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Systems Integration Group, Inc.

**RESTRICTED USE PESTICIDE**

Due to toxicity to aquatic invertebrate animals. For retail sale to and use only by Certified Applicators, or persons under their direct supervision, and only for those uses covered by the Certified applicator's certification.

**ACCEPTED**  
APR 30 1999

Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No. 400-461

# DIMILIN® 2L

## INSECT GROWTH REGULATOR

Net contents:

**COMPOSITION**

**Active ingredient:** (% by weight)

diflubenzuron N-[[[(4-Chlorophenyl)amino]carbonyl]-2,6-difluorobenzamide\* ..... 22%

Inert Ingredients: ..... 78%

TOTAL ..... 100%

\*Contains 2 lbs. diflubenzuron per gallon.

### KEEP OUT OF REACH OF CHILDREN

## CAUTION

### FIRST AID

IF ON SKIN: Wash with plenty of soap and water. Seek medical attention if irritation persists.

### PRECAUTIONARY STATEMENTS

#### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

### CAUTION

Avoid contact with skin. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

### PERSONAL PROTECTIVE EQUIPMENT

Some materials that are chemical-resistant to this product are listed below. If you want more options, follow the instructions for Category E on an EPA chemical-resistance category selection chart.

**Applicators and Other Handlers Must Wear:** A long-sleeved shirt & long pants; shoes plus socks; chemical-resistant gloves such as Nitrile rubber, barrier laminate, neoprene rubber or viton.

Follow manufacturer's instructions for cleaning and maintaining PPE. If no such instructions for washables, use detergent and hot water. Keep and wash PPE separately from other laundry.

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

### USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.

### ENVIRONMENTAL HAZARDS

This pesticide is extremely toxic to crab, shrimp and other aquatic invertebrates. For terrestrial uses, do not apply directly to water or to areas where surface water is present or to intertidal areas below the mean high water mark. Drift or runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water by cleaning of equipment or disposal of wastes.

**UNIROYAL  
CHEMICAL**

**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 through any type of irrigation system.

For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

**AGRICULTURAL USE REQUIREMENTS**

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR Part 170. This Standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE) and restricted-entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- coveralls
- chemical-resistant gloves, such as nitrile rubber, barrier laminate, neoprene rubber or viton
- shoes plus socks.

**DIRECTIONS FOR USE  
SOYBEANS**

**VELVET BEAN CATERPILLAR, MEXICAN BEAN BEETLE AND GREEN CLOVER WORM:** DIMILIN 2L will control larvae of velvetbean caterpillar, Mexican bean beetle and green cloverworm. Apply DIMILIN 2L at the rate of 2 to 4 ounces per acre. Make application when larvae are small (less than 0.5 inches) to give greater control and minimum insect damage to leaves. Repeat application if damaging numbers reappear. minimum reapplication interval is 30 days.

DIMILIN 2L may be applied at the lower rate (2 ounces) to prevent velvetbean caterpillar build-up when the vegetative growth of soybeans is completed and as pod formation begins. Consult local Extension Service regarding infestation levels requiring treatment.

**BEET AND FALL ARMYWORM AND SOYBEAN LOOPER:** To control larvae of beet and fall armyworm and to provide suppression of soybean looper, apply 4 ounces of DIMILIN 2L per acre. Application must be made when worms are small before the 3rd instar and before populations build.

**ADJUVANT USAGE:** See Cotton Section.

**Aerial Application:** Apply recommended amount of DIMILIN 2L in sufficient water (3 to 5 gallons per acre) to achieve uniform coverage of foliage.

**Ground Application:** Apply recommended amount of DIMILIN 2L in 9 to 35 gallons of water per acre to give uniform coverage.

Do not make more than two applications per season. Do not apply within 21 days of harvest.

DIMILIN 2L inhibits the molting process of larvae, therefore it does not provide immediate kill. From 5 to 7 days may be required before populations are reduced.

**USE AND MIXING DIRECTIONS:** See Cotton Section.

**SOYBEAN YIELD ENHANCEMENT:** In the absence of significant insect pressure and under certain growing conditions, an increase in soybean seed yield has been demonstrated with DIMILIN under field conditions on both determinate and indeterminate cultivars. Application of 0.031 to 0.062 lb. a.i. per acre (2 to 4 fl. oz. DIMILIN 2L per acre) to high yield potential soybean plants at the R3 to R3.5 growth stage period has been more consistent in increasing yields than applications at other reproductive stages of the soybean plant. This reproductive period represents beginning pod growth (pod 3/16 inch long at one of the four uppermost nodes on the main stem with a fully developed leaf) to just prior to full pod elongation (pod 3/4 inch long at one of the four uppermost nodes on the main stem with a fully developed leaf).

