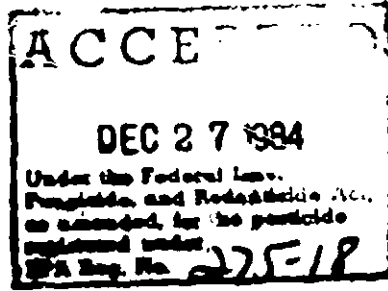


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dipel
WORM KILLER

01-3153789-000-8 84

WETTABLE POWDER
BIOLOGICAL INSECTICIDE

Active Ingredient:

Bacillus thuringiensis, var. *kurstaki*,
16,000 International Units of Potency per mg.
(7.26 billion International Units per pound) 3.2%
Inert Ingredients 96.8%

KEEP OUT OF REACH OF CHILDREN

CAUTION

EPA Registration No. 275-18
EPA Est. No. 33762 1A-1

STORAGE AND DISPOSAL
See container label.

BENEFICIAL INSECTS

Honeybees foraging treated areas are not harmed by DIPEL use.

DIPEL does not interrupt the activities of beneficial and predacious arthropods in pest management programs.

Days to harvest: There are no restrictions on applying DIPEL up to the time of harvest.

Sites: DIPEL may be used for any labeled pest in both field and greenhouse uses.

For Smaller Spray Volumes:

Rate in	Use This Amount Per Gallon
1/4 lb/acre or 100 gals	1/4 tsp
1/2 lb/acre or 100 gals	1 tsp
1 lb/acre or 100 gals	2 tsp
2 lb/acre or 100 gals	4 tsp

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling.

DIPEL is a highly selective insecticide for use against listed caterpillars (larvae) of lepidopterous insects. Close scouting and early attention to infestations is highly recommended. Larvae must eat deposits of DIPEL to be affected. Always follow these directions.

- Treat when larvae are young (early instars) before the crop is extensively damaged
- Larvae must be actively feeding on treated, exposed plant parts
- Thorough spray coverage is needed to provide a uniform deposit of DIPEL at the site of larval feeding. For some crops directed drop nozzles by ground machine are required
- Under heavy pest population pressure, use the higher label rates, shorten the spray interval, and/or raise gallonage to improve spray coverage
- Repeat applications at an interval sufficient to maintain control, usually 3 to 14 days depending on plant growth rate, moth activity, rainfall after treating, and other factors. If attempting to control a pest with a single spray, make the treatment when egg hatch is essentially complete, but before extensive crop damage occurs
- A spreader sticker which has been approved for use on growing and harvested crops should be added for hard to wet crops such as cole crops, or to improve weather fastness of the spray deposits

After eating a lethal dose of DIPEL, larvae stop feeding within the hour, and will die within several days. Dying larvae move slowly, discolor, then shrivel, blacken and die.

DIPEL may be applied in conventional ground or aerial equipment with quantities of water sufficient to provide thorough coverage of infested plant parts. The amount of water needed per acre will depend on crop size, weather, spray equipment and local experience. Unless otherwise indicated, use at least 2 gallons of water by air, except in the far west, 5 to 10 gallons is the usual minimum. Add water to the spray

or mixing tank at the level that provides maximum agitation. With the agitator running, slowly sprinkle in the DIPEL. Continue agitation. Then add other spray materials (if any). Add the balance of the water and agitate until mixed. Maintain the suspension while loading and spraying. Do not mix more DIPEL than can be used in a 12-hour period.

APPLICATION RATE

Crop	Pest	Pounds/Acre	
Cole Crops and Vegetables including Leafy Root, Stalk, and Seed and Pod Types (Peas, Beans, Lentils, etc. dry or succulent) Potatoes Cucurbits	Loopers	1/2 to 1	
	Hornworms	1/2 to 1/2	
	Imported Cabbageworm	1/2 to 1/2	
	Diamondback Moth	1/2 to 1/2	
	Green Clover worm	1/2 to 1/2	
	Worms	1/2 to 1	
	Armyworms*	1 to 2	
	Tomatoes, Peppers, Eggplant	Loopers	1/2 to 1
	Hornworms	1/2 to 1/2	
	Tomato Fruitworm*	1	

*DIPEL may be used to suppress small armyworms (1st and 2nd instars) when populations are light and full coverage ground sprays are applied.

Saltmarsh	Caterpillars	1/2 to 1	
	Armyworms**	1 to 2	
	Cucurbits, Melons, Squash, Cucumbers etc.	Roundworm Complex*	1/2 to 1
	Melonworms	1 to 2	
	Tobacco	Tobacco Budworm	1/2 to 1
	Hornworms	1/2 to 1/2	
	Loopers	1/2 to 1	

*Apply weekly in a preventive program.
**DIPEL may be used to suppress small worms (1st and 2nd instars) when populations are light and full coverage ground sprays are applied.

