

Evaluation Report for Category B, Subcategory 2.3, 2.4 Application

Application Number: 2007-4674
Application: B.2.3: Change in Product Chemistry - Identity of Formulants
B.2.4: Change in Product Chemistry - Proportion of Formulants
Product: Bravo Zn Agricultural Fungicide
Registration Number: 28900
Active ingredients (a.i.): Chlorothalonil
PMRA Document Number: 1559207

Purpose of Application

The purpose of this submission is to register Bravo Zn Agricultural Fungicide for the control of early blight (*Alternaria solani*) at a rate of 1.6 - 2.4 L product/ha (800 - 1200 g a.i./ha) and control of late blight (*Phytophthora infestans*) at a rate of 1.2 - 2.4 L product/ha (600 - 1200 g a.i./ha) on potato.

Chemistry Assessment

Bravo Zn Agricultural Fungicide is formulated as a suspension containing chlorothalonil at a nominal concentration of 500 g/L. This end-use product has a density of 1.29 g/mL and pH of 8-10. The chemistry requirements for Bravo Zn Agricultural Fungicide are complete.

Health Assessments

The slight change in formulation, compared to the currently registered end-use product Bravo 500 Agricultural Fungicide, is not expected to change the toxicological profile, therefore no toxicological data were required.

It is not expected that exposure from Bravo Zn Agricultural Fungicide to handlers or post-application workers/bystanders will increase over the currently registered products containing the active ingredient chlorothalonil.

Residue data for chlorothalonil in potatoes were not submitted to support the registration of the new end-use product Bravo Zn Agricultural Fungicide. Previously reviewed residue data from field trials conducted in/on potatoes were reassessed. The food residue risk profile of Bravo Zn Agricultural Fungicide is expected to be similar to that of the currently registered chlorothalonil end-use product Bravo 500 Agricultural Fungicide. Therefore, no increase in dietary exposure is

anticipated. The formulation of Bravo Zn Agricultural Fungicide will not pose an unacceptable risk to any segment of the population, including infants, children, adults and seniors.

Environmental Assessment

As the application rate and use directions are identical to the currently registered product, Bravo 500 Agricultural Fungicide, an environmental assessment was not conducted for Bravo Zn Agricultural Fungicide. No additional increase in environmental exposure is expected, therefore, additional environmental data were not required to support the registration of Bravo Zn Agricultural Fungicide. Environmental concerns are mitigated on the existing label.

Value Assessment

Trials were reviewed from Manitoba, Prince Edward Island, and Michigan in support of late blight control, and from Michigan, Pennsylvania, Nebraska, and Wyoming in support of early blight control. Control of early blight is confirmed at the rates proposed in the submitted data. Control of late blight at the proposed low rate (600 g a.i./ha) was not tested, but the lowest tested rate (800 g a.i./ha) provided very good control (97 %) under high disease pressure, so it is expected that the 600 g a.i./ha rate should be efficacious. Comparison of Bravo Zn Agricultural Fungicide to the currently registered product, Bravo 500 Agricultural Fungicide, revealed that there were no significant differences in the level of control. Based on the results of the efficacy trials reviewed, the claim of control of early blight (*Alternaria solani*) of potato and control of late blight (*Phytophthora infestans*) of potato with Bravo Zn Agricultural Fungicide is supported as proposed..

Conclusion

The PMRA has completed an evaluation of the subject application. As a result of the evaluation, the PMRA is proposing full registration for the subject product.

References

A. LIST OF STUDIES/INFORMATION SUBMITTED BY REGISTRANT

PMRA

Document Number	Reference
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1.0	Chemistry Assessment
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1445878	2007, BRAVO Zn - Identification, DACO: 3.1.1,3.1.3,3.1.4
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1445879	2007, BRAVO Zn - Formulating Plant Name and Address, DACO: 3.1.2 CBI
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1445880	2007, BRAVO Zn - Starting Materials, DACO: 3.2.1 CBI
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- 1445881 2007, BRAVO Zn - Manufacturing Process, DACO: 3.2.2 CBI
- 1445882 2007, BRAVO Zn - Discussion of Formation of Impurities, DACO: 3.2.3 CBI
- 1445883 2007, BRAVO Zn - Certification of Limits, DACO: 3.3.1 CBI
- 1445884 2001, The Determination of Chlorothalonil in BRAVO SC and WP Formulations By [CBI Removed], AMW00050-01A, DACO: 3.4.1 CBI
- 1445885 2007, Chemical and Physical Properties, DACO:
3.5.1,3.5.10,3.5.11,3.5.12,3.5.13,3.5.14,3.5.15,3.5.2,3.5.3,3.5.4,3.5.5,3.5.6,3.5.7,3.5.8,3.5.9

2.0 Value Assessment

- 1169642 THE EFFECT OF FUNGICIDE TYPE, APPLICATION RATE AND APPLICATION FREQUENCY ON EARLY BLIGHT, LATE BLIGHT AND BOTRYTIS VINE ROT ON BOTH DRYLAND AND IRRIGATED RUSSET BURBANK POTATOES., DACO: 10.2.3.3
- 1169643 EFFICACY OF CHEMICAL TREATMENTS FOR CONTROL OF POTATO EARLY BLIGHT AND GRAY MOLD:, PROJECT-1993, DACO: 10.2.3.3
- 1445887 2007, BRAVO Zn Agricultural Fungicide: Efficacy Summary - Early Blight Control in Potatoes, DACO: 10.1,10.2.1,10.2.2,10.2.3.1,10.3.1,10.3.2
- 1445892 1993, Late Blight and Early Blight Control in Potato, US-PO-93-01, DACO: 10.2.3.3
- 1445893 1995, Late Blight and Early Blight Control in Potato, US-PO-95-01, DACO: 10.2.3.3
- 1445894 Pavlista, A., 2001, Evaluation of Fungicides for Early Blight Control in Potato, 2001, US-PO-01-01, DACO: 10.2.3.3
- 1445895 Stump, W. and Franc, G., 2002, The effects of foliar fungicide programs on foliar and tuber diseases in potato, 2002, US-PO-02-01, DACO: 10.2.3.3

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