

BEST AVAILABLE COPY

ACCEPTED

JUN 3 1985
Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 275-18

dipel
WORM MILLER

**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 predaceous arthropods in pest management programs.

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

- Treat when larvae are young (early instar) 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
Cereals and Vegetables (including leafy Root, Stalk and Seed and Pod Types) (See also Fruit and Vegetable section for many Cucurbits)	Loopers	1 to 1
	Headworms	1 to 1.5
	Imported Cabbageworm	1 to 1.5
	Diamondback Moth	1 to 1.5
Fruit and Vegetable (see also Cereals and Vegetables section for many Cucurbits)	Loopers	1 to 1
	Headworms	1 to 1.5
	Imported Cabbageworm	1 to 1.5
	Diamondback Moth	1 to 1.5
Tobacco, Peppers, Eggplant	Loopers	1 to 1
	Headworms	1 to 1.5
	Imported Cabbageworm	1
	Vermilion Cutworm	1
Cucurbits	Cucurbits	1 to 1
	Caterpillars	1 to 1
	Armyworms	1 to 2
	Imported Cabbageworm	1 to 2

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

Sprays are applied

Cucurbits, Melons, Squash, Cucumbers, etc.	Headworm Complex ¹ Melonworms	1 to 1 1 to 2
*Apply weekly in a preventive program		
Tobacco	Tobacco Budworm	1 to 1
	Headworms	1 to 1.5
	Loopers	1 to 1
Soybeans, Sugar beets, Melons	Loopers	1 to 1
	Saltmarsh Caterpillar	1 to 1
	Caterpillars	1 to 1
Soybeans, Sunflowers, Peanuts	Loopers	1 to 1
	Green Cloverworm	1 to 1.5
	Vermilion Caterpillar	1 to 1.5
Peanuts	Armyworm ²	1 to 1

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

DIPEL suppresses podworms under pest management conditions.

Alfalfa Pastures Hay, Small Grains and Forage Crops	Loopers	1 to 1 1 to 1.5 1 to 1.5
Rangeland	Range Caterpillar	1 to 1.5
	Use a minimum of 1 to 1.5 gallon water per acre	
Cotton	Tobacco Budworm ¹	1 to 1
	Cotton Bollworm ¹	1 to 1
	Loopers ¹	1 to 1

Use to suppress light to moderate populations of newly hatched worms in pest management conditions. Use under close scouting when beneficial insects are active or feeding. Repeat treatments at 4 to 5 day intervals, as long as necessary and results are acceptable. If 15% or more terminals have eggs and 1% to 10% of chrysalis (larvae) or 10% of fruit are present, increase chlordaneform to 1.5 lb. AI if needed.

Do not tank mix with insecticides. DIPEL (at 1 to 1.5 lb/acre) may be tank mixed with methomyl (Lannate[®] or Nudrin[®]) at 7.25 to 6.75 lbs. AI per acre to control light to moderate infestations of early instar larvae. Observe any rate, frequency or hold back 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 DIPEL with chlordaneform for inhibiting the growth of lepidopterous larvae on plants is covered by Abbott U.S. patent 3,937,813.

Turf	Soil Wireworm	2 to 4
Crop	Loopers	1 to 1.5
	Headworms	1 to 1.5
	Imported Cabbageworm	1 to 1.5
	Diamondback Moth	1 to 1.5
	Armyworms ¹	1 to 1.5
	Headworms	1 to 1.5
	Imported Cabbageworm	1 to 1.5
	Diamondback Moth	1 to 1.5
	Armyworms ¹	1 to 1.5
	Headworms	1 to 1.5

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

For Smaller Spray Volumes

Rate is	Use This Amount Per Gallon
1/2 lb/acre (100 gals)	1.5 tsp.
1 lb/acre (200 gals)	3 tsp.
1.5 lb/acre (300 gals)	4.5 tsp.
2 lb/acre (400 gals)	6 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.

