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EMULSIFIABLE SUSPENSION
BIOLOGICAL INSECTICIDE

DIPEL ES

Active Ingredient

Bacillus thuringiensis, subsp. kurstaki,	3.5%
Inert Ingredients	96.5%
	<u>100.0%</u>

Potency: 17,600 International Units per mg of product
or 64 billion International Units per gallon
of product.

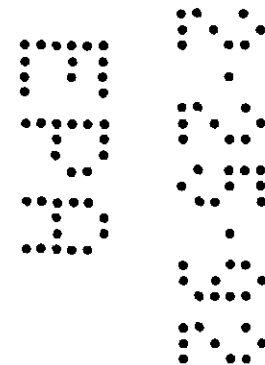
Potency units should not be used to adjust use
rates beyond those specified in the Directions
For Use section.

KEEP OUT OF REACH OF CHILDREN

CAUTION

List No. 5555 01
EPA Registration No. 275-65
EPA Est. No. 33762-IA-1

NET CONTENTS: GALLONS



JUL 16 1965

275-65

DIRECTIONS FOR USE

CAUTION

Avoid contact with skin, eyes or clothing. In case of contact immediately flush eyes or skin with plenty of water. Get medical attention if irritation persists.

STORAGE AND DISPOSAL

Do not contaminate water, food or feed by storage or disposal.

Storage: Keep containers tightly closed when not in use. At temperatures less than 0°F and greater than 100°F, Dipel ES should be stored under cover. Roll or shake the container before dispensing.

Pesticide Disposal: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility. Do not contaminate water when disposing of equipment wash waters.

Container Disposal: Triple rinse (or equivalent). Then puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Re-Entry Statement

Do not enter treated areas without protective clothing until sprays have dried.

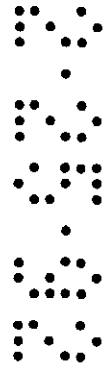
Written or oral warnings must be given to workers who are expected to be in a treated area or in an area about to be treated with this product. Oral warnings must include the following information:

Inform workers of area of fields that must not be entered without appropriate protective clothing until sprays have dried. In case of accidental exposure, wash with plenty of water. If there is any irritation in eyes after washing, get medical attention.

When oral warnings are given, warnings shall be given in a language customarily understood by workers. Oral warnings must be given if there is reason to believe that written warnings cannot be understood by workers.

Written warnings must include the following information:

"Area treated with DiPel ES on (date of application). Do not enter without appropriate protective clothing until sprays have dried. In case of accidental exposure, wash with plenty of water. If there is any irritation in eyes after washing, get medical attention."



DIRECTIONS FOR USE

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

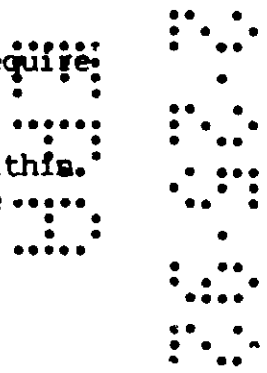
Do not apply this product in such a manner as to directly or through drift expose workers or other persons. The area being treated must be vacated by unprotected persons.

APPLICATION INSTRUCTIONS

DiPel ES 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 ES 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 ES at the site of larvae 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 or surfactant which has been approved for use on growing and harvested crops should be added for hard-to-wet crops.
- * DiPel ES is a non-restricted use pesticide and does not require a restricted use permit for purchase or use.

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



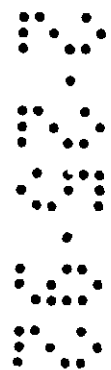
APPLICATION INSTRUCTIONS (CONT'D)

DiPel ES may be applied in conventional ground, aerial equipment, or sprinkler systems (east of the Rockies only) such as, center-pivot lateral move, end-tow, side (wheel) roll, traveler, solid-set or hand move 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. Do not apply this product through any type of irrigation system west of the Rockies. Refer to the chemigation instructions on this label.

