



OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

WASHINGTON, D.C. 20460

September 16, 2026

Leanna Bosarge
Director, Regulatory Affairs
Control Solutions, Inc.
5903 Genoa-Red Bluff
Pasadena, TX 77507-1041

Subject: Label Amendment - Registration Review Mitigation for Diflubenzuron
Product Name: MANA DIFLUBENZURON 2L
EPA Registration Number: 53883-517
Application Date: 9/13/2022
Decision Numbers: 00477795

Dear Leanna Bosarge:

The Agency, in accordance with the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, has completed reviewing all the information submitted with your application to support the Registration Review of the above referenced product in connection with the Diflubenzuron Interim Decision, and has concluded that your submission is acceptable. The label referred to above, submitted in connection with registration under FIFRA, as amended, is acceptable.

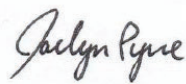
Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide, Fungicide, and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance Assurance.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling

before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 12 months from the date of this letter. After 12 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

If you have any questions about this letter, please contact Ben Tweed by phone at 202-566-2274, or via email at tweed.benjamin@epa.gov.

Sincerely,

A handwritten signature in black ink that reads "Jaclyn Pyne". The signature is written in a cursive, flowing style.

Jaclyn Pyne, Team Leader
Risk Management and Implementation Branch 3
Pesticide Re-Evaluation Division
Office of Pesticide Programs

ENCLOSURE: Stamped label

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.

MANA Diflubenzuron 2L

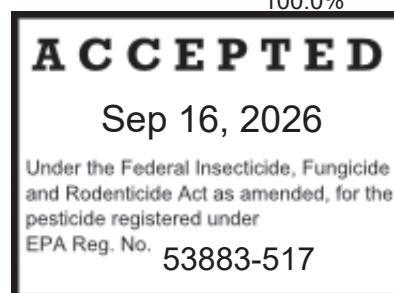
For use on selected crops, non-crop areas, livestock/poultry premises, turfgrass and other uses

ACTIVE INGREDIENT:	% BY WT.
Diflubenzuron (N-[[[4-Chlorophenyl]amino]carbonyl]-2,6-difluorobenzamide)*	22.0%
OTHER INGREDIENTS:	78.0%
TOTAL:	100.0%

*Contains 2.0 lbs. diflubenzuron per gallon

**KEEP OUT OF REACH OF CHILDREN
CAUTION**

Manufactured for:
Control Solutions, Inc.
5903 Genoa Red Bluff Rd.
Pasadena, TX 77507



EPA Reg. No. 53883-517

EPA Est. No. [REDACTED]

NET CONTENTS: _____ GALLONS

EMERGENCY ASSISTANCE:

Have the product container or label with you when calling a doctor or going for treatment. You may contact Prostar at 1-877-250-9291 for emergency medical treatment information.

**PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS AND DOMESTIC ANIMALS
CAUTION**

PERSONAL PROTECTIVE EQUIPMENT

Applicators and Other Handlers Must Wear:

- A long-sleeved shirt & long pants
- chemical-resistant gloves, such as Barrier Laminate, Butyl Rubber > 14 mils, Nitrile Rubber >14 mils, Neoprene Rubber > 14 mils, Natural Rubber > 14 mils, Polyethylene, Polyvinyl Chloride > 14 mils, or Viton > 14 mils, when mixing and loading and also when using hand-held equipment
- shoes plus socks.

Mixers and Loaders Using Fixed-Wing Aircraft Must Wear:

- A long-sleeved shirt and long pants
- chemical-resistant gloves such as Barrier Laminate, Butyl Rubber > 14 mils, Nitrile Rubber >14 mils, Neoprene Rubber > 14 mils, Natural Rubber > 14 mils, Polyethylene, Polyvinyl Chloride > 14 mils, or Viton > 14 mils
- shoes plus socks
- a minimum of a NIOSH-approved particulate filtering facepiece respirator (with any R, or P filter; OR a NIOSH-approved elastomeric particulate respirator with any R or P filter, OR a NIOSH-approved powered air purifying respirator with HE filters.

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 (including water soluble bags), enclosed cabs, or aircraft in a manner that meets the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170. 607(d)(e)(f)], 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.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to terrestrial juvenile insects and aquatic invertebrates/mollusks/insects. 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 and runoff may be hazardous to aquatic organisms in water adjacent to treated areas. Do not contaminate water when disposing of equipment washwaters or rinsate.

DIRECTIONS FOR USE

Restricted Use Pesticide

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

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. 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 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 made of any waterproof material
- shoes plus socks

INSTRUCTIONS AND INFORMATION

MANDATORY SPRAY DRIFT LABELING

This product may contaminate water through drift of spray in wind. This product has a potential for runoff for several months or more after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product. A level, well maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential for contamination of water from rainfall-runoff. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours. Sound erosion control practices will reduce this product's contribution to surface water contamination. Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment-and-weather-related factors determines the potential for spray drift. The applicator is responsible for considering all these factors when making decisions. The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to ULV applications on grassland and non-crop areas, for the control of grasshoppers and Mormon crickets.

- Where states have more stringent regulations, they must be observed.
- The applicator must be familiar with and take into account the information covered in the Aerial Application information below.

Aerial Applications:

- Do not release spray at a height greater than 10 ft above the ground or vegetative canopy; unless a greater application height is necessary for pilot safety.
- Applications are required to use a fine or coarser droplet size (ASABE S572.1).
- Applicators must use the ½ swath displacement upwind at the downwind edge of the field.

- Do not apply when wind speeds exceed 15 mph at the application site. If the windspeed is greater than 10 mph, the boom length must be 65% or less of the wingspan for fixed wing aircraft and 75% or less of the rotor diameter for helicopters. Otherwise, the boom length must be 75% or less of the wingspan for fixed-wing aircraft and 90% or less of the rotor diameter for helicopters.
- Do not apply during temperature inversions.

Ground Boom Applications:

- User must only apply with the release height recommended by the manufacturer, but no more than 3 feet above the ground or crop canopy.
- Applicators are required to use a fine or coarser droplet size (ASABE S572.1).
- Do not apply when wind speeds exceed 15 miles per hour at the application site.
- Do not apply during temperature inversions.

SPRAY DRIFT ADVISORIES

IMPORTANCE OF DROPLET SIZE

An effective way to reduce drift potential is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

Controlling Droplet Size – Ground Boom

- Volume-Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.
- Pressure –Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.

Spray Nozzle – Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce spray drift.

Controlling Droplet Size – Aircraft

- Adjust Nozzles – Follow nozzle manufacturers' recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

BOOM HEIGHT – Ground Boom

For ground equipment, the boom should remain level with the crop and have minimal bounce.

RELEASE HEIGHT – Aircraft

Higher release heights increase the potential for spray drift.

SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

TEMPERATURE AND HUMIDITY

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

TEMPERATURE INVERSIONS

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upwards and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

WIND

Drift potential generally increases with wind speed. **AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS.** Applicators need to be familiar with local wind patterns and terrain that could affect spray drift.

Handheld Technology Applications:

Take precautions to minimize spray drift.

