



Increased Relevance for IPM in IR-4 Priority Setting

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Capturing IPM compatibility information is now part of the of the IR-4 process.

REQUIRED information when submitting a PCR (pesticide clearance request).



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<u>PR#</u>	<u>CHEMICAL(MFG)</u>	<u>COMMODITY (CROP GROUP)</u>	<u>PROJECT STATUS</u>
11945 A	SPINOSAD (DOWAGR)	MUSHROOM (WHITE BUTTON) (21=EDIBLE FUNGI GROUP)	RESEARCHABLE, RESIDUE & E/CS DATA NEEDED

Reduced Risk Status: THIS AI HAS BEEN CLASSIFIED AS RR FOR ONE OR MORE FOOD USES.

IPM Compatibility: PER REQUESTOR: VERY GOOD IPM FIT; WOULD BE AN EXCELLENT FIT IN MUSHROOM IPM PROGRAMS IN PLACE ON ALL FARMS IN THE U.S.; NEED OTHER ADULTICIDES FOR RESISTANCE MANAGEMENT; SEVERAL APPLIC COULD BE MADE DURING THE GROWING CYCLE TO HELP DISRUPT THE LIFE CYCLE OF THESE FLIES; COULD BE TIMED VERY WELL TO FLY MONITORING AS PART OF A COMPLETE IPM PROGRAM; PRODUCT (ENTRUST) IS OMRI LISTED:06/16

Reasons for need: SCIARID AND PHORID FLIES
PA CA

Indoxacarb/strawberry: plant bugs, sap beetle

- IPM rationale provided by by Gerald Holmes, reviewed by Frank Zalom and Mark Bolda.

- IPM Fit: “Very Good – Excellent”
- The chemical and insecticidal properties of indoxacarb make it a good candidate for Integrated Pest Management Programs (IPM); more so than most other insecticidal products. Indoxacarb is a very effective crop-protection product, with low toxicity to non-target organisms¹, and a short persistence in the environment.

- The primary route of entry of indoxacarb into the target insect is through ingestion. It has no vapor activity and has low or no contact activity. These attributes provide indoxacarb with excellent safety to predators and parasitoids.

- A unique attribute of indoxacarb that contributes to its fit in IPM is that it is a proinsecticide. Indoxacarb requires metabolic bio-activation by the insect to confer potent insecticidal activity. This bioactivation is attributed to esterase and amidase metabolism in the midgut and fat bodies most abundant in lepidopteran and other selected pests. Therefore, indoxacarb users and non-target organisms¹ are exposed to the benign pro-insecticide while pests, through insect-specific metabolism, transform it into an effective insecticide.

Indoxacarb is unlikely to be found in ground water due to vertical movement since it degrades in aqueous solutions over a short time, is immobile in the soil, and is microbially and photolytically broken down.

Indoxacarb is only one of two products that share the same mode of action (IRAC Group 22) which makes it an excellent rotation partner for insecticide resistance management programs since it will control insects resistant to other chemistries. There is no evidence of target site cross resistance to products in other mode of action groups.

Its insecticidal selectivity to a narrower group of pests results in conservation of natural enemies which reduces flares of mites, aphids, mealybugs, and scales.

¹ Except bees, the EPA product label states:
This product is highly toxic to bees exposed to direct treatment on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops or weeds while bees are foraging in the treatment area.

Risk mitigation strategy: allow application only at night.



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Priority given to IPM compatible projects

IPM Centers given an Automatic “A” priority
at IR-4 Food Use Workshop

Has only been used once:
tebufenozide/grape