

Guardian®

Seed Treatment Insecticide

TECH TOPIC

Controls various insect pests in a range of crops & prevents spread of Barley Yellow Dwarf Virus (BYVD) transmission.

Active ingredient: 600 g/L imidacloprid
Class: Group 4A insecticide

Guardian® should be used as part of an integrated pest management program.

Compatibility with Other Products:

Guardian may be applied with Quantum®, Maxiflo? Proleaf®, Foliarflo®, Proguard®, Rancona® & Rancona® Dimension.

Always refer to the label for complete details.

BENEFITS

- Starts working the moment the seed is planted - protecting the seedling during the vulnerable establishment stage.
- Safe to beneficial species, the environment and operators during handling and sowing if used as directed.
- Protects emerging seedlings for 3-4 weeks after sowing.
- Systemic, providing protection to both shoots & roots.
- No need to apply soil or foliar applied insecticides as a separate operation at, or just after, sowing.

APHID DAMAGE & PREVENTION

Aphids

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

Aphids can damage cereals in two ways - by spreading BYDV and through direct feeding.



1. Damage caused by direct feeding

- Can result in losses up to 30% where yield potential is 3 t/ha and higher.
- Occurs when colonies of 10 to 100 aphids develop on stems, leaves and heads - from seedling stage through to head filling.
- The degree of damage depends on the growth stage of the crop, the percentage of tillers infested, the number of aphids per tiller, and the duration of the infestation.
- Feeding damage often has no obvious signs or symptoms. However, heavily infested plants may be covered in black sooty moulds which live on the sugary honeydew excreted by aphids.

2. Damage caused by cereal aphids spreading BYDV

BYDV is spread to healthy cereal crops from infected perennial grasses by cereal aphid vectors. Cereal aphids pick up the virus while feeding from the vascular tissues of infected plants.

Once acquired, they carry the virus in their salivary glands for the rest of their lives and transmit the virus by feeding on healthy plants.

BYDV 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.

Plants infected prior to mid tillering are stunted and yield can be decreased by up to 50%.

Quality of grain is also affected as the percent of shrivelled grain increases. If plants are infected later, i.e. post tillering, then yield is largely unaffected.

Preventing the spread of BYDV

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

- Protection through the use of a seed treatment is an excellent option.
- Check aphid numbers as the crops develop in high risk areas or moderate risk areas (medium annual rainfall). High numbers of aphids may follow regular summer rains.
- A follow up insecticide spray may be required 7 to 8 weeks after sowing.

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