



focus on **Weeds**

Common sowthistle/milk thistle (*Sonchus oleraceus*)

What makes sowthistle difficult to control?

- A prolific seed producer, up to 25,000 per plant;
- No innate dormancy, able to germinate straight away;
- 30-50 per cent of seed buried below 2cm will persist and remain viable;
- Flourishes in no till situations;
- Increasing levels of herbicide resistance, groups M (Glyphosate), B(Chlorsulfuron) & Group I resistant populations, including cross resistance to 2,4-D and Dicamba;
- Seed readily dispersed by wind;
- Able to germinate and set seed year round, requires multiple control efforts;
- Surface germinating.

Levels of glyphosate resistance in cotton fields are consistent with findings from surveys conducted in broad acre grain farming systems, on average a quarter of all populations' tested exhibit glyphosate resistance.

Table 1. Glyphosate resistance of sowthistle in Australian cotton systems

	2015-16	2016-17	2017-18
Percentage resistance	22	10*	28

**only six samples collected*

Management strategies, what are the weak links?

- Poor competitor with crops: sow competitive variety, narrow rows, increase seeding rate;
- Targeted aggressive tillage, bury seeds;
- Seeds will not germinate from depths greater than 5cm;
- Double knock herbicide strategies, ensure any survivors do no set seed;
- Seed persistence is short lived (8-12months) on soil surface.

Herbicide control in fallow

- Target small seedlings;
- Mix glyphosate with group I such as, Starane®, Grazon DS® or Cadence®;
- Double knock with glyphosate followed by Spayseed® or paraquat (Group L) 7-10 day gap;
- Double knock with glyphosate followed by Sharpen® (saflufenacil);
- Basta® (glufosinate) followed by paraquat (optical sprayer).

Further reading:

- QDAF FTRG Northern IWM Factsheet: <https://weedsmart.org.au/wp-content/uploads/2018/09/Common-Sowthistle-Sonchus-oleraceus-L-ecology-and-management.pdf>
- CRDC: DAQ123C Technical Report. <http://www.insidecotton.com/xmlui/bitstream/handle/1/3795/DAQ123C%20Technical%20Report.pdf?sequence=2&isAllowed=y>
- GRDC Update paper: <https://grdc.com.au/resources-and-publications/grdc-update-papers/tab-content/grdc-update-papers/2009/09/common-sowthistle-and-flaxleaf-fleabane-understanding-the-weeds-lifecycles-for-management-strategies-that-work>
- Northern Grower Alliance: <https://www.nga.org.au/results-and-publications/download/952/grdc-update-papers-weeds/fallow-broadleaf-weed-management-grdc-update-paper-moonie-march-2019.pdf>