

# Rustler®

SELECTIVE HERBICIDE

## Control key grass weeds in Canola and Winter grain legumes

### CONTROL OF KEY GRASS WEEDS:

- Annual ryegrass
- Barley grass
- Canary grass
- Fescue
- Great brome
- Prairie grass
- Rat's tail fescue
- Silver grass
- Squirrel tail
- Wild oats
- Winter grass

### REGISTERED IN:

- Canola
- Oilseed Poppies
- Vegetables
- Chickpeas
- Faba beans
- Field peas
- Lentils
- Lupins
- Legume Pastures (Lucerne, Clover and Medics) grown for forage, hay or seed production

### 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.

### 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 70 L/ha using a coarse droplet

Place crop seed below applied band of Rustler®

### 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 1 L/ha or as a pre-emergent for Winter Grain Legumes at the label rate 1-2 L/ha. Water rates should be maintained at a minimum of 70 L/ha water, using a coarse droplet.

Coarse droplets combined with the minimum recommended water rate will improve soil coverage.

### SEED PLACEMENT & EQUIPMENT

Crop 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



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- dry sown canola crops treated with Rustler® after heavy rain events

## RE-CROPPING INTERVALS

Minimum recropping intervals for Rustler® have been recommended to minimise the risk of damage to rotational crops (see table below). However, considerable variations in environmental, edaphic and agronomic factors affecting the soil microbial activity, mean that it is not possible to absolutely eliminate all risks and potential for damage to following crops:

Crop	Re-cropping interval
Cereals (wheat, barley, Oats and Triticale)	9 months <sup>^</sup>
Canola, Winter Grain Legumes (including Lentils, Lupins, Chickpeas, Faba Beans and Field Peas)	Can be sown into soil treated with Rustler® in a failed crop scenario, however Rustler (or any other propyzamide products) should not be applied prior to sowing the replacement crop (i.e. twice in one growing season).

<sup>^</sup>Provided there has been sufficient rainfall (estimated > 250 mm) over summer to support microbial activity and degradation of Rustler®. Conditions that aren't conducive to adequate soil microbial degradation may result in extended recropping intervals.

For advice on crops and situations not mentioned above, contact FMC.

## 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 10 mm 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.

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

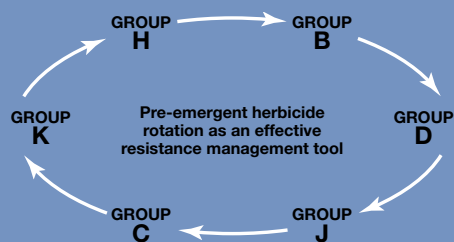
Failure to follow correct tank mixing orders or compatibility recommendations can lead to poor application and potentially poor weed control.

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. Rustler® is an acetylcholinesterase inhibitor with contact and stomach action. Fyfanon® has no systemic activity. For insecticide resistance management Fyfanon® is classed as a group 1B insecticide.

Always read the product label and follow the Directions for Use. The product must only be applied according to the label and according to the local rules and regulations. Use in accordance with good agricultural practice.

## 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.

## USE IN CANOLA AND WINTER GRAIN LEGUMES

Crop	Weeds Controlled	Rate L/ha	Critical Comments
Canola	Annual ryegrass, Barley grass, Canary grass, Fescue, Great brome,	1	Incorporate by sowing (IBS) when weeds are at the pre-emergent stage.
Chickpeas, Faba beans, Field peas, Lentils, Lupins	Prairie grass, Rat's tail fescue, Silver grass, Squirrel tail, Wild oats, Winter grass.	1 - 2	Incorporate by sowing (IBS) when weeds are at the pre-emergent stage.  Use rates towards the higher end of the range on heavy soils, if conditions are not optimal or where a heavy grass population is expected.

### WITHHOLDING PERIODS:

#### CANOLA:

**HARVEST – NOT REQUIRED WHEN USED AS DIRECTED.**

**GRAZING – DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 12 WEEKS AFTER APPLICATION.**

#### WINTER GRAIN LEGUMES:

**HARVEST – NOT REQUIRED WHEN USED AS DIRECTED**

**GRAZING – DO NOT GRAZE OR CUT FOR STOCK FOOD FOR 12 WEEKS AFTER APPLICATION.**

### COMPATIBILITIES

Rustler Mixing Partner	Rustler 500 SC	
Atrazine 900WG	Acceptable	Acceptable: Products considered physically compatible with Rustler® in a two-way mix.
Cyren® 500EC (chlorpyrifos)	Acceptable	
Danadim® 400EC (dimethoate)	Acceptable	Conditional: Tank mixes of Rustler® with the following product may result in nozzle or filter blockage if vigorous agitation in the spray unit is not maintained during the entire spray operation.
Diuron 900WG	Acceptable	
Dominex® Duo	Acceptable	
Ecopar 20SC	Acceptable	
Glyphosate present as the potassium salt based products**	Not Recommended	
Glyphosate 450SL	Acceptable	Not Recommended: Tank mixes of Rustler® with the following product is likely to form a slimy residue which can block spray nozzles and filters during application.
Glyphosate Dry WG680	Acceptable	
Haloxypop 520EC	Acceptable	
Hammer® 400EC	Acceptable	
Omethoate 290SL	Acceptable	
Oxyfluorfen 240EC	Acceptable	
Paraquat 250SL	Not Recommended	
Paraquat 350SL	Not Recommended	
Talstar® 250EC	Acceptable	
Terbyne Xtreme WG	Acceptable	
Trifluralin 480EC	Acceptable	**It is not recommended to mix Rustler® with any products containing Glyphosate present as the potassium salt.
Trojan® Insecticide	Acceptable	

**Need help? Please visit [www.fmccrop.com.au/contact](http://www.fmccrop.com.au/contact) for your local representative.**

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, FMC accepts no liability or responsibility for loss or damage arising from failure to follow such directions and instructions.

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