

A. Steinwider, W. Starz, H. Rohrer, J. Häusler, R. Pfister (2018): **Milk performance per area of pasture- or silage-fed organic dairy cows in mountainous regions of Austria** (in German). Züchtungskunde, 90, (3), 218-239.

Summary

The core aim of sustainable dairy milk production is an efficient and cheap conversion of forage to milk. In pasture based dairy production systems, a high level of milk production per hectare is a mayor goal. In the project presented, three milk production systems „barn feeding with grass silage – group S-KF0“, „barn feeding with grass silage plus concentrate supplementation – group S-KF+“ and „pasture feeding on a continuous grazing system without supplementation – group VW“ were compared, including 63 cows over three vegetation periods in the mountain area of Austria. The average lactation day at the beginning of the feeding experiment was 46 days (± 11.9). The permanent grassland was divided into three equal arears. One third of the area was used over the full grazing period as pasture (continuous grazing, RPM-pasture height of 5.3 cm) and the remaining area was used for grass silage production (four cuttings per year). The silage bales were feed during the winter months to the silage feeding groups. The full grazing pasture period lasted on average in the three years from 14 of April until 16 of September. In the grazing system higher net forage yields in comparison to the grass silage production system were achieved. Therefore, the average experimental period lasted 155 days in group VW and 150 and 139 days in groups S-KF+ and S-KF0, respectively. During the entire experimental period, the milk yield of the S-KF+ group was significantly higher (2,798 kg ECM/cow and period) than in S-KF0 (2,309 kg ECM). The yield from cows in group VW was in between (2,511 kg ECM/cow and period). The mean daily milk production per cow in group S-KF+ (18.7 kg ECM/day) was significantly higher than in group S-KF0 (16.6 kg ECM) and VW (16.2 kg ECM). The milk yield per ha forage area increased significantly from group S-KF0 (7,931 kg ECM/ha forage area) to S-KF+ (9,690 kg ECM/ha). The milk production of cows in group VW (8,637 kg ECM/ha forage area) was in between and did not differ significantly from the silage groups. When the ECM performance was allocated to the total fodder area (incl. organic arable land for concentrate production), no significant group differences were found. The group VW achieved numerically the highest overall ECM production per hectare total fodder area.

Keywords: dairy farming systems, barn feeding, pasture, organic farming

Zitat (Deutsch):

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