**Use on soybeans not registered by the California Department of Pesticide Regulation.**

**COTTON**

**BEET ARMYWORM:**

**EARLY SEASON (before first bloom):** For early infestations on young cotton, DIMILIN 2L should be applied at the first sign of beet armyworm activity (2 egg masses or hatch outs/100 feet of row) with 2 to 4 fl. oz. per acre in multiple applications, either as directed or broadcast spray. Use on a 5 to 7 day interval until up to 8 fl. oz. per acre have been applied. Do not exceed 6 applications per season and do not exceed 24 fl. oz. DIMILIN 2L per season. Multiple applications of DIMILIN 2L will provide acceptable beet armyworm control and because it has little activity on beneficial insects (parasites and predators) and has good persistence, will help prevent populations of beet armyworm from building up later in the growing season. Use of DIMILIN 2L in this way allows for more complete coverage of new foliage during the period of rapid vegetative growth.

**MID SEASON:** Starting around first bloom and through mid-bloom, apply 4 to 8 fl. oz. of DIMILIN 2L per acre. Repeat application until up to 8 fl. oz. per acre have been applied, using a 5 to 7 day interval between applications. The higher application rate should be used on larger cotton and/or under conditions of greater larval pressure. Do not exceed 6 applications per season and do not exceed 24 fl. oz. DIMILIN 2L per season. First application should coincide with peak beet armyworm moth catches in pheromone traps, indicating another generation of larvae is imminent. DIMILIN is more effective on early stages of larval development, therefore cotton leaves should be treated before populations become established.

**LATE SEASON:** After mid-bloom and prior to 14 days before harvest, apply 6 to 8 fl. oz. of DIMILIN 2L per acre. The higher application rate should be used on more advanced cotton or under conditions of greater larval pressure. Do not exceed 6 applications per season and do not exceed 24 fl. oz. DIMILIN 2L per season. Do not exceed 3 applications and 12 fl. oz. DIMILIN 2L post boll opening. Application should coincide with peak beet armyworm moth catches in pheromone traps. Additional applications of 6 to 8 fl. oz. per acre may be needed if larval pressure continues.

**Adjuvant Usage:** Always use oil (1 to 2 quarts) with DIMILIN 2L if conditions are favorable for water evaporation (e.g. high air temperature and/or low humidity). For ground or aerial LV application, 1 pint to 2 quarts of emulsified vegetable or paraffinic crop oil is recommended to enhance canopy penetration and to reduce spray droplet evaporation and subsequent drift. For ULV application, use DIMILIN 2L in a minimum of 20 oz. of emulsified cottonseed, vegetable or petroleum based oil carrier. A compatibility agent may be needed if non-emulsified cottonseed oil is used. Consult your supplier or Uniroyal representative for oil specifications.

**Aerial Application:** Apply in 3 to 5 gallons total volume per acre. For ULV application, use a total volume of 20 to 48 oz. per acre. (See notes on use of adjuvants above and mixing directions below).

**Ground Application:** Apply in 10 to 20 gallons of total volume per acre to give uniform coverage. For ULV application, use a total volume of 20 to 64 oz. per acre (See notes on use of adjuvants above and mixing

directions below).

Use sufficient application volume to assure adequate coverage. DIMILIN 2L may be mixed with other insecticides being applied for other cotton insects. When emulsifiable concentrate insecticide formulations are used with oil and DIMILIN in tank mixes, they may result in phytotoxicity. Care should be taken where such mixture is used. Because of the unique mode of action of DIMILIN, its visible effects may not be seen for 5 to 7 days following application.