Mixing Recommendations: Important - do not add DiPel ES to the mix tank before introducing the desired quantity of water. Start the mechanical or hydraulic agitation to provide moderate circulation before adding DiPel ES. When using a surfactant or spreader-sticker, add it to the water prior to addition of DiPel ES. Add the desired volume of DiPel ES to the mix tank and continue circulation. Include rinse water from the containers. Maintain the suspension while loading and spraying. When using a non-emulsifiable oil or another pesticide, add it after the DiPel ES. Do not mix more DiPel ES than can be used in a 6-day period. Rinse and flush spray equipment thoroughly following each use. Selection of fluid to flush the application system will depend on what type of mixture was used during the application period. Use 20-mesh screens.

Mixing Recommendations For Chemigation (East of the Rockies Only): (Also see Chemigation Section): FOLLOW GENERAL MIXING RECOMMENDATIONS AND KEEP THE RATIO AT 3 PARTS WATER TO 1 PART DIPEL ES. ALSO, PROVIDE MILD UNIFORM AGITATION THROUGHOUT THE SOLUTION BUT DO NOT AGITATE EXCESSIVELY. For undiluted injection for chemigation: Flush and clean nurse tank, lines, screen canister, and pump with diesel fuel or a non-emulsifiable oil until they are water free before and after application. Use a 20-mesh screen. Continue agitation during injection.

Spray Volume Recommendations: For aerial application use at least 3 gallons of total volume per acre in water based sprays, except in the Western U.S. where 5 to 10 gallons is the usual minimum. For ground application, use at least 7 gallons of volume per acre. For chemigation (East of the Rockies Only), use irrigation levels of 0.15 to 0.5 inches of water per acre. Up to 1 inch of irrigation water may be used, but efficacy may be reduced. Apply DiPel ES only through sprinkler irrigation systems such as center-pivot, lateral move, end-tow, side (wheel) roll, traveler, solid-set or hand move. Do not apply this product through any other type of irrigation system. (Also see Chemigation Section.)



Control of European and Southwestern Corn Borers on Field Corn, Seed Corn, Sweet Corn, Silage Corn or Popcorn

**Dipel ES for Corn
(All States Except California)**

<u>Crop</u>	<u>Pest</u>	<u>Pints/Acre (Ground Equipment)</u>	<u>Pints/Acre (Sprinkler Irrigation)</u>	<u>Pints/Acre (Aerial Application)</u>
Corn:				
Field Corn	European Corn-	1 1/2 to	1 1/2 to	---
Seed Corn	borer and	2 1/2	2 1/2	
Sweet Corn	Southwestern			
Popcorn	Cornborer (First			
Silage Corn	generation			
	population)			
	European Corn-	1 1/2 to	1 to	1 1/2 to
	borer & South-	2 1/2	2 1/2	2 1/2
	western Corn-			
	borer (Second			
	generation			
	population)			

Timing of Application:

Applications should be made when young larvae are present for first or second generation corn borers. One application against the first generation of larvae should provide economic control. Two or more applications may be required against second generation borers if there is an extended period of egg deposition.

Treatments should be made before extensive damage has occurred while larvae are still actively feeding on exposed plant parts. Thorough spray coverage is needed to provide a uniform deposit at the site of larval feeding.

Under heavy pest population pressure, use the higher label rates increased spray volume, and/or multiple applications.

Cool weather may cause cornborer larvae to seek protected areas of the corn plant and to reduce the amount of feeding normally done on exposed plant parts. This alteration in feeding behavior will hamper the effectiveness of DiPel ES.

CONTROL OF OTHER CORN PESTS

(All States Except California)

Crop	Pest	Pints/Acre
Sweet Corn	Corn Earworm	3/4 to 2 1/2
	Armyworms ¹	3/4 to 2 1/2

Directions For Use:

This product can be mixed with esfenvalerate (1.9EC), permethrin (25W, 2E, 3.2EC, 25WP), methomyl (90% water soluble powder, 24% liquid, 29% liquid) or methidathion (microencapsulated 2 lbs/gallon) for use on sweet corn against armyworms and corn earworm in accordance with the more restrictive of label limitations and precautions. No label dosage rates should be exceeded. This product can not be mixed with any product containing a label prohibition against such mixing.

