

## Evaluation Report for Category B, Subcategory 2.3, 2.5, 2.6, 3.11 Application

**Application Number:** 2013-2983  
**Application:** New end-use product: changes to product chemistry: identity of formulants, formulation type, new combination of technical grade active ingredients (TGAIs), and Product labels: new pests  
**Product:** TwinGuard Insecticide  
**Registration Number:** 31442  
**Active ingredients (a.i.):** Sulfoxaflor and Spinetoram  
**PMRA Document Number:** 2458211

### Purpose of Application

The purpose of this application was to register a new agricultural end-use product, TwinGuard Insecticide (guarantee: 20% sulfoxaflor and 20% spinetoram), for control or suppression of various insect pests on pome fruits, stone fruits and potato. The pest claims and their respective application rates in terms of active ingredient are equivalent to those on the label of Delegate WG Insecticide (Registration Number 28778, 25% spinetoram) for the chewing insect pests, but there is an increase in rate on potato as compared to Closer SC Insecticide (Registration Number 30826, 240 g/L sulfoxaflor) for the sucking insect pests.

### Chemistry Assessment

TwinGuard Insecticide is formulated as wettable granules containing spinetoram at a nominal concentration of 20.0% and sulfoxaflor at a nominal concentration of 20.0%. This end-use product has a bulk density of 0.4-0.6 g/mL and a pH of 7-10. The chemistry requirements for TwinGuard Insecticide have been fulfilled.

### Health Assessments

TwinGuard Insecticide is of low acute toxicity to rats via the oral, dermal and inhalation routes. It is minimally irritating to the eye and non-irritating to the skin of rabbits. It is considered to be a dermal sensitizer in mice.

No new residue data for sulfoxaflor or spinetoram in Pome Fruits (CG 11-09), Stone Fruits (CG 12-09), or potatoes were submitted to support the registration of TwinGuard Insecticide containing these two active ingredients. Previously submitted residue data from field trials conducted in/on all petitioned crops were reassessed in the framework of this petition.

Updated health risk assessments for sulfoxaflor and spinetoram were conducted for chemical handlers involved in the mixing, loading and/or application of the new product, TwinGuard Insecticide, to pome and stone fruit trees, as well as potatoes. No risks of concern are expected when workers follow the label directions and wear the personal protective equipment identified on the label.

For postapplication exposure of re-entry workers, only the proposed new use of sulfoxaflor in potato fields was re-assessed and no risks of concern were identified. The proposed uses of spinetoram in potato fields, as well as the proposed uses of sulfoxaflor and spinetoram in pome and stone fruit trees, were all covered under the registered use patterns. No risks of concern are expected if workers adhere to the recommended REI of 12 hours.

Any potential pick-your-own, residential or bystander exposures are also not expected to be of health concern.

### **Environmental Assessment**

The maximum seasonal rate for TwinGuard Insecticide is comparable to currently registered rates for sulfoxaflor and below currently registered rates for spinetoram. Additional risk is therefore not expected from the use of TwinGuard on pome fruit, stone fruit and potatoes. Buffer zones specific to the TwinGuard Insecticide use pattern were calculated and included on the label. Other mitigation measures on the TwinGuard Insecticide label are consistent with currently registered products containing sulfoxaflor and spinetoram.

### **Value Assessment**

Bridging trials for representative crop/pest combinations demonstrated that TwinGuard Insecticide is as effective as either Closer SC Insecticide or Delegate WG Insecticide applied alone against pests on the respective product labels. TwinGuard Insecticide has value for the control or suppression of both sucking insect pests and chewing insect pests with a single pest control product.

### **Conclusion**

The PMRA has completed an assessment of the information provided in support of the product, TwinGuard Insecticide, and has found the information sufficient to support registration.

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ISSN: 1911-8082

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