ADAMA

Ultro® 900 WG herbicide

In a field of its own.

Product overview

Ultro® 900 WG herbicide from ADAMA introduces a new mode of action (Group 23) for the pre-emergent control of annual ryegrass, barley grass and brome grass in winter pulses and fallow.

Mode of action

GROUP	23	HERBICIDE

Ultro 900 WG contains 900 g/kg carbetamide in a water dispersible granule formulation. Carbetamide is a carbamate herbicide, which inhibits mitosis and microtubule polymerisation in target weeds. Ultro is applied pre-emergent prior to the germination of target weeds. Uptake of carbetamide occurs primarily via the roots. In susceptible grass weeds, growth is affected shortly after germination, although visual symptoms may not develop for a few weeks. Chlorosis first appears in the growing points of susceptible plants before slowly spreading throughout the plant leading to plant death over a number of weeks. Surviving grass weeds will often appear stunted and dark green as the herbicide is preventing vegetative growth. Root growth on affected plants will be severely pruned. Many of these affected plants do not survive to produce panicles.

Registered crops

Ultro is registered in broad beans, chickpeas, faba beans, field peas, lentils, lupins and vetch. Additionally, Ultro is registered for application in winter fallow.

At a glance

Strong performance on problem grass weeds	Australian trials have confirmed that Ultro provides robust control of annual ryegrass, barley grass and brome grass.
Unique mode of action	Ultro provides a new mode of action (Group 23) to control of grass weeds in winter pulses and fallow, and to help manage herbicide resistance.
Compatible formulation	Ultro can be tank-mixed with a range of pre-emergent herbicides to utilise a number of different modes of action to control key annual grass weeds and/or broaden weed spectrum.
Registered in all winter pulses and fallow	Ultro is registered in broad beans, chickpeas, faba beans, field peas, lentils, lupins and vetch. Additionally, Ultro can be applied in winter fallow.
Flexible application window	Ultro is non-volatile and can be applied up to seven days before incorporation by sowing.

HERBICIDE

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Application rate

Ultro is applied at 1.1–2.3 kg/ha, with the recommended rate varying according to the pulse crop type (Table 1), soil texture and weed pressure. In situations of high grass weed pressure, apply the higher rate of Ultro or in a tank-mix with another mode of action for robust control and resistance management. In situations with lighter soil texture, Ultro may be applied at a lower rate depending on grass weed pressure.

Table 1: Application rate and timing

Crop	Timing	Rate
Chickpeas	IBS or PSPE	1.1 kg/ha
Broad beans, faba beans, field peas, lentils or vetch	IBS	1.1–1.7 kg/ha
Lupins	IBS	1.1–2.3 kg/ha
Winter fallow	Before weed emergence	1.1–2.3 kg/ha

How to read a box plot graph

Maximum: Greatest value (excluding outliers)

Upper quartile: 25% of data greater than this value

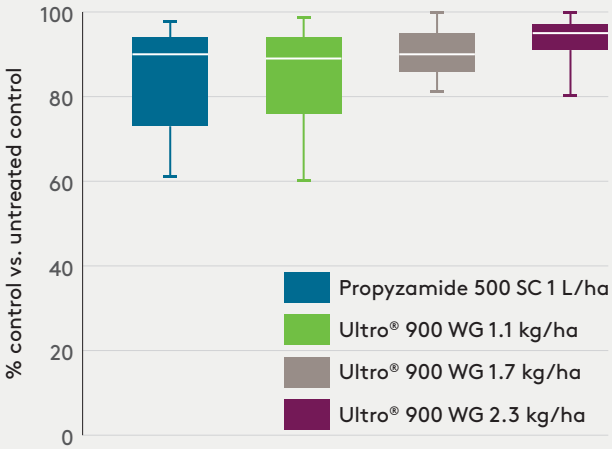
Median: 50% of data is greater than this value

Lower quartile: 25% of data less than this value

Minimum: Least value (excluding outliers)

Annual ryegrass

Australian trials conducted between 2014 and 2019 have shown Ultro provided equivalent or superior control of annual ryegrass when compared to the industry standards (Figures 1 and 2). Ultro provides consistent control of annual ryegrass for up to 3 months after application. Figures 1 and 2 demonstrate that increasing the application rate of Ultro reduced variability of controlling annual ryegrass. Refer to the product label and Table 1 for maximum registered rates by pulse species. Many of the initial surviving annual ryegrass plants did not reach maturity as demonstrated by the reduction in panicle counts recorded in trials between 2014 and 2019 (Figure 3).