Timing of Applications:

Armyworms: Treat when plants first exhibit feeding signs in the whorl or leaves. Multiple applications at approximately 3-5 days interval may be necessary when populations are heavy. High-spray gallonage (50 to 75 gallons per acre) is best for effective control.

Corn Earworm: Treat every 1 to 3 days or at longer intervals depending on pest pressure, temperature and geographical location. Begin treatments when 5 percent of the upper ears show silk. When populations are heavy, treat when first silk is seen and every 1-3 days thereafter until harvest.

Crop	Pest	Pints/Acre
Field Corn, Seed Corn, Silage Corn and Popcorn	Corn Earworm	1 to 2 1/2
	Variegated Cutworm	1 to 2 1/2
	Webworms ¹	1 to 2 1/2
	Armyworms ¹	1 to 4
	Western Bean Cutworm	1 to 2 1/2

¹ DiPel ES may be used to control small armyworms (1st and 2nd instar) when populations are light and full coverage sprays are applied. Repeat treatments as necessary. If mature worms or heavy populations are present a contact insecticide should be used to enhance control.

DIPEL ES FOR COTTON

EARLY SEASON PROGRAM

Pre-squaring stage:

DiPel ES may be used for early season management of Heliothis species under conditions of continuous low egg deposition. Use DiPel ES alone at 0.5 pint/acre or in combination with a recommended ovicide, boll weevil sprays, or Pix applications. A label ovicide should be used when egg pressure is moderate to high. A spray interval of 5-7 days is recommended for a total of 3 applications, if necessary, especially if continued egg pressure occurs during this period.

Pre-bloom stage:

For control of light to moderate populations, use DiPel ES 0.75 to 2.0 pints/acre in combination with an approved ovicide. Repeat treatments at 4 to 5 day intervals or as long as necessary to maintain economical control. Applications should be directed at brown eggs and newly hatched larvae. Larvae should not exceed 2,500 per acre (approximately 4 percent of plants infested) before treatments are initiated. Close scouting is essential for well timed applications.

MID SEASON PROGRAM

Pre-bloom to first mature boll stage:

Use DiPel ES at 0.75 to 2.0 pints/acre in combination with 1/2 to 2/3 rate of a recommended synthetic pyrethroid during midseason. Use the lower rates under moderate pressure and increase rates if necessary to maintain control.

LATE SEASON PROGRAM

Mature bloom boll stage:

Use DiPel ES at 0.75 to 2.0 pints/acre in combination with recommended carbamate or organophosphate insecticides. DiPel ES will aid in controlling worms escaping from organophosphate insecticides.

DiPel ES can be mixed with other insecticides in accordance with the more restrictive label limitations and precautions. No label rates should be exceeded. DiPel ES cannot be mixed with any other product having a label which prohibits such mixing.

DIPEL ES FOR COTTON (Cont'd)

Spray Volumes:

For aerial applications, use a minimum of 3 gallons of total volume per acre in water based sprays except in the Western U.S. where 5 to 10 gallons is the usual minimum. For ground applications, use at least 8 gallons of total volume per acre with 3 nozzles per row. For banded applications, use a minimum of 2 nozzles per row with ground sprayer or cultivator. Rates should not be less than 0.5 pint/acre on a broadcast basis.