INFORMATION

MANA DIFLUBENZURON 2L is an insect growth regulator which is effective on a wide variety of listed insect pests, predominately from the families Lepidoptera and Diptera. It is an aqueous flowable formulation which is easy to mix and spray. IRAC (Insecticide Resistance Action Committee) classifies diflubenzuron (active ingredient in MANA DIFLUBENZURON 2L) as a Group 15 Insecticide which inhibits chitin biosynthesis. Chitin inhibition results in a disruption of the normal molting process of the immature stages of insects. This process is slow and several days (up to 5 to 7 days) may elapse before the full effect of MANA DIFLUBENZURON 2L is seen. Because of its specificity, MANA DIFLUBENZURON 2L can be used in IPM programs.

RESISTANCE MANAGEMENT

For resistance management, MANA DIFLUBENZURON 2L contains a Group 15 insecticide. Any insect population may contain individuals naturally resistant to MANA DIFLUBENZURON 2L and other Group 15 insecticides. The resistant individuals may dominate the insect population if this group of insecticides are used repeatedly in the same fields. Appropriate resistance-management strategies should be followed.

To delay insecticide/acaricide resistance, take the following steps:

- Rotate the use of MANA DIFLUBENZURON 2L or other Group 15 insecticides within a growing season, or among growing seasons, with different groups that control the same pests.
- Use tank mixtures with insecticides from a different group that are equally effective on the target pest when such use is permitted. Do not rely on the same mixture repeatedly for the same pest population. Consider any known cross-resistance issues (for the targeted pests) between the individual components of a mixture. In addition, consider the following recommendations provided by the Insecticide Resistance Action Committee (IRAC):
 - Individual insecticides selected for use in mixtures should be highly effective and be applied at the rates at which they are individually registered for use against the target species.
 - Mixtures with components having the same IRAC mode of action classification are not recommended for insect resistance management.
 - When using mixtures, consider any known cross-resistance issues between the individual components for the targeted pest(s).
 - Mixtures become less effective if resistance is already developing to one or both active ingredients, but they may still provide pest management benefits.
 - The insect resistance management benefits of an insecticide mixture are greatest if the two components have similar periods of residual insecticidal activity. Mixtures of insecticides with unequal periods of residual insecticide activity may offer an insect resistance management benefit only for the period where both insecticides are active.
- Adopt an integrated pest management program for insecticide use that includes scouting, uses historical information related to pesticide use, crop rotation, record keeping, and which considers cultural, biological and other chemical control practices
- Monitor after application for unexpected target pest survival. If the level of survival suggests the presence of resistance, consult with your local university specialist or certified pest control advisor.
- Contact your local extension specialist or certified crop advisors for any additional pesticide resistance-management and/or IPM recommendations for the specific site and pest problems in your area.
- For further information or to report suspected resistance contact Control Solutions, Inc. at 800-242-5562 or at www.controlsolutionsinc.com.

RESTRICTIONS

Do not apply this product to bodies of water where swimming is likely to occur.

For Field Crops, Row Crops, Orchard Uses, Grassland and Non-Crop Areas: Do not apply within 25 feet by ground or 150 feet by air of bodies of water such as lakes, reservoirs, rivers, permanent streams, natural ponds, marshes or estuaries. All applications must include a 25 foot vegetative buffer strip within the buffer zone to decrease runoff.

RESTRICTIONS ON ROTATIONAL CROPS: Do not plant food or feed crops in MANA DIFLUBENZURON 2L treated soils within 1 month following last application, unless MANA DIFLUBENZURON 2L is labeled for use on these crops.

APPLICATION INSTRUCTIONS

USE AND MIXING DIRECTIONS IF USED WITH WATER:

1. Fill tank with half of the required amount of water.
2. Begin agitation and add required amount of MANA DIFLUBENZURON 2L.
3. Continue agitation while adding remainder of water.
4. If permitted for the use site, 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 IF USED WITHOUT WATER:

Always evaluate any potential mixture for compatibility and sprayability. To ensure thorough mixing of MANA DIFLUBENZURON 2L with insecticides or other carriers, premix ingredients 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 MANA DIFLUBENZURON 2L.
3. After the contents of the tank have been thoroughly agitated, a volume of carrier sufficient to fill the booms and piping system must be drained and then added back to the tank.

APPLICATION THROUGH IRRIGATION SYSTEMS – CHEMIGATION

MANA DIFLUBENZURON 2L may be applied through properly equipped chemigation systems for insect control in grassland and row crops. Apply this product only through sprinkler (including center pivot, lateral move, end tow, side (wheel) row, traveler, big gun, solid set, or hand move) irrigation systems. 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 non-uniform distribution of treated water. In order to calibrate the irrigation system and injector to apply the mixture, determine the following: 1) Calculate the number of acres irrigated by the system; 2) Set the irrigation rate and determine the number of minutes for the system to cover the intended treatment area; 3) Calculate the total gallons of the mixture needed to cover the desired acreage. Divide the total gallons of mixture needed by the number of minutes to cover the treated area. This value equals the gallons per minute that the injector must deliver. Convert the gallons per minute to ounces per minute. Calibrate the injector pump with the system in operation at the desired irrigation rate. Calibrate the injector pump at least twice before operation and monitor the system during operation. If you have questions about calibration, 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.

CHEMIGATION SYSTEMS CONNECTED TO PUBLIC WATER SYSTEMS

If the chemigation system is connected to a public water supply, the following conditions must also be met:

- Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily 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 a point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the flow 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.
- The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection.
- Upon completion of insecticide application, remove scale, pesticide residues, and other foreign matter from the supply tank and entire injector system. Flush thoroughly with clean water.
- Do not apply when wind speed favors drift beyond the area intended for treatment.

SPRINKLER CHEMIGATION

For continuously moving systems, the mixture containing MANA DIFLUBENZURON 2L must be injected continuously and uniformly into the irrigation water line as the sprinkler is moving. If continuously moving irrigation equipment is used, apply in no more than 0.25 inch of water. For sprinkler systems that do not move during operation, apply in no more than 0.25 inches of irrigation immediately before the end of the irrigation cycle.

Maintain continuous agitation of the pesticide supply tank for the duration of the application period.

To apply a pesticide using sprinkler chemigation, the chemigation system must meet the following specification:

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

BARLEY, OATS, TRITICALE, WHEAT

Application: Use adequate spray volume to ensure adequate coverage. For ground application, apply in 5 to 15 gallons of total volume per acre. For air application, apply in 2 to 5 gallons total volume per acre.

PEST	DOSAGE		COMMENTS
	LB AI/A	FL OZ/A Of product	
Grasshopper	0.016 to 0.031	1 to 2	Note: Visible effects on immature stages of these insects may not be seen for 5 to 7 days following application. Grasshopper: MANA DIFLUBENZURON 2L does not control adult grasshoppers. If a large number of adults are present in the infestation, tank mix with a knockdown insecticide to control the adults. For best results against immature grasshoppers, apply when the majority have reached the 2nd to 3rd nymphal stage of development. Cereal leaf beetle: For best results, apply at first sign of egg laying. Do not apply MANA DIFLUBENZURON 2L if late instar larvae make up the majority of the infestation.
Cereal leaf beetle	0.0625	4	
RESTRICTIONS: • Pre-harvest Interval: Do not harvest grain and straw within 50 days of application. Do not harvest forage within three days of application. Do not harvest hay within 15 days of application. • Do not make more than 1 application per season • Do not exceed 4 fl oz (0.0625 lb ai) per acre per year • Do not apply after boot stage of growth. • For use in the following states only: AK, CO, ID, MT, NV, OR, UT, WA, WY, western ND & SD and western NE (west of Route 281 in ND, SD & NE).			

