TECH NOTE

NEW

RENO® 350FS

BENEFITS

- Protects cereal crops from insect damage, including russian wheat aphid & wireworms
- Flexibility in how you use RENO® 350FS insecticide – protecting cereal seedlings from aphid & wireworm attack, to controlling stored grain pests
- Short withholding period
- Proven formulation makes RENO 350FS easy to apply to seed & provide protection from insect attack
- Compatible with other products: RENO 350FS may be applied with VITAFLO® C, RANCONA® DIMENSION, PROLEAF® T, RANCONA® C, FOLIARFLO® C, & ZINCFLO® PLUS*

** read label before use*

Control of aphid, wireworm, and stored grain pests. Reduced spread of Barley Yellow Dwarf Virus (BYDV) and Cereal Yellow Dwarf Virus (CYDV)

Active: 350 g/L thiamethoxam

Class: Group 4A insecticide

Crops: Wheat, barley, oats & triticale

RENO 350FS should be used as part of an integrated pest management program

DIRECTIONS FOR USE

Crop	Pest	Rate	Comments
Barley & wheat	**Control of aphids including:** Wheat/Oat Aphid (*Rhopalosiphum padi*) Corn Aphid (*Rhopalosiphum maidis*) Green Peach Aphid (*Myzus persicae*)^ Cowpea Aphid (*Aphis craccivora*) Russian Wheat Aphid (*Diuraphis noxia*) **Reduced spread of:** Barley Yellow Dwarf Virus (BYDV) Cereal Yellow Dwarf Virus (CYDV) **Control of wireworm including:** False Wireworm (*Pterohelaeus spp.*) True Wireworm (*Agrypnus variabilis*)	100–200 ml/ 100kg seed	RENO 350 FS will protect cereal seedlings from early season aphid feeding damage and damage caused by wireworm.Use the higher rate in areas where higher pest pressure is expected or a longer period of control is required. Protection of crops by early aphid infestation will reduce the spread of BYDV and CYDV. Crops should be monitored and sprayed as needed should there be later infestations by aphids. **^Note:** This use is subject to a CropLife resistance management strategy. Refer to www.croplife.org.au for more information.
Barley, oats, triticale, wheat	**Control of adult insects & progeny in storage:** Lesser Grain Borer (*Rhyzopertha dominica*) Rice Weevil (*Sitophilus oryzae*) Saw-toothed Grain Beetle (*Oryzaephilus surinamensis*) Flat Grain Beetle (*Cryptolestes ferrugineus*) **Control of progeny of grain insects in storage**: Rust Red Flour Beetle (*Tribolium castaneum*) **Suppression of adult grain insects in storage:** Rust Red Flour Beetle (*Tribolium castaneum*)	30ml /100kg seed	RENO 350 FS will provide protection from the listed stored grain pests for up to 9 months. RENO 350 FS should be used as part of an integrated silo management plan. Grain intended for treatment should be of high quality and free of infestation. If adult Rust Red Flour Beetles were to be detected after cleaning, the bulk should be disinfested by an approved fumigation or other registered treatment before application of RENO 350 FS.

WITHHOLDING PERIODS
Harvest: not required when used as directed
Grazing: DO NOT graze or cut for stock food for 8 weeks after planting

Always refer to the label for complete details

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Hannaford
The Seed Protection Specialists

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APHIDS & VIRUSES

Aphids can damage cereals in two ways – by spreading viruses and through direct feeding.

Oat and corn aphids are the primary vectors for Barley Yellow Dwarf Virus (BYDV) and Cereal Yellow Dwarf Virus (CYDV). These viruses have the potential to cause significant yield loss.

APHID DAMAGE CAUSED BY DIRECT FEEDING

- Losses up to 30% where yield potential is 3 T/Ha & higher
- Occurs when colonies of 10–100 aphids develop on stems, leaves & heads, from seedling stage through to head filling
- Damage depends on the growth stage of the crop, percentage of tillers infested, number of aphids per tiller, and the duration of the infestation
- Feeding damage often has no obvious signs or symptoms. Heavily infested plants may be covered in black sooty molds living on the sugary honeydew excreted by aphids.

DAMAGE CAUSED BY RUSSIAN WHEAT APHID

- Inject toxic saliva into the plant when feeding, which interferes with normal plant growth & metabolism
- The toxins cause physiological changes in the plant, leading to characteristic damage symptoms
- Yield losses can range from 20–80%, depending on the timing & severity of the infestation

DAMAGE CAUSED BY APHIDS SPREADING BYDV OR CYDV

BYDV/CYDV are spread to cereal crops by cereal aphids. Cereal aphids pick up the virus while feeding on infected perennial grasses, carrying the virus in their salivary glands and transferring it to healthy cereal crops when feeding.

BYDV/CYDV affects the plants by restricting the movement of water and nutrients in the vascular tissues of cereal plants. The level of damage is dependent on the timing of infection:

- Prior to mid tillering - yield decreases up to 50%
- Post tillering - yield is largely unaffected

Quality of grain is also affected as the percentage of shrivelled grain increases.

PREVENTING THE SPREAD OF BYDV or CYDV

It is vital to prevent the spread of BYDV/CYDV during the first 8–10 weeks after crop emergence.

- Seed treatments provide early protection
- Check aphid numbers as the crops develop in high or moderate risk areas (medium annual rainfall). High numbers of aphids may follow regular summer rains.
- A follow up insecticide spray may be needed 6–8 weeks after sowing

WIREWORMS

Wireworms are soil-dwelling pests that can cause significant damage to cereal crops, particularly in early growth stages.

DAMAGE CAUSED BY WIREWORM

- Hollow out seeds entirely, leading to patchy or uneven crop establishment
- Damaged seeds may also rot in the soil, further reducing plant establishment
- Larvae feed on the roots & underground stems of young seedlings
- Severe feeding can result in seedling death or poor growth, leading to stunted plants
- Damage to seeds & young plants leads to reduced plant density, creating bare patches in the field
- These gaps can allow weeds to proliferate, further reducing yield potential

STORED GRAIN PESTS

Stored grain pests can cause significant damage to grain during storage, leading to economic losses and reduced grain quality.

DAMAGE CAUSED BY STORED GRAIN PESTS

- Direct feeding - results in weight loss & reduced quality
- Contamination
- Loss of germination
- Fungal growth
- Heating & spoilage
- Economic loss

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Innovating seed treatment technology for over 30 years

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