

A. Steinwider, J. Frickh, L. Gruber, T. Guggenberger, A. Schauer and G. Maierhofer (2006): Influence of protein and energy intake on performance of Simmental bulls. 2nd communication: Slaughter performance, meat quality and N excretion. (in German).
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Abstract

In a two-factorial experiment 120 Simmental bulls were fed with different amounts of energy and crude protein during the fattening period of 158 to 648 kg of LW. The supply of energy differed in three levels (E1, E2, E3) varying by different amounts of concentrate (E1 1.3 kg DM; E2 2.5 kg DM, E3 increasing amount during fattening period of 2,6 to 3,9 kg DM). The roughage consisted of about 92 % corn silage and 8 % hay. The supply of crude protein differed in four levels (P1–P4) depending on the protein/energy-ratio. In P1 the protein/energy-ratio was 8.9. In group P2, P3 and P4 the protein/energy-ratio decreased during fattening period (P2 from 12.4 to 10.4; P3 from 16.0 to 12.0; P4 from 19.5 to 13.5). The killing out percentage was significantly higher in E3 (58.5) than that of E2 (57.5 %) and E1 (57.9 %). Within the energy groups the killing out percentage of P1 was lowest. The EUROP classification of the muscle tissue of group E3 was superior to that of E2 and E1. Within the protein groups the muscle tissue in P1 was worse. The fat deposition increased from E1 to E3 significantly and was higher in P3 and P4 than in P1 and P2. The chemical and physical meat quality parameters (drip-, grilling- and cooking losses, shear force, nutrient content and meat colour) were not altered considerably due to the different protein and energy supply. In E1 the sensory measured parameters of meat quality were lowest. The N-excretion increased linear from group P1 with 36.1 kg per fattened bull (84 g per day) to 56.0 kg (160 g per day) in group P4.

Keywords: beef cattle, energy and protein supply, slaughter performance, meat quality, N-excretion

Zitat (Deutsch):

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