



Practice Abstract N° 19

Weed management in wheat in a conventional system, Greece

INTRODUCTION

This study assessed the effects of different cover crops (*Trifolium alexandrinum*, *Lolium perenne*, and their mixture) and weed management strategies (herbicide application, mechanical control, and false seedbed) in a conventional cropping system in Central Greece. The experiment followed a Randomized Complete Block Design (RCBD) with a split-plot layout.

MAIN RESULTS – OUTCOMES

- ✦ The mixture of the two cover crops (*T. alexandrinum* + *L. perenne*) produced a significantly greater amount of biomass compared to the monocultures of *L. perenne* and *T. alexandrinum*
- ✦ Before cover crop termination, weed biomass was 62%, 76% and 85% lower in the *T. alexandrinum* + *L. perenne* mixture plots compared to *L. perenne*, *T. alexandrinum* and the non-cover crop control plots, respectively
- ✦ The combination of *T. alexandrinum* + *L. perenne* × herbicide application at the recommended rate increased grain yield (4,258.0 kg ha⁻¹) by 65% compared to the combination of *L. perenne* × untreated control (1,489.7 kg ha⁻¹)

PRACTICAL RECOMMENDATIONS

- 1 **Use cover crop mixtures for improved biomass and weed suppression** → The combination of *T. alexandrinum* + *L. perenne* provided the highest biomass and significantly reduced weed presence before termination
- 2 **Consider the false seedbed technique** → This method, when combined with the cover crop mixture, effectively reduced weed biomass by over 95% compared to untreated plots with one cover crop


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