

Effects of vegetation phase of three varieties of grass on digestibility, nutritive value and palatability of hay

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Third-crop, three varieties of grass (Kora, Perun and Becva), cut at two vegetation phases, were tested to compare digestibility (OM *in vitro* by cellulase, *in vivo* with wethers), nutritive value (using routine analyses) and palatability (in precise feeding experiments with twelve heifers, which were at the beginning of the experiment 250 days old and 212 kg weight in average) of hay.

The three varieties of grass compared were :

Kora - new breed *Festuca arundinacea* Schreb.

Becva - Kora x *Lolium multiflorum* Lam.

Perun - *Festuca pratensis* Huds. x *Lolium multiflorum* Lam.

To harvest third-crop grass in two different vegetation phases at the same time, second-crop was harvested at two different times (one-third of the experimental area at the beginning of harvesting, two-third of the area 11 days later).

The content in crude fiber of the older grasses was significantly ($P \leq 0.05$) higher than in young grasses. There were also differences

among the varieties of grass.

In vitro and also *in vivo* digestibility of young grasses were significantly ($P \leq 0.05$) higher than digestibility of older grasses. There were also differences among varieties of grass.

The palatability of hay of these three varieties of grass was tested during optimal vegetation phase (Y-young) and 11 days afterwards (O-old). The heifers used were housed in individual pen with the same accessibility to the three tested fodders. The average daily voluntary intake of the three grass varieties in exp.(Y) was 7.1 kg (the percentage being 49.3 %, 40.0 % and 19.7 % for the varieties Kora, Perun and Becva, respectively) and in exp.(O), daily intake was 5.4 kg (55.6 %, 33.3 % and 11.1 % for Kora, Perun and Becva, respectively).

The time of cutting grass forage had effects on digestibility and palatability of the hay. When the grass is cut during the optimal vegetation phase, the hay is more toothsome and digestible than when cut later. It is also important to choose the best variety of grass.