

Effects of sprouted barley supplementation level on growth performance and carcass characteristics of Hanwoo

Chang Hyun Baeg¹, Ji Yoon Kim¹, Bu Gil Choi¹, Jun Hee Lee¹, Jong Jin Park¹,
Arrynda Rachma Dyasti Wardani¹, Young Ho Joo², Hyeon Tak Noh³, Jeong Seok Choi⁴,
Seung Min Jeong⁵ and Sam Churl Kim¹

¹Division of Applied Life Science (BK21Four, Institute of Agriculture and Life Science),
Gyeongsang National University, Jinju 52828, Republic of Korea,

²Gyeongsangbuk-do Livestock Research Institute, Yeongju 36052, Republic of Korea,

³Feed Industry Research Institute, Korea Feed Association, Ansan 15426, Republic of Korea,

⁴Division of Livestock Processing, Haedream LPC, Changyeong 50319, Republic of Korea,

⁵Grassland and Forages Division, National Institute of Animal Science, RDA, Cheonan 31000, Republic of Korea

This study was aimed to evaluate the sprouted barley (SB) supplementation effects on growth performance and carcass characteristics of Hanwoo steers. Experiment 1 analyzed the chemical composition and *in vitro* digestibility of SB total mixed ration (TMR) used in feeding. Experiment 2 analyzed the growth performance and carcass characteristics of Hanwoo steers through the SB TMR feeding. SB supplementation levels were 0, 5, and 10%. The feeding period was conducted from growing to fattening period and 12 Hanwoo steers were assigned to each groups. In Experiment 1, as the SB ratio increased, crude protein and acid detergent fiber contents were increased linearly ($p < 0.05$). also, *in vitro* dry matter digestibility, and *in vitro* NDF digestibility (IVNDFD) were increased linearly ($p < 0.05$) in growing period TMR. While, IVNDFD was lowest at 5% SB supplementaiton treatment ($p < 0.05$) in the fattening period. In Experiment 2, as the SB ratio increased, average daily gain was increased linearly ($p = 0.001$). While, average daily feed intake and feed conversion ratio were decreased linearly ($p = 0.001$). Caracss weight was heavier in the 5% supplementation group than in the 10% supplementation group. While, meat quality (1⁺⁺:1⁺:1:2 %) was highest in the 10% supplementation group (84:8:8:0). In this results, SB 10% supplementation could be redused feed consumption and improved meat quality.

Key words : sprouted barley, growth performance, meat quality