

Steward® 150 EC

Insect control

PRODUCT DESCRIPTION

An emulsifiable concentrate stomach and contact insecticide used to control African bollworm larvae (*Helicoverpa armigera*) in soybeans, green beans and dry beans and to control fall armyworm (*Spodoptera frugiperda*) in soybeans. The *Spodoptera* leaf worm (*Spodoptera littoralis*) and the semi- (Plusia) looper (*Chrysodeixis acuta*) will also be controlled in soybeans, green beans and dry beans if present during an application.

PROPERTIES

- Registered for tractor application.
- Is active as a larvicide through ingestion (stomach action) and through cuticular absorption (contact action) - very quick feeding cessation and immobilisation.
- Is equally active on larvae of all development stages of bollworm species.
- Low dose rate – even on strains resistant to existing insecticides.
- Consistent performance even at high temperatures.
- Is highly lipophilic and absorbs into the waxy cuticle of leaves.
- Rainfast properties once the spray mixture has dried on the target area, will not wash off through rainfall or irrigation and these conditions will therefore not influence the normal residual activity of the product.
- Low toxicity to operators, consumers and mammals in general when applied according to the label recommendations.
- Non toxic to birds.
- Long persistence.
- Integrated Pest Management compatible (selective to main beneficial arthropods and doesn't encourage red spider mite repercussions).
- Short pre-harvest interval.

COMPOSITION

Steward® 150 EC contains 150 g/l indoxacarb in an emulsifiable concentrate formulation for better distribution and adherence to plant surfaces.

MODE OF ACTION

Indoxacarb (chemical class: oxadiazines) belongs to IRAC MoA group 22A and has a unique mode of action. Target pests change the molecular structure and properties of indoxacarb through metabolic activation, by breaking off a piece of the molecule to create an altered, more active form. This transformation changes the indoxacarb molecule into a highly potent insecticide. Indoxacarb works either through ingestion or absorption. It acts as a sodium channel blocker and inhibits the entry of sodium ions into the nerve cells of target pests, resulting in the paralysis and death of the insects within 24 to 60 hours.

RESISTANCE MANAGEMENT

Lack of cross-resistance to existing insecticides makes indoxacarb an excellent active ingredient for Insect Resistance Management programmes. Indoxacarb belongs to IRAC group 22A. Refer to product labels for specific resistance management guidelines.

**USE PLANT PROTECTION PRODUCTS SAFELY AND WITH RESPONSIBLE CARE.
PLEASE ALWAYS FOLLOW THE LABEL WHEN APPLYING PLANT PROTECTION PRODUCTS.**

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USE RECOMMENDATION

As a result of its unique mode of action, **Steward® 150 EC** is ideally suited for applications where resistance management is important. Whilst there is no evidence of insect resistance to **Steward® 150 EC**, these guidelines will maximise the effective life of the product:

1. Apply preventively at flowering or when the first bollworm eggs or small larvae are observed following regular scouting during flowering and pod-set stage. Apply two **Steward® 150 EC** applications consecutively (= block application) and thereafter alternate with products with different modes of action (for example carbamates, pyrethroids, organophosphates or insect growth regulators).
2. A follow-up application 7–10 days later will normally be necessary if the first application is made at the early flowering stage or under conditions of continuous re-infestation.
3. **Steward® 150 EC** will control larvae of all stages of development, including large 5th instar larvae. Larvae that have penetrated the pods or are obscured by dense foliage during application may not be adequately controlled. It is therefore essential to ensure thorough coverage of the foliage.
4. Monitor insect populations and apply **Steward® 150 EC** according to the label instructions when locally determined economic thresholds are reached. More than one application may be necessary for any one infestation.
5. Do not exceed the maximum number of two applications per season with **Steward® 150 EC**.
6. **Steward® 150 EC** has a minimum effect on beneficial insects and mites, which provides a natural form of pest regulation and thus further decreases the risk of resistance development. Not applicable to tank mixtures.
7. Under conditions of repeated infestation, apply **Steward® 150 EC** in a 7 – 10 day spray programme. Use the shorter spray interval when the pest infestation pressure is high or when soybeans are growing fast.
8. **NB:** Do not apply **Steward® 150 EC** on soybeans, dry beans and green beans that are under drought stress.

Application rates for STEWARD® 150 EC in Soybeans, Dry beans and Green beans:

| Pest | Ground Application | Recommendations / Remarks |
|---|--------------------|--|
| African bollworm (larvae) (<i>Helicoverpa armigera</i>) in all beans Fall armyworm (larvae) (<i>Spodoptera frugiperda</i>) in soybeans | 250 ml/ha | <p>Corrective Foliar Application: Apply in 300–700 l water per hectare in soybeans. Ensure thorough, even coverage of the foliage.</p> <p>AFRICAN BOLLWORM: Apply at flowering or when the first bollworm eggs or small larvae are observed following regular scouting during flowering and pod-set stages.</p> <p>FALL ARMYWORM: Apply at the beginning of the infestation and at the first sign of damage. Application is not recommended for control of worms larger than 1 cm. A follow-up application 7–10 days later will normally be necessary if the first application is made at the early flowering stage or under conditions of continuous re-infestation.</p> <p>Steward® 150 EC will control larvae of all stages of development, including large 5th instar larvae. Larvae that have penetrated the pods or are obscured by dense foliage during application may not be adequately controlled. It is therefore essential to ensure thorough coverage of the foliage. The <i>Spodoptera</i> leaf worm (<i>Spodoptera littoralis</i>) and the semi- (<i>Plusia</i>) looper (<i>Chrysodeixis acuta</i>) will also be controlled in soybeans if present during application. Do not exceed 2 applications of Steward® 150 EC per season. Should a third application be needed, use an insecticide with a different mode of action. Most beneficial insects and predatory mites are unaffected by applications of Steward® 150 EC. The addition of a suitable registered adjuvant at the registered rate, may enhance efficacy. Allow 14 days between last Steward® 150 EC application and harvest.</p> |

FOR MORE INFORMATION

Put this powerful tool to work for you. Contact your local crop protection retailer, or FMC representative to learn how you can get more consistent control of key pests in soya with **Steward® 150 EC** insect control.

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Always read and follow the label directions and precautions for use.
Steward® 150 EC contains Indoxacarb (Oxadiazine) Reg. No. L8435 Act No. 36 of 1947, harmful. H&R CROP OIL Reg. No. L6802 Act No. 36 of 1947 contains mineral oil, caution. Steward® is a trademark of FMC Corporation or an affiliate. H&R CROP OIL are registered trademarks of H&R Global Special Product Sales (Pty) Ltd, Box 21575, Bluff 4036.