

3125-587

10/25/2002

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U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (H7505C)
401 "M" St., S.W.
Washington, D.C. 20460

EPA Reg. Number
3125-587

Date of Issuance
OCT 25 2002

Term of Issuance Conditional:
Registration will expire
November 15, 2003

Name of Pesticide Product
Renounce B 20WP

NOTICE OF PESTICIDE:

Registration
 Reregistration

(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

Bayer Corporation
8400 Hawthorn Road
P.O. Box 4913
Kansas City, MO 64120-0013

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA sec. 3(c)(7)(A), subject to the following terms:

1. You must submit and/or cite all data required for registration/reregistration of your product under FIFRA sec. 3(c)(5) when the Agency requires all registrants of similar products to submit such data; and submit acceptable responses required for reregistration of you product under FIFRA section 4.
2. You have agreed to provide market share data annually for the following crops and to comply with any risk mitigation measures that may be required if cyfluthrin should capture a significantly greater market share than projected and the estimated dietary and/or aggregate exposure to cyfluthrin becomes unacceptable: head and leaf lettuce, head and stem brassica, mustard greens and dry and southern peas. Market share data for these uses must be submitted annually for a period of 5 years, beginning with calendar year 2003. This information must be submitted to the Agency no later than March 15 following the end of the calendar year (January 1 through December 31). The first market share report will be due at the Agency on March 15, 2004 for the year ending December 31, 2003.

Signature of Approving Official:

Susan L. Stanton, for George T. LaRocca

Date:

OCT 25 2002

- 3. You will submit product information (pounds or gallons produced) for this product for the fiscal year in which the added uses are conditionally registered, in accordance with FIFRA section 29. The fiscal year begins October 1 and ends September 30. The production information will be submitted to the Agency no later than November 15 following the end of the preceding fiscal year.

The information should be submitted to:

U.S. Environmental Protection Agency
 Office of Pesticide Programs (7504C)
 Document Processing Desk
 Ariel Rios Building
 1200 Pennsylvania Avenue, NW
 Washington, DC 20460

- 4. This registration is conditioned under the same terms and conditions for data generation as stipulated in our November 15, 1993 letter for use of the cyfluthrin product, Baythroid (EPA Reg. No. 3125-351), on cotton.
- 5. Bayer Corporation agreed that the current synthetic pyrethroid mitigation measures are interim in nature and may be reconsidered or modified after review and evaluation of the Spray Drift Task Force.
- 6. You understand that this registration will expire on November 15, 2003. You further understand that it is EPA's stated intent to, by November 15, 2003, complete its review of all relevant data and other information that are available to the Agency, and to make FIFRA section 3(c)(5) or other appropriate regulatory decisions for cotton-use synthetic pyrethroids and other crops conditionally registered based on the Agency's review of such data/information and considering statutory and regulatory criteria for such decisions.
- 7. You have agreed to submit the data listed below, conducted in accordance with the 40CFR Part 158 Test Guidelines:

Title of Study	Guideline Reference No.	Date Due
Developmental Neurotoxicity Study	870.6300	Sept. 30, 2003

- 8. You must make the following label changes:
 - a. Revise the EPA Registration Number to read "EPA Reg. No. 3125-587".

- b. Change the chemical-resistance category under "Personal Protective Equipment" to category "A" (currently given as "G").
 - c. Add the following grazing restriction to the directions for use on potato: "If more than 7 ounces/Acre is applied, allow at least 14 days between the last application and grazing."
 - d. Add the restriction "Not for Use in Greenhouses".
 - e. Include the restriction prohibiting ULV application under "Aerial Applications" in the "Spray Drift Reduction Management" section.
9. Please submit two (2) copies of your final printed label before you release the product for shipment. Refer to the A-79 enclosure for a further description of final printed labeling.

