



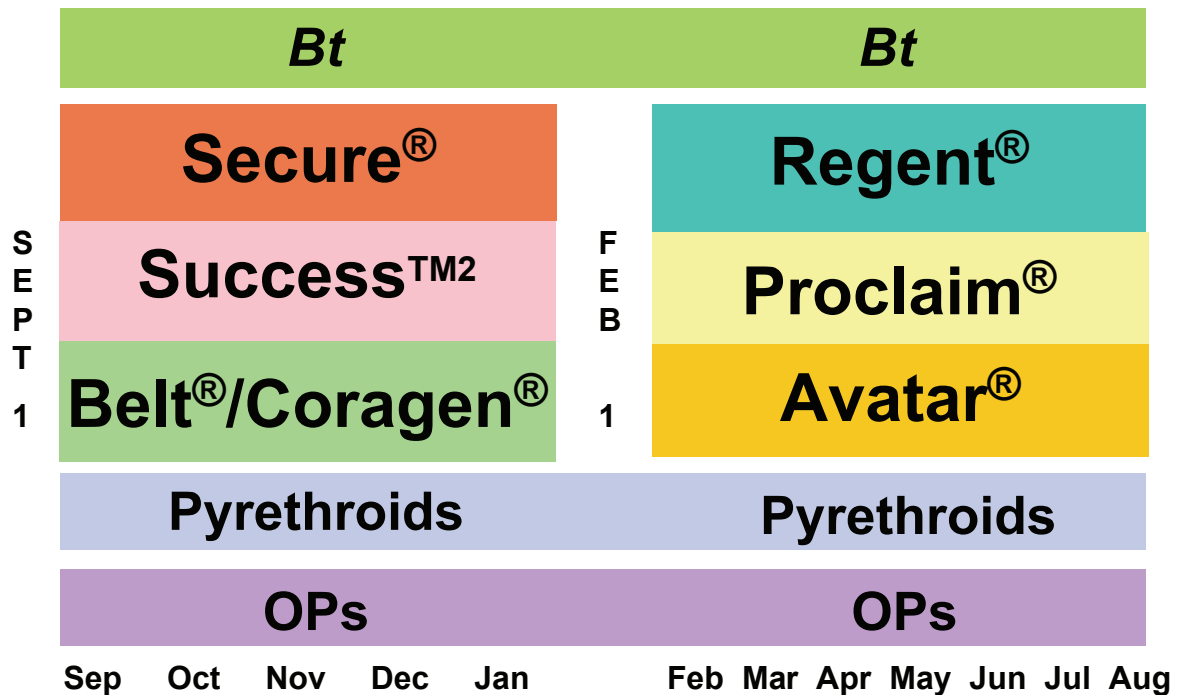
# IRMRG Diamondback Moth (DBM)

2009

## Insecticide Resistance Management Strategy

for NSW, Victoria, Tasmania, South Australia and Stanthorpe district, QLD

**This strategy aims to delay the development of resistance to new insecticide groups**



The industry aims to promote co-ordinated use of insecticides to control DBM. Using chemicals in a random manner will cause DBM to rapidly develop resistance. Help to avoid this by adopting this IRM strategy.

**Secure<sup>®</sup>, Success<sup>TM2</sup>, Belt<sup>®</sup> or Coragen<sup>®</sup> may be used from 1 Sep until 31 Jan.**

**Regent<sup>®</sup>, Proclaim<sup>®</sup> or Avatar<sup>®</sup> may be used from 1 Feb until 31 Aug.**

Labels of some products place a limit on the number of times they can be used. If further control is required on one planting, different groups from within the same window should be rotated.

**It is important to monitor crops regularly for DBM.**

**Do not use mixtures of insecticides for controlling DBM (eg Bt's and pyrethroids).**

Use of the biological insecticide, Bt, in the early stages of crop development is encouraged to boost natural enemies. Avoid broad-spectrum sprays (eg. OP's and pyrethroids).

**Good crop hygiene - planting clean seedlings and the prompt working in of post harvest crop residues - will help to reduce DBM pressure.**



**IRMRG is CropLife Australia's Insecticide Resistance Management Review Group**



# Chemical groups & products for DBM

2009

1B

## Organophosphates (OPs)

- acephate (e.g. Orthene<sup>®</sup>, Lancer<sup>®</sup>, Eraser<sup>®</sup>)
- chlorpyrifos (e.g. Lorsban<sup>™</sup> 500EC, Strike-Out<sup>®</sup>, Cyren<sup>®</sup>)
- diazinon (e.g. Diazinon, DiazoI<sup>®</sup>) – use restrictions apply
- methamidophos (e.g. Nitofol<sup>®</sup>, Monitor<sup>®</sup>)
- mevinphos (Phosdrin<sup>®</sup>) - use restrictions apply
- parathion-methyl (e.g. Folidol<sup>®</sup> M500, Methyl Parathion) – use restrictions apply
- prothiofos (Tokuthion<sup>®</sup>)

2C

## phenylpyrazoles

- fipronil (Regent<sup>®</sup>)

3A

## pyrethroids

alpha-cypermethrin (e.g. Alpha-Scud<sup>®</sup>, Astound<sup>®</sup>, Dominex<sup>®</sup>, Fastac<sup>®</sup>);  
beta-cyfluthrin (e.g. Bulldock<sup>®</sup> 25 EC, Chix<sup>®</sup> EC); beta-cypermethrin (Banshee<sup>®</sup>);  
cypermethrin (e.g. Sonic<sup>®</sup>, Scud<sup>®</sup>); deltamethrin (e.g. Ballistic<sup>®</sup>, Decis Options<sup>®</sup>);  
esfenvalerate (Sumi-Alpha<sup>®</sup> Flex); gamma-cyhalothrin (Trojan<sup>™</sup>);  
lambda-cyhalothrin (Karate<sup>®</sup>, Matador<sup>®</sup>); permethrin (e.g. Ambush<sup>®</sup>, Hellfire<sup>®</sup>);  
tau-fluvalinate (Mavrik<sup>®</sup> Aquaflo); zeta-cypermethrin (Fury<sup>®</sup>)

5A

## spinosyns

- spinosad (Success<sup>™2</sup>, Entrust<sup>™</sup>)

6A

## avermectins

- emamectin benzoate (Proclaim<sup>®</sup>)

11C

## biologicals

- *Bacillus thuringiensis* (Bt)
- (e.g. Agree<sup>®</sup> WG, Delfin<sup>®</sup> WG, DiPel<sup>®</sup> DF, Full-Bac<sup>®</sup> WDG, Xentari<sup>®</sup> WG)

13A

## chlorfenapyr

- chlorfenapyr (Secure<sup>®</sup>)

22A

## indoxacarb

- indoxacarb (Avatar<sup>®</sup>)

28

## ryanodine receptor activators

- chlorantraniliprole (Coragen<sup>®</sup>)
- flubendiamide (Belt<sup>®</sup>)

X



Insecticide Mode of Action Groups

The inclusion of any product by trade name in this publication does not necessarily imply endorsement of that product. Conversely, the omission of a particular product should not be regarded as a censure of that product. As the registration of insecticides can vary between states and over time, the correct choice of chemical, rate and method of application is the responsibility of the user.