**FALL ARMYWORM, YELLOWSTRIPED ARMYWORM, SOUTHERN ARMYWORM, SOYBEAN LOOPER, CABBAGE LOOPER AND SALTMARSH CATERPILLAR:** For larvae of fall armyworm, yellowstriped armyworm and southern armyworm, and larval suppression of soybean looper, cabbage looper and saltmarsh caterpillar, apply 4 to 8 fl. oz. of DIMILIN 2L per acre. Application should be made during early stages of larval development. Repeat application until at least 8 fl. oz. per acre have been applied using a 5 to 7 day interval. **See BEET ARMYWORM for recommendations on adjuvants, and application by air or ground See BEET ARMYWORM for use restrictions.**

**BOLL WEEVIL:**

**EARLY SEASON (before first bloom):** DIMILIN 2L will control boll weevil by suppressing reproduction. Apply 4 to 8 fl. oz. of DIMILIN 2L per acre in combination with 2 to 4 quarts of emulsified cottonseed oil, vegetable oil, or paraffinic crop oil. For ULV application, use 4 fl. oz. of DIMILIN 2L in a minimum of 8 fl. oz. of emulsified cottonseed oil, oil based insecticide, or vegetable or petroleum based oil carrier. A compatibility agent may be needed if a non-emulsified cottonseed oil is used. Consult your supplier or Uniroyal representative for oil specifications.

For best suppression of boll weevil reproduction, make first application at pinhead square stage of cotton growth when overwintering boll weevils are entering the fields. Repeat treatments should allow a minimum of 7 days between application.

**LATE SEASON:** DIMILIN 2L will reduce the numbers of weevils that emerge in the following spring if applications are made when adult weevils are going into diapause to overwinter. Apply when cotton plant has reached full vegetative growth or when it begins blooming out the top. For ground or aerial LV application, spray 2 to 4 fl. oz. of DIMILIN 2L per acre in combination with 2 to 4 quarts of an emulsifiable vegetable or paraffinic oil per acre. For ULV application, use 2 to 4 fl. oz. DIMILIN 2L in a minimum of 8 oz. of emulsified cottonseed oil, oil based insecticide, or vegetable or petroleum based oil carriers. A compatibility agent may be needed if a non-emulsified cottonseed oil is used. At least 2, but not more than 3, applications at 7 to 14 day intervals should be made.

**Aerial application:** Apply in 3 to 5 gallons total volume per acre. For ULV application, use total volume of 20 to 32 fl. oz. per acre. (See notes on use of adjuvants above and mixing directions below).

**Ground application:** Apply in 10 to 20 gallons of total volume per acre to give uniform coverage. For ULV application, use total volume of 20 to 64 fl. oz. per acre. (See notes on use of adjuvants above and mixing directions below).

DIMILIN 2L does not kill the adult boll weevils, however, eggs deposited by affected female weevils will not hatch, thus limiting reproduction. The control of egg hatch and larval development within the square prevents its shedding and will then allow normal boll development. After initial treatment of the female weevil, 7 to 10 days are required before non-hatching eggs are laid; however, once affected, non-hatching eggs will be laid for approximately 10 days, and longer if the female encounters more DIMILIN. Thus treat early and use multiple applications.

When DIMILIN 2L is used alone for boll weevil control, it allows normal build-up of beneficial insects which may aid in control of bollworm and budworm. Emulsifiable concentrate insecticide formulations used in tank mixes, in the presence of oil, may result in phytotoxicity. Care

should be taken where such mixture is used.

**USE AND MIXING DIRECTIONS FOR COTTON IF USED WITH WATER:**

1. Fill tank with half of the required amount of water.
2. Begin agitation and add required amount of DIMILIN 2L.
3. Continue agitation while adding remainder of water.
4. Add proper quantity of oil slowly. To avoid formation of an invert emulsion, use at least 2 parts of water for each part of oil.

**USE AND MIXING DIRECTIONS FOR COTTON IF USED WITHOUT WATER:**

Always evaluate any potential mixture for compatibility and sprayability. To ensure thorough mixing of DIMILIN 2L with insecticides or other carriers, it is recommended that ingredients be premixed in a nurse tank prior to being transferred to aerial or ground ULV application equipment. If nurse tank is not available, or unable to simultaneously mix:

1. Fill tank with the required amount of oil and/or oil based insecticide.
2. Begin agitation and add required amount of DIMILIN 2L.
3. After the contents of the tank have been thoroughly agitated, a volume of carrier sufficient to fill the booms and piping system should be drained and then added back to the tank.

**Aerial or ground application:** Spray should be applied with aerial or ground equipment designed or modified to insure full uniform coverage of the entire plant. Adjust equipment to provide droplets with a diameter of 150 to 220 microns. Provide agitation prior to, during, and after blending and while applying.

**USE RESTRICTIONS FOR COTTON:** Do not exceed 6 applications per season and do not exceed 24 fl. oz. DIMILIN 2L per season. Do not exceed 3 applications and 12 fl. oz. DIMILIN 2L post boll opening. Do not apply closer than 14 days before harvest.

