

## Forage preferences of horses

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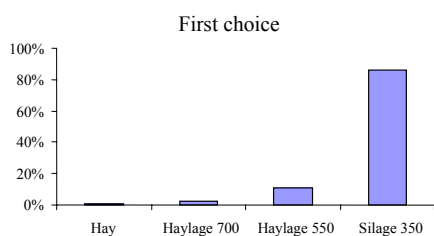
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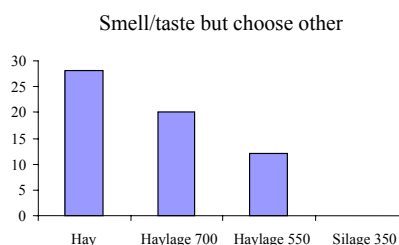
**Introduction** In the northern climates the forage fed to horses has by tradition been hay. However, hay is subjected to moulding unless it is stored dry. Mould spores together with actinomycetes are responsible for the condition Recurrent Airway Obstruction (RAO), which is the second largest reason for culling of warm-blood horses in Sweden (Wallin, 2001). Therefore, the possibility of replacing hay with haylage and silage in the feed rations of horses is interesting. The objective of this study was to investigate the preferences among horses for different types of conserved grass, to gain more knowledge about the suitability of haylage and silage as a horse feed.

**Materials and methods** Four mature horses of different age and breed were used in a preference test, in which the horses had simultaneous access to four forages harvested from the same grass ley (585-608 g neutral detergent fibre (NDF), 26-102 g water soluble carbohydrates (WSC) per kg DM) at the same date, but with different dry matter (DM) levels and different techniques. Silage with 350 g DM/kg, haylage with 550 g DM/kg, haylage with 700 g DM/kg and hay was baled with a high density hay baler. Silage and haylage bales were wrapped (eight layers of white 360 mm wide stretch film) and hay bales were put on a barn-drier. During the period of the preference test, the horses were kept on autumn pasture and were offered the experimental forages as an extra meal for two hours daily inside a stable. All forages were served in amounts of 1 kg DM in plastic containers of identical size, colour and square shape, and the order of the containers was different from day to day according to a randomised scheme, to avoid that a certain place was preferred instead of a certain forage. During the two-hour period, real time observations were made for every horse, and the activities were registered according to a predetermined protocol with certain definitions. The preference for eating place of each individual horse was also registered. The preference test was repeated for 24 days. All comparisons were done using SAS GLM procedure, and for a difference to be considered as statistically different  $P < 0.05$ .

**Results** The horses chose to eat the silage with 350 g DM/kg first more often than any of the other forages (Figure 1,  $P < 0.001$ ). In the beginning of the experimental period, the horses spent more time smelling at the different forages before deciding to stay and eat from one particular forage, than at the end. The only forage that was never left in favour to any other forage was silage with 350 g DM/kg. In contrast, hay was the forage that was left in favour of the other forages most often (Figure 2,  $P < 0.001$ ). The horses did not have any preference for eating place in the study. The analytical results of the forages showed differences in content of NDF and WSC which were lowest in the 350 g DM/kg silage, as well as levels of VFA (volatile fatty acids) which were highest in silage with 350 g DM/kg (data not shown).



**Figure 1** First choice of forages. The type of forage is indicated by the DM level on the x-axis



**Figure 2** No. of times horses smelled at a forage but left it in favour for another

**Conclusion** The result of the present study shows that horses seem to make active choices of forages and that silage is the preferred forage when given the choice. WSC-content did not seem to be involved in preference, since the forage with the highest WSC-content was the least preferred.

## References

Wallin, L. (2001). *Longevity and early prediction of performance in Swedish horses*. Agraria 288. PhD Thesis. Swedish University of Agricultural Sciences, Uppsala, Sweden.