

## Evaluation Report for Category B, Subcategory 3.5, 3.10, 3.11, 3.12 Application

**Application Number:** 2017-3006  
**Application:** Changes to product label; new pests, new host, new tank mixes and changes to rotational crops.  
**Product:** Zidua SC  
**Registration Number:** 32542  
**Active ingredient (a.i.):** Pyroxasulfone  
**PMRA Document Number:** 2926914

### Purpose of Application

The purpose of this application was to amend the label of Zidua SC to reflect the following:

- (1) Early season residual suppression of additional pests; kochia, wild oat, and lamb's-quarters, in field corn and soybean
- (2) Reduction of rates for early season suppression of weeds in field corn and soybeans
- (3) Use for early season suppression of weeds in dry field peas and lentils
- (4) Addition of tank mix partners
- (5) Expanded rotational crop recommendations.

### Chemistry Assessment

A chemistry assessment was not required for this application.

### Health Assessments

A toxicological assessment was not required for this application.

The amendment of the Zidua SC label to add a preplant or postplant, pre-emergent application on field peas and lentils is not expected to result in an increase for potential occupational or bystander exposure over the previously registered uses of pyroxasulfone. An updated chemical handler risk assessment indicated that no health risks of concern are expected from the new uses, provided that workers follow the label directions and wear the personal protective equipment identified on the label. The amended preplant or pre-emergence use of Zidua SC would have no associated postapplication exposure potential.

No new residue data for pyroxasulfone were submitted to support the amendments of the Zidua SC label. The early season residual suppression treatment to field corn and soybeans is at a lower application rate than previously registered for these crops on the Zidua SC label. Previously

reviewed residue data from field trials conducted in/on dry peas and beans were reassessed in the framework of this petition to support the addition of dry field peas and lentils. In addition, a field rotational trial study was also reassessed to determine the potential for pyroxasulfone residue uptake into secondary crops. The residues of pyroxasulfone in/on treated crops are not expected to increase as a result of these amendments, and will be covered under the maximum residue limits (MRLs) established for pyroxasulfone. Consequently, the dietary exposure to residues of pyroxasulfone is not expected to increase with the addition of dry field peas and lentils to the Zidua SC label, and will not pose health risks of concern to any segment of the population, including infants, children, adults and seniors.

### **Environmental Assessment**

The use expansion for Zidua SC to include use on lentils and dry field peas does not result in changes in environmental concerns as application rates are lower than previously registered on the label for similar crop species and the label statements are adequate for risk mitigation.

The use expansion for Zidua SC to add a lower rate option for currently registered crops, new tank mixes and amendments to rotational crops does not result in changes to environmental concerns. Therefore, the use expansion did not require a revised environmental risk assessment, and the label statements including buffer zones are adequate for risk mitigation.

### **Value Assessment**

Registration of Zidua SC on corn, soybeans, field peas, and lentils at the lower rates gives growers an option for early season weed management with a set up treatment, which is to be followed by an in-crop application of another registered herbicide. It also allows growers to add a Group 15 product as a tank mix option to their current herbicide program prior to crop emergence.

Expansion of rotational crop recommendations provides growers with a great flexibility to employ Zidua SC for early season weed management as well as to arrange sequential crops.

Value information submitted consisted of data from efficacy and dedicated crop tolerance trials, scientific rationales, use history of the same product in the US, and registration of a cited precedent product.

In the efficacy trials, it was demonstrated that pre-plant and pre-emergent application of Zidua SC at the rates of 120-240 mL/ha can be expected to provide early season residual suppression of green foxtail, common waterhemp, kochia, lamb's-quarters, redroot pigweed, and wild oats. Data in support of early season residual suppression of green foxtail can be extrapolated to support early season residual suppression of yellow foxtail.

In the dedicated crop tolerance trials, it was demonstrated that lentil and field pea as host crops as well as rescue crops, which can be immediately planted in case of the crop failure, can be expected to have adequate margins of crop tolerance to Zidua SC applied at up to 180 and 240 mL/ha, respectively, in accordance with the label instructions.

All listed tank mixtures for Zidua SC applied at the rates for early season residual weed suppression are supported since the use patterns for these tank mixtures are consistent with those that are registered for their respective tank mix components each applied as a sole herbicide treatment.

The scientific rationale, use history of Zidua SC in the US, and registration of the cited precedent product were reviewed and considered sufficient to support the expansion on rotational crop recommendations for Zidua SC applied at both the registered and lower rates.

Based on the weight of evidence, the amendments to the use patterns of Zidua SC are considered to have acceptable value.

### **Conclusion**

The Pest Management Regulatory Agency has completed an assessment of the information provided, and has found the information sufficient to support the label amendments for Zidua SC.

## References

### PMRA

#### Document

Number	Reference
2774995	2017, Zidua SC - Application to register Zidua SC in dry field peas and lentils and as a set up treatment, DACO: 10.1, 10.2, 10.2.1, 10.2.2, 10.2.3, 10.2.3.1, 10.2.3.3, 10.2.4, 10.3, 10.3.1, 10.3.2, 10.3.3, 10.4, 10.5, 10.5.2, 10.5.3, 10.5.4, and 10.5.5.
2774998	2017, Efficacy trial reports, DACO: 10.2.3.3(B).
2775001	2017, Zidua SC - Use site history, DACO: 10.2.4.
2775005	2017, Phytotoxicity trial reports, DACO: 10.3.2.

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