

silage in horses. Three wilted silages with different dry matter (DM) content and in square big bales were compared. The first two were first-cut grass silages with a low DM content at 427.3 g/kg (LGS) or a medium DM content (661.7 g/kg, MGS). They were compared with a second-cut silage from grass grown under very dry conditions (HGS, 787.5 g/kg). The three silages were offered alone and *ad libitum* to four sport horses in three consecutive periods, each silage being offered during one period. Large changes were observed in the concentration of fungi and bacteria between bales of the same silage, between the silages and between the days after opening the bales. LGS was characterized by a lactic acid content of 18.01 (s.e. 2.83) g/kg DM, an acetic acid content of 8.82 (s.e. 0.67) g/kg DM and a butyric acid content of 2.69 (s.e. 1.41) g/kg DM. The corresponding concentrations for MGS and HGS were 2.47 (s.e. 1.24) and 4.49 (s.e. 1.21); 4.39 (s.e. 1.13) and 3.31 (s.e. 0.77) and 0.54 (s.e. 0.48) and 0.05 (s.e. 0.02) g/kg DM, the differences being significant between LGS and the two others ( $P < 0.01$ ). No health problems were recorded with the horses. DM intakes were close with the two silages at the low and medium DM content (8.4 (s.e. 0.21) and 8.6 (s.e. 1.32) kg/day) and higher than that of HGS (6.99 (s.e. 0.20) kg/day ( $P < 0.001$ )). The apparent digestibility coefficients were 637 (s.e. 81), 645 (s.e. 81), 621 (s.e. 74) and 665 (s.e. 75) g/kg for DM, organic matter, crude protein and acid-detergent fibre (ADF) respectively for LGS. For MGS, the corresponding coefficients were 675 (s.e. 86), 671 (s.e. 93), 760 (s.e. 38) and 577 (s.e. 145) and for HGS 588 (s.e. 47), 597 (s.e. 44), 798 (s.e. 113) and 484 (s.e. 86) g/kg; the digestibility of ADF only being significantly lower for HGS than that of the two other diets ( $P < 0.05$ ). It can be concluded that grass silage with a DM content of 450 to 650 g/kg, although characterized by a high microbial count, was a foodstuff of interest for horses.

#### 100. Composition, intakes and apparent digestibility of three grass silages offered to horses

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Hay, a usual component of horse diet is suspected to provide some spores causing chronic obstructive pulmonary disease. Grass silage has been suggested as forage in the diet to overcome the problem. It was therefore of interest to assess the nutritive value of grass