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Extensive Agriculture Fact Sheet 2016

Key Points

- Early (March or before) sown wheat performs best as a dual purpose crop compared to later sown crops in Tasmania, producing better grain yields and dry matter for grazing
- Early (March) sown wheat is more tolerant of grazing than later sown crops, with minimal impact on grain yield.
- The minimum crop height for grazing without affecting grain yield at growth stage 30 (start of stem elongation) is 5 cm.
- Grazing late at growth stage 32 (second node on main stem) significantly reduces grain yield at any sowing date.
- Grazing under waterlogged conditions

Managing dual purpose wheat

Introduction

The use of dual purpose wheat in a mixed farming operation makes good sense both economically and for environmental sustainability whilst adding flexibility to the cropping system. As a dual purpose crop it has the added benefit of filling an important winter feed gap whilst assisting nutrient recycling.

This project looked at how to maximise grazing opportunity without sacrificing grain yield for the dual purpose wheat cultivar 'Revenue'. The best time to sow, when to graze and how intensely to graze are all strategies that have potential to impact on grain yield.

Early sown wheat for high grain yield and biomass

Early sown wheat (March or earlier) performs best as a dual purpose crop compared to later sown wheat. With each month delay in sowing time, both the quantity of dry matter available for grazing and grain yield declines (Figure 1).

What impact does grazing have?

Early sown wheat is more tolerant of grazing than later sown wheat. High grazing intensity had a very small impact on grain yield. Later sown wheat is less tolerant of grazing with a 14% reduction in grain yield for April sown wheat and a 33% reduction in yield for wheat sown in May. Grazing early sown wheat can have an added advantage of delaying development which pushes flowering back a couple of weeks out of the traditional frost risk zone.

Is it too late to graze?

Grazing wheat at growth stage 32 significantly reduced grain yield ranging from 30% for early (March) sown wheat through to a 75% reduction in yield for late (May) sown wheat. (Figure 2). Grazing at this growth stage removes the wheat's flowering points and reduces potential grain yield.

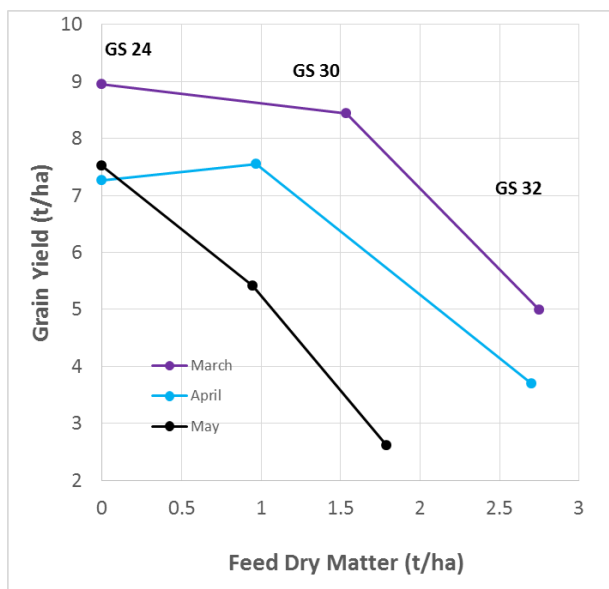


Figure 2: The effect of grazing at different wheat growth stages (Revenue Wheat).

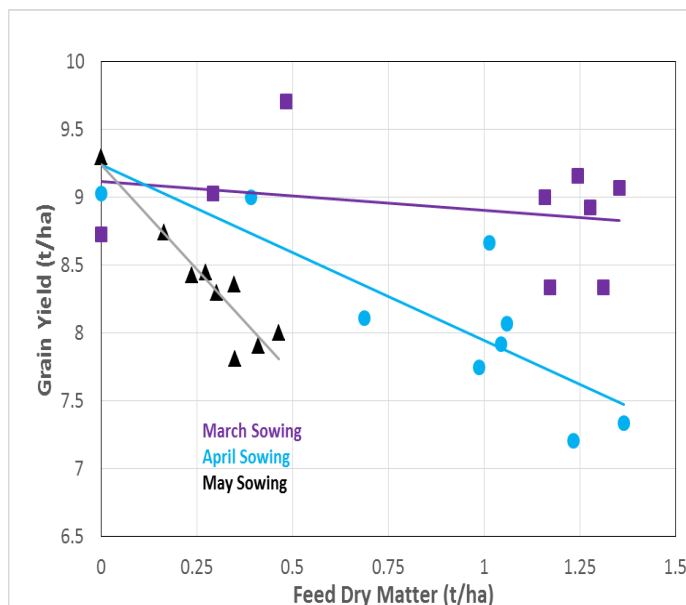


Figure 1: The effect of grazing on grain yield and dry matter production of Revenue wheat .

Other benefits

Grazing dual purpose wheat varieties can have the added benefit of reducing lodging and disease as excessive vigour is managed through strategic grazing.



Figure 3: Sufficient biomass for grain recovery

Contact

Peter Johnson

Tasmanian Institute of Agriculture

P.G.Johnson@utas.edu.au

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