CONTROLLING VOLUNTEER CoAXium® BARLEY

Aggressor® herbicide has no re-cropping intervals, meaning any crop can be grown the following season. The main rotational consideration is how to control volunteer plants in the following crop. As with all herbicide-tolerant crop technology, careful consideration must be given to herbicide options in the following crop and the adoption of integrated weed management practices.

INTEGRATED MANAGEMENT

An integrated approach is necessary to minimise the carry-over of seed and to control subsequent germinations.

At harvest: Reducing the seed bank of volunteer CoAXium® barley at harvest will significantly reduce problems in the following year. Take extra care to set up your harvester correctly to minimise grain loss.

In-fallow control: Volunteer barley seed generally sits on top of the soil and will readily germinate after minimal rainfall. Apply a knockdown herbicide (e.g. glyphosate or paraquat) to control any germinating volunteer barley plants. Consider a light cultivation with a tined implement to stimulate germination if there is high seed burden.

In-crop control: With the exception of the imidazolinone-tolerant and Roundup Ready® production systems, no single herbicide application will provide complete control of volunteer CoAXium® barley. As other Group 1 herbicides (e.g. clethodim and butroxydim) have limited efficacy on volunteer CoAXium® barley, pre-emergent herbicides will be the primary method of controlling volunteer CoAXium® barley. Sipcam trials have shown that acceptable levels of control can be achieved if pre-emergent herbicides are applied in conjunction with other control measures. Where possible, spray topping with paraquat or glyphosate before harvest can significantly reduce the risk of volunteer barley setting seed. Windrowing before harvest is another effective method of controlling immature volunteer barley.

CROP ROTATION OPTIONS

Crop rotation options will be largely determined by herbicides available for controlling volunteer CoAXium® barley in the following crop.

Cereals: Volunteer CoAXium® barley varieties are susceptible to Clearfield® herbicides, such as OnDuty® (imazapic + imazapyr) and Intervix® / Intercept® (imazamox + imazapyr), meaning Clearfield® cereal varieties are a viable crop rotation option following CoAXium® barley. Sipcam trials have shown Luximax® (cinmethylin) and Sakura® (pyroxasulfone) provide useful suppression of surface-germinating barley in conventional wheat varieties. Conventional cereal varieties may not be suitable unless some level of CoAXium® barley seed can be tolerated in harvest samples (e.g. feed barley).

Canola: Imidazolinone-tolerant canola varieties are a viable crop rotation option following CoAXium® barley. OnDuty® and Intervix® / Intercept® (imazamox + imazapyr) herbicides are registered for the control of volunteer barley. In TT canola, atrazine herbicides provide useful suppression of volunteer barley when applied at the maximum label rate. Rustler® (propyzamide) is also available for use pre-emergent application. In RR and TruFlex® canola varieties, Roundup® Ready herbicide provides excellent post-emergent control of volunteer barley. Rustler® is registered and should be used pre-emergence in conventional canola.

The CoAXium® Barley Production System is a new tool to manage hard-to-control grass weeds during the barley phase of crop rotation programs. It comprises a non-GMO herbicide tolerance trait; high-yielding herbicide-tolerant barley varieties (e.g. Titan AX); and a grass herbicide specifically formulated to optimise efficacy and crop safety (Aggressor®). The CoAXium® Barley Production System must be utilised in accordance with a stewardship program to safeguard the long-term viability of this important technology. Visit sipcam.com.au

Lentils: Imidazolinone-tolerant lentil varieties are a viable crop rotation option following CoAXium® barley. Intercept® herbicide is registered for the control of volunteer barley. Sipcam trials have shown the pre-emergent herbicides, Rustler® and Ultro® (carbetamide), provide acceptable levels of control of volunteer barley in conventional lentils.

Lupins, chickpeas and faba beans: The pre-emergent herbicides, Rustler® and Ultro®, are registered in lupins, chickpeas and faba beans. Sipcam trials have shown Rustler® and Ultro® provide acceptable levels of control of volunteer barley in these crops. Simazine is also registered for use in these crops and will provide useful suppression when applied in conjunction with other herbicide options.

