Effect of Timothy and *Festulolium* on growth characteristics and carcass quality in bulls.

Margarita Novoa-Garrido[1] and Harald Volden[2]. [1]Norwegian Institute for Agricultural and Environmental Research, Arctic Agriculture and Land Use Division, 8049 Bodø, Norway. [2]Norwegian University of Live Sciences, 1432 Ås, Norway.

Searching for grass species with good feed quality and overwintering properties

The main objective of this experiment was to compare Timothy (*Phleum pratense*) and X-*Festulolium* varieties Felina and Felopa as forage for growing bulls for a more efficient, sustainable, and economically viable livestock farming in the Nothern Norway.

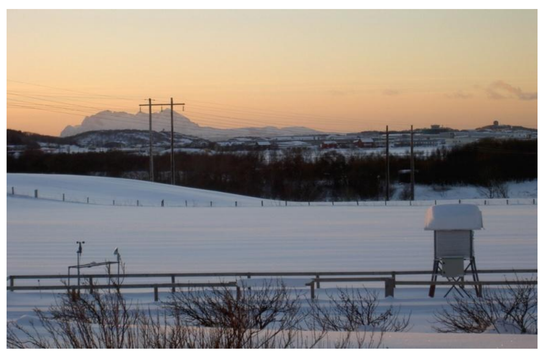

Fig. 1. Bioforsk's research station in Bodø, on Nordland' coast.
Photo: Birger Volden

Fig. 2. Bulls during the study.
Photo: Birger Volden

Fig. 3. 2nd ley. Date: 05-19-2009
Photo: Birger Volden

Material and methods

The study included 31 one-year-old Norwegian Red bulls. The animals were assigned to one of the three feeding groups by stratified block randomisation within life weight in individual boxes and feeding. The forage was grown at Bioforsk's research station in Bodø, (latitude: 67.28 °N), Norway, and was attempted to be harvested at a NDF content of 500 g/kg dry matter (DM) in the summer of 2008. The bulls were fed silage *ad libitum* and a fixed amount of one kg of concentrate/day through the experiment. Animals were slaughtered at a live weight of 600 kg, and the slaughters were classified according to the EUROP system. A palatability test of the silage was also done during the study.

Results

- Forage cultivars had no effect on carcass classification
- Timothy group showed the greatest weight gain (Fig. 4a) and the largest forage uptake
- Timothy group reached the slaughter weight (600 kg) earlier (Fig. 4c)