Soybeans, Sunflowers, Peanuts	Loopers	1/2 to 1
	Green (Lawnmower)	1/2 to 1/2
	Velvetbean	1/2 to 1/2
	Caterpillar	1/2 to 1/2
	Podworm*	1/2 to 1

DIPEL may be tank mixed with such control products as recommended rates. Follow the application directions on the sucker control labels. Observe all label precautions for all products used.

Safflower, Sugar beets, Nuts	Loopers	1/2 to 1
	Saltmarsh Caterpillar	1 to 1
All other Cereals, Hay, Small Grains and Forage Crops	Loopers	1/2 to 1
	All other Caterpillars	1/2 to 1
	European Shipping (Horn) Caterpillar	1/2 to 1
Range Land	Range Caterpillars	1/2 to 1/2

*DIPEL suppresses podworms under most circumstances (consult label).

Cotton	Tobacco Budworm	1/2 to 1
	Eastern Podworm	1/2 to 1
	Travlers	1/2 to 1

Use to suppress light to moderate populations of newly hatched larvae in pest management programs. If water (about 1 gal per acre) is available, use of DIPEL spray treatments at 4 to 5 day intervals as long as necessary and results are acceptable. If 15% or more of plants have eggs and 1/2 lb AI (chloroform residue) per acre to 1 lb DIPEL increase chloroform to 1/2 lb AI if needed.

One tonne of water is no longer a factor. DIPEL (1/2 to 1 lb/acre) may be tank mixed with methoxy (Lanase® or Hudson®) at 275 to 675 lbs AI per acre to control light to moderate

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site infestations of early instar larvae. Observe any rate, frequency, or bulk load label restrictions for methomyl in your area. Methomyl will likely cause reddening of cotton foliage. Discontinue this tank mix if reddening becomes excessive.

Before using any tank mix, read the product labels for all environmental and usage cautions. Chlordaneform is restricted to aerial application and to states where registered.

**Full plant coverage needed.

*The mixture of DI, with chlordaneform for inhibiting the growth of lepidopterous larvae on plants is covered by Abbott U.S. patent 3,937,813.

Crop	Pest	Lbs./100 Gals.
Turf	End Webworm	2 to 4
Flowers and Ornamentals (ground only)	Loopers	1/2 to 1
	Tobacco Budworm	1/2 to 1
	Omnivorous	1/2 to 1
	Loopers	1/2 to 1
	Omnivorous	1/2 to 1
	Leafroller	1/2 to 1
	Diamondback Moth	1/2 to 1/2
	Armyworms*	1 to 2
	Elm Moth (Hornworm)	1/2 to 1/2
	to Moth	1/2 to 1
	Cleander Moth	1/2 to 1

*DIPEL may be used to suppress small armyworms (1st and 2nd instar) when populations are light and full coverage ground sprays are applied.

DIPEL for Fruits, Nuts, Trees, Ornamentals

Crop	Pest	Pounds/Acre	
Grapes, Small Fruits, Cane and Bush Berries	Grapeleaf Skeletonizer (ground only)	1/2 to 1	
	Grape Leafroller	1/2 to 1	
	Acheta Spinnin Moth (Hornworm)	1/2 to 1	
	Saltmarsh Caterpillar (ground only)	1	
	Omnivorous Leafroller (ground only)	1/2 to 1	
	Loopers	1/2 to 1	
		Pounds/100 Gallons* (Ground Application)	Pounds/Acre (Aerial** Application)
Stone Fruits, Nut Trees, Pomegranates	Redhumped Caterpillar	1/2 to 1	1/2 to 1
	Tent Caterpillars	1/2 to 1	1/2 to 1
	Omnivorous Leafroller	1/2 to 1	1/2 to 1
	Fall Webworm	1/2 to 1	1/2 to 1
	Walnut Caterpillar	1/2 to 1	1/2 to 1
	Cankerworms	1/2 to 1	1/2 to 1
Pome Fruits*	Cankerworms	1/2 to 1	1/2 to 1
	Gypsy Moth	1/2 to 1	1
	Vari-colored Leafroller	1/2 to 1	1/2 to 1
	Redhumped Leafroller	1/2 to 1	1/2 to 1
	Tufted Apple Budmoth	1/2 to 1	1/2 to 1
	Tent Caterpillars	1/2 to 1	1/2 to 1
Citrus*	Fruitree Leafroller	1/2 to 1	1/2 to 1
	Orangecod	1/2 to 1	1/2 to 1
Tropical Fruit:†	Hornworm	1/2 to 1	1/2 to 1
	Leafrollers	1/2 to 1	1/2 to 1
	Omnivorous Looper	1/2 to 1	1/2 to 1
	Loopers	1/2 to 1	1/2 to 1
Forest, Shade Sugar Maple Trees and Ornamentals	Gypsy Moth	1/2 to 1	1
	Bagworm	1/2 to 1	1/2 to 1
	Redhumped Caterpillar	1/2 to 1	1/2 to 1
	Spring & Fall Cankerworm	1/2 to 1	1/2 to 1
	Fall Webworm	1/2 to 1	1/2 to 1
	Elm Spanworm	1/2 to 1	1/2 to 1
	Tent Caterpillars	1/2 to 1	1/2 to 1
	California Oakworm	1/2 to 1	1/2 to 1
	Pine Pringley	1/2 to 1	1/2 to 1
	Spruce Budworms*	1/2 to 1	1/2 to 1
	Saddle Prominent Caterpillar	1/2 to 1	1/2 to 1
	Douglas Fir Tussock Moth	1/2 to 1	1/2 to 1
	Western Tussock Moth	1/2 to 1	1/2 to 1
	Fruitree Leafroller	1/2 to 1	1/2 to 1
	Black-headed Budworm	1/2 to 1	1/2 to 1
Merrill Webworm	1/2 to 1	1/2 to 1	
Jack Pine Budworm	1/2 to 1	1/2 to 1	
Saddleback Caterpillar	1/2 to 1	1/2 to 1	

