

The effect of a companion legume on the establishment of Caucasian clover (*Trifolium ambiguum*) when sown with timothy

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CONCLUSIONS

- When Caucasian clover was sown with timothy, a companion legume did not reduce weeds
- Red clover suppressed establishment of the Caucasian clover

INTRODUCTION

- Red clover (*Trifolium pratense*) (RC) is not persistent in Nordic leys.
- Caucasian clover (CC) has the potential to be more persistent than red clover but is slow to establish.

Can the inclusion of a second legume reduce weeds and improve Caucasian clover establishment?

METHODS

- An experiment was established in 2023 at Rådde, Sweden.
- Seed mixtures combined timothy (*Phleum pratense*, T) at 5 kg ha⁻¹ with cultivars of CC (10 kg ha⁻¹), RC (8 kg ha⁻¹), or yellow lucerne (*Medicago falcata*, YL) (10 kg ha⁻¹).
- Two additional treatments combined T and CC at 5 kg ha⁻¹, with a second legume, either RC (4 kg ha⁻¹) or YL (5 kg ha⁻¹).
- For three harvests (H) in 2024 and 2025, samples were hand separated into species, to determine the CC, total legume, and weed fractions.

RESULTS

- For 2024, H1, CC as a fraction of dry matter was not different between the single legume CC treatments (mean 9.1%).
- The fraction of dry matter (DM) was greater for 'Iga' CC as a single legume than when combined with either YL or RC.
- For H2, the overall contribution of CC had increased (mean 29.2%).
- For H1, H2 and H3, the total legume content was greatest for 'Iga' + RC.
- For 2025 H1, there were less clear treatment differences.
- For H2 and H3, 'Iga' combined with RC had a lower fraction of CC than other treatments.
- However, the total legume fraction was greatest for 'Iga' combined with RC.
- There was no effect of a second legume on weeds at harvest.

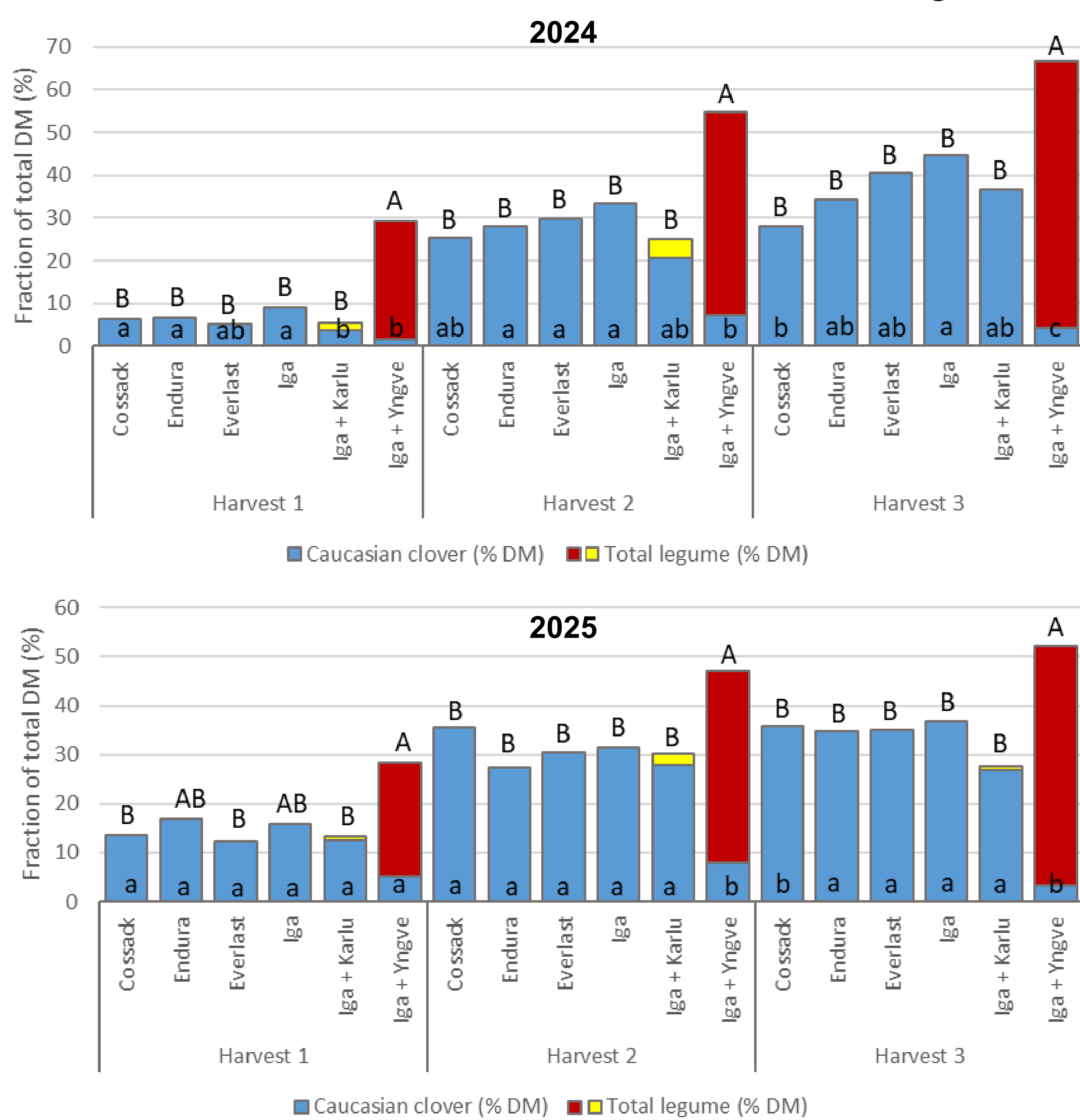


Figure. Contribution of Caucasian clover (Cossack, Endura, Everlast, and Iga) and combinations with yellow lucerne (Karlu) and red clover (Yngve) to total dry matter (DM) in mixed swards with timothy. CC means with common lowercase letters and total means with uppercase common letters do not significantly differ ($p > 0.05$) within each harvest, according to Tukey's test.



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