If you fail to satisfy any of the conditions imposed on this registration, e.g., you fail to submit the required information/data by the specified deadlines or the data submitted were not generated in accordance with the applicable test guidelines or you fail to make the required label changes, EPA may issue a notice to cancel this registration under FIFRA section 6(e).

You should note that, regardless of whether you satisfy all applicable conditions, this conditional registration will expire automatically on November 15, 2003. Sale and distribution of the subject product bearing labeling for the subject uses after November 15, 2003 will be illegal.

Finally, once the required data have been submitted and evaluated, EPA will entertain an application to amend the registration of the subject product to allow its unconditional use without any special restrictions on the duration of the registration.

A stamped copy of the label is enclosed for your records. If you have any questions regarding this action, please contact Susan Stanton of my team at (703) 305-5218.

Sincerely,

George T. LaRocca
Product Manager (13)
Insecticide Branch
Registration Division (7505C)

Enclosures

RESTRICTED USE PESTICIDE

Due to Toxicity to Fish and Aquatic Organisms

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.

Renounce® 20WP

Insecticide

For control of certain insects on listed field crops, vegetables, and tree and vine crops.

ACTIVE INGREDIENT:

Cyfluthrin
 Cyano(4-fluoro-3-phenoxyphenyl)methyl-
 3-(2,2-dichloroethenyl)-2,2-dimethyl-
 cyclopropanecarboxylate. 20%

INERT INGREDIENTS: 80%
 100%

US Patent No. 4,218,469

EPA Reg. No. 3125-XXX

Net Contents: 10 x 4.0 ounce PVA Packets / Re-closable Bag - 8 Re-closable Bags / 20 lb Case

STOP - Read the label before use.

Keep out of reach of children.

CAUTION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.

(If you do not understand the label, find someone to explain it to you in detail.)

**ACCEPTED
with COMMENTS
In EPA Letter Dated:**

OCT 25 2002

*Under the Federal Insecticide,
Fungicide, and Rodenticide Act,
as amended, for the pesticide
registered under EPA Reg. No.
3125-587*

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

Caution: Harmful if swallowed, absorbed through the skin or inhaled. Causes moderate eye irritation. Avoid breathing dust. Avoid contact with skin, eyes or clothing.

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 G on an EPA chemical-resistance category selection chart.

Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical resistant gloves (such as nitrile, butyl, neoprene, and/or barrier laminate)
- Shoes plus socks

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

Engineering controls statements: 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

User 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.

FIRST AID	
If in eyes	<ul style="list-style-type: none"> • Hold eye open and rinse slowly and gently with water for 15 to 20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
If swallowed	<ul style="list-style-type: none"> • Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give anything by mouth to an unconscious person.
If on skin or clothing	<ul style="list-style-type: none"> • Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15 to 20 minutes. • Call a poison control center or doctor for treatment advice.
If inhaled	<ul style="list-style-type: none"> • Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. • Call a poison control center or doctor for further treatment advice.
<p>In case of emergency call toll free the Bayer Kansas City Emergency Response Telephone No. 800-414-0244. Have a product container or label with you when calling a poison control center or doctor, or going for treatment.</p>	
<p>Note To Physician: ANTIDOTE - No specific antidote is available. Treat symptomatically. Published data indicate Vitamin E acetate can prevent and/or mitigate symptoms of paresthesia (skin irritation) caused by synthetic pyrethroids. Vomiting may cause aspiration pneumonia. In case of poisoning, it is requested that you also notify Bayer Corporation.</p>	

ENVIRONMENTAL HAZARDS

This pesticide is extremely toxic to fish and aquatic invertebrates. Do not apply directly to water, to areas where surface water is present or to inter-tidal areas below the mean high water mark. Do not apply when weather conditions favor drift from treated areas. Drift and runoff from treated areas may be hazardous to aquatic organisms in neighboring areas. Do not contaminate water when disposing of equipment wash-waters.

This product is highly toxic to bees exposed to direct contact or residues on blooming crops or weeds. Do not apply this product or allow it to drift to blooming crops if bees are visiting the treