

## **Evaluation Report for Category B, Subcategory 2.6, 3.12 Application**

**Application Number:** 2021-0905

**Application:** New End Use Product; New Combination of Technical Grade

Active Ingredients and New Sites

**Product:** A23089 Fungicide

**Registration Number:** 34616

**Active ingredients (a.i.):** Azoxystrobin, Difenoconazole and Pydiflumetofen

PMRA Document Number: 3383724

## **Purpose of Application**

The purpose of this application was to register an end use product which is a combination of active ingredients azoxystrobin, difenoconazole and pydiflumetofen, for use on dried shelled peas and beans, and soybeans, for management of listed fungal diseases.

### **Chemistry Assessment**

A23089 Fungicide is formulated as a suspension containing pydiflumetofen, azoxystrobin, and difenoconazole at concentrations of 75 g/L, 125 g/L and 125 g/L, respectively. This end-use product has a density of 1.118 g/mL and pH of 8.5 (1% solution). The required chemistry data for A23089 Fungicide have been provided, reviewed and found to be acceptable.

#### **Health Assessments**

A23089 Fungicide is of moderate acute oral and dermal toxicity and low acute inhalation toxicity. It is minimally irritating to the eyes and skin, and it is not a dermal sensitizer.

The occupational exposure and risk of A23089 Fungicidewas assessed. No risks of concern are expected from the new use, provided that workers follow the label directions and wear the personal protective equipment identified on the label.

No new residue data were submitted to register A23089 Fungicide. Previously reviewed residue data from field trials conducted with pydiflumetofen, difenoconazole and azoxystrobin in/on CSG6C and soybeans were reassessed in the framework of this application. In addition, processing studies in soybeans were reassessed to determine the potential for concentration of residues of pydiflumetofen, difenoconazole and azoxystrobin into processed commodities.



Dietary risks from exposure to residues of pydiflumetofen, azoxystrobin and difenoconazole in these crop/livestock commodities at the established maximum residue limits were shown to be acceptable for the general population and all subpopulations, including infants, children, adults and seniors. Thus the foods that contain residues of pydiflumetofen, azoxystrobin and difenoconazole are considered safe to eat.

#### **Environmental Assessment**

The use pattern of A23089 Fungicide is within the registered use pattern of the active ingredients pydiflumetofen, azoxystrobin and difenoconazole, therefore, no additional risk is expected from the use of A23089 Fungicide. The label includes all the required environmental precautions, directions for use and spray buffer zone information, which adequately mitigate risks to the environment.

Risk from use of A23089 Fungicide is acceptable from the environmental perspective when used according to label directions.

#### **Value Assessment**

To support the efficacy of the product, A23089 Fungicide, against certain diseases on soybean and some dried shelled pea and beans, the applicant submitted the results of field efficacy trials, extrapolations from registered products and scientific rationales. Based on the submitted value information, A23089 Fungicide is expected to control powdery mildew, anthracnose, frogeye leaf spot, Asian soybean rust and cercospora leaf blight and suppress white mould on soybean at 1.0 L product/ha. In addition, A23089 Fungicide is expected to control anthracnose, ascochyta blight, powdery mildew, mycosphaerella blight and Asian soybean rust and suppress white mould on certain dried shelled pea and beans at 1.0 L product/ha. Efficacy was supported for all claims when applied by either ground or aerial application equipment.

A23089 Fungicide combines action of three fungicides so that growers may simultaneously manage various diseases and delay the development of fungicide resistance to each active ingredient in the targeted pathogen populations.

#### Conclusion

The Pest Management Regulatory Agency has completed an assessment of the information provided, and has found the information sufficient to register A23089 Fungicide.

