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Annual ryegrass (*Lolium rigidum* Gaud) competition altered wheat grain quality: A study under elevated atmospheric CO₂ levels and drought conditions

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Title page

Title: Annual ryegrass (*Lolium rigidum* Gaud) competition altered wheat grain quality: A study under elevated atmospheric CO₂ levels and drought conditions

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Abstract

Annual ryegrass is one of the most serious, costly weeds of winter cropping systems in Australia. To determine whether its competition-mediated plant defence mechanisms effect on wheat grain quality, wheat (cv. Yitpi) and annual ryegrass were grown under two levels of CO₂ (400 ppm; (a[CO₂]) vs 700 ppm; (e[CO₂]), two levels of water (well-watered vs drought) and two types of competition (wheat only; (W), and wheat × annual ryegrass; (W × R) with

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