

focus on **Weeds**

Feathertop Rhodes Grass (*Chloris virgata*)

What makes this grass such a difficult weed to control?

- Small seeded surface germinator that favours No till systems.
- Individual plants can produce from 6000-40,000 seeds.
- Several cases of glyphosate resistance reported.
- Naturally tolerant of glyphosate.
- Germinates after small amounts of rain (<10mm).
- Germinates across a wide range of temperatures, more than one cohort per year.
- Capable of producing seed 6 weeks after germination
- Quickly becomes stressed under dry conditions.
- Establishes quickly on lighter textured soils.
- Lighter soils are not suited to cultivation.

Table 1. Glyphosate resistance of feathertop Rhodes grass in Australian cotton systems

	2015-16	2016-17	2017-18
Percentage resistance	20	35	40

Management strategies:

What are the weak links?

- Combine a number of control tactics to stop seed-set.
- Target all stages of the weeds life cycle.
- Focus on non-field areas.

Before winter crop:

1. Use a residual herbicide.
2. Apply knock down and consider top up residual.
3. Competitive crop (seed rate, row space, variety).
4. In crop selective.
5. Post-harvest double knock control, Group A fb Gramoxone seven days later.
6. Patch management, spot spray, chip, strategic deep tillage to bury seed.

Post winter crop harvest:

1. Following first rain after harvest, high rate of gramoxone + residual.
2. Patch Management by spot spray, chip or deep targeted tillage.
3. After Autumn rain double knock with group A followed by

gramoxone seven days later.

4. Manage patches
5. First rain post-harvest apply Balance (beware plant back) + Gramoxone.

Best double knock strategy to use:

Research indicates that a Group A herbicide followed 5-7 days later with Group L paraquat provide much better control than a Glyphosate followed by paraquat. Weeds must be at the 3-leaf stage to early tillering. Translocation of Group A herbicide decreases as plants move to reproductive stage. Extra punch can be added to the paraquat with a residual such as a group C or H herbicide,

Chemical options in fallow:

- Balance (Isoxaflutole) early in winter fallow.
- Dual Gold (S-metolachlor) – Can now be applied as a split application (see label).
- Valor 500 WG (Flumioxazin).
- Group A followed 5-7 days later by Gramoxone.
- be aware of potential plant back issues

Herbicide options in non-field areas:

- Arsenal (Imazapyr)
- Terrain & Valor (Flumioxazin)
- APVMA permit #12941: Verdict (Haloxypop)
- APVMA permit Weedseeker #11163: Glyphosate, Sprayseed and Glufosinate; Group A's; Haloxypop, Fluazifop, Sethoxydim, Clethodim, Butroxydim (beware plant back going into cereals)

Further reading

- GRDC: https://grdc.com.au/_data/assets/pdf_file/0024/182445/integrated-weed-management-feathertop-rhodes-grass-2014-web-accessible.pdf
- FTRG Biology: <https://sciences.adelaide.edu.au/agriculture-food-wine/system/files/docs/2017-ftr-biology.pdf>
- QDAF: www.daf.qld.gov.au/_data/assets/pdf_file/0010/51040/Feathertop-rhodes-grass.pdf
- WEEDpak: www.cottoninfo.com.au/publications/weedpak