COTTON

Application: For ground application, apply in 10 to 20 gallons of total volume per acre. For ULV application, use a total of 20 to 64 fl oz per acre. For air application, apply in 3 to 5 gallons total volume per acre. For ULV application, use a total volume of 20 to 48 fl oz per acre.

Adjuvant usage: Under conditions of rapid water evaporation (i.e., high air temperature and/or low humidity) use oil (1 to 2 qt per acre) in place of water with MANA DIFLUBENZURON 2L. For ground or aerial LV application, use 1 pt to 2 qt per acre of emulsified vegetable or paraffinic crop oil to enhance canopy penetration and to reduce spray droplet evaporation and subsequent drift. For ULV application, apply MANA DIFLUBENZURON 2L in a minimum of 20 fl oz per acre 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 Control Solutions, Inc., Inc. representative for oil specifications.
 Use sufficient application volume to ensure adequate coverage. MANA DIFLUBENZURON 2L may be mixed with other insecticides being applied for other cotton insects. When emulsifiable concentrate insecticide formulations are used with oil and MANA DIFLUBENZURON 2L in tank mixes, they may result in phytotoxicity. Care must be taken where such mixture is used.

PEST	DOSAGE		COMMENTS
	LB A/A	FL OZ/A of product	
Grasshopper	0.031	2	Note: Visible effects on immature stages of these insects may not be seen for 5 to 7 days following application.
Beet armyworm – early season before first bloom Boll weevil – diapauses treatment	0.031 to 0.0625	2 to 4	Grasshopper: MANA DIFLUBENZURON 2L does not control adult grasshoppers. If a large number of adults are present in the infestation, tank mix with a knockdown insecticide to control the adults. For best results against

Beet armyworm – mid season Fall armyworm Yellow striped armyworm Southern-armyworm Soybean looper* Cabbage looper* Saltmarch caterpillar* *suppression Boll weevil – early season (before first bloom)	0.0625 to 0.125	4 to 8	immature grasshoppers, apply when the majority have reached the 2nd to 3rd nymphal stage of development. Beet armyworm: Early season: To control early infestations on young cotton, apply MANA DIFLUBENZURON 2L at the first sign of beet armyworm activity (2 egg masses or hatch outs/100 feet of row) in multiple applications, either as directed or broadcast sprays. Make applications on a 5 to 7 day interval until 8 fl oz per acre have been applied. Multiple applications of MANA DIFLUBENZURON 2L will provide acceptable beet armyworm control and in the presence of beneficial insects (parasites and predators) will prevent populations from building up later in the season. Spraying every 5 to 7 days provides more complete coverage and protection of new foliage with MANA DIFLUBENZURON 2L. Mid-season: Make applications on a 5 to 7 days schedule from first bloom and through midbloom, or until a maximum of 8 fl oz/acre have been applied. Use higher listed application rate on larger cotton and/or heavy beet armyworm pressure. Coincide initial application with peak beet armyworm moth catches in pheromone traps. MANA DIFLUBENZURON 2L is more effective on early stages of larval development, therefore treat cotton leaves should be treated before populations become established. Late Season: Apply after mid-bloom and prior to 14 days before harvest. Use higher listed application rate on larger cotton and/or heavy beet armyworm pressure. Coincide application with peak beet armyworm moth catches in pheromone traps. Additional applications may be needed if pressure continues. Boll weevil: Early season: Apply MANA DIFLUBENZURON 2L with 2 to 4 qt per acre of emulsified cottonseed oil, vegetable oil, or paraffinic crop oil. For ULV application, use 4 fl oz per acre in a minimum of 8 fl oz per acre of emulsified cottonseed oil, oil based insecticide, or vegetable or petroleum based oil carrier. A compatibility agent may be needed if a non-emulsified cotton-seed oil is used. For best suppression of boll weevil reproduction, make the first application at pinhead square stage of cotton growth when overwintering boll weevils are entering the fields. Repeat applications must allow a minimum of 7 days between applications. MANA DIFLUBENZURON 2L controls boll weevil by suppressing reproduction and does not kill the adult boll
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Beet armyworm – late season	0.0625	4	weevils. Eggs deposited by affected female weevils will not hatch, thus limiting reproduction. After the 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 MANA DIFLUBENZURON 2L. Thus treat early and use multiple applications. Diapause: MANA DIFLUBENZURON 2L will reduce numbers of boll weevils emerging the following spring if applications are made when adult weevils are going to diapause. Apply when the cotton plant has reached full vegetative growth or when it begins blooming out the top. For LV application spray in combination with 2 to 4 qt per acre of an emulsifiable vegetable or paraffinic oil. For ULV application combine in a minimum of 8 fl oz per acre 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. Apply at least 2, but not more than 3, applications at 7 to 14 day intervals. <u>Fall armyworm, yellowstriped armyworm, southern armyworm, soybean looper, cabbage looper, saltmarch caterpillar:</u> Apply during early stages of larval development. Repeat applications on a 5 to 7 day schedule until at least 8 fl oz per acre have been applied.
RESTRICTIONS: • Pre-harvest Interval: Do not harvest within 14 days of application. • Do not exceed 24 fl oz (0.375 lb ai) per acre per year. • Do not exceed 6 applications per season. • Do not exceed 3 applications and 12 fl oz (0.188 lb ai) post boll opening.			

GRASSLAND

Includes Rangeland, Pastures, Improved Pastures and Similar Areas Used for Production of Native Domesticated Forage Grasses for Harvest for Livestock Primarily for Grazing or Mechanical Harvest

Application: For low/high volume air application, apply MANA DIFLUBENZURON 2L in 2 to 10 gallons of water per acre. Apply in a minimum of 12 fl oz per total volume per acre for rangeland ULV application. For low/high volume ground application, apply in 2 to 30 gallons of water per acre. Apply in a minimum of 12 fl oz total volume per acre for rangeland ULV application.

Thorough coverage of the target crop is very important regardless of application type used. For aerial and ULV spray mixtures include an evaporation/drift retardant product at label use rates. This is especially important when temperatures are high and humidity is low and evaporation is likely. When using oil type evaporation/drift retardant products, be sure to maintain a ratio of at least 2 parts water to 1 part oil. For low volume and ULV applications, make sure that the spray mixture in the boom contains the correct concentration of MANA DIFLUBENZURON 2L before application begins, and be sure that good agitation is maintained throughout mixing and application.

Higher listed rates and gallonages are suggested for areas with dense vegetation, when nymphs are beyond the 3rd instar stage, and when climatic conditions are favorable for grasshopper/Mormon cricket survival and increase. Apply anytime after eggs begin to hatch through early instars. MANA DIFLUBENZURON 2L remains active on the foliage and will continue to control larvae and grasshoppers/Mormon crickets that hatch later in the season.