^Refer to registered label for maximum application rates by crop type.

Figure 1: Annual ryegrass control 60 days after application (Average 35 trials conducted in Australia, 2014–2019).

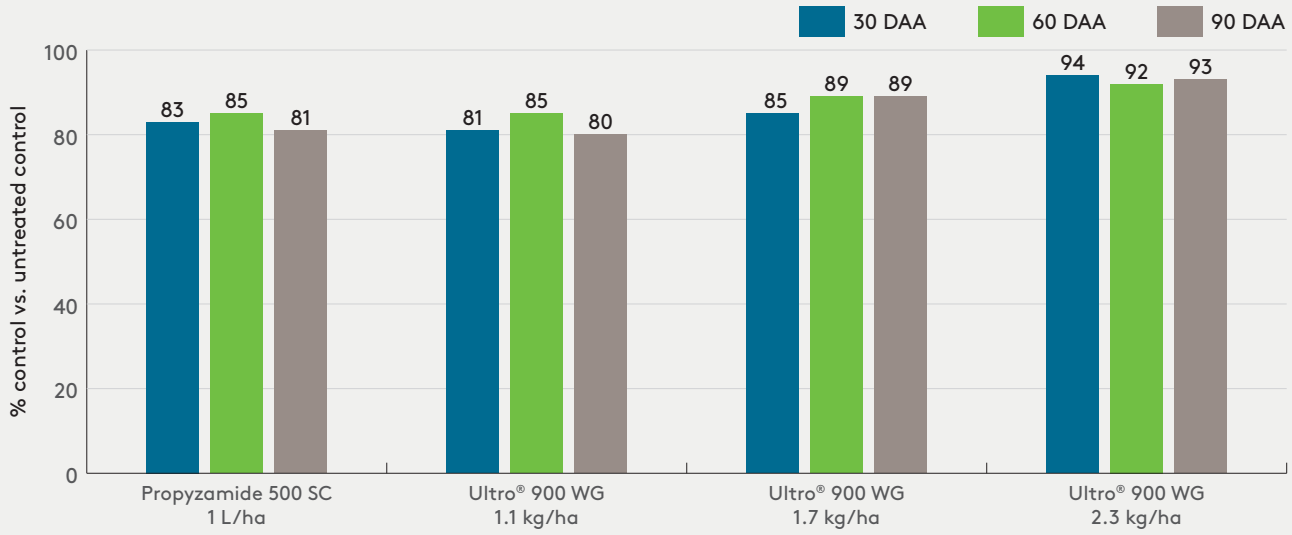
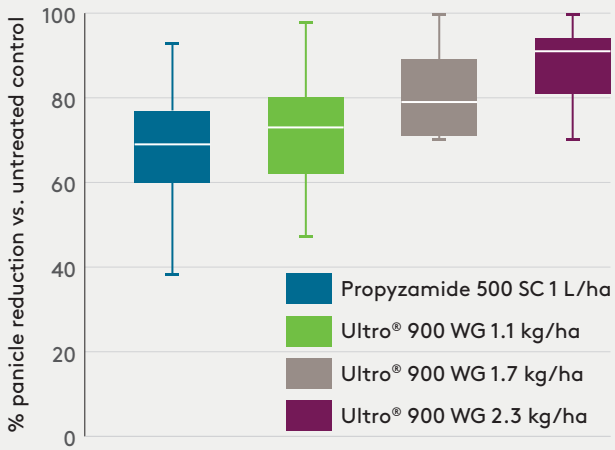


Figure 2: Annual ryegrass control up to 3 months after IBS application (Average 35 trials conducted in Australia, 2014–2019).

