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# Acceptance and apparent dry matter digestibility of Teff haylage (*Eragrostis tef* var. Moxie) in horses

## CONCLUSION

Horses accepted teff haylage as their sole feed, and apparent dry matter digestibility of teff haylage was estimated to 56 % (using acid insoluble ash).

## Introduction

Climate change may require novel crops in forage production. Teff (*Eragrostis tef*) is a drought tolerant C4-grass of interest, but there is scarcity of knowledge on teff as a forage for horses in northern Europe.

## Objectives

- Can Teff be grown in the Swedish climate?
- Is Teff haylage accepted by horses?
- Which apparent dry matter digestibility of Teff haylage can be expected?



Figure 2. Teff haylage in round bale during feed experiment.

## Materials and Methods

Teff (*Eragrostis tef* var. Moxie) was sown in south of Sweden and harvested as round bale haylage 3.5 months later (Figure 1a and b). Teff haylage (Figure 2) was fed *ad libitum* to six horses (age  $6.3 \pm 0.75$  years, body weight  $504 \pm 90.4$  kg) for three weeks. Teff haylage composition was analysed, voluntary dry matter (DM) intake registered, and apparent dry matter digestibility (ADMD) estimated using acid insoluble ash (AIA) as a marker in faecal samples taken once daily during the third week.

Table 1. Composition of Teff haylage

Variable	Average (std dev)
Dry matter, g/kg	649 (23.9)
Ash, g/kg DM	69 (2.1)
Crude protein, g/kg DM	123 (6.0)
Neutral detergent fibre, g/kg DM	599 (12.8)
<i>In vitro</i> digestible organic matter, g/kg DM	769 (6.0)
Estimated metabolisable energy, MJ/kg DM	9.7 (0.08)
Calcium, g/kg DM	5.0 (0.08)
Phosphorous, g/kg DM	2.0 (0.02)



Figure 1 a. Teff field on July 15, 2015 (2 months after sowing) Photo: T. Erlandsson.



Figure 1b. Teff field on September 1, 2015 (3.5 months after sowing). Photo: T. Erlandsson.

## Results

Composition of Teff haylage is reported in Table 1. Teff yield was  $4.7 \pm 1.63$  tons DM per hectare. Apparent dry matter digestibility was estimated to  $56 \pm 5.0$  % which was comparable to ADMD in teff hay (Staniar et al., 2010). Horses readily consumed 2.4 to 3.0 % of their body weight in kg DM of teff haylage.

**References:** Staniar et al., 2010. J Anim Sci 88, 3296-3303.

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