER ESTADO EN UN SISTEMA DE PRODUCCIÓN BOVINA EN PASTOREO.

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Se realizó un estudio sobre el efecto de la administración de A. oligospora en bloques minerales a terneras Holstein friesian de ocho meses de edad en pastoreo, durante 84 días. El consumo promedio del bloque mineral con esporas de A. oligospora fue de 52 g./ternera./día. Los bloques se evaluaron microbiológicamente para establecer la presencia de A. oligospora con posterioridad a la confección de ellos, registrándose niveles efectivos de sobrevivencia de 4,5*106 esporas por gramo de mezcla mineral en bloque. Los animales consumieron 1,2*106 esporas por Kg. de peso vivo durante 84 días. El efecto controlador se estableció por medio de la cuenta de larvas por cada 200 g. de forraje fresco, calculando posteriormente el número de larvas por Kg. de materia seca. Se logró un control de 60,5% respecto de las praderas que se mantuvieron los animales sin tratamiento. No se obtuvieron diferencias de ganancia de peso entre animales del grupo control y tratado.

**Palabras clave:** Arthobotrys oligospora; bloques minerales.

PB058

## PRODUÇÃO DE LEITE DE VACAS MESTIÇAS HOLANDÊS X ZEBU EM PASTAGENS SEM ÁRVORES OU ARBORIZADAS COM DIFERENTES PERCENTAGENS DE LEGUMINOSAS HERBÁCEAS

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Este trabalho teve por objetivo avaliar a massa de forragem, a taxa de lotação e a produção de leite de vacas mestiças Holandês x Zebu, em pastagens de Brachiaria decumbens, cultivadas de acordo com as especificações das normas estabelecidas para um sistema de pecuária orgânica. As pastagens avaliadas eram arborizadas e com maior percentual

PB059

## RELATIONSHIP BETWEEN BLOOD SERUM IGF-1 AND GH CONCENTRATIONS AND GROWTH OF HOLSTEIN STEERS

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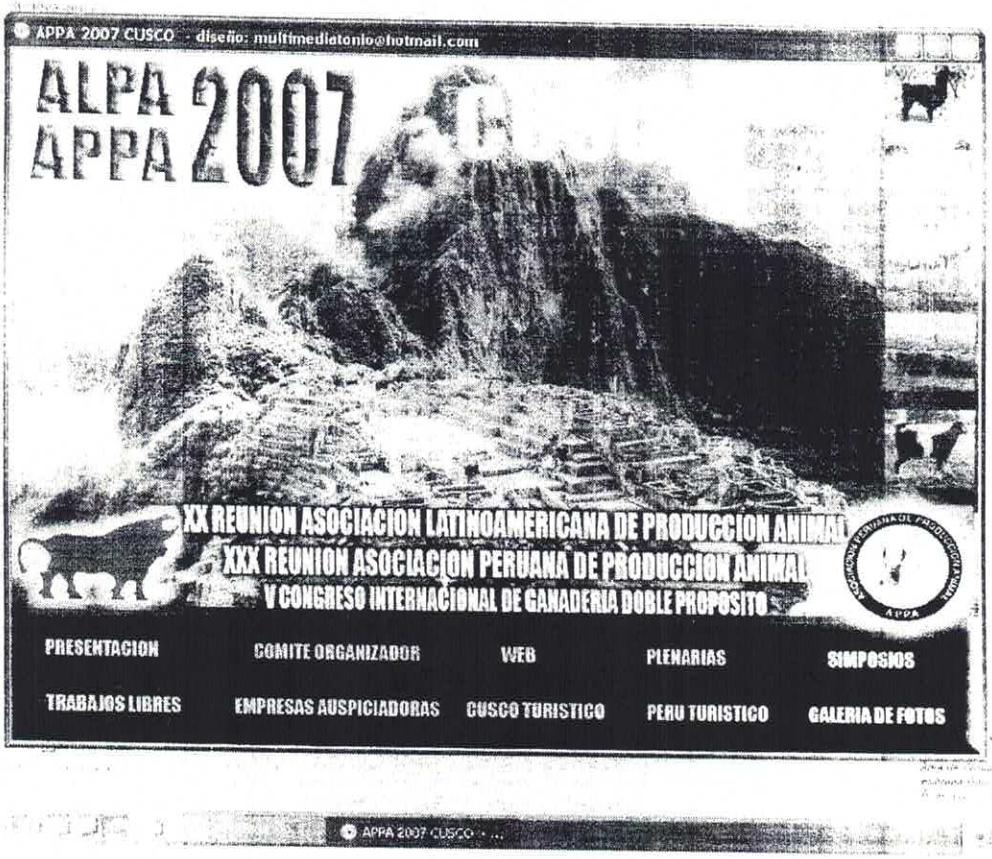
Insulin-like growth factor-1 (IGF-1) and GH have been studied as indicators of growth potential in beef cattle, but the relationship between these and the growth and development of Holstein steers has not been reported. The objective of this study was to relate the concentrations of GH and IGF-1 in blood serum and growth of Holstein calves. Twelve calves weaned at 4±2 d, average age and body weight (BW) of 45 d and 54,6 kg, respectively, were selected to obtain their BW and blood samples every 28 d during 336 d. Ten blood samples were collected at 30 min intervals, from 0800 to 1300 h, every sampling date. Samples from the same animal and sampling day were mixed, and a serum subsample was used to analyze. The concentrations of IGF-1 and GH were analyzed using RIA test. Linear regression and correlation analyses were performed to determine the relationship between ADG and BW, and serum concentrations of IGF-1 and GH. The correlation values between serum IGF-1 and ADG or BW were consistently positive (0.47 y 0.48, respectively), but the correlation values between GH and ADG and BW were negative (-0.31 and -0.37, respectively). Serum concentration of IGF-1 explained 24% of the variation in ADG, but GH only explained nearly 10% of this variation. There was a significant relationship ($P < 0.01$) between serum IGF-1 and age of the calves. Serum concentration of IGF-1 showed a strong relationship with BW ($R^2 = 0.41$) throughout a 336 d postweaning growth performance. These data indicate that serum IGF-1 may be useful for predicting average daily gain in Holstein steers.

**Key words:** Holstein steers, IGF-1, GH, Prediction.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