^Refer to registered label for maximum application rates by crop type.

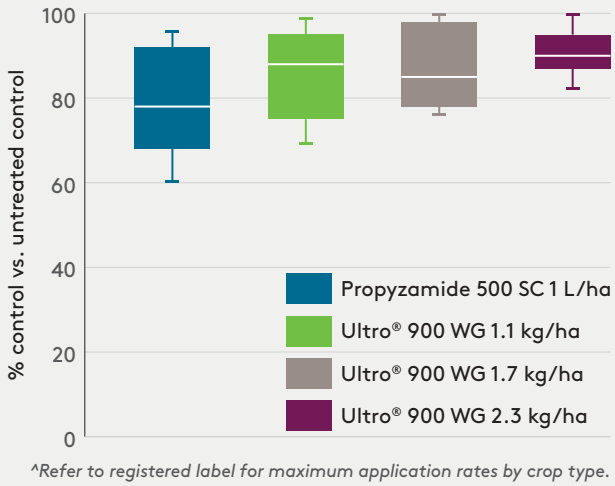


^Refer to registered label for maximum application rates by crop type.

Figure 3: Annual ryegrass panicle reduction
(Average 21 trials conducted in Australia, 2014–2019).

Controlling annual ryegrass on lighter soil textures

Trials conducted in Western Australia and the Victorian Mallee region between 2015 and 2019 have shown Ultro provides more consistent annual ryegrass control than industry standards (e.g. trifluralin and propyzamide) when applied at 1.1 kg/ha. Trial results confirm that Ultro provides good weed control under a wide range of soil textures, soil moisture and rainfall situations when compared with industry standards, (Figure 4).

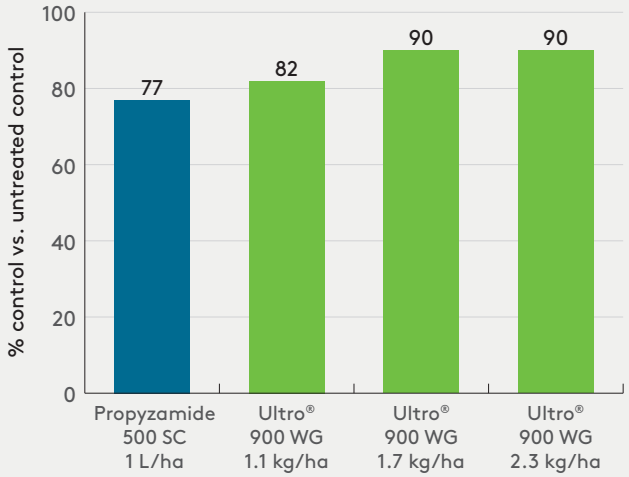


^Refer to registered label for maximum application rates by crop type.

Figure 4: Annual ryegrass control 60 days after application (Average 12 trials conducted in the Victorian Mallee and in Western Australia, 2014–2019).

Brome grass

Fourteen trials conducted between 2014 to 2019 have shown that Ultro provided equivalent or superior control of brome grass when compared with the industry standard pre-emergent herbicide, propyzamide (Figure 5). The application of Ultro at higher rates improved the level of control up to three months after application.

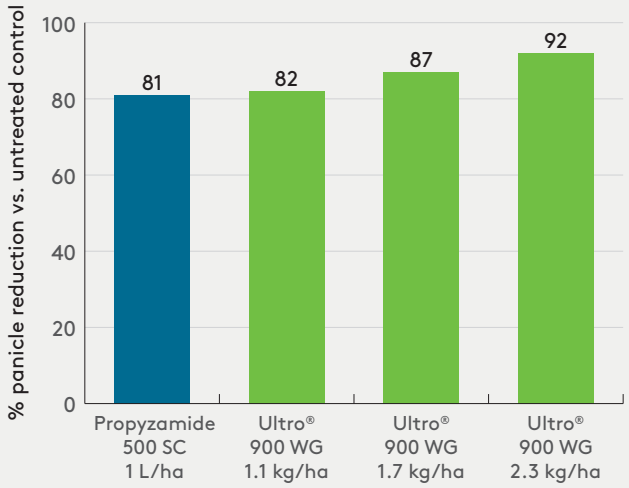


^Refer to registered label for maximum application rates by crop type.