(For All States Except California)

<u>Crop</u>	<u>Pest</u>	<u>Pints/Acre (Ground Equipment)</u>	<u>Pints/Acre (Sprinkler Irrigation)</u>	<u>Pints/Acre (Aerial Application)</u>
Cotton*	Tobacco Bud- worm ²	1 to 2 1/2	1 to 2 1/2	1 to 2 1/2
	Cotton Bollworm ²	1 to 2 1/2	1 to 2 1/2	1 to 2 1/2
	Armyworm ¹	1 to 2 1/2	1 to 2 1/2	1 to 2 1/2
	Loopers	1 to 2	1 to 2	1 to 2
	Saltmarsh Cater- pillar	1 to 2	1 to 2	1 to 2

* For Use in California - See the California Crops Section of this Label

Application Timing:

- 1 DiPel ES may be used to control small armyworms (1st and 2nd instar) when populations are light and full coverage sprays are applied. Repeat treatments as necessary. If mature worms or heavy populations are present a contact insecticide should be used to enhance control.
- 2 Use DiPel ES to control light to moderate populations of newly hatched worms in pest management programs. Use under close scouting when beneficial insects are active or building. Repeat treatments at 4 to 5 day intervals or as long as necessary and results are acceptable. This product can be mixed with Larvin (thiodicarb 3.2 lbs/gallon) for use on cotton against tobacco budworm and cotton bollworm in accordance with the more restrictive of label limitations and precautions. No label dosage rates should be exceeded. This product can not be mixed with any product containing a label prohibition against such mixing. DiPel ES may be used alone for Heliothis control only on prebloomng cotton where few or no eggs are present. If significant eggs are present, use only in combination with ovicidal rates of Larvin. Larvin is a trademark of Rhone Poulenc.

DIPEL ES FOR PEANUTS

(All States Except California)

<u>Crop</u>	<u>Pest</u>	<u>Pints/Acre (Ground Equipment)</u>	<u>Pints/Acre (Sprinkler Irrigation)</u>	<u>Pints/Acre (Aerial Application)</u>
Peanut	Green Clover- worm	1 to 2	1 to 2	1 to 2
	Loopers	1 to 2	1 to 2	1 to 2
	Corn Earworm ¹	1 to 2	1 to 2	1 to 2
	Armyworm	1 to 2	1 to 2	1 to 2
	Velvetbean Caterpillar	1 to 2	1 to 2	1 to 2

¹ DiPel ES may be used to control corn earworms and armyworms when populations are light to moderate and good spray coverage can be achieved. Use DiPel ES at 1 to 1.5 pints/acre when small larvae first appear. Applications should be made to coincide with egg lay and early instar larvae. Under conditions of higher pressure and rapid plant development, the addition of a contact insecticide in combination with DiPel ES is recommended. Treatments should be repeated as necessary to maintain acceptable control.

DIPEL ES FOR ALFALFA, HAY AND OTHER FORAGE CROPS

(For All States Except California)

<u>Crop</u>	<u>Pest</u>	<u>Pints/Acre (Ground Equipment)</u>	<u>Pints/Acre (Sprinkler Irrigation)</u>	<u>Pints/Acre (Aerial Application)</u>
Alfalfa (Hay and Seed)	Armyworms ¹	1 to 4	1 to 4	1 to 4
	Loopers	1 to 2	1 to 2	1 to 2
Hay and Other Forage Crops*	Alfalfa			
	Caterpillar	1 to 2	1 to 2	1 to 2
	European Skipper	1 to 2	1 to 2	1 to 2
	Webworm	1 to 2	1 to 2	1 to 2

* For Use in California -- See the California Crops Section on this Label.

Application Timing:

¹ DiPel ES may be used to control small armyworms (1st and 2nd instar) when populations are light and full coverage sprays are applied. Repeat treatment as necessary. If mature worms or heavy populations are present a contact insecticide should be used to enhance control.

DIPEL ES FOR SUNFLOWERS

(All States Except California)

<u>Crop</u>	<u>Pest</u>	<u>Pints/Acre (Ground Equipment)</u>	<u>Pints/Acre (Sprinkler Irrigation)</u>	<u>Pints/Acre (Aerial Application)</u>
Sunflowers:	Sunflower Moth ³	1 1/2-2 1/2	—	1 1/2-2 1/2
Oil Seed and Confectionary	Banded Sunflower Moth ³	1 1/2-2 1/2	—	1 1/2-2 1/2

Application Timing:

³ For moderate pest pressure make a single application prior to 75% bloom. A second application, 5 days later, may be necessary to control severe infestations. Treat when larvae are exposed and small.

