Opportunities and Challenges of Oat Agronomy

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Oats – Good for Growers?

• Good break crop
• Often a low input crop
  ...but seen as a low output crop
• Opportunities to optimise inputs and maximise yield
  ...while recognising challenges
The Fertilisation Opportunity

- Low rates of Nitrogen often applied to oats crops
- Fertiliser Manual recommends a max. 140 kg N/ha
- Worries about lodging
- Recent work suggests more N could be applied
Lydbury North N response trial 2014
ADAS N response trial - 2014

Yield (t/ha @ 15% mc) vs. Applied N (kg N/ha)

- Balado
- Gerald
- Mascani
- Tardis
ADAS N response trial - 2015

The graph shows the yield (t/ha @ 15% mc) plotted against N applied (kg/ha) for different varieties:
- **Balado** (blue line)
- **Gerald** (red line)
- **Mascani** (orange line)
- **Tardis** (green line)

The yield increases with the amount of N applied, up to a point, after which it plateaus. The varieties show different response rates to N application.
It’s not all about Nitrogen ...
Lodging

• Lodging can occur - associated with high seed and N rates

• New, shorter varieties more resistant to lodging

• Generally not a problem where PGRs applied

• Breeders have opportunity to reduce risk through:
  • Wider root plate
  • Stronger stem
  • Shorter height
The Weed Challenge

• Grass weeds are often a barrier to oat growing
• Chemical control is limited
• Considerations should include:
  • Rotation
  • Varietal choice
  • Stale seedbed
• Is there an opportunity to exploit allelopathic effects of oats?
The Disease Control Opportunity

• Crown rust and mildew be a problem
  • Especially in the West and South-West

• Both diseases are relatively cheap to control

• Could the addition of SDHIs give additional benefits?
Oats – Good for Growers

• Opportunities to optimise yields and gross margin of oats throughout the season

• Some of the greatest gains could come from optimising fertilisation

• Weed control is still a challenge

• Further understanding of the crop would benefit growers
Thank you

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