PSVIII-38 Late-Breaking Abstract: Estimating genetic parameters of feed efficiency traits in American mink. Pourya Davoudi<sup>1</sup>, Duy Ngoc Do<sup>1</sup>, Guoyu Hu<sup>1</sup>, Siavash Salek Ardestani<sup>2</sup>, Younes Miar<sup>1</sup>, <sup>1</sup>Department of Animal Science and Aquaculture, Dalhousie University, <sup>2</sup>Department of Animal Science and Aquaculture, Dalhousie University, Truro, NS, B<sup>2</sup>N <sup>5</sup>E<sup>3</sup>, Canada

Feed cost is the major input cost in the mink industry and thus improvement of feed efficiency through selection for high feed efficient mink is necessary for the mink farmers. The objective of this study was to estimate the heritability, phenotypic and genetic correlations for different feed efficiency measures, including final body weight (FBW), daily feed intake (DFI), average daily gain (ADG), feed conversion ratio (FCR) and residual feed intake (RFI). For this purpose, 1,088 American mink from the Canadian Center for Fur Animal Research at Dalhousie Faculty of Agriculture were recorded for daily feed intake and body weight from August 1 to November 14 in 2018 and 2019. The univariate models were used to test the significance of sex, birth year and color as fixed effects, and dam as a random effect. Genetic parameters were estimated via bivariate models using ASReml-R version 4. Estimates of heritabilities ( $\pm$ SE) were 0.41 $\pm$ 0.10,  $0.37 \pm 0.11$ ,  $0.33 \pm 0.14$ ,  $0.24 \pm 0.09$  and  $0.22 \pm 0.09$  for FBW, DFI, ADG, FCR and RFI, respectively. The genetic correlation (±SE) was moderate to high between FCR and RFI (0.68±0.15) and between FCR and ADG (-0.86±0.06). In addition, RFI had low nonsignificant (P > 0.05) genetic correlations with ADG  $(0.04 \pm 0.26)$  and BW  $(0.16 \pm 0.24)$  but significant (P < 0.05) high genetic correlation with DFI (0.74  $\pm$  0.11) indicating that selection for lower RFI will reduce feed intake without adverse effects on the animal size and growth rate. The results suggested that RFI can be implemented in genetic/genomic selection programs to reduce feed intake in the mink production system.

**Keywords:** feed efficiency, American mink, genetic parameters

## PSVIII-35 Late-Breaking Abstract: Administration of an appeasing substance at castration improves performance of pre-conditioned beef crossbred steers.

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Alternatives that alleviate stress-related responses and improve performance of the beef cattle herd are imperative and deserve further investigation. In previous trials, administration of the bovine appeasing substance (BAS) has improved performance of newly-weaned and feedlot received beef animals, as well as reduced the risk of dark, firm, and dry (DFD) cuts in carcass obtained from Bos indicus cattle. Therefore, this study was designed to evaluate the effects of BAS administration at castration on pre-conditioning performance of crossbred beef animals. On day 0, 390 crossbred Angus × Nellore animals were ranked by initial shrunk BW  $(255 \pm 21.1 \text{ kg})$  and assigned to receive or not (CON) 5 mL/head of BAS (SecureCattle; Nutricorp, Araras, SP, Brazil) immediately before castration. From d 0 to 30, animals within treatments were maintained in 2 feedot pens with a minimum distance (300 m) to avoid contact between treatment groups and received a grass hay-based diet (70:30 roughage:concentrate ratio) ad libitum. On day 30, animals were individually weighed following 16 hours of feed and water restriction. Hence, a descriptive analysis was performed to evaluate pen dry matter intake (DMI) and feed efficiency (FE). Animal was considered the experimental unit and all data were analyzed using the PROC MIXED procedure of SAS (version 9.4; SAS Inst. Inc., Cary, NC). Bovine appeasing substance administration at castration improved ADG and BW change (P < 0.0001) compared with CON cohorts (0.983 vs. 1.155 kg/d and 29.5 vs. 34.6 kg for ADG and BW change, respectively). Total DMI was similar among treatments when reported as kg/d (6.70 vs. 6.75 kg) or % of BW (2.48 vs. 2.48%), whereas FE was dramatically improved in BAS-administered animals (146 vs. 172 g/kg for CON and BAS, respectively). In summary, BAS administration improved performance of crossbred beef animals for 30 days post-castration.

**Keywords:** bovine appeasing substance, castration, crossbred, performance