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Abstract

Grain Oats—An Alternative Winter Cereal for the Australian Sub-Tropics? †

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Abstract: Current production of oats for grain in Queensland is minor due to unsuitable varieties bred for different climates, and high disease pressure from leaf and stem rust late in the growing season. A range of grain oat breeding lines developed by the Federal University of Rio Grande do Sul in Porto Alegre, Brazil, was screened for leaf rust resistance and subsequently identified as potential grain oat cultivars for sub-tropical Queensland. The evaluation of these grain oat lines from Brazil may provide an opportunity to re-establish oats as a winter grain crop in central and southern Qld and northern NSW. Two replicated trials were established near Toowoomba in Qld and Grafton in NSW to assess grain yield and agronomic characteristics. These trials showed significant differences in grain yield within the set of Brazilian grain oat lines, compared with the Australian cultivars, showing the potential for selection of higher yielding lines. The Brazilian line coded UFRGS037031-3 was the highest yielding line in both high yielding conditions at Grafton and moisture stressed conditions at Wellcamp, and should be the focus of any further evaluation. The Brazilian grain oat lines have very strong resistance to leaf rust compared with Australian cultivars. Further research is needed to determine the potential demand for grain oats as a feed grain in Queensland and to determine the profitability of grain oats to farmers as an alternative winter cereal.

Keywords: oats; rust; Australia

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