Figure 5: Ultro efficacy on brome grass three months after application compared to the industry standard
(Average 14 trials conducted in Australia, 2014–2019).

Barley grass

Two trials conducted in 2016 found that Ultro provided equivalent or superior control of barley grass in winter pulses as the industry standard pre-emergent (Figure 6). Increasing the application rate improved control.



^Refer to registered label for maximum application rates by crop type.

Figure 6: Barley grass panicle reduction
(Average 2 trials, 2016).

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Flexible application window and method

Ultro should be applied as an incorporated by sowing (IBS) treatment before planting broad beans, chickpeas, faba beans, field peas, lentils, lupins and vetch. Rainfall within 2–3 weeks is required to incorporate and activate the herbicide. Ultro can also be applied as a post-sowing pre-emergent (PSPE) treatment in chickpeas within two days of sowing.

Application volume

Ground application: Apply as a medium spray quality or larger in an application volume of 50–150 L water per hectare.

Aerial application: Apply as a coarse spray quality or larger in a minimum application volume of 30 L water per hectare.

Solubility and movement in soil

Ultro is moderately mobile in soil due to its water solubility and low adsorption to organic matter. After incorporation, carbetamide will move into the soil solution and is absorbed by the roots of susceptible grass weeds. Compared to other registered pulse herbicides, Ultro requires less rainfall or soil moisture for incorporation, activation and weed control. Ultro does not strongly bind to stubble, however a thick layer of stubble may affect coverage, and the ease/uniformity of soil incorporation. Delaying application to burnt stubble until a rainfall event has dispersed the ash to improve soil contact is recommended.

Crop rotation and soil breakdown

Ultro is degraded in soil by microbial activity. Under conditions that do not favour breakdown, such as low soil moisture or low soil microbial activity, carry-over residues can affect susceptible following crops. The re-cropping intervals commence after sufficient rainfall occurs to wet the soil to a depth of 5 cm (Table 2).

The rate of microbial break down is dependent on the number of micro-organisms present that metabolise carbetamide. Repeated applications of Ultro can increase the population of micro-organisms that degrade carbetamide, resulting in accelerated microbial break down and reduced soil persistence of subsequent applications. If applied too frequently in a cropping cycle, accelerated microbial degradation may occur which reduces the residual activity and efficacy of carbetamide. To reduce the risk of accelerated microbial degradation, the following recommendations should be adopted when using Ultro:

- Ultro should only be applied to a field no more than once every four years, with a minimum three-year use-free interval between applications.
- Rotate the use of Ultro in pulses with at least one application of a herbicide with a different mode of action, i.e. propyzamide.
- Do not apply Ultro to a field if accelerated microbial degradation is suspected or has been confirmed.

Table 2: Re-cropping interval

Crop to be sown	Minimum Re-cropping interval	Minimum interim rainfall
Barley, oats, wheat, soybeans, sunflowers	9 months	250 mm
Canola	6 months	200 mm
Corn, cotton, mungbeans, sorghum	7 months	
Legume pastures, including clovers, lucerne, medics	4 months	
All other crops	12 months	300 mm

Compatibility

Ultro is compatible with a range of herbicides, insecticides and adjuvants applied around the time of planting winter pulses. Ultro is not compatible with potassium salt glyphosate products. For control of emerged weeds prior to planting, apply Ultro with a registered and compatible knockdown herbicide such as Wipe-Out® 450, Wipe-Out® Pro or Spraytop® 250. Refer to the Ultro compatibility guide at adama.com for a full list of compatible products. Always follow best practice tank mixing procedure.

Withholding periods

Harvest: Not required when used as directed.

Grazing: DO NOT graze or cut for stockfood for 12 weeks after application.

DO NOT graze treated weeds for 12 weeks after application.

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