Field peas: The pre-emergent herbicides, Rustler® and Ultro®, are registered for use in field peas. These herbicides should be used in field peas following CoAXium® barley.

POST-EMERGENT CONTROL

Most Group 1 herbicides are unsuitable for controlling volunteer CoAXium® barley in pulse and canola crops. Clethodim provides useful suppression when applied at the maximum label rate to volunteer CoAXium® barley at the 2 leaf growth stage and only in conjunction with a suitable pre-emergent herbicide. In pulse crops, the addition of butroxydim to clethodim will provide additional control, particularly if volunteer barley is >2 leaf or present in large numbers. Apply both active ingredients at the maximum label rates and in conjunction with a suitable pre-emergent herbicide. Volunteer CoAXium® barley plants surviving clethodim or clethodim + butroxydim applications will be severely stunted and unlikely to mature. Crop topping and windrowing are very effective on immature survivors.

SUMMARY

Concerns about controlling volunteer barley in the following crop should not deter growers from adopting the CoAXium® production system. Herbicide-tolerant varieties are attractive crop rotation options, subject to plant-back intervals and the incidence of resistance to Group 2 herbicides. If growing conventional crops, growers must determine their crop rotation based on herbicide options and the implementation of integrated weed control strategies. Wherever possible, multiple herbicides should be used and mechanical options, such as light cultivation, spray topping and windrowing, should be incorporated.

OPTIONS TO CONTROL VOLUNTEER CoAXium® BARLEY – CEREALS & CANOLA

	Wheat	Barley	Clearfield® cereals*	Canola	TT canola	Roundup Ready® canola	Imidazolinone-tolerant canola*
Knockdown	Glyphosate Paraquat	Glyphosate Paraquat	Glyphosate Paraquat	Glyphosate Paraquat	Glyphosate Paraquat	Glyphosate Paraquat	Glyphosate Paraquat
Pre-em	Luximax®^ Sakura®^			Propyzamide	Propyzamide Simazine^ Atrazine^ Terbyne®^	Propyzamide	Propyzamide
Post-em			OnDuty® Intervix® Intercept®	Clethodim^	Atrazine^ Clethodim^	Roundup® Clethodim^	OnDuty® Intervix® Intercept® Clethodim^

**Imidazolinone herbicides will not control CoAXium® varieties that also carry the imidazolinone tolerance trait, which are designated by the suffix "IA" after the variety name. ^Suppression.*

OPTIONS TO CONTROL VOLUNTEER CoAXium® BARLEY – PULSES

	Lupins	Chickpeas	Faba beans	Field peas	Lentils	Imidazolinone-tolerant lentils and faba beans*
Knockdown	Glyphosate Paraquat	Glyphosate Paraquat	Glyphosate Paraquat	Glyphosate Paraquat	Glyphosate Paraquat	Glyphosate Paraquat
Pre-em	Propyzamide Carbetamide Simazine^ Terbyne®^	Propyzamide Carbetamide Simazine^ Terbyne®^	Propyzamide Carbetamide Simazine^ Terbyne®^	Propyzamide Carbetamide Terbyne®^	Propyzamide Carbetamide Terbyne®^	Propyzamide Carbetamide Terbyne®^
Post-em	Clethodim^ Clethodim + Butroxydim	Clethodim^ Clethodim + Butroxydim	Clethodim^ Clethodim + Butroxydim	Clethodim^ Clethodim + Butroxydim	Clethodim^ Clethodim + Butroxydim	Intercept® Clethodim^ Clethodim + Butroxydim

**Imidazolinone herbicides will not control CoAXium® varieties that also carry the imidazolinone tolerance trait, which are designated by the suffix "IA" after the variety name. ^Suppression.*

SIPCAM Innovation Not Imitation

Sipcam Pacific Australia Pty Ltd
Level 1, 191 Malop Street,
GEELONG VICTORIA 3220
1300 130 633