

Summer 2017/18 Trial Snapshots

1. Optical Spray Options

- (a) Summer Grasses - Six trials screening a range of knockdown options for the control of hard to kill grasses e.g. feathertop Rhodes grass, awnless barnyard grass and windmill grass. Trials will be conducted through a conventional boom assessing options that can be utilised through an optical sprayer.
- (b) Broadleaf Weeds – Six trials screening options for the control of common sowthistle or fleabane.

2. Common Sowthistle

Evaluation of most promising new double knock options for common sowthistle management. Treatments refined following winter 2017 trial program.

3. Rutherglen Bug Management

Large scale 'proof of concept' trial to evaluate options aimed at reducing damage to emerging crops from Rutherglen Bug nymphs when sown near canola. Treatments include cultural practices using crop density or physical barriers compared to insecticide use. Working in collaboration with DAF entomology team.

4. Broadleaf Weed Control in Sorghum

Continuation of project activity from 2016/17. Three trials planned for the management of problem broadleaf weeds in sorghum. Target weeds to include yellowvine and caltrop.

5. Mungbean Seed Treatments

Four trials screening a combination of fungicide and insecticide seed treatments to evaluate potential in mungbeans. Primary targets include leafhoppers (impact on phytoplasma ?) and *Fusarium*.

6. Mungbean Nitrogen Nutrition

Three trials to assess nitrogen response in mungbeans. Multiple rates of N have already been applied at two soil depths with all treatments compared with and without inoculation.

7. Managing Efficacy with Drift Reduction

Three trials on fleabane evaluating application and product options to reduce the impact on efficacy when using TTI nozzles.

8. Nitrogen Management in Sorghum

Opportunity trial to utilise site established for winter 2017 N management trial in wheat (unable to be planted due to lack of planting moisture). Will assess the impact of method, timing and rate of N application.



9. AMF (VAM) Effects in Sorghum

Site established in winter 2016 was abandoned after heavy rain caused significant erosion issues. A new site was established in winter 2017 near Mullaley with strips of wheat, canola and fallow. Multiple summer crops are planned for next summer with a range of management options including mycorrhizal inoculation.

Ongoing Large Scale Trials

10. Cotton Cut Stump Application

Site established near Thallon to evaluate a wide range of options for managing regrowth following dryland cotton in 2016/17. First assessment shortly.

11. Soil Remediation

A large-scale trial near Burren Junction evaluating the long term impact and economics from gypsum application on a high magnesian, sodic soil type. Crop response and soil water measurements to continue.

12. Stubble Impacts on Fallow Efficiency

Two large scale sites underway in the Walgett region. Stubble height impact trial was established at the end of winter 2016 following a Shelbourne stripper harvest. Three stubble heights were established with comparison also to stubble flattened and stubble removed options. Current plan is chickpeas in 2018, due to insufficient soil moisture for a summer crop. An additional site was established in August comparing the impact of Kelly or coil chains versus standing stubble on soil moisture accumulation.