

A. Steinwider, W. Starz, H. Rohrer, R. Pfister, G. Terler, M. Velik, J. Häusler, R. Kitzer, A. Schauer and L. Podstatzky (2019): **Fattening of steers without concentrate – Part 1: Effect of sward surface height on continuous grassed pastures on fattening performance and forage area productivity** (in German). *Züchtungskunde*, 91, (5), 329-346.

Summary

In pasture based cattle production systems stocking rate and sward surface height significantly influences animal performance and productivity per unit pasture area. With increasing stocking rate, a decline in individual animal performance but an increase in utilization of pasture and productivity per unit pasture area can be expected. In this paper, the influence of pasture height in a continuously grazed pasture system on fattening performance and area productivity will be presented. In a second paper (Steinwider et al., 2019b) the slaughter performance, meat quality and economic parameters will be evaluated. In the experiment a concentrate-free feeding system with Simmental steers from 225 to 700 kg live weight was carried out in mountainous region of Austria. The trial was carried out in two replications with a total of 24 steers, divided into 3 experimental groups per year. In experimental group "kurz", a target pasture growth height of 5.0 cm, in group "mittel" of 6.5 cm and in group "lang" of 8.0 cm was used. The growth height of each permanent grassland area was recorded weekly with the Rising Plate Pasture Meter and the size of the pasture area was increased during the vegetation period. After the first grazing period the steer groups were kept in stable and fed with grass silage. In the next vegetation period the steers grazed on pasture again. With the exception of four animals in group "kurz", which had to be finished in stable in autumn, all steers were slaughtered during the grazing period. The nutrient content of the pasture samples out of the three pasture groups did not differ substantially, the average crude protein content was 20% and the average energy concentration was 10.7 MJ ME/kg DM. However, as the pasture growth height increased, the feed losses increased and pasture maintenance became increasingly necessary.

The average slaughter age of the animals was 26.4 (kurz), 24.8 (mittel) and 24.2 (lang) months, respectively. Group differences at the significance limit (P-values 0.06 and 0.07 respectively) were found for the duration of the experiment and the daily gains. The daily gains of group "kurz" (864 g) tended (p-value 0.06) to be below those of the groups "mittel" (950 g) and "lang" (935 g). The total forage area required per animal was significantly higher in group "lang" than in group "kurz" and group "mittel". The forage area productivity (live weight gain/ha) was significantly lower in group "lang" compared to group "kurz" and "mittel" with 612 kg and 606 kg/ha respectively. Those experimental groups, which achieved the highest daily gains, did not achieve the highest area performance.

Keywords: steers, pasture, set stocking, continuous grazing, fattening, sward height, stoking rates

Zitat (Deutsch):

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1. Mitteilung: Einfluss der Aufwuchshöhe bei Kurzrasenweide auf Mastleistung und Flächenproduktivität. *Züchtungskunde*, 91, (5), 329-346.