*Rate for hydraulic sprayer. For mist blowers, use the applicable amount (lbs) in 10 gallons of water.

**For aerial application, use in one to ten gallons of water depending on type and density of trees. For best results, spray systems which deliver droplet size of 200 microns should be used.

†Use 400-450 gallons/acre to suppress listed pests in pest management programs.

‡Use 100 to 400 gallons/acre.

§Use at least 200 gallons/acre.

¶Use against populations below 35 larvae per 18 inch branch tip. Use a minimum of 1/2 gallon/acre by air.

DIPEL FOR STORED AGRICULTURAL COMMODITIES

For the Control of Tobacco Moth on Fire-Cured Tobacco
Apply 0.4 ounce (approximately 5 teaspoonsful) of DIPEL in one quart of water per 100 pounds of tobacco as a fine mist spray. Avoid overwetting. Tobacco should have just enough moisture to be handled without shattering at the time of application.

Tobacco to be Stored up to Twelve Months.
Spray loose leaves as the tobacco is being banded from the curing barn. For tobacco on sticks, treat both sides of leaves.

Stored Tobacco.
For tobacco which is to be carried over, rebundle or restack sticks, fluff up tobacco and spray loose leaves.

For tobacco that has been stored over three weeks, apply at first signs of infestation, promptly open bundles, spray loose leaves, then bundle.

Treatment of Storage Barns.
If tobacco has been treated, or is going to be treated, treatment of the floors and walls may be made to aid in control. Sweep out the area, especially cracks and corners, and all of the loose tobacco pieces in which the moth might breed. Make a spray mixture containing 1 lb. DIPEL per 2 1/2 gallons of water. Apply this at a rate of 1/2 gallon per 1000 sq. ft. of surface area. Be sure to spray into cracks and between floorboards.

STORED GRAINS, SOYBEANS, SUNFLOWER SEED, PEANUTS, CROP SEED.

Pest	Rate
Indian Meal Moth	1/2 lb./100 bu.
Almond Moth	1/2 lb./100 bu.
*As a surface treatment, apply 1 lb. DIPEL in 10 gal. of water per 500 sq. ft. of grain surface area. Mix into top 4 inches.	

For the control and prevention of these pests, apply DIPEL in a constantly agitated water suspension to the top four inch surface layer of grain in the bin. Use a sprinkler can or sprayer to apply the dosage into the grain stream as the last (top) four inch layer is augered into the bin. Mix 1/10 lb. DIPEL per gallon of water. Apply 0.6 pint of this mixture per bushel as grain is augered into storage. Or, sprinkle the dosage onto the surface of the grain in the bin and mix thoroughly with a scoop or rake to the depth of four inches. More thorough coverage may be achieved by dividing the recommended dosage into three applications and mixing the grain between applications.

For the protection of bagged grain, apply the dosage to the entire grain mass and mix thoroughly prior to bagging. Treatments can be applied to the stored grain at any time, but for best results, make application immediately after harvest before moth activity occurs. In areas where late fall harvested grain is not subject to infestation because of low temperatures, application can be delayed until late winter or early spring before moth activity begins. Control for a full storage season should normally be expected; however, repeat application if infestation recurs.

This treatment controls the moth larvae. If an infestation is present when the grain is treated, moth excrement will continue for several days. If immediate control of severe infestations is desired, grain should be fumigated prior to application of this treatment. DIPEL will not control weevils or other beetles.

DIPEL is exempt from tolerance restrictions and the treated grain can be used at any time after treatment by any use.

NOTICE TO USER

Abbott makes no warranty, express or implied, of merchantability, fitness or otherwise, concerning use of this product other than as indicated on the label. User assumes all risks of use, storage or handling not in strict accordance with accompanying directions.

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