In Texas, begin treatment when early-instar larvae are present and no more than 20% of the heads are in bloom. Use a spray interval of 4-6 days for a total of 3 applications, if necessary, to reduce the worm population to an acceptable level, especially if continued egg deposition occurs during the period.

DIPEL ES FOR TREES AND SHRUBS

(All States Except California)

Crop	Pest	Pints/ 100 Gallons* (Ground Equipment)	Pints/Acre (Aerial** Application)
Forest, Shade, Sugar Maple Trees and Shrubs	Gypsy Moth	1/2 to 2 1/2	1 to 2 1/2
	Browntail Moth	1/2 to 2 1/2	1 to 2 1/2
	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	1/2
	Elm Spanworm	1/2 to 1	1/2 to 1
	Tent Caterpillars	1/2 to 1	1/2 to 1
	California Oakworm	1/2	1/2
	Pine Butterfly ⁴	1	1
	Spruce Budworms ⁴	1 to 2 1/2	1 to 2 1/2
	Saddled Prominent Caterpillar	1/2 to 1	1/2 to 1
	Douglas Fir Tussock Moth	1 to 2	1 to 2
	Western Tussock Moth	1/2 to 1	—
	Fruittree Leafroller	1/2 to 1	—
	Blackheaded Budworm	1	—
	Mimosa Webworm	1/2 to 1	—
	Jack Pine Budworm	1/2 to 1	1 to 2
	Saddleback Caterpillar	1/2 to 1	—
	Green Striped Maple Worm	1 to 1 1/2	1 to 1 1/2
Oak Leaf Tier	1 to 1 1/2	1 to 1 1/2	

* Water dilution rate for hydraulic sprayer may be varied depending on coverage. For mist blowers, mix the applicable amount (pts.) in up to 10 gallons of water.

** For aerial application, use in up to 10 gallons of water depending on type and density of trees. For best results, spray systems which deliver droplet VMD of 150 microns or less should be used. DIPEL ES should always be mixed with at least an equal amount of water for diluted applications

⁴ Use rates greater than 1 pint in Northern states for heavy populations. DiPEL ES may be sprayed undiluted for the control of Spruce Budworms, Jack Pine Budworm and Gypsy Moth.

DIPEL ES FOR OTHER CROPS

(All States Except California)

APPLICATION RATE

<u>Crop</u>	<u>Pest</u>	<u>Pints/Acre</u>
Leafy and Cole Crops (***) such as Broccoli, Brussell Sprouts, Cabbage, Cauliflower, Celery, Chinese Cabbage, Collards, Endive, Kale, Kohrabi, Lettuce (Head and Leaf), Mustard Greens, Parsley, and Spinach	Loopers	1 to 2
	Imported Cabbageworm	1 to 2
	Diamondback Moth	1 to 2
	Armyworms ¹	1 to 4

***Do not apply by air to plants after transplant or other stress before 6 weeks in the field. Use more than 25 gallons of water per acre by ground and 5 gallons of water per acre by air.

<u>Crop</u>	<u>Pest</u>	<u>Pints/Acre</u>
Legume Vegetables such as Beans, Peas Lentils and Soybeans	Loopers	1 to 2
	Green Cloverworm	1 to 2
	Velvetbean Caterpillar	1 to 2
	Podworms ¹	1 to 2
	Armyworms ¹	1 to 4
	Soybean Loopers	1 to 2
	Saltmarsh Caterpillar	1 to 2

¹ DiPel ES may be used to control small armyworms and/or podworms (1st and 2nd instar) when populations are light and full coverage sprays are applied. Repeat treatment as necessary. If mature worms or heavy populations are present a contact insecticide should be used to enhance control.

<u>Crop</u>	<u>Pest</u>	<u>Pints/Acre</u>
Tobacco	Tobacco Budworm	1 to 2
	Hornworms	1/2 to 1
	Loopers	1 to 2

DIPEL ES FOR OTHER CROPS (Cont.)