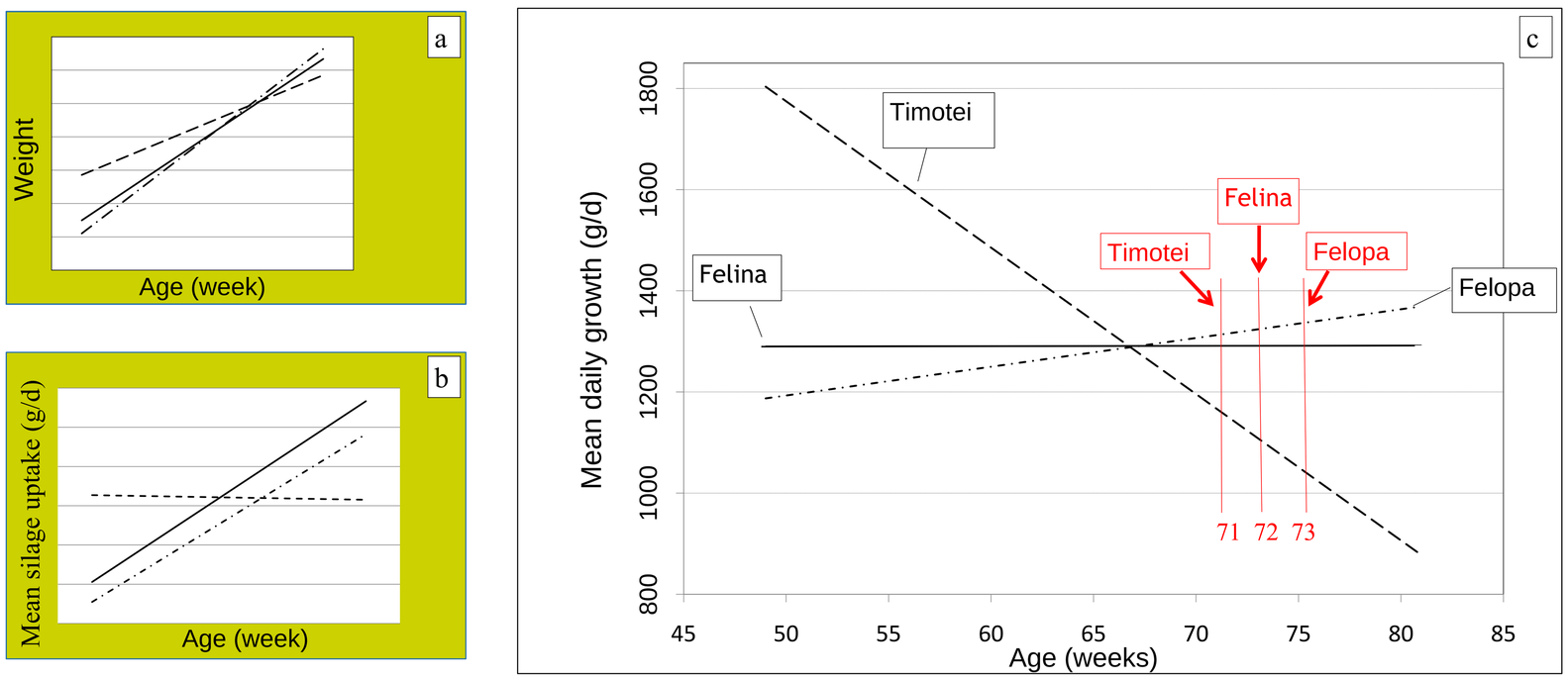

Fig. 4. Weight increase thoughout the growing period (4a). Silage uptake throughout the growing period (4b). Dailig growth and age at slaugther time in red (4c).

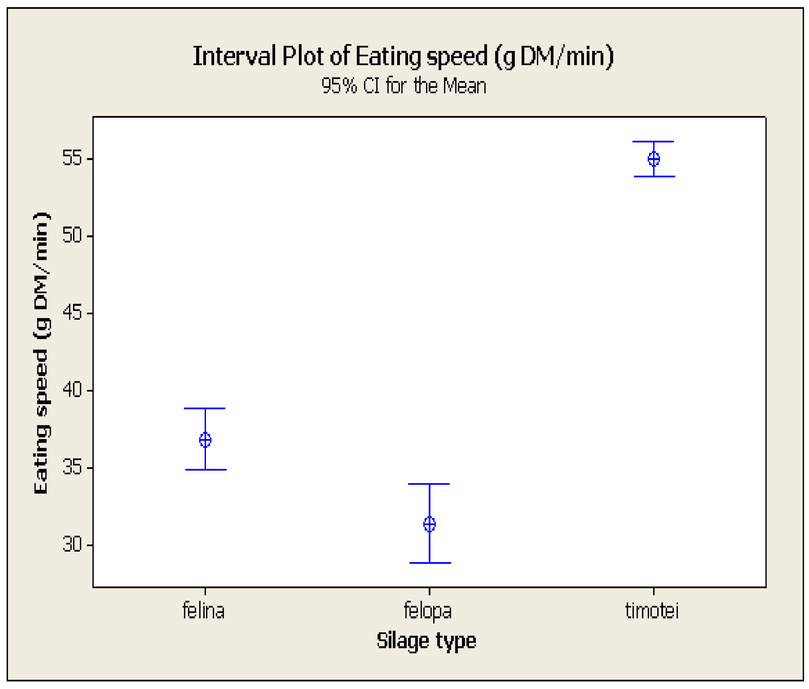

Fig. 5. Mean estimated speed per forage with 95% CI

- The palatability test indicated that the animals had a clear preference for Timothy. Between the X-*Festulolium* varieties the animals seemed to preferred Felina (Fig. 5). These results correlated very well with the DM content.

Conclusion

The Timothy group showed the greater total weight increase and reached the slaughter weight at an earlier time, followed by felina and finally felopa (Fig. 4a, 4c). The daily weight gain in the Timothy group was larger than in the testing groups, but showed a reducing tendency throughout the entire study period (Fig. 4c). This can be explained by the even silage uptake in the Timothy group in contrast with the increasing daily silage uptake in the *X-Festulolium* variants (Fig. 4b). The palatability study indicates that the animals liked the Timothy silage better than the silages produced with Felina and Felopa. Between the testing groups it seems like the animals preferred Felina to Felopa, and this corresponds with the difference observed in the mean daily silage uptake (Fig 4b).

www.bioforsk.no
margarita.novoa-garrido@bioforsk.no