



Rustler®

CANOLA PRODUCT GUIDE

February 2015

CONTROL OF KEY GRASS WEEDS:

Annual Ryegrass
Barley grass
Canary grass
Fescue
Great Brome
Prairie Grass
Rat's Tail Fescue
Silver Grass
Squirrel Tail
Winter Grass
Wild Oats

REGISTERED IN:

Canola*
Legume Pastures (lucerne, clover and medics) grown for forage, hay or seed production
Oilseed Poppies
Vegetables

KEY ATTRIBUTES:

Strong soil residual herbicide.
Effective grass weed control when applied as a pre-emergent incorporated by sowing (IBS).
Non-volatile - extending the window for incorporation.
Targets grass weeds as they germinate preventing competition with the crop.
Compatible with a range of knockdown herbicides and insecticides.

GROUP D HERBICIDE

Getting the best result from Rustler

| |
|---|
| Target germinating grasses and weeds |
| Apply to a firm, clod-free seedbed |
| Apply to moist soil, or prior to moderate rainfall |
| Ensure adequate and even soil coverage |
| Maintain water rates at minimum 70L/ha using a course droplet |
| Place canola seed below applied band of Rustler |

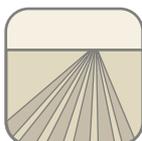
*Rustler 500SC registered in canola

SUCCESSFUL APPLICATION

ENVIRONMENTAL CONDITIONS



Rustler requires adequate soil moisture for effective weed control. Rustler is effective in warm moist soils on small germinating grass weeds; its efficacy improves dramatically when soil temperatures decline below 10°C. Cool moist soils in the months following application will encourage strong residual grass weed control.



MINIMUM OR ZERO TILLAGE SYSTEMS

Maximum control is achieved on target weed seeds germinating close to the soil surface. Best results are achieved from minimum or zero tillage systems where weed seeds are close to the surface.



SPRAY APPLICATION

Adequate and even soil coverage at application is critical for Rustler efficacy. Apply Rustler as a pre-emergent for canola at the label rate of 1L/ha. Water rates should be maintained at a minimum of 70L/ha water, using a coarse droplet. Coarse droplets combined with the minimum recommended water rate will improve soil coverage.



SEED PLACEMENT & EQUIPMENT

Canola seed should ideally be sown below the applied band of Rustler to avoid reduced plant vigour. Sowing with knife points and press wheels is regarded as the safest sowing configuration when using Rustler. Crop safety when using disc seeding systems is variable based on seed placement.



SOWING SPEED

Fast sowing speeds can throw treated soil into adjacent furrows where the increased Rustler concentration may lead to crop damage. A slow, steady sowing speed will help keep the Rustler treated soil in the inter-row where it is most effective against germinating weeds.



STUBBLE LOADING

High stubble loadings or ash from a recently burnt paddock can lead to poor soil contact. Results may be unsatisfactory if ground cover from stubble exceeds 50%. Standing stubble will cause less efficacy loss compared to stubble that has been dropped to the ground via mechanical means or grazing. It is best to delay application to recently burnt paddocks or windrows until rainfall occurs to disturb the layer of ash. Rustler binds to ash stronger than it does to stubble (ash is free carbon).

Caution: The potential for seedling damage may occur on:

- light soils with low organic matter if heavy rainfall follows sowing
- dry sown canola crops treated with Rustler after heavy rain events

RE-CROPPING INTERVALS

Application prior to sowing will minimise risk posed to the following season's cereal crop. In a failed crop scenario where canola establishment is poor, options for re-sowing with alternative crops are limited. Advice should be sought from a Cheminova technical specialist in this situation.

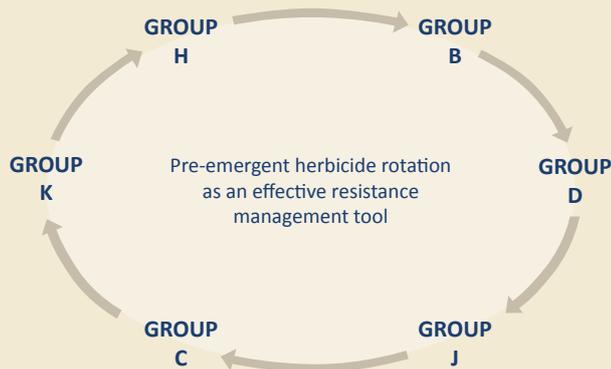
| Crop | Re-cropping interval |
|---|-----------------------|
| Cereals (wheat, barley, Oats and Triticale) | 9 months [^] |

[^]Provided there has been sufficient soil moisture over summer to commence breakdown.

Summer rainfall can be erratic with the top 10cm of soil experiencing wetting and drying periods. Rustler breakdown over summer will occur when the top 10cm of soil is moist. As the soil dries breakdown will decrease and won't recommence until sufficient rainfall is received.

RESISTANCE MANAGEMENT

Rustler is from the Group D Herbicide subgroup labelled Benzamides.



Rotating herbicide groups is an important resistance management tool when used as part of a broader integrated weed management strategy.

Rotating pre-emergent herbicides ensures that the life of a specific product is extended.

PRODUCT ATTRIBUTES

Mode of action

Rustler is absorbed by plant roots, preventing cell division (mitosis) of target weeds.

Following application target plants exhibit signs of reduced root growth and development. Leaves become discoloured and less erect, gradually changing colour to red or yellow. Field experience indicates that symptoms may develop within a couple of weeks under ideal conditions.

UV Stability

Rustler is relatively UV stable, allowing an extended window for incorporation in comparison to trifluralin.