# References

PMRA Document	
Number	Reference
3206326	2021, A23089B - Manufacturing Process Description and Supporting Data, DACO: 3.1, 3.2, 3.2.1, 3.2.2, 3.2.3, 3.3.1, 3.3.2, 3.4, 3.4.1, 3.4.2 CBI
3206327	2021, Pydiflumetofen/Azoxystrobin/Difenoconazole A23089 Fungicide Product Chemistry, DACO: 3.1.1, 3.1.2, 3.1.3, 3.1.4, 3.5.4 CBI
3206329	2021, A23089B - Physical and Chemical Properties, DACO: 3.5, 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, 3.5.5, 3.5.6, 3.5.7, 3.5.8, 3.5.9 CBI
3206331	2020, Azoxystrobin/Difenoconazole/Pydiflumetofen SC (A23089B) - Acute Oral Toxicity - Up-And-Down Procedure in Rats, DACO: 4.6.1
3206332	2020, Azoxystrobin/Difenocnozale/Pydiflumetofen SC (A23089B) - Acute Dermal Toxicity, DACO: 4.6.2
3206333	2020, Azoxystrobin/DifenoconazolePydiflumetofen SC (A23089B) - Acute Inhalation Toxicity in Rats, DACO: 4.6.3
3206334	2020, Azoxystrobin/Difenoconazole/Pydiflumetofen SC (A23089B) - Primary Eye Irritation in Rabbits, DACO: 4.6.4
3206335	2020, Azoxystrobin/Difenoconazole/Pydiflumetofen SC (A23089B) - In Vitro Eye Irritation Test in Isolated Chicken Eyes, DACO: 4.6.4
3206336	2020, Azoxystrobin/Difenoconazole/Pydiflumetofen SC (A23089B) - Primary Skin Irritation in Rabbits, DACO: 4.6.5
3206337	2020, Azoxystrobin/Difenoconazole/Pydiflumetofen SC (A23089B) - In Vitro Skin Irritation Test in the EpiDermTM Model (EPI-200-SIT), DACO: 4.6.5
3206338	2020, Azoxystrobin/Difenoconazole/Pydiflumetofen SC (A23089B) - Local Lymph Node Assay (LLNA) in Mice, DACO: 4.6.6
2033179	2011, Evaluate the use of difenoconazole (Inspire) alone and in combination with azoxystrobin for control of anthracnose in navy beans. BEA09-01., DACO: 10.2.3.3
2033180	2009, Evaluate Quadris Top for control of Anthracnose in dry beans planted at HRF. BEA09-02., DACO: 10.2.3.3
2033181	2009, Evaluate Quadris Top for control of Anthracnose in dry beans Princeton, Ontario. BEA09-03., DACO: 10.2.3.3
2033182	2010, Evaluate SYN545546 and SYN545192 for control of anthracnose in dry bean. BEA10-01., DACO: 10.2.3.3
2033237	2011, Evaluate efficacy of Quadris Top on Anthracnose of lentil. LEN10-01., DACO: 10.2.3.3
2033238	2011, Evaluate efficacy of Quadris Top on Anthracnose of lentil. LEN10-02., DACO: 10.2.3.3
2033239	2011, Evaluate efficacy of Quadris Top on Anthracnose of lentil. LEN10-03., DACO: 10.2.3.3
2033241	2010, Evaluate efficacy of Quadris Top on Mycosphaerella Blight of field pea. PEA10-01., DACO: 10.2.3.3
2033242	2010, Evaluate efficacy of Quadris Top on Mycosphaerella Blight of field pea. PEA10-02., DACO: 10.2.3.3
2033243	2010, Evaluate efficacy of Quadris Top on Mycospaerella Blight of field pea and Anthracnose of lentil. PEA10-03., DACO: 10.2.3.3

2033244	2010, Evaluate efficacy of Quadris Top on M. PINOIDESaerella Blight of field pea and Anthracnose of lentil. PEA10-04., DACO: 10.2.3.3
2033245	2010, Efficacy of foliar fungicide treatments against mycosphaerella blight of field
2033243	pea under greenhouse conditions. PEA10-05-06., DACO: 10.2.3.3
2255652	,
2255653	2012, Trial Summary Reports, DACO: 10.2.3.3,IIIA 6.1.2
3206300	2021, Value Summary A23089 for use on corn, pulses and soybean in NA, DACO: 10.1,10.3.1
3206303	2018, Evaluate ADEPIDYN Formulations for Control of Sclerotinia in Lentils,
2200202	DACO: 10.2.3.3,10.3.2
3206304	2018, Evaluate Solo Active Ingredients for Control of Mycosphaerella Blight in Field
3200304	Peas, DACO: 10.2.3.3,10.3.2
2206205	
3206305	2018, Evaluate Solo Active Ingredients for Control of Mycosphaerella Blight in Field
220 (210	Peas, DACO: 10.2.3.3,10.3.2
3206319	2020, Evaluate A23089A for control of white mold in soybeans, DACO:
	10.2.3.3,10.3.2
3206320	2019, Evaluate ADEPIDYN Formulations for Control of Ascochyta Blight in
	Chickpeas, DACO: 10.2.3.3,10.3.2
3206321	2018, Evaluate ADEPIDYN Formulations for Control of Sclerotinia in Lentils,
	DACO: 10.2.3.3,10.3.2
3206322	2018, Evaluate Solo Active Ingredients for Control of Mycosphaerella Blight in Field
	Peas, DACO: 10.2.3.3,10.3.2
3206323	2019, Evaluate ADEPIDYN Formulations for Control of Ascochyta Blight in
	Chickpeas, DACO: 10.2.3.3,10.3.2
3206324	2018, Evaluate ADEPIDYN Formulations for Control of Sclerotinia in Lentils,
	DACO: 10.2.3.3,10.3.2
3271876	2021, A23089 Fungicide, Efficacy Deficiency Response Submission Number: 2021-
02/10/0	0905, DACO: 10.2
3271878	2018, Profiling trial of APN+DFZ against frogeye spot in soybean in CN 2018,
3271070	DACO: 10.2.3.3
3271879	2019, Profiling trial of APN+DFZ against Frogeye spot (Cercospora sojina) in
32/10/	Soybean in CN 2019, DACO: 10.2.3.3
2220254	· · · · · · · · · · · · · · · · · · ·
3339254	2022, A23089 Fungicide, Efficacy Deficiency Response Submission Number: 2021-
222225	0905, DACO: 10.2
3339255	2018, Efficacy Data Summary for A21461 Fungicide in Corn, DACO: 10.2.3.1

## © His Majesty the King in Right of Canada, as represented by the Minister of Health Canada, 2023

All rights reserved. No part of this information (publication or product) may be reproduced or transmitted in any form or by any means, electronic, mechanical, photocopying, recording or otherwise, or stored in a retrieval system, without prior written permission of Health Canada, Ottawa, Ontario K1A 0K9.