MANA DIFLUBENZURON 2L is not effective against adult grasshoppers/Mormon crickets. If adults of either species are present, tank-mix MANA DIFLUBENZURON 2L with a registered adulticide to control later hatching species. Check mixing compatibility and sprayability prior to transferring to the main spray tank. Besides a fatal incomplete molting, adult grasshoppers/Mormon crickets may exhibit missing posterior legs, hernias, abdominal segments malformed, twisted antennae, hemolymph exudation, and wrinkled wings. Additionally, they may move slower, have limited jumps

and unsteady landings, show a reduction in feeding, have atrophy of posterior legs or be unable to fly. Any nymph/adult possessing these symptoms is likely more susceptible to predatory insects, birds, and mammals.

PEST	DOSAGE		COMMENTS
	LB AI/A	FL OZ/A of product	
Grasshopper	0.016 to 0.031	1 to 2	Grasshopper: Make 1 application on early instar (majority in the 2nd through 4th instar nymphal stages); use high listed rate for pastureland. Mormon cricket: Use on rangeland only, in a RAATs (Reduced Area and Agent Treatment) application on early instars. A RATTs application is an IPM strategy that takes advantage of grasshopper movement and conservation biological control to allow MANA DIFLUBENZURON 2L to be applied on rangeland on a reduced treated area and at reduced rates, while sustaining acceptable control. Using this program MANA DIFLUBENZURON 2L may be applied on as little as 50% of the infested acreage (e.g. skipping a 100 ft swath for every 100 ft treated), up to 100% of infested acreage. The rate per acre and amount of area treated will depend on grasshopper/mormon cricket age, plant canopy and topography. Skip up to 50% of the infested area and use the lower listed rate under uniform topography with early instar ages and sparse vegetation. If the majority of the population is late instars, vegetation is dense, terrain is considered rough, and conditions are hot during treatment, increase the coverage and rate of MANA DIFLUBENZURON 2L up to a blanket (100%) coverage with 1 fl oz per acre. If a second application is made, apply 2 to 3 weeks after the first application. Lepidopteran foliage feeding caterpillars: Apply MANA DIFLUBENZURON 2L at first sign of hatch and prior to larvae reaching fourth instars (< 1/2 inch) for maximum control. MANA DIFLUBENZURON 2L must be ingested and larvae must molt before populations are reduced. Horn fly, Face fly: Apply MANA DIFLUBENZURON 2L to cattle manure patties for two weeks or longer control of horn fly and face fly emergence.
Mormon cricket	0.012 to 0.016	0.75 to 1 (1st application)	
	0.008 to 0.016	0.5 to 1 (2 nd application)	
Lepidopteran foliage feeding caterpillars such as: Fall armyworm Striped grasshopper	0.031	2	
Horn fly Face fly	0.031	2	
RESTRICTIONS: - Do not need to exceed a total of 2 fl oz (0.031 lb ai) per acre per cutting. - Do not exceed a total of 6 fl oz (0.094 lb ai) per acre per year. - Allow at least 1 day after treatment before cutting grass. - Apply only when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g. when wind is blowing away from the sensitive areas).			

LEAFY BRASSICAS

Leafy Brassica group includes Broccoli raab, Cabbage, Chinese (bok choy), Collards, Kale, Mizuna, Mustard greens, Mustard spinach, Rape greens and Turnip greens

Application: Apply MANA DIFLUBENZURON 2L by ground only in a minimum of 30 gallons of water per acre. Thorough coverage is essential for suitable grasshopper control. Additional applications allow for more complete

coverage of newly expanding foliage. Since MANA DIFLUBENZURON 2L is an insect growth regulator, immature grasshoppers must ingest treated plant material and then molt before populations are reduced. Thus initial signs of control may not be seen until 5 to 7 days after treatment.

PEST	DOSAGE		COMMENTS
	LB AI/A	FL OZ/A of product	
Grasshopper	0.031 to 0.0625	2 to 4	Grasshopper: MANA DIFLUBENZURON 2L does not control adult grasshoppers. If a large number of adults are present in the infestation, tank mix with a knockdown insecticide to control the adults. For best results against immature grasshoppers, apply when the majority have reached the 2nd to 3rd nymphal stage of development. Reapply at 7 day intervals if reinfestation of the crop continues. Use the higher rate where there is a history of heavy infestations, dense foliage, or greater residual control is desired.
RESTRICTIONS: • Pre-harvest Interval: Do not harvest within 7 days of application. • Do not make more than 4 applications per season. • Do not exceed 16 fl oz (0.25 lb ai) per acre per season. • Do not use on turnip cultivars or varieties which produce a harvestable root.			

LIVESTOCK/POULTRY PREMISES

Includes Litter, Stale/waste feed, Manure, Manure/straw mixtures, Feed muck spoilage, Spoiled organic refuse, Bedding material, Floors, Walls/wall footings, Posts, Cage frames, Ceilings

Livestock / poultry operations include farms, farm buildings, barns, feedlots, dairies, equine facilities, poultry houses, and other production facilities. Application sites within these operations also include fence lines of holding pens, feed troughs, feed bunks, hay bale feeders, water troughs; and marginal areas of waste retention ponds.

For insect control around hay feeding sites, treat the entire area where manure and waste hay are mixed at the soil surface by livestock activity.

MANA DIFLUBENZURON 2L will not control adult or pupal stages but does provide extended control of eggs and developing larvae. Exposure to adults, however, through contact or ingestion, does impact their reproductive potential, resulting in reduced numbers and viability of eggs. If a large adult population already exists at the time treatment is to be made, application with a knockdown insecticide either alone or in a tank mix with MANA DIFLUBENZURON 2L may be desirable to achieve rapid reduction of that population.

PEST	DOSAGE		COMMENTS
	LB AI/A	FL OZ/A of product	
Carrion beetle Darkling beetle Hide beetle	0.188 lb ai/ 1000 ft ²	12 fl.ozs / 1000 ft ² In 2 – 20 gals. water per 1000 ft ²	Beetles: Broadcast Application: Apply MANA DIFLUBENZURON 2L as a whole house broadcast spray to the litter following de-caking, as well as to floors, walls, posts, cage frames, and crack and crevices around insulation. Be sure to treat areas under feed and water lines. Apply in sufficient volume to uniformly and thoroughly wet the litter and other surfaces. The spray volume will vary depending on the depth of litter being treated. Band Application: When the whole house is not being treated, application of MANA DIFLUBENZURON 2L can be made to areas where pests are concentrated, such as under feed and water lines, along perimeter walls and side / end walks. Apply in sufficient volume to thoroughly wet litter following de-caking in a 2-4 foot wide band under and next to these areas. Spray volume will vary depending on depth of litter. Lower sections of walls, posts and cage frames should also be treated at least 1 foot up from the floor. Flies: Broadcast Application: Apply MANA DIFLUBENZURON 2L as a whole house broadcast spray as described above for beetles. Spot Treatment: Apply as a directed spray at a volume of 1 quart of spray solution to 10 sq. ft. of surface area. 100 gallons of spray solution will treat 4000 sq. ft. Begin applications when flies first appear. Reapply as needed when adult fly numbers begin to increase, typically at 2 – 3 week intervals.
House fly Stable fly Face fly Horn fly	0.188 lb ai/ 1000 ft ² 0.08 lb ai in 10 gals water	12 fl.ozs / 1000 ft ² In 2 – 20 gals. water per 1000 ft ² Spot treatment: 5 fl oz in 10 gals water	
RESTRICTIONS: - Do not apply directly to livestock or poultry. - Do not contaminate feed or water through application-cover or remove exposed feed and water from the area to be treated.			

