

## **Influence of body weight at slaughter and dietary energy concentration on carcass tissue composition of Fleckvieh bulls**

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The objective of this study was to specify the effect of body weight at slaughter and dietary energy concentration on carcass composition of growing Fleckvieh bulls of modern type.

### **Methods**

74 Fleckvieh bulls (age: 44 d, body weight (BW) 81 kg) were fed on restricted milk replacer and a concentrates/hay-based total mixed ration (TMR) until weaning at an average BW of 123 kg and subsequently on a TMR based on maize silage and concentrates for ad libitum intake. At a BW of about 220 kg the bulls were divided in two feeding groups “energy norm” and “energy high” with 11.2 and 12.0 MJ ME/kg DM, respectively. Individual feed intake was recorded daily and BW was determined every four weeks. The bulls were slaughtered in five weight groups: 120, 200, 400, 600, and 780 with average final weights of 121 (n=8), 200 (n=10), 400 (n=18), 597 (n=16) and 781 (n=18) kg, respectively. After slaughtering, the dressed carcasses were chilled for 20 hours at 4 °C and dissected to muscle, fat, tendons and bone. Statistical analysis was performed using Proc GLM of SAS (Version 9.3). Results are shown in LSMEANS.

### **Results**

There were only minor effects of dietary energy concentration on carcass tissue composition in feeding groups energy norm and energy high. During growth the percentage of bone in the chilled carcasses decreased from 23.1% in 120 kg bulls to 13.2% in 780 kg bulls ( $p<0.05$ ). Comparing the lowest and highest weight groups with 120 and 780 kg, muscle percentage decreased from 67.5% to 63.5% ( $p<0.05$ ) while percentage of fat tissue increased from 2.7% to 16.3% ( $p<0.05$ ). However, percentage of tendons did not vary between weight groups 120 and 780 kg with 6.0% and 5.9%, respectively.

### **Conclusions**

Carcass compositions of bulls in lower weight classes corresponded widely to literature data from past decades while contemporary high end weights of 750 kg and above showed considerably more whole body fat at the expense of muscle tissue. Variations in dietary energy concentrations within margins found under practical conditions do not alter body composition to a relevant extent.

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