

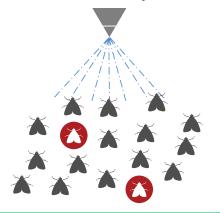
| Resistance Management |

## Break the Insecticide Resistance Cycle

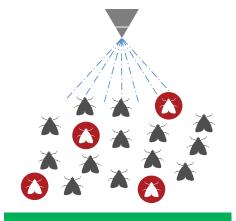
Adding DiPel® DF Biological Insecticide Dry Flowable to your worm (lepidopterous larvae) control program breaks the resistance cycle, while also providing excellent control for greater return on investment. Group 28 chemistries like Coragen® are effective but can be costly and resistant populations have begun to develop (irac-online.org/content/uploads/DBM\_Workshop\_Diamide-\_DBM\_Resistance\_Thailand.pdf). Rotating DiPel with other classes of chemistries promotes good resistance management practices that helps ensure other currently used modes of action continue to work efficiently.

## How Insects Develop Resistance

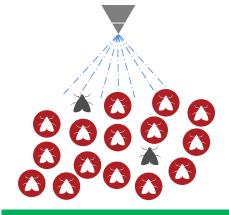
Insects, such as worms, can be highly susceptible to developing resistance to insecticides when one class of insecticide is used exclusively and repeatedly. Surviving insects are left to form future resistant generations. Over the course of multiple generations and sprays, the insect populations move from predominately susceptible to predominately resistant, as shown in the illustrations below. By adding *DiPel* to your worm control program the cycle is broken so that not only are the worms controlled, but the effectiveness of conventional insecticides is maintained.



Initial insecticide application with minimal resistant pests



After initial application, surviving pests multiply and pass on the resistance trait to their offspring and applications of the same insecticide are less effective



If the same class of insecticide is used repeatedly and exclusively, the majority of the population can become resistant



Controlled Pests



## DiPel—Excellent Choice for Worm Control Programs

- Economical control of worm pests
- No harvest residue or MRL concerns because DiPel is exempt from tolerance
- Great rotational partner to reduce the potential of worms developing resistance to insecticides with other modes of action



Products That Work, From People Who Care® | valent.com | 800-6-VALENT (682-5368)

Always read and follow label instructions.

Products That Work, From People Who Care is a registered trademark of Valent U.S.A. LLC. DiPel is a registered trademark of Valent BioSciences LLC. Coragen is a registered trademark of FMC Corporation. ©2019 Valent U.S.A. LLC. All rights reserved. Printed in the U.S.A. 2019-DIP-8006 PM 2/19