NON-CROP AREAS

Includes Field borders, Fence rows, Roadsides, Farmsteads, Ditchbanks, Wasteland, Conservation Reserve Program CRP Land

Application: MANA DIFLUBENZURON 2L may be applied by ground and aerial application equipment to the listed non-crop areas. See the **Application** section of **Grassland** above for further information.

PEST	DOSAGE		COMMENTS
	LB AI/A	FL OZ/A of product	
Grasshopper Mormon cricket Lepidopteran foliage feeding caterpillars such as: Fall armyworms Striped grass looper	0.031	2	Grasshopper/Mormon cricket: Apply MANA DIFLUBENZURON 2L to manage these insects in their breeding areas before they move into cropland. See Grassland section above for timing of application. Foliage feeding caterpillars: For maximum control use MANA DIFLUBENZURON 2L at first sign of hatch and prior to larvae reaching fourth instars (<1/2 inch). MANA DIFLUBENZURON 2L must be ingested and larvae must molt before populations are reduced.
See Grassland section for restrictions.			

TURFGRASS (FOR USE IN SOD FARMS ONLY)

Application: Apply in 20 to 50 gallons of water per acre by ground application.

PEST	DOSAGE		COMMENTS
	LB AI/A	FL OZ/A of product	
Lepidopteran foliage feeding caterpillars such as: Sod webworm Armyworms Including Fall, True, Southern, Beet, Yellow-striped Striped Grass Looper Granulate cutworm	0.031	2	Apply MANA DIFLUBENZURON 2L at first sign of hatch and prior to larvae reaching 4 th instars (>1/2 inch). MANA DIFLUBENZURON 2L must be ingested and larvae must molt before populations are reduced. Repeat applications at 14 day intervals or as needed to protect new foliage growth.
RESTRICTIONS: Do not exceed a total of 4 applications per year.			

PEANUTS

Application: Apply MANA DIFLUBENZURON 2L in 3 to 5 gallons of water per acre for air application and 9 to 35 gallons of water per acre for ground application. Uniform coverage of foliage is very important.

Adjuvant Usage: See the **Cotton** section for more information.

Since MANA DIFLUBENZURON 2L is an insect growth regulator, larvae/nymphs must ingest treated plant material and then molt before populations are reduced. Thus initial signs of control may not be seen until 5 to 7 days after treatment.

PEST	DOSAGE		COMMENTS
	LB AI/A	FL OZ/A of product	
Grasshopper	0.031	2	<u>Grasshoppers:</u> MANA DIFLUBENZURON 2L does not control adult grasshoppers. If a large number of adults are present in the infestation, tank mix with a knockdown insecticide to control the adults. For best results against immature grasshoppers, apply when the majority have reached the 2nd to 3rd nymphal stage of development. Reapply at 7 day intervals if reinfestation of the crop continues. Use the higher when infestations are heavy, there is dense foliage or long residual is needed. <u>Other pests:</u> Apply MANA DIFLUBENZURON 2L when larvae are small (<0.5 inches) to give greater control and minimum insect damage to leaves. Repeat applications as necessary to maintain control but not before the minimum reapplication interval of 14 days. Use the higher when infestations are heavy, there is dense foliage or long residual is needed.
Velvet bean caterpillar Mexican bean beetle Green cloverworm	0.031 to 0.0625	2 to4	
Armyworms such as: Beet armyworm Fall armyworm Southern army-worm Yellow-striped armyworm Lesser cornstalk borer Soybean looper (suppression)	0.0625 to 0.125	4 to 8	
RESTRICTIONS: • Pre-harvest interval: Do not harvest within 28 days of application. • Do not make more than 3 applications per season. • Do not exceed 24 fl oz (0.375 lb ai) per acre per season.			

ORANGES, GRAPEFRUIT, TANGERINE, PUMMELOS and their hybrids

Application: By ground, apply MANA DIFLUBENZURON 2L in 50 to 1,000 gallons of water per acre making sure to obtain thorough coverage. By air, apply in 5 to 20 gallons of water per acre again making sure that thorough coverage is obtained.

Spray Oil: The addition of a spray oil, such as FC435-66 enhances coverage and may enhance control of citrus leafminer, citrus peelminer, and the citrus root weevil complex.

PEST	DOSAGE		COMMENTS
	LB AI/A	FL OZ/A of product	
Citrus rust mite (<i>Phyllocoptruta oleivora</i>) Lepidopterous miners: a. Citrus leafminer (<i>Phyllocnistis citrella</i>) b. Citrus peelminer (<i>Marmara</i> spp.) Citrus root weevil complex including: a. West Indian sugar cane rootstock borer weevil (<i>Diaprepes abbreviatus</i>) b. Southern blue-green citrus root weevil (<i>Pachnaeus litus</i>) c. Blue-green citrus weevil (<i>P. opalus</i>) d. Fuller rose beetle (<i>Asynonychus godmani</i>) e. Little leaf notcher (<i>Artipus floridanus</i>)	0.31	20	Citrus rust mite: Apply MANA DIFLUBENZURON 2L when rust mites first appear. For full season rust mite control, make repeat applications no sooner than 90 days after the former application. MANA DIFLUBENZURON 2L has activity only on eggs and nymphal stages of citrus rust mites, not adults. The full effect of treatment with MANA DIFLUBENZURON 2L may not be evident until 3 to 10 days after application. Citrus leafminer: Apply MANA DIFLUBENZURON 2L when oviposition begins on new growth flushes. To protect subsequent new growth flushes, repeat application but no sooner than 90 days after the former application. Adults are not killed by MANA DIFLUBENZURON 2L and only eggs, larval and pupal stages are affected. Citrus peelminer: Apply MANA DIFLUBENZURON 2L when oviposition begins on peel surface. Peelminer eggs laid on protected/treated fruit do not develop. Since fruit is rapidly expanding, protection from MANA DIFLUBENZURON 2L may only last a few weeks. Citrus root weevil complex: Apply MANA DIFLUBENZURON 2L to a newly expanded flush on citrus and/or when adult weevils are present. Addition of a spray oil enhances penetration of MANA DIFLUBENZURON 2L into adult weevils and eggs. Oil may also deter weevil egg masses from attaching to leaf surfaces. MANA DIFLUBENZURON 2L will not kill adult weevils but it does result in reduction of reproduction potential of weevils and prevents eggs from hatching. The grubs from eggs laid on treated leaves are reduced in number.
RESTRICTIONS: • Pre-harvest interval: Do not apply within 21 days of harvest. • Do not apply more than 60 fl oz (0.93 lb ai) of MANA DIFLUBENZURON 2L per acre per year. • Do not graze livestock in treated groves or harvest cover crops for animal feed. • In Florida, do not apply within 100 feet of estuarine/marine bodies of water. Spray last three rows windward of surface water using nozzles on one side only, with spray directed away from surface water. Turn off or adjust nozzles to prevent spray going over tops of trees. Shut off nozzles on the side away from the grove when spraying the outside row. Shut off nozzles when turning at ends of rows and passing tree gaps in rows.			

