

Nutrien
Ag Solutions®

Nutrien
Ag Solutions®

Barley – Genetics or Fungicide?

Annabelle Maher

BACKGROUND

- Part of a series of trials completed over several years
- 2 trials across 2 years
- Both completed in high rainfall years



BACKGROUND

- It is difficult to maximise yield purely with fungicides due to disease in high disease pressure environments. Can this be improved with stronger genetic management?



For more detail on infection levels and the final profit, please refer to the paper
“Barley variety selection to maximise profits in high disease pressure environments”

Nutrien
Ag Solutions™

RESULTS - CALINGIRI

| | Yield (t/ha) | Profit change per variety (\$/ha) | Profit increase c.f. Spartacus UTC (\$/ha) |
|--------------------------------|-----------------|---|--|
| Spartacus CL UTC | 5.4 | 0 | 0 |
| Spartacus CL Z31, Z37 | 5.8 | 47 | 47 |
| Spartacus CL Seeding, Z31, Z37 | 5.8 | 51 | 51 |
| Maximus CL UTC | 6.2 | 0 | 324 |
| Maximus CL Z31, Z37 | 6.5 | -19 | 305 |
| Maximus CL Seeding, Z31, Z37 | 6.5 | -8 | 315 |
| Commodus CL UTC | 6.1 | 0 | 169 |
| Commodus CL Z31, Z37 | 6.3 | -51 | 118 |
| Commodus CL Seeding, Z31, Z37 | 6.4 | -10 | 159 |

Prices: Spartacus CL /Maximus CL Malt 1 \$368/T
Commodus CL Feed 1 \$351/T

Nutrien
Ag Solutions™

RESULTS – SOUTH STIRLINGS

| | Yield (t/ha) | Profit change per variety (\$/ha) | Profit increase c.f. Plant UTC (\$/ha) |
|------------------------|-----------------|---|--|
| Planet UTC | 6.4 | 0 | 0 |
| Planet Z31, Z37 | 7.2 | 168 | 168 |
| Planet Z33, Z37, Z59 | 6.6 | -99 | -99 |
| Planet Z31, Z37, Z59 | 7.3 | 162 | 162 |
| Minotaur UTC | 7.1 | 0 | 71 |
| Minotaur Z31, Z37 | 8.6 | 404 | 475 |
| Minotaur Z33, Z37, Z59 | 8.0 | 123 | 194 |
| Minotaur Z31, Z37, Z59 | 8.3 | 291 | 362 |

Prices: Planet Malt 1 \$376/T
 Minotaur Feed 1 \$ 351/T

OUTCOMES

Genetics played a significant part in disease management to maximise yield

FURTHER RESEARCH

Rotating genetics may prove to be key to decreasing inoculum burden