(All States Except California)

APPLICATION RATE

<u>Crop</u>	<u>Pest</u>	<u>Pints/Acre</u>
Fruiting Vegetables such as Eggplant, Peppers, and Tomatoes	Loopers	1 to 2
	Tomato Fruitworm	1 to 2
	Variegated Cutworm	1 to 2
	Saltmarsh Caterpillar	1 to 2
	Hornworms ¹	1 to 2
	Armyworms	1 to 4
Rangeland	Range Caterpillar	1/2 to 1
Use in 1 to 2 qts. water per acre against 1st through 4th instar larvae.		
Avocados	Amorbia Moth (Western Avocado Leafroller)	1 TO 4
	Omnivorous Leafroller	1 TO 4
	Omnivorous Looper	1 TO 4
	Orange Tortix	1 TO 4
Use a minimum of 200 gallons water per acre by ground rig or 10 gallons by aircraft.		
Cranberries	Spanworms	1 to 2 1/2
	Gypsy Moth	1 to 2 1/2
	Blossom Worm	1 to 2 1/2
	Sparganothis Fruitworm	1 to 2 1/2
	Fireworms	1 to 2 1/2
	Cranberry Fruitworm	1 to 2 1/2
	False Armyworm	1 to 2 1/2
	Fall Armyworm	1 to 2 1/2
Black Cutworm	1 to 2 1/2	
Small Grains such as Barley, Sorghum, Wheat or Oats	Armyworms ¹	1 to 4
	Variegated Cutworm	1 to 2
	Loopers	1 to 2
	Corn Earworm	1 to 2
	Webworm	1 to 2

Application Timing:

¹ DiPel ES may be used to control small armyworms (1st and 2nd instar) when populations are light and full coverage sprays are applied. Repeat treatment as necessary. If mature worms or heavy populations are present a contact insecticide should be used to enhance control.

DIPEL ES FOR OTHER CROPS (Cont.)

(All States Except California)

APPLICATION RATE

<u>Crop</u>	<u>Pest</u>	<u>Pints/Acre</u>
Root and Tuber* Crops such as Sugar Beets, Carrots, or Potatoes	Armyworms ¹	1 to 4
	Cutworms	1 to 2
	Diamondback Moth	1 to 2
	Hornworms	1 to 2
	Loopers	1 to 2
	European Corn Borer	1 to 2

* For Use in California - See the California Crops Section of this Label.

Stone Fruit such as Cherries, Plum, Peach, Prune and Nectarine Pome Fruit such as Apples and Pears Tree Nuts such as Almonds, Pecan, Walnut and Filbert	Fall Webworm	1 to 4
	Walnut Caterpillar	1 to 4
	Cankerworms	1 to 4
	Gypsy Moth	1 to 4
	Codling Moth	1 to 4
	Fruittree Leafroller	1 to 4
	Obliquebanded Leafroller	1 to 4
	Omnivorous Leafroller	1 to 4
	Tent Caterpillar	1 to 4
	Redbanded Leafroller	1 to 4
	Redhumped Caterpillar	1 to 4
	Tufted Apple Budmoth	1 to 4
	Varigated Leafroller	1 to 4
	Filbert Leafroller	1 to 4
Armyworms ¹	1 to 4	
Hops	Armyworms ¹	1 to 4
	Loopers	1 to 2

Application Timing:

¹ DiPel ES may be used to control small armyworms (1st and 2nd instar) when populations are light and full coverage sprays are applied. Repeat treatment as necessary. If mature worms or heavy populations are present a contact insecticide should be used to enhance control.

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DIPEL ES FOR OTHER CROPS (Cont.)