PEARS)

Application: Apply MANA DIFLUBENZURON 2L by ground application at 80 to 400 gallons of water per acre according to the specific pest being targeted for control. See pests controlled below for specific spray volumes.

Oil usage: MANA DIFLUBENZURON 2L may be applied with 4 to 6 gallons per acre of horticultural mineral oil during the delayed dormant to popcorn growth stage for control of some pests shown below. Oil may cause injury to certain pear varieties so be sure to check compatibility of oil mixtures with your local tree fruit specialist.

PEST	DOSAGE		COMMENTS
	LB A/A	FL OZ/A of product	
Pear psylla (pre-bloom) Pear rust mite (pre-bloom)	0.625 to 0.75	40 to 48	Pear psylla pre-bloom: Apply MANA DIFLUBENZURON 2L in 80 to 400 gallons of water per acre during the period between delayed dormant up to the popcorn stage. Complete uniform coverage of the tree is essential to achieve insect control. Use a horticultural mineral oil at a rate of 4 to 6 gallons per acre during the delayed dormant period. After this period and through the popcorn stage, apply oil at a concentration of 0.25%, but use no more than 1 gallon per acre. A surfactant may be used to improve coverage. Follow manufacturer's label specifications. MANA DIFLUBENZURON 2L should be applied during egg deposition so that it will come in contact with pear psylla eggs and/or 1st and 2nd instar nymphs. Pear rust mite: Apply MANA DIFLUBENZURON 2L in 80 to 400 gallons of water per acre during the period between delayed dormant up to the popcorn stage. See Pear psylla pre-bloom section for directions on use with oil. Pear psylla post-bloom: Applications at normal codling moth rates and timings will provide suppression of pear psylla. Codling moth: Apply MANA DIFLUBENZURON 2L in a minimum of 80 gallons of water per acre. Use the low listed rate for light codling moth pressure and/or on small trees. Complete coverage of the fruit and foliage in all areas of the trees is essential for insect control. MANA DIFLUBENZURON 2L prohibits hatch of codling moth eggs so it is important that it be applied prior to egg laying so that eggs are laid on treated plant parts. Apply first application as soon as possible after first moths are caught (biofix) or observed, or about 50-75 degree-days after biofix. This timing can be determined by your local pest control consultant and/or fruit specialist with the aid of pheromone traps. Normally this timing occurs at late petal fall or about 10-14 days earlier than the timing used for organophosphate insecticides. Apply second application about 14-18 days after the first. If necessary, apply third and fourth application, timed prior to egg laying of the 2nd generation by using the same method as for the 1st generation. If traps are not used, make the 3rd application 21-30 days after the second, followed by the 4th application 21-30

Codling moth Pear psylla (post-bloom)	0.188 to 0.25	12 to 16	days later. If a degree-day model is used the 3rd spray should be timed at 1000 degree-days after biofix. Combination with organophosphates for codling moth control: MANA DIFLUBENZURON 2L can be used in combination with an organophosphate insecticide, to save a trip through the orchard and to make timing of the MANA DIFLUBENZURON 2L sprays easier. The combination is more effective than MANA DIFLUBENZURON 2L alone when controlling moderate to heavy codling moth infestations and/or treating large trees. The combination will provide residual control of eggs laid after application. Apply MANA DIFLUBENZURON 2L and the organophosphates at their labeled rates. Apply at the beginning of egg hatch of 1st generation codling moth. This is the normal timing for the first organophosphate cover spray (250 degree- days following biofix for 1st generation and 1250 degree-days for the 2nd generation). This program can be repeated for the 2nd and 3rd generation of codling moth or use alone prior to egg laying. Do not use oil in tank mix with MANA DIFLUBENZURON 2L in late season treatments. With light codling moth populations, as indicated by monitoring, this combination may offer control of an entire generation with 1 application. When populations are heavy, this combination will improve control, but it may not control an entire generation with one spray. A second spray of MANA DIFLUBENZURON 2L alone or in combination may be applied 14-18 days later. Leafminer: Apply MANA DIFLUBENZURON 2L in a minimum of 80 gallons of water per acre just prior to the 1st or 2nd generation to control eggs and larvae. Consult the local pest control consultant or fruit specialist for information on timing of the 1st and 2nd leafminer generations. If control of later generations is necessary, apply MANA DIFLUBENZURON 2L in the same way. Complete coverage of foliage is important as well as having MANA DIFLUBENZURON 2L in place on the plant before eggs are laid. It will provide control through the early sap feeding stage of the leafminer.
Leafminer			
RESTRICTIONS: • Pre-harvest Interval: Do not harvest within 14 days of application. • Do not apply more than 4 applications per year. • Do not apply more than 64 fl oz (1.0 lb ai) per acre per year. • Do not use oil in tank mix in late season treatments (3rd and 4th applications).			

PEPPER (BELL AND NON-BELL)

Application: Apply MANA DIFLUBENZURON 2L in a minimum of 30 gallons of water per acre for ground application and 3 to 10 gallons of water per acre by air application. Apply in sufficient water to provide uniform coverage of foliage.

Adjuvant usage: See the **Cotton** section for more information.

Since MANA DIFLUBENZURON 2L is an insect growth regulator, larvae and nymphs must ingest treated plant material and then molt before populations are reduced. Thus, initial signs of control may not be seen until 5 to 7 days after treatment.

PEST	DOSAGE		COMMENTS
	LB AI/A	FL OZ/A of product	
Pepper weevil Beet armyworm Fall armyworm Southern armyworm and other foliage feeding Lepidopteran insects	0.0625 to 0.125	4 to 8	Pepper weevil: Apply MANA DIFLUBENZURON 2L at 4 to 8 fl oz per acre starting at initial flowering. Use the high listed rate if the adult infestation is moderate to heavy. Make additional applications as needed to maintain control but no sooner than a minimum interval of 7 days. Additional applications allow for more complete coverage of new foliage and expanding fruit. MANA DIFLUBENZURON 2L will not control adults, but eggs laid by adults will exhibit reduced hatching in fruits once adults have consumed or contacted residues of MANA DIFLUBENZURON 2L on pepper tissue. Armyworm and other Lepidoptera: Apply MANA DIFLUBENZURON 2L at 4 to 8 fl oz per acre when larvae are small. Use a higher listed rate if the infestation is heavy and/or MANA DIFLUBENZURON 2L is being applied alone. A knockdown tank-mix partner should be used if late instar larvae are present. Additional applications allow for more complete coverage of new foliage and expanding fruit, however do not make applications any sooner than a minimum interval of 7 days.
RESTRICTIONS: • Pre-harvest Interval: Do not apply within 7 days of harvest. • Do not apply more than 24 fl oz (0.375 lb ai) per acre per season. • Do not apply more than 5 applications per growing season			

RICE

Application: Apply MANA DIFLUBENZURON 2L by air using a minimum of 5 gallons of total spray volume per acre.

Application precautions: (1) Consult your local extension service for determination of economic threshold and/or determination of oviposition. (2) Do not apply MANA DIFLUBENZURON 2L if flooding is in progress because activity will be reduced. (3) MANA DIFLUBENZURON 2L is water active so the entire field must be treated. (4) Do not disturb a flooded field after a single application for at least 7 days. (4) With split applications in water seeded, pinpoint or continuous flood rice, the flood must not be disturbed for a minimum of 4 days following the 1st treatment and 7 days following the 2nd application. Hold treated water at least 14 days to allow dissipation of MANA DIFLUBENZURON 2L.

