

# Tanniniferous silage with *Lotus corniculatus* (L.) compared with *Trifolium repens* (L.) for dairy cows in Sweden

Sweden

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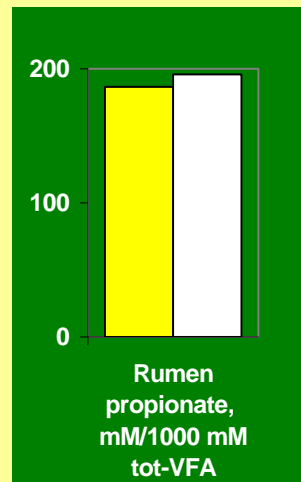
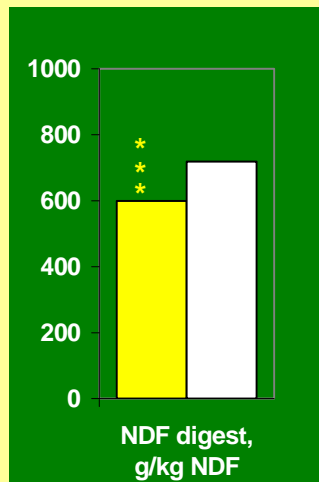
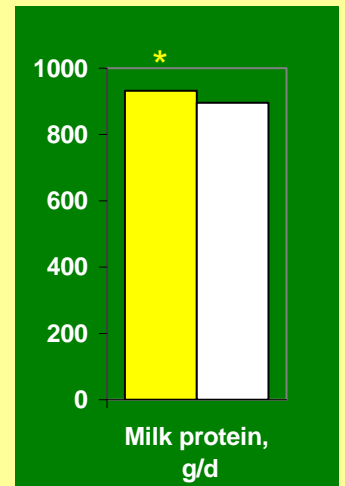
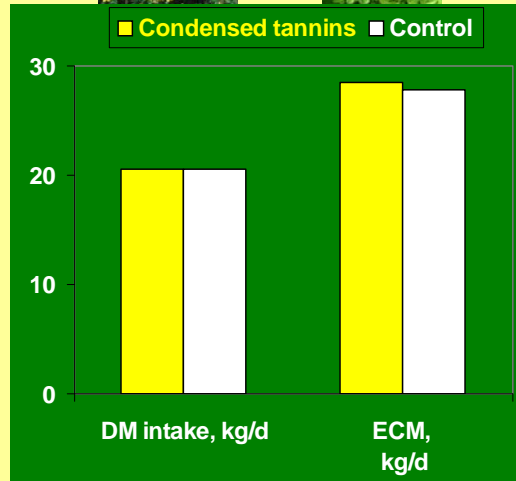
## Introduction

The legume birdsfoot trefoil (*Lotus corniculatus* (L.)) contains condensed tannins (CT) that decrease ruminal protein degradation and hereby improves protein supply to the ruminant small intestine. CT has also been reported to reduce methane emissions giving a propionate-type rumen fermentation.

The moderate CT levels in birdsfoot trefoil grown in Sweden has previously not been assumed to have any tannin effect until *in-vitro* studies and feeding experiments with fresh birdsfoot trefoil for growing cattle showed promising results. Feeding experiments with ensiled birdsfoot trefoil have not been performed in Sweden until the present study.

## Material and Methods

12 mid-lactating dairy cows were fed silage of perennial ryegrass mixed with either birdsfoot trefoil (Condensed tannins diet) or white clover (Control diet) in change-over experiments during two consecutive years. The silages were supplemented at rates corresponding to 300-350 g kg<sup>-1</sup> total diet dry matter with grain concentrates.



## Conclusion

- Grass/legume silage with birdsfoot trefoil grown in Sweden was able to increase milk protein production moderately compared to a mixed silage with white clover as the legume component
- Digestibility of organic matter and NDF was markedly lower with birdsfoot trefoil, but apparently without adverse effects on production.
- Rumen propionate proportion was decreased rather than increased with birdsfoot trefoil.

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