**RICE**

**RICE WATER WEEVIL**

**Southern U.S. Rice Belt:**

**For Drill Seeded; Dry Seeded; or Water Seeded, Delayed Flood Rice,** make a single 12 to 16 fl. oz. application of DIMILIN 2L per acre per year to control larvae when adult infestations reach economic threshold and/or at initial oviposition, usually within a time frame of 2-5 days after permanent flood establishment. If adult weevil infestations are historically high and/or migration into the field is prolonged, use the higher application rate.

**For Water Seeded, Pinpoint Flood, or Continuous Flood Rice,** split applications should be made. Apply 8 fl. oz. after the permanent flood when adult infestations reach economic threshold and/or at initial oviposition, usually when rice leaves are exposed above the water surface. The second 8 fl. oz. treatment **must** be made 5-7 days after the first application. Failure to make the second 8 fl. oz. application within the above timeframe could result in inadequate control of rice water weevil larvae, especially if adult infestations are high and/or migration into the rice is prolonged.

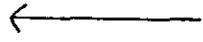
**California:**

**To Control Larvae of Rice Water Weevil,** apply 12 to 16 fl. oz. DIMILIN 2L per acre per year at initiation of oviposition by adults. During a typical year this coincides with 2 to 8 days after rice emergence above the water. For best results target the application for 2 to 5 days after rice emergence above the water (2 to 4 leaf stage). Use the higher application rate if infestations have been historically high.

**All States:**

Consult your local extension service for determination of economic threshold and/or determination of initiation of oviposition.

DIMILIN does not appear to control adult weevils. It controls rice water weevil by preventing larval emergence from the egg. Eggs laid under the surface of treated water are controlled. Additionally, adults feeding on treated plant surfaces do not lay viable eggs.



- \*Apply DIMILIN 2L by air using at least 5 gallons total volume per acre.
- \*Do not apply DIMILIN 2L if flooding is in progress. Activity will be reduced. Since DIMILIN 2L is water active, the entire field should be treated.

For maximum activity of DIMILIN 2L do not disturb flood after a single application for at least 7 days. With split applications in water seeded, pinpoint flood, or continuous flood rice, flood should not be disturbed for a minimum of 4 days following the first treatment and 7 days following the second application. Treated water should be held at least 14 days to allow for dissipation of DIMILIN 2L.

DIMILIN 2L is not phytotoxic to rice. DIMILIN 2L can be safely applied in combination with post permanent flood herbicides such as FACET®, GRANDSTAND® and LONDAX®. However, before using a tank mix combination, read each product label carefully and follow Precautionary Statements on each label.

®Facet is a registered trademark of BASF AG; ®Grandstand is a registered trademark of DowElanco; ®Londax is a registered trademark of E.I. DuPont de Nemours and Company.

**USE RESTRICTIONS FOR RICE:**

- Do not apply within 80 days of harvest.
- Do not use on rice fields in which crayfish (crawfish) farming is included in the cultural practice.
- Do not drain treated water into fields where crayfish farming is intended.
- Do not apply to rice immediately adjacent to sites of crayfish aquaculture.
- Do not use treated rice flood waters for irrigating crops except for uses currently established for DIMILIN.
- Do not impregnate on granular materials.
- Do not use on wild rice (*Zizania* spp.).

**RESTRICTIONS ON ROTATIONAL CROPS:** Do not plant food or feed crops in DIMILIN treated soils within 1 month following last application, unless DIMILIN is authorized for use on these crops.

**STORAGE AND DISPOSAL**

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

**STORAGE** - Store in a dry location.

**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 offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration or if allowed by State and local authorities, by burning. If burned, stay out of smoke.

<b>EMERGENCY ASSISTANCE:</b>	
<b>UNIROYAL CHEMICAL EMERGENCY PHONE</b>	<b>203-723-3670</b>
<b>SAFETY DATA AND INFORMATION</b>	<b>203-573-3303</b>
<b>TRANSPORTATION EMERGENCY (CHEMTREC)</b>	<b>800-424-9300</b>

**IMPORTANT NOTICE** — Seller warrants that this product conforms to its chemical description and is reasonably fit for the purposes stated on the label when used in accordance with the directions and instructions specified on the label under normal conditions of use, but neither this warranty nor any other warranty of merchantability or fitness for a particular purpose, express or implied, extends to the use of this product, contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to seller, and buyer assumes the risk of any such use.

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