

Effects of corn and soybean meal levels and expected breeding value on growth performance and carcass characteristics in late-fattening Hanwoo steers

Yun He Zheng¹, Young Lae Kim¹, So Hee Lee¹, Jun Cui¹, Ji Woo Choi¹, Jae Jin Kim¹, Jae Yong Song², Joong Kook Park², Jun Sang Ahn², Jeong Heon Lee², Suk Jun Yun², Gi Hwal Son³, Jong Suh Shin¹, Min Ji Kim¹ and Byung Ki Park¹

¹Department of Animal Science, Kangwon National University, Chuncheon, South Korea

²Noghyup Feed Co. Ltd., South Korea

³Nonghyup Livestock Research Center, Anseong, South Korea

As a strategy to improve the feed efficiency of Hanwoo steers, appropriately adjusting the composition ratio of concentrate feed is considered a key factor that can contribute to increasing farmers' income. Therefore, this study was conducted to investigate the effects of varying corn and soybean meal levels in concentrate feed on growth performance, blood metabolites, and carcass characteristics of late-fattening Hanwoo steers classified by expected breeding value (EBV). A total of 16 Hanwoo steers (initial body weight: 562.6 ± 83.0 kg) divided into four treatment groups based on feed type (C: control feed; T: feed supplemented with 10% additional corn and 5% soybean meal) and EBV (Y: yield type; Q: quality type), resulting in CY, CQ, TY, and TQ groups. Results showed that average daily gain (ADG) followed the order $TY > TQ > CY > CQ$, while feed conversion ratio (FCR) followed $CY > CQ > TQ > TY$. In carcass characteristics, TQ had the highest carcass weight, backfat thickness followed the order $CQ > CY > TY > TQ$. The occurrence rate of yield grade B or higher was highest in the order of $CQ = TY = TQ > CY$. Marbling score was $TY > TQ = CQ > CY$, with the highest incidence of quality grade 1⁺⁺ observed in TY. The results of this study suggest that increasing the levels of corn and soybean meal can positively influence growth performance and carcass characteristics in late-fattening Hanwoo steers. In particular, expected to serve as an effective strategy in feed formulation to enhance marbling score.

Key words : Hanwoo steers, expected breeding value, soybean meal, corn, growth performance, carcass characteristics