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*W. H. Hutton*

Mr. Donald S. Kenney  
Chemical and Agricultural Products Division  
Abbott Laboratories  
1400 Sheridan Road  
North Chicago, IL 60064

Dear Mr. Kenney:

Subject: DIPEL ES  
EPA Registration No. 275-65  
Your Submission Dated November 1, 1988

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable. A stamped copy is enclosed for your records.

Sincerely yours,

Phil Hutton  
Product Manager (17)  
Insecticide-Rodenticide Branch  
Registration Division (TS-767C)

Enclosure

58000:I:Nelson:C.Disk:KENCO:11/07/88:de:vo:jh:de

CONCURRENCES

SYMBOL								
SURNAME								
DATE								

NOT REGISTERED IN CALIFORNIA

DIPEL ES

EMULSIFIABLE SUSPENSION  
BIOLOGICAL INSECTICIDE

Active Ingredient

Bacillus thuringiensis, var. kurstaki, 17,600 International Units of Potency per mg (64 billion International Units per gallon) .....	3.5%
Inert Ingredients .....	96.5%

KEEP OUT OF REACH OF CHILDREN  
CAUTION

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

NET CONTENTS: GALLONS

ACCEPTED  
with COMMENTS  
(in EPA Letter Dated:

Feb 17. 1989

Under the Federal Insecticide,  
Fungicide, and Rodenticide Act  
as amended, for the pesticide  
registered under EPA Reg. No.

275-65

**PRECAUTIONARY STATEMENTS**

**HAZARDS TO HUMANS (and Domestic Animals)**

**CAUTION**

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

**Beneficial Insects**

Honeybees foraging treated areas are not harmed by Dipel ES use.

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

**Directions for Use**

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

**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.

**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.

**Days to harvest:** There are no restrictions on applying Dipel ES up to the time of harvest.

**DIPEL ES FOR CORN**

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

**Dipel ES for Corn**

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

**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.

## DIPEL ES FOR CORN (Cont)

**Application Instructions:**

**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. For chemigation, keep the ratio at 3 parts water to 1 part Dipel ES. 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.

**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:** For aerial application use at least 3 gallons of total volume per acre in water based sprays. For ground application, use at least 7 gallons of volume per acre. For chemigation, use irrigation levels of 0.15 to 0.5 inches of water per water. 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.

## DIPEL ES FOR COTTON

## Control of Tobacco Budworm and Cotton Bollworm on Cotton

<u>Crop</u>	<u>Pest</u>	<u>Pints/Acre (Ground Equipment)</u>	<u>Pints/Acre (Center Pivot Irrigation)</u>	<u>Pints/Acre (Aerial Application)</u>
Cotton	Tobacco Bud- worm	1 to 2 1/2	1 to 2 1/2	1 to 2 1/2
	Cotton Bollworm	1 to 2 1/2	1 to 2 1/2	1 to 2 1/2

**Application Timing**

Use Dipel ES to suppress 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. Use only in combination with chlordimeform or methomyl ovicides at recommended rates 0.125 to 0.25 lb. ai/A. Chlordimeform is restricted to aerial applications and to states where registered.

The mixture of B.t. with chlordimeform for inhibiting the growth of lepidopterous larvae on plants is covered by Abbott U.S. patent no. 3,937,813. The effects of combining Dipel ES with miticides (other than chlordimeform) are unknown.

**Application Instructions:**

**Mixing Recommendations:** Use general guidelines given for corn.

**Spray volume:** For aerial application use at least 3 gallons of total volume per acre in water based sprays. For ground equipment, use at least 7 gallons volume per acre. Use 20-mesh screens.

## DIPEL ES FOR ALFALFA

## Control of Armyworms on Alfalfa and Other Forage Crops

<u>Crop</u>	<u>Pest</u>	<u>Pints/Acre (Ground Equipment)</u>	<u>Pints/Acre (Center Pivot Irrigation)</u>	<u>Pints/Acre (Aerial Application)</u>
Alfalfa (Hay and Seed) Hay and Other Forage Crops	Armyworms	1 to 2 1/2	1 to 2 1/2	1 to 2 1/2

**Application Timing:**

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 added to enhance control.

**Application Instructions:**

**Mixing Recommendations:** Use general guidelines given for corn.

**Spray volume:** For aerial application use at least 3 gallons of total volume per acre in water based sprays. For ground equipment, use at least 7 gallons volume per acre. Use 20-mesh screens.

**CHEMIGATION**

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.

The pesticide injection pipeline must also contain a functional, normally closed solenoid operated valve connected to the system interlock located on the intake side of the injection pump and 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.

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.

**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:

1-800-323-9597

1-800-642-1959 (In Illinois)

Chemical and Agricultural Products Division  
Abbott Laboratories  
North Chicago, Illinois 60064

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