

Angel proves to be a godsend

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Key Messages

- Angel will tolerate residual levels of SU herbicides
- Angel can be controlled to the same degree as Herald using a MCPA and Lontrel mix.

Why do the trial?

Annual pastures are a major feed source for most livestock in the cereal-livestock zone. One major issue that faces many annual legume pastures in this zone is the widespread use of sulfonylurea (SU) herbicides, particularly on alkaline soils where high soil residue levels persist for one or more years after application. Where a residual effect has occurred, severe stunting, reduced dry matter production, reduced seed yields, poor regeneration and persistence, and decreased nitrogen fixation can occur.

This trial is aimed at demonstrating to Upper North growers the impact that sulfonylurea (SU) residues and other broadleaf herbicides have on two medic pastures, Herald and the new strand medic Angel.

How was it done?

The two cultivars were sown at 10kg/ha on the 29th June 2005 in a split plot design with 75kg/ha of DAP (18:20:0:1.6) pre-drilled. Pre-emergent herbicide treatments were applied on the 7th May, and the post-emergent herbicides were applied on the 7th September, see Table 1 for treatments. Visual scores and estimates of dry matter production were made using photographic guides, including 'Pasture Pic' and 'A photographic guide to annual pastures for low-rainfall sheep production'.

What Happened?

Reasonably even establishment was observed for both medics. Once Herald encountered the Logran residues, it became stunted and purple in colour, while Angel continued to grow at a reduced level compared to the control.

Application of Ally to both medics resulted in reduced herbage production of Angel and the elimination of Herald. Whilst the application of the MCPA and Lontrel mix, resulted in severe stunting of both medics.

Table 1. Herbicide treatments and their visual scores (taken on the 9th Sept) and estimated dry matter production for the herbicide tolerance trial at Morchard trial, 2005.

Treatment	Application Rate	Application Date	Herald Visual Score (/10)	Estimated dry matter production (t/ha)	Angel Visual Score (/10)	Estimated dry matter production (t/ha)
Nil			10	2.0	10	2.0
Logran 750 WG	5g/ha	7/05/2005	0	0	7	1.3
Logran 750 WG	10g/ha	7/05/2005	0	0	7	1.3
Amicide 625	1.4L/ha	7/09/2005	10	2.0	10	2.0
MCPA 500 + Lontrel 750 SG	1.41/ha 0.25L/ha	7/09/2005	2	0.1	2	0.1
Ally	5g/ha	7/09/2005	0	0	5	0.9

What does this mean?

The results have confirmed that Angel will tolerate residual levels of SU herbicides but can be suppressed by particular post-emergent broadleaf herbicides enabling it to be controlled in crop. SARDI pastures group research results published in the EPFS 2004 Summary, "controlling FEH-1 strand medic in-crop", have also shown that Angel can be effectively controlled to an acceptable level in-crop by a range of commonly used chemicals. Therefore Upper North growers can be confident in sowing Angel medic pastures as a valuable feed source that is able to tolerate SU herbicide residues, and be confident about controlling it in a later cereal crop.

Acknowledgements

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Category

"Try this yourself now"

Location

Closest town: Morchard

Co-operator: Morchard farming community

Group: Upper North Farming Systems

Rainfall

Av. Annual total: 330 mm

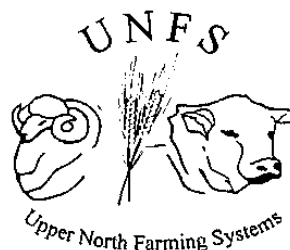
Av. Growing season: 233 mm

Actual annual total: 233 mm

Actual growing season: 153 mm

Yield

Potential yield of pasture: 8019 kg/h



Paddock History

2004: Wheat (X t/ha)

2003: Grass Pasture

2002: Grass Pasture

Soil

Alkaline, red clay loam.

Land value

\$650/ha

Plot size

2m x 4m

Other factors

None