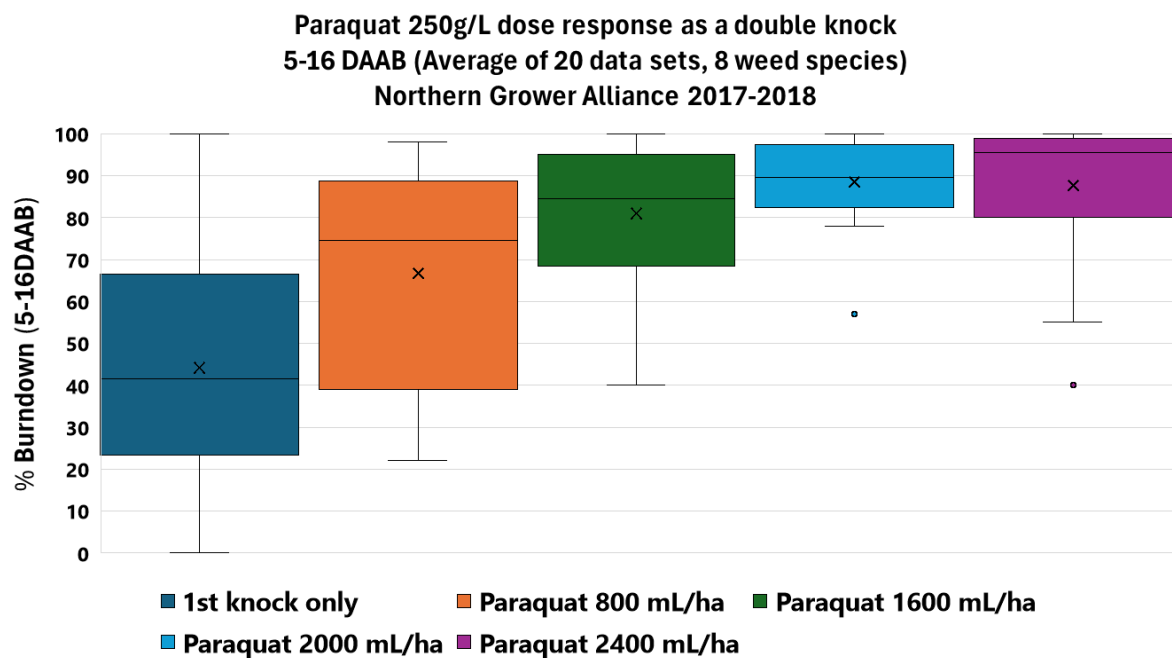




Effectiveness of paraquat as a double knock application

Data below is a compilation of paraquat dose response trials conducted by Northern Grower Alliance (NGA) during 2017-2018. Individual trial summaries can be found at <https://www.nga.org.au/trial-summaries>

Figure 1 Percent burndown (brownout) following paraquat applied as a second knock at application rates from 200 to 600 gai/ha.



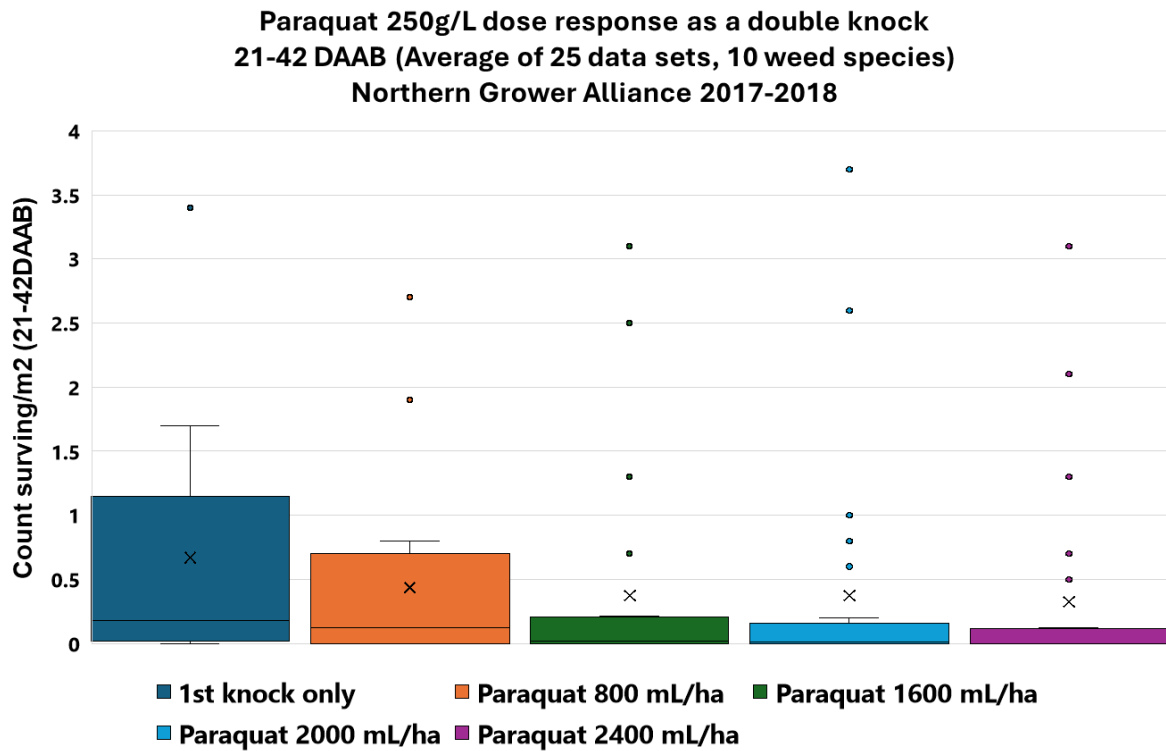
Weed size at application ranged from 6-leaf to flowering plants. A range of glyphosate +/- partner herbicides were applied as the first knock in all trials.

