

DiPel[®] DF

KILLING ME SOFTLY



- Kind to fruit
- Kind to the environment
- Kind to your customers
- **Killer to caterpillars**



DiPel[®] DF Biological Insecticide

DiPel DF – The solution to Lightbrown apple moth in a range of tree fruit crops.

Problem *lepidopteran* caterpillars like Lightbrown apple moth attack fruit trees and cause severe damage to valuable fruit. DiPel DF stops caterpillars feeding, minimizing crop damage and maximising crop returns.

DiPel DF is a specially prepared dry flowable formulation containing live spores and endotoxin of a naturally occurring bacterium – *Bacillus thuringiensis*. DiPel DF is safe to the people handling it, soft on the crop and beneficial insects but deadly to caterpillars. Ideal for inclusion in IPM programmes, DiPel DF is also a valuable tool for rotational resistance management strategies.

Application

DiPel DF must be ingested by the target insect, therefore thorough coverage is essential. Treat when larvae are young. Under heavy pressure, use the higher recommended rates and shorter interval between applications. If rain falls shortly after treatment, re-treatment may be necessary. When mixed with water before application DiPel DF can be applied through any standard spray equipment.

Compatibility

DiPel DF is compatible with most insecticides and fungicides. Do NOT apply as a tank mix with, or within 2 days of application of alkaline products such as foliar nutrients, liquid fertilisers or Bordeaux mixtures.

DIRECTIONS FOR USE

SITUATION	PEST	RATE	CRITICAL COMMENTS
Agricultural and Non-Agricultural Uses:	Lepidopteran larvae susceptible to DiPel, Including:	Hectare 0.5 to 2.0 kg/ha	<ol style="list-style-type: none"> 1. Crops must be monitored regularly for lepidopteran eggs or first instar larvae (caterpillar stage). The suitability of DiPel DF as a control measure should be determined through consultation with local industry advisers, company representatives or small scale tests before treatment of a large area or number of plants begins. 2. If DiPel DF is suitable, time the commencement of spraying to coincide with egg hatch or first instar larvae and before damage to the plant. 3. The activity of DiPel DF commences to decline immediately after application. Under continual pest pressure or rapid plant growth (eg sweet corn silks, tomato shoots etc), a minimum of 2 sprays separated by no more than 3 days initially, and then reapply at 3 – 5 day intervals. 4. Use the higher rates of DiPel DF for higher egg laying activity, longer residual or larger first instar larvae. Higher rates should be used against <i>Helicoverpa</i> spp. Control of <i>Helicoverpa</i> is most effective if larvae are less than 8 mm long. Control of <i>Spodoptera</i> is most effective if larvae are less than 15 mm long. 5. Spray late in the afternoon or early evening (before dew begins to settle) when larvae are actively feeding. Reapplication after rainfall or overhead sprinkler irrigation may be necessary. 6. Ensure complete and thorough coverage of all plant surfaces. A non-ionic wetting agent such as Agral may need to be used on difficult to wet plants. 7. Larval control is only achieved when the larvae ingest DiPelDF and activation begins in the alkaline gut. Feeding ceases once the larvae ingest DiPel DF and death of treated larvae may take up to 3 – 5 days. Under low temperatures, when larvae are less actively feeding, control may be slower. 8. Larvae in sheltered positions such as the centre of the sweet corn whorls or in the heart leaves of lettuce and crucifers will not be controlled. In these cases spraying to achieve run-off may be desirable for the DiPel DF to reach the target area to achieve efficacy. 9. DiPel DF is safe to beneficial arthropods and is best used in conjunction with these beneficial species (eg <i>Trichogramma</i> spp. parasitoids). To obtain maximum assistance from beneficial arthropods, avoid the use of broad spectrum insecticides before and during the use of DiPel DF. 10. DiPel DF should be used in an Insecticide Resistance Management Strategy.
Vegetables	Armyworm	Dilute Spraying (to the point of run-off)	
Fruits	(<i>Spodoptera</i> spp.)	25 – 100 g/100 L	
Vines	Cotton bollworm	Concentrate Spraying	
Oilseeds	(<i>Helicoverpa armigera</i>)	100 – 1000 g/100 L	
Cereal	Native budworm		
Grains	(<i>Helicoverpa punctigera</i>)		
Herbs	Cabbage moth		
Tobacco	(<i>Plutella xylostella</i>)		
Ornamentals	Cabbage white butterfly		
Forestry	(<i>Pieris rapae</i>)		
Amenity	Green looper		
Trees	(<i>Chrysodeixis eriosoma</i>)		
Turf	Lightbrown apple moth		
	(<i>Epiphyas postvittana</i>)		
	Pear looper		
	(<i>Ectropis excursaria</i>)		
	Soybean looper		
	(<i>Thysanoplusia orichalcea</i>)		
	Vine moth		
	(<i>Phalaenoides glycinae</i> ,		
	<i>Agarista agricola</i>)		
	Tobacco looper		
	(<i>Chrysodeixis argentifera</i>)		

- ALWAYS READ THE LABEL BEFORE USING THIS PRODUCT
- WITHHOLDING PERIOD: NOT REQUIRED WHEN USED AS DIRECTED