MANA DIFLUBENZURON 2L can be safely applied in combination with post permanent flood herbicides such as FACET®, GRANDSTAND®, and LONDAX®. Before using such a tank-mix combination, read each product label carefully and follow Precautionary Statements on each label.

PEST	DOSAGE		COMMENTS
	LB AI/A	FL OZ/A of product	
Rice water weevil (Southern U.S. Rice Belt) -for drill seeded; dry seeded; or water seeded, delayed flood rice	0.188 to 0.25	12 to 16	Note: MANA DIFLUBENZURON 2L does not 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. Southern U.S. – Single Application: Apply a single application of MANA DIFLUBENZURON 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. Use the higher listed application rate if adult weevil infestations are high. Southern U.S. – Split Application: Split applications can effectively control larvae. Apply the first application of 8 fl oz per acre of MANA DIFLUBENZURON 2L 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 2nd application of 8 fl oz per acre must be made 5-7 days after the 1st application. Failure to make the second application within this timeframe could result in inadequate control of rice water weevil larvae. *Use 8 fl oz plus another 8 fl oz, a total of 2 applications. California: To control larvae, apply MANA DIFLUBENZURON 2L one time per year at the initiation of adult oviposition. Target the application for 2 to 5 days after rice emergence above the water (2 to 4 leaf stage). Use 12 to 16 fl oz of MANA DIFLUBENZURON 2L if infestations have been historically high.
Rice water weevil (Southern U.S. Rice Belt) water seeded, pinpoint flood, or continuous flood rice	0.188 + 0.188	8 + 8*	
Rice water weevil (California)	0.188 to 0.25	8 to 16	
RESTRICTIONS: • Pre-harvest Interval: Do not harvest within 80 days of application. • 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 irrigated crops except for uses currently established for MANA DIFLUBENZURON 2L. • Do not impregnate on granular materials. • Do not use on wild rice (<i>Zizania spp.</i>).			

SOYBEAN (EXCEPT CALIFORNIA)

Application: Apply MANA DIFLUBENZURON 2L in 9 to 35 gallons of water per acre for ground application and 3 to 5 gallons of water per acre by air application. Apply in sufficient water to provided uniform coverage of foliage.

Adjuvant usage: See the **Cotton** section for more information.

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 MANA DIFLUBENZURON 2L under field conditions on both determinate and indeterminate cultivars. Application of 2 to 4 fl oz per acre to high yield potential soybeans 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 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 4 uppermost nodes on the main stem with a fully developed leaf).

PEST	DOSAGE		COMMENTS
	LB AI/A	FL OZ/A of product	
Grasshopper	0.031	2	Note: MANA DIFLUBENZURON 2L is an insect growth regulator, larvae/nymphs must feed on it and then molt before populations are reduced. Thus, initial signs of control may not be seen until several days after treatment. Grasshopper: MANA DIFLUBENZURON 2L does not control adult grasshoppers. If a large number of adults are present in the infestation, tank mix with a knockdown insecticide to control the adults. For best results against immature grasshoppers, apply when the majority have reached the 2nd to 3rd nymphal stage of development. Reapply at 7 day intervals if reinfestation of the crop continues. Use the higher listed rate where there is a history of heavy infestations, dense foliage, or greater residual control is desired. Velvet bean caterpillar, Mexican bean beetle, Green cloverworm: Apply MANA DIFLUBENZURON 2L Make when larvae are small (<0.5 inches) to provide control. Repeat application if damaging numbers reappear but no sooner than the minimum reapplication interval of 30 days. MANA DIFLUBENZURON 2L may be applied at the lower listed rate 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 armyworm, fall armyworm, soybean looper: Application must be made when worms are small before populations build.
Velvet bean caterpillar Mexican bean beetle Green clover-worm	0.031 to 0.0625	2 - 4	
Beet armyworm Fall armyworm Soybean looper (suppression)	0.0625	4	
• Pre-harvest Interval: Do not harvest within 21 days of application. • Do not make more than 2 applications per season. • Not registered for use in California.			

STONEFRUIT

Includes Apricot, Nectarine, Peach, Plum and Prune **but does not include Cherries.**

Application: If making ground applications you must use a minimum of 50 gallons of water per acre for small trees (10 feet tall or less) and at least 100 gallons per acre for larger trees (10 feet tall or more). Using insufficient water for thorough coverage and/or using an uneven spray pattern across the canopy will likely result in less than desired efficacy.

PEST	DOSAGE		COMMENTS
	LB AI/A	FL OZ/A of product	
Peach twig borer	0.188 to 0.25	12 to 16	<u>Peach twig borer: Dormant/delayed dormant:</u> Apply MANA DIFLUBENZURON 2L in combination with a

Fall webworm Filbert leafroller Oblique banded leafroller Omnivorous leafroller Omnivorous leaf tier Oriental fruit moth Redhumped caterpillar Variegated leafroller Walnut caterpillar Winter moth	0.125 to 0.25	8 to 16	narrow range oil at 4 to 6 gallons per acre (1.5 to 2.0 gallons per 100 gallons in a dilute spray). Use the higher listed rate if the infestation is heavy. Bloom: For control of peach twig borer during the growing season, apply MANA DIFLUBENZURON 2L at early bloom. Vegetable oil may be used at the rate of 1 qt per acre. Use the higher listed rate if the infestation is heavy. Make repeat applications if necessary for control but no sooner than 21 days between applications. Pests other than Peach Twig Borer: Apply MANA DIFLUBENZURON 2L at the first sign of larval infestation. Use the higher listed rate for longer residual control, higher pest infestations, low crop load, larger trees or heavy, dense foliage. Make repeat applications if necessary for control but no sooner than 21 between applications.
RESTRICTIONS: • Pre-harvest Interval: Is equal to 0. • Do not apply after petal fall. • Do not exceed 2 applications in any given season. • Do not exceed 32 fl oz (0.50 lb ai) per acre in any given season. • Retreatment interval of 21 days between applications.			

TREE NUT GROUP

Includes Almond, Beech nut, Brazil nut, Butternut, Chestnut, Chinquapin, Filbert (hazelnut), Hickory nut, Macadamia nut (bush nut), Pecan, Pistachio, Walnut (black & English).

Application: If making ground applications you must use a minimum of 50 gallons of water per acre for small trees (10 feet tall or less) and at least 100 to 300 gallons per acre for larger trees (10 feet tall or more). Using insufficient water for thorough coverage and/or using an uneven spray pattern across the canopy will likely result in less efficacy. If 4 applications are needed, time the application to correspond to the following growth stages: (1) dormant to pre-bud swell, (2) bloom to petal fall, (3) flowers/leaves/immature nut fruit formation, and (4) hull split.