Solubility

Rustler is relatively insoluble (15 mg/L at 25°C). Following application, eighty percent of Rustler will be present 10mm from the soil surface (under normal field conditions). Best results are achieved when sufficient rainfall occurs soon after application, or soil movement from sowing incorporates the product into the weed root zone. Infiltration could potentially be greater in sandy soils.

Breakdown

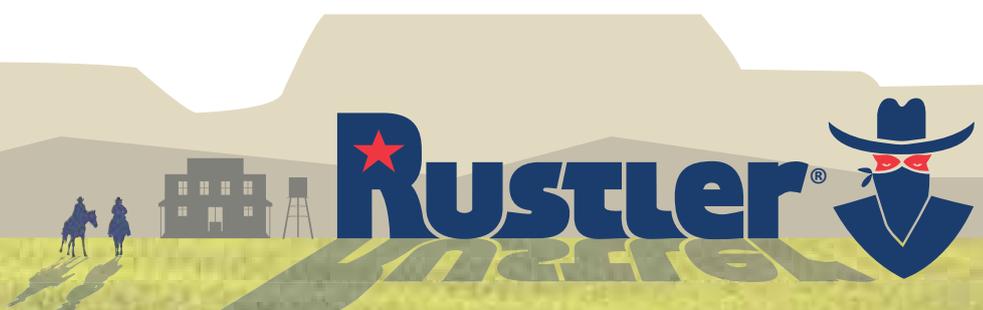
Rustler requires both adequate soil moisture and warm conditions to breakdown. Warm soils with low moisture will prevent breakdown occurring. The half-life of propyzamide significantly increases in soil temperatures below 10°C. Soil pH has no role in the breakdown of Rustler.

Soil conditions during spring sowing are often warm with good or variable soil moisture. For optimal control apply Rustler as close as possible to sowing. Application at the recommended rate of Rustler close to sowing will not lead to significant breakdown of the product before it is required for weed control. Coming into winter soils are cooling, the rate of breakdown will be decreasing, and the rate of applied Rustler will be sufficient to control the weed flush at this time.

Activity

Rustler must make contact with the soil to be effective as a pre-emergent. Application of Rustler prior to weed germination will allow rains to provide sufficient soil moisture for weed root systems to extend into the band of Rustler. Emerging weeds that germinate below this layer may escape control.

Rustler activity is directly related to soil temperature and moisture. The effectiveness of Rustler in cool growing conditions is linked to the slow growth rate of the target weeds. Weeds take up Rustler but do not have the metabolic ability to break down the active, enabling excellent control in ideal conditions.



DIRECTIONS FOR USE IN CANOLA

| Crop | Weeds Controlled | State | Rate L/ha | Critical Comments |
|--------|---|------------|-----------|---|
| Canola | Annual Ryegrass, Barley Grass, Canary Grass, Fescue, Great Brome, Prairie Grass, Rat's Tail Fescue, Silver Grass, Squirrel Tail, Wild Oats, Winter Grass. | All states | 1 | Incorporate by sowing (IBS) when weeds are at the pre-emergent stage. |

Withholding Period:

Canola: Harvest – Not required when used as directed.

Grazing – Do not graze or cut for stock food for 12 weeks after application.

RUSTLER 500SC COMPATIBILITIES AND TANK MIXING

| Compatible: Products considered physically compatible with Rustler 500SC in a two-way mix. | Conditional Compatibilities: Tank mixes of Rustler 500SC with the following products may result in nozzle or filter blockage if vigorous agitation in the spray unit is not maintained during the entire spray operation. | Not Recommended for mixing: Tank mixes of Rustler 500SC with the following herbicide is likely to form a slimy residue which can block spray nozzles and filters during application. |
|--|---|--|
| Alpha-cypermethrin 100EC Atrazine 900WG Convert 240EC Convict 520EC Cyren 500EC Diuron 900WG Terbyne Xtreme WG* Ecopar 20SC* Trifluralin 480EC Ken-up Dry WG680 | Bifenthrin 250EC Danadim 400EC LeMat 290SL Glyphos 450SL Punch 240EC | Paraquat 250SL Paraquat 350SL Roundup Ultra Max SL570 |

*Terbyne Xtreme and Ecopar are registered brands of Sipcam Pacific Australia Pty Ltd

Physical compatibility with Rustler 500SC should be determined prior to mixing with a product not listed above, or when mixing Rustler as a component of a 3-way tank mix.

Always read the product label for the manufacturer's tank mix recommendations and to determine individual product compatibility options and correct mixing orders for individual products. If unsure, perform a jar test before proceeding to determine physical compatibility. Physical compatibility does not always guarantee biological compatibility.

MIXING INSTRUCTIONS

Failure to follow correct tank mixing orders or compatibility recommendations can lead to poor application and potentially poor weed control.

For correct mixing order refer to Cheminova's Tank Mixing Order document at www.cheminova.com.au.

Ensure that any products added to the tank prior to Rustler have completely dispersed. Similarly, ensure Rustler has completely dispersed before adding a product to the tank mix.

Disclaimer: The information and recommendations in this guide are based on tests and data believed to be reliable at the time of publication. Results may vary, as the use and application of the products is beyond our control and may be subject to climatic, geographical or biological variables, and/or developed resistance. Any product referred to in this guide must be used strictly as directed, and in accordance with all instructions appearing on the label for that product and in other applicable reference material. So far as it is lawfully able to do so, Cheminova Australia Pty Ltd accepts no liability or responsibility for loss or damage arising from failure to follow such directions and instructions.

Rustler[®] is registered trademark of Cheminova A/S, Denmark APVMA Approval No: 61630