

Name of research project:	Innovative crop weed control for northern region cropping systems
Research organisation(s):	QDAF, USyd, NSW DPI, CSU, UQ
GRDC Project code:	US00084
Key contacts:	Michael Walsh (USyd) – 02 6799 2201 m.j.walsh@sydney.edu.au Michael Widderick (QDAF) – 07 4529 1325, Michael.widderick@daf.qld.gov.au
Project objectives:	The overall objective for this project is the development of weed management techniques and strategies that allow the mitigation and avoidance of problems associated with the widespread occurrence of herbicide resistance in northern region cropping weeds. Research will focus on five key areas of i) herbicide innovation, ii) crop competition, iii) strategic weed control, iv) investigative weed biology and v) engineering weed control solutions will be directed by this initial major survey.
Project period:	01/07/2015 – 01/07/2018
Project outcomes and status: (Brief overview of the intended and achieved project outcomes of up to 3-4 paragraphs, as well as comments as to current project status. When developing your comments, please consider the shelf life of what is put into print and try to avoid commentary with a shorter shelf life - in preference for ones that will take longer to date)	Crop competition A series of field trials will evaluate the effect of sorghum competitiveness via the manipulation of factors including row spacing, plant density and fertiliser placement on the competitiveness of sorghum and the impact on in-crop weed species including feathertop Rhodes grass and awnless barnyard grass. Agronomic approaches to improving the competitive ability of key summer (mung beans) and winter (chickpea and fababeans) crops will be evaluated in a series of field trials conducted throughout the northern region. Specifically, field trials will evaluate the effect of row spacing, plant density and fertiliser placement on the competitiveness of these crop species on in-crop weed species including fleabane, sowthistle, feathertop Rhodes grass and awnless barnyard grass. Initially for mung beans, chickpea and faba bean crops field trials will evaluate the impact of pulse crop row spacing and plant density, individually and in combination, on the biomass and seed production of feathertop Rhodes grass (mung beans), awnless barnyard grass (mung beans) and sowthistle (chickpeas and faba beans).

	<p>A recent phenomenon is the occurrence of summer weeds, feathertop Rhodes grass, awnless barnyard grass, common sowthistle and fleabane, emerging and producing seed late in winter crops. As there are no herbicide options available for weed control and these early emerging weeds set seed and replenish the seed bank prior to crop harvest. Field trials will assess the individual effects of row spacing and crop density of wheat and chickpea crops on the time of emergence and biomass of feathertop Rhodes grass, awnless barnyard grass, fleabane and sowthistle.</p>
<p>Links to any relevant websites or specific documents you feel are relevant and may be of interest.</p>	<p>Not yet.</p>