PEST	DOSAGE		COMMENTS
	LB AI/A	FL OZ/A of product	
Peach twig borer	0.188 to 0.25	12 to 16	Peach Twig Borer: Dormant/delayed dormant: Apply MANA DIFLUBENZURON 2L in combination with a narrow range oil at 4 to 8 gallons per acre (1.5 to 2.0 gallons per 100 gallons in a dilute spray). Use the higher listed rate if the infestation is heavy. Bloom: Apply MANA DIFLUBENZURON 2L at early bloom. Always use the higher listed rate of MANA DIFLUBENZURON 2L in the rate range if the crop has a history of heavy infestations. Spring flight ("May Spray"): Using pheromone traps to determine flight activity, apply MANA DIFLUBENZURON 2L at the rate of 16 fl oz per acre at initial flight activity. Summer flight: Using pheromone traps to determine flight activity, apply MANA DIFLUBENZURON 2L at the rate of 16 fl oz per acre at initial flight activity. Hickory shuckworm: Apply split applications of MANA DIFLUBENZURON 2L at 4 to 8 fl oz per acre when hickory shuckworm moth emergence begins or larval feeding is detected and then again two weeks later for maximum nut protection and hickory shuckworm control. Apply MANA DIFLUBENZURON 2L starting at half-shell hardening. Make subsequent applications at 21 day intervals to shuck split, or while nuts are susceptible to hickory shuckworm under heavy infestations. Use the higher listed rate under higher pest infestations, low crop load, larger trees or heavy, dense foliage. Pecan nut case-bearer: Apply split applications of MANA DIFLUBENZURON 2L at 4-8 fl oz per acre beginning at bud break and then again two weeks later. Normal timing in southeastern US would be from mid-April for bud break and then two weeks later (early May). Apply MANA DIFLUBENZURON 2L in split applications at the initiation of each adult generation to target egg hatch. Note for the 1st generation this is approximately 8 to 15 days following the first prolonged moth catch (biofix which is defined as the date on which the total of 5 moths are captured in 3 pheromone traps within a 7-day period). States may have a different recommendation for initiation of spraying; please consult authorities such as county and university extension specialists on current recommendations. Use the higher listed rate for longer residual control, higher pest infestations, low crop load, larger trees or heavy, dense foliage. Pecan weevil suppression: Use the higher listed rate if weevils are attaching fruit and for higher infestations. Other Lepidopteran pests: Apply MANA DIFLUBENZURON 2L at the first sign of larval infestations. Use the higher listed rate for longer residual control, higher pest infestations, low crop load, larger trees or heavy, dense foliage. Filbert worm: The lower listed rate may be used where filbert worm pressure is low and/or the trees are small. The higher listed rate is necessary when worm pressure is moderate to high and/or the trees are large. Apply MANA DIFLUBENZURON 2L 2 to 3 days after the 1st

Hickory shuckworm Pecan nut case-bearer Pecan weevil (suppression) Others pests, including: Fall webworm Filbert leafroller Oblique banded leafroller Omniverous leafroller Omniverous leaf-tier Oriental fruit moth Redhumped caterpillar Variegated leafroller Walnut caterpillar Winter moth	0.125 to 0.25	8 to 16	moth is caught in pheromone detection traps. Mating takes place within several days of emergence and egg laying begins the next day. MANA DIFLUBENZURON 2L must be applied prior to egg deposition on the treated foliage. Good uniform coverage of the tree is essential to achieve optimum control of filbert worm with MANA DIFLUBENZURON 2L. Normally MANA DIFLUBENZURON 2L will give season long control. If moth pressure remains high, additional applications should be made. Codling moth: Apply MANA DIFLUBENZURON 2L prior to egg laying. MANA DIFLUBENZURON 2L must be present on the surface upon which eggs are laid; therefore, full coverage spray is necessary. Apply first application when moth flights begin or when moths are found in pheromone traps. Apply the 2nd application, approximately 21 days after the 1st application. For control of the 2nd brood, application should be timed prior to egg laying, similar to 1st brood. Because of fluctuations in temperature, the emergence and moth flights of the over-wintering population may be extended over a long period of time. Under such circumstances, MANA DIFLUBENZURON 2L should be tank mixed with an organophosphate insecticide at its lowest label rate. This tank mix should be applied at normal 1st organophosphate timing. Later in the season, if egg laying has already occurred before application of MANA DIFLUBENZURON 2L, it is recommended that MANA DIFLUBENZURON 2L be tank mixed with an organophosphate as previously described.
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Filbert worm	0.188 to 0.25	12 to 16	
RESTRICTIONS: • Pre-harvest Interval: Do not harvest within 28 days of application. • Do not exceed 4 (3 for walnuts) applications per season. • Do not exceed 64 fl oz (1.0 lb ai) per acre per growing season.			

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Store in original container only.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER HANDLING

Plastic containers: Nonrefillable container. Do not reuse or refill this container. Triple rinse or pressure rinse (or equivalent) promptly after emptying.

Triple rinse as follows: For containers small enough to shake: Empty the remaining contents into a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and then recap. Shake for 10 seconds. Pour rinsate into a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. For containers too large to shake: Empty remaining contents into a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Empty the rinsate into a mix tank or store for later use or disposal. Repeat this procedure two more times.

Pressure rinse as follows: Empty the remaining contents into a mix tank and continue to drain for 10 seconds after the flow continues to drip. Hold container upside down over mix tank to collect rinsate for later use or disposal. Insert pressure rinsing nozzle in the side of the container and rinse about 40 PSI for at least 30 seconds. Drain for 10 seconds after the flow begins to drip.

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

Recycling: Once cleaned, some agricultural plastic pesticide containers can be taken to a container collection site or picked up for recycling. To find the nearest site, contact your chemical dealer or manufacturer or contact the Ag Container Recycling Council (ACRC) at 1-877-952-2272 (tollfree) or www.acrecycle.org.

LIMITATION OF WARRANTY AND LIABILITY

Read the entire directions for use, conditions of warranties and limitations of liability before using this product. If terms are not acceptable, return the unopened product container at once.

By using this product, user or buyer accepts the following **CONDITIONS, DISCLAIMER OF WARRANTIES, and LIMITATIONS OF LIABILITY.**

CONDITIONS: The directions for use of this product are believed to be adequate and must be followed carefully. However, it is impossible to eliminate all risks associated with the use of this product. Crop injury, ineffectiveness or

other unintended consequences may result because of such factors as weather conditions, presence of other materials, or the manner of use or application, all of which are beyond the control of Control Solutions, Inc., Inc. To the extent consistent with applicable law, all such risks shall be assumed by the user or buyer.

DISCLAIMER OF WARRANTIES: To the extent consistent with applicable law, Control Solutions, Inc., Inc. makes no other warranties, express or implied, of merchantability or of fitness for a particular purpose or otherwise, that extend beyond the statements made on this label. No agent of Control Solutions, Inc., Inc. is authorized to make any warranties beyond those contained herein or to modify the warranties contained herein. To the extent consistent with applicable law, Control Solutions, Inc., Inc. disclaims any liability whatsoever for special, incidental or consequential damages resulting from the use or handling of this product.

LIMITATIONS OF LIABILITY: To the extent consistent with applicable law, the exclusive remedy of the user or buyer for any and all losses, injuries or damages resulting from the use or handling of this product, whether in contract, warranty, tort, negligence, strict liability or otherwise, shall not exceed the purchase price paid or at Control Solutions, Inc., Inc.'s election, the replacement of product.

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