(All States Except California)

APPLICATION RATE

<u>Crop</u>	<u>Pest</u> ¹	<u>Pints/Acre</u>
Blueberries	Gypsy Moth	1 to 2 1/2
	Spanworms	1 to 2 1/2
	Tent Caterpillars	1 to 2 1/2
	Fireworms	1 to 2 1/2
	Loopers	1 to 2 1/2

Application Timing:

¹ Treat when larvae are young and before extensive damage occurs. If hatch occurs over an extended period of time, multiple applications should be considered. Use higher rates when pest pressure is heavy and/or older larvae are present. Tank mixes of Dipel ES plus a low rate of a contact insecticide registered for use on blueberries such as Imidan, may enhance control of heavy populations and large larvae. The use of an approved spreader sticker is recommended. Dipel ES may be tanked mixed with fungicides registered for use on blueberries, such as Benlate. Imidan and Benlate are registered trademarks of companies other than Abbott Laboratories.

CALIFORNIA CROPS

<u>Crop</u>	<u>Pest</u>	<u>Pints/Acre</u>
Cotton*	Armyworm ¹	2 to 2 1/2
	Loopers	1

* See the Cotton Section of this Label for Further Use Directions

Alfalfa (Hay and Seed) Hay and Other Forage Crops	Armyworm ¹	2 to 2 1/2
	Alfalfa Caterpillar	1 to 2

Root and Tuber such as, Sugar Beets, Carrots, and Potatoes	Armyworms ¹	2 to 2 1/2
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Application Timing:

¹ DiPel ES may be used to control small armyworms (1st and 2nd instar) when populations are light and full coverage sprays are applied. Repeat treatment as necessary. If mature worms or heavy populations are present a contact insecticide should be used to enhance control.

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CHEMIGATION (EAST OF THE ROCKIES ONLY)

Apply this product only through sprinkler systems such as center pivot, lateral move, end tow, side (wheel) roll, traveler, solid set, or hand move. Do not apply this product through any other type of irrigation system.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water. If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.

Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label-prescribed safety devices for public water systems are in place.

A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

The active ingredient in DiPel ES will settle in the tank and injection lines: adequate agitation must be provided before and during the injection period. Use only in systems that apply uniformly and have appropriate check valves. Do not apply where wind speed favors drift beyond the area intended for treatment. When application is complete, thoroughly flush the injection system and sprinkler lines.

The system must contain a functional check valve, vacuum relief valve, and low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

CHEMIGATION (EAST OF THE ROCKIES ONLY) (CONT'D)

The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

A public water system is a system for the provision to the public of piped water for human consumption that has a least 15 service connections or regularly serves, an average of at least 25 individuals daily for at least 60 days out of the year.

Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe.

The pesticide injection pipeline must contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Do not apply when wind speed favors drift beyond the area intended for treatment.

Mixing Recommendation For Chemigation

Follow general mixing recommendations and keep the ratio at 3 parts water to 1 part DiPel ES. Also, provide mild uniform agitation throughout the solution but do not agitate excessively.

For undiluted injection for chemigation: Flush and clean nurse tank, lines, screen canister, and pump with diesel fuel or a non-emulsifiable oil until they are free before and after application. Use a 20-mesh screen. Continue agitation during injection.

Spray Volume For Chemigation

For chemigation, use irrigation levels of 0.15 to 0.5 inches of water per acre. Up to 1 inch of irrigation water may be used, but efficacy may be reduced. Apply DiPel ES only through spinkler irrigation systems such as center-pivot, lateral move, end-tow, side (wheel) roll, traveler, solid-set or hand move. Do not apply this product through any other type of irrigation system.

Application Timing For Chemigation

For all crops except cranberries, application of DiPel ES may be made continuously during irrigation. For cranberries, apply during the end of the irrigation period, after it is determined that the heads are operating properly for 8-20 minutes depending on the size of the system.

For Small Spray Volumes:

<u>If Rate Is:</u>	<u>Use This Amount Per Gallon</u>
1/2 pt./acre or 100 gals.	1/2 tsp.
1 pt./acre or 100 gals.	1 tsp.
2 pts./acre or 100 gals.	2 tsps.

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NOTICE TO USER

Seller 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.

For information call:
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