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Correlation between blood composition and meat quality in Hanwoo steers

Y H Moon, S S Jang, W G Cho, E T Kim and **S S Lee**
Gyeongnam National University of Science and Technology, South Korea

A hundred twenty six Hanwoo steers (8-9 month of age) were used to know the correlation between blood composition and carcass traits. Steers fed the formula feed and rice straw (30 heads) or total mixed rations (96 heads) and were slaughtered at 30 month of age. Blood samples were corrected from jugular vein at the growing (8-12 mo), early fattening (13-23 mo) and late fattening (24-30 mo) phases. Blood metabolites and hormones were analyzed and determined the correlation coefficients and regression equations with carcass traits. Average concentrations of retinol, insulin and leptin were 1.10 IU, 30.34 ng and 235.35 ng per ml of blood plasma, respectively and blood retinol has negative correlations significantly ($P<0.01$) with insulin and leptin. With the age of steers, blood insulin and total protein decreased but blood retinol, AST, glucose, cholesterol and triglyceride were increased. At the late fattening phase, significant ($P<0.01$) negative correlations occurred between blood retinol concentration and marbling score and also blood total protein and longissimus muscle area of 13ᵗʰ rib and obtained the regression equations as follows; Marbling score $(1-9)=-0.009\times Retinol$ (IU/100 ml)$+9.125$ ($R2=0.643$); Ribeye muscle area (cm2)$=-0.250\times AST$ (U/L)$+112.498$ ($R2=0.450$). From the results obtained in the current study, it might be possible to make a high marbled beef by controlling the blood retinol content during the fattening phase in steers.

Biography

Y H Moon has completed his PhD in Ruminant Nutrition from GNU in Korea and working in the university as a Professor since 20 years. He has published more than 100 papers in reputed journals and has been serving as an Editorial Board Member of repute.

yhmoon@gntech.ac.kr

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