

YIELD AND QUALITATIVE EVALUATION OF FODDER CROPS IN MEDITERRANEAN CONDITIONS, UNDER A CONSERVATION AGRICULTURE TECHNIQUE



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Introduction

EXTENSIVE LIVESTOCK PRODUCTION

Important sector of the Portuguese land management and economy

- + Biodiversity
- + Food security and sovereignty
- + Ecosystem services
- + Animal welfare
- + Climate change adaptation and mitigation



Production and conservation of quality forage
↓
Guarantee the stability of ruminant production

OBJECTIVE

Assess the effect of the 'cleaning cut' (early fodder harvest) for weed control on dry matter production and quality at different stages of growth on:



MATERIAL AND METHODS



INIAV-Elvas,
Portugal
Autumn/2022

Direct seed drill
Conservation agriculture technique

- Fodder crops for multiple cuttings
- 5 ha of each forage
- Sowing density: 50 kg ha⁻¹

Italian ryegrass and a biodiverse mixture



Factorial scheme
- Combine in each forage, the 'cleaning cut' (with and without) with 4 cutting dates in each of the five blocks.

Dry matter yield, crude protein content, NDF, ADF, ADF, in vitro digestibility

RESULTS AND DISCUSSION

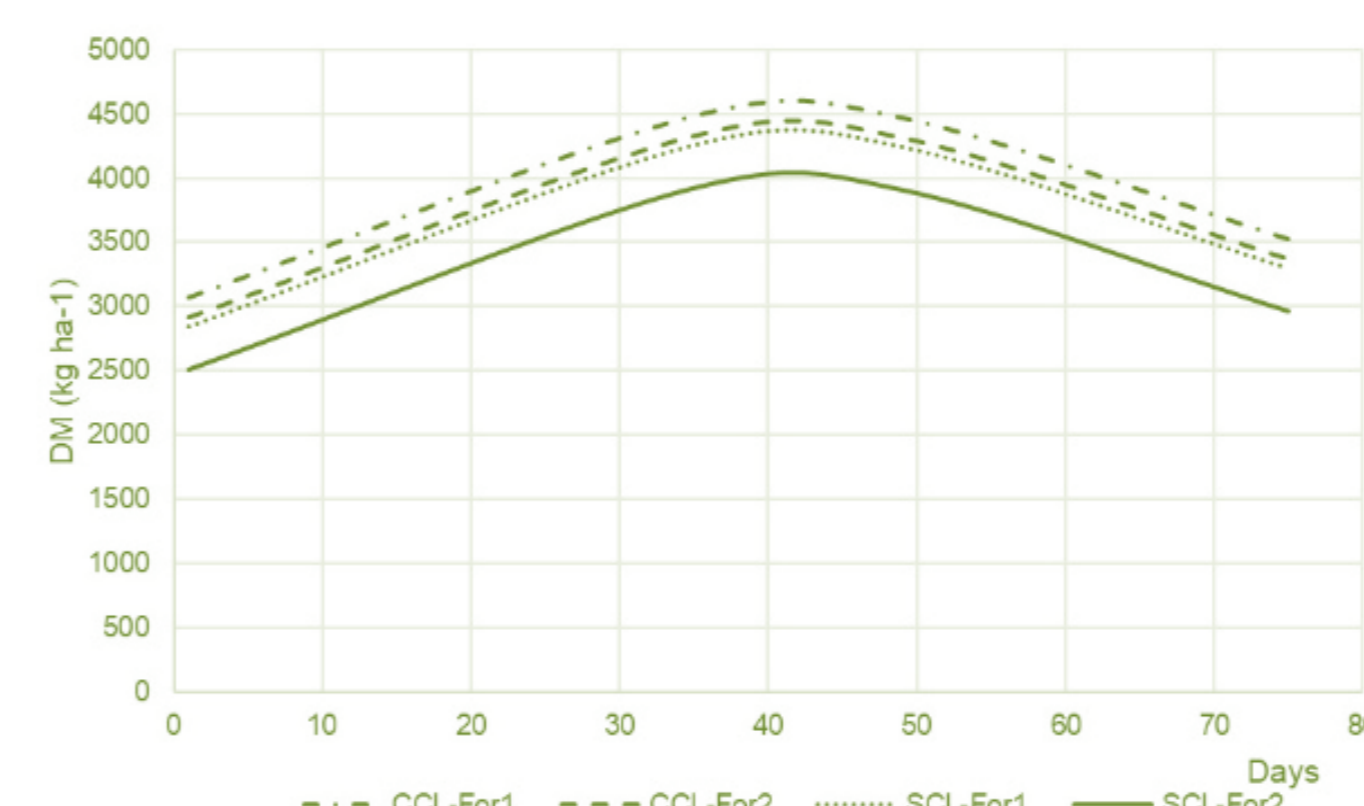


Figure 1 - Total dry matter yield (DM; kg ha⁻¹) of two treatments (with and without cleaning cut: CCL and SCL) on both fodder crops (For 1: Italian ryegrass; For 2: Italian ryegrass+annual clovers);

The dry matter production was not affected by the practice of 'cleaning cut'.

The effect of time on dry matter production followed a quadratic pattern, with a linear coefficient of 73.3±12.30 kg ha⁻¹ day⁻¹ and a quadratic coefficient of -0.88±0.157 kg ha⁻¹.

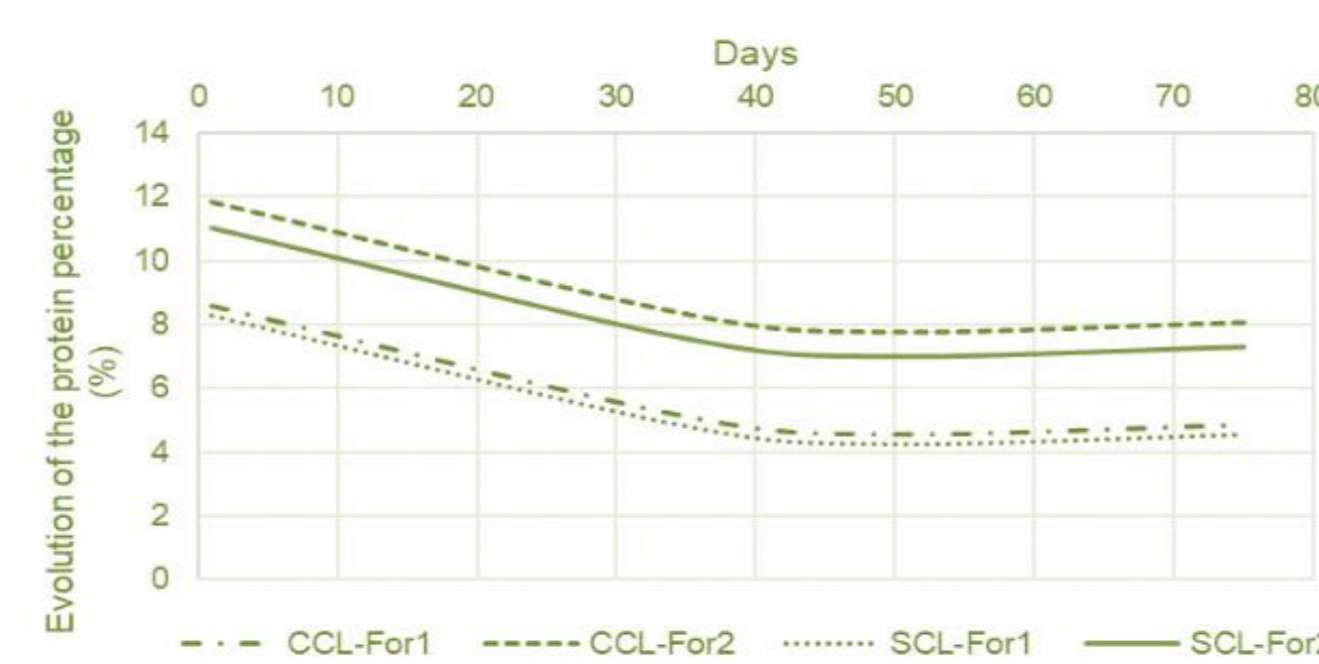


Figure 2 (right) - Evolution of the protein percentage (%) of two treatments (with and without cleaning cut: CCL and SCL) on both fodder crops (For 1: Italian ryegrass; For 2: Italian ryegrass+annual clovers)

Both the total protein production and evolution of the protein percentage were affected by fodder crop.

CONCLUSIONS

This preliminary study provides information on the influence of cutting date and the presence of leguminous species on fodder quality: early cuts and forage mixtures with legumes have a higher nutritional value.

Acknowledgements

This study was carried out as part of the PPR project GEEBovMit - LA 3.3- Mitigation of GHG emissions in the production of beef cattle - pastures, forages and natural additives