Data sets included:

Milk thistle (SONOL)	8	RB1817, LB1821, RB1806, LB1810, BD1812, BD1722, DK1706, BD 1711
Fleabanes Flaxleaf (CONBO)	4	RB1817, LB1821, BD1728, LB1731
Tall (CONSU)	1	LB1715
Canadian (CONCA)	1	LB1730
Vetch (VICSA)	1	RB1806
Yellow vine (TRIMI)	1	LB1821
Feathertop Rhodes grass (CHLVI)	2	LB1822, LB1715
Awnless barnyard grass (ECHCO)	1	RB1819
Button grass (DACRA)	1	BD1823



Figure 2 Surviving plants /m² following paraquat applied as a second knock at application rates from 200 to 600 gai/ha.



Weed size at application ranged from 6-leaf to flowering plants. A range of glyphosate +/- partner herbicides were applied as the first knock in all trials.

Data sets included:

Milk thistle (SONOL)	10	RB1817, LB1821, RB1806, LB1810 (x2), BD1812, BD1722, DK1706, BD 1711, BD1822
Fleabanes	3	RB1817, LB1821, BD1728
Flaxleaf (CONBO)	1	LB1715
Tall (CONSU)	1	LB1730
Canadian (CONCA)	1	
Vetch (VICSA)	1	RB1806
Yellow vine (TRIMI)	1	LB1821
Climbing buckwheat (FALCO)	1	BD1822
Soft roly poly (SALAU)	1	BD1822
Feathertop Rhodes grass (CHLVI)	1	LB1715
Windmill grass (CHLTR)	1	BD1823
Awnless barnyard grass (ECHCO)	2	RB1819, BD1823
Button grass (DACRA)	2	BD1823, LB1730



Conclusions

A clear dose response can be seen up to 2 L/ha (500gai/ha). There is little difference between 2.0 and 2.4 L/ha.

Statistical analysis (not shown here) indicated that 4 of the 20 'burndown' data sets included in this analysis had no significant difference. Primarily this was where the first knock achieved almost complete control.

For the surviving count (21-42 DAA), the statistical analysis (not shown here) indicated that there was no significant difference in 14 of the 25 data sets (56%). This was split between

- No advantage of applying the double knock (i.e. control didn't improve over the single knock control). 6 of the 14 non statistical data sets
- Everything died, including the single knock control. 5 of the 14 non statistical data sets
- There was too much treatment variability with the trial. 3 of the 14 non statistical data sets (noting that the protocol had several other second knock treatments that are not presented here).



The valuable contribution of research conducted by Northern Grower Alliance is recognised in generating the data underpinning this analysis.

Any recommendations, suggestions or opinions contained in this publication do not necessarily represent the policy or views of the Grains and Research Development Corporation or Independent Consultants Australia Network Pty Limited. No person should act on the basis of the content of this publication without first obtaining specific, independent professional advice. This publication has been prepared in good faith on the basis of information available at the date of publication. Neither the Grains Research and Development Corporation or Independent Consultants Australia Network Pty Limited or other participating organisations guarantee or warrant the accuracy, reliability, completeness or currency of information in this publication nor its usefulness in achieving any purpose.

Readers are responsible for assessing the relevance and accuracy of the content of this publication. Neither the Grains Research and Development Corporation or Independent Consultants Australia Network Pty Limited or other participating organisations will be liable for any loss, damage, cost or expense incurred or arising by reason of any person using or relying on the information in this publication.

Products may be identified by proprietary or trade names to help readers identify particular types of products but this is not, and is not intended to be, an endorsement or recommendation of any product or manufacturer referred to. Other products may perform as well or better than those specifically mentioned.

CAUTION: RESEARCH ON UNREGISTERED AGRICHEMICAL USE

Any research with unregistered agrichemical or of unregistered products reported in this publication does not constitute a recommendation for that particular use by the authors or the authors' organisations. All agrichemical applications must accord with the currently registered label for that particular agrichemical, crop, weed and region.