

Carcass and meat quality characteristics of distiller's co-product-supplemented pasture- and feedlot-finished beef steers.

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British breed beef steers (n = 48; 370 kg) were assigned to pasture or feedlot diets and one of two concentrations of 25-hydroxyvitamin D3 (VITD; 0 or 500 mg) to evaluate VITD and distiller's co-product supplementation effects on performance, carcass traits, and fatty acid composition. Pasture-finished cattle received 6.8 kg/hd per day of pelleted distiller's grains, wheat midds, and soy hulls. The feedlot diet contained 10% wet distiller's grains. Steers were harvested after 112, 133, or 154 d on feed (DOF) to minimize 12th rib fat differences. Steers (n = 24) received 25-hydroxyvitamin D3 boluses orally 7 d prior to assigned harvest date. At harvest, carcass data and longissimus (LM), semimembranosus (SM), and gracilis (GR) muscles were collected for analysis. At harvest, feedlot steers were heavier ($P = 0.0370$; 584 kg; 132 DOF) than pasture-fed steers (563 kg; 130 DOF) and had greater ADG ($P < 0.0001$; 1.74 vs. 1.51 kg/d). Pasture-fed steers had less ($P < 0.0001$) 12th rib fat and ($P = 0.0108$) kidney, pelvic, and heart fat as well as lower ($P = 0.0141$) marbling scores than did feedlot steers (Slight45 vs. Slight90). Lipid percentage differed by muscle ($P < 0.0001$) as GR had the least lipid followed by SM and LM (1.54, 1.94, and 2.54% of tissue, respectively). Pasture-fed steers had greater LM C18:2 cis-9, trans-11 (CLA) and C18:3n3 concentrations ($P < 0.0001$) than did feedlot steers (0.95 and 0.63 vs. 0.19 and 0.26 mg/100 mg lipid, respectively). Feedlot steers generally had greater monounsaturated fatty acid percentages, except for C18:1 trans-9 and trans-11 isomers. VITD did not affect performance or carcass traits. Data indicate it is possible to finish steers on pasture by supplementing with distiller's co-products without substantially increasing time needed to reach market weight and still maintain increased CLA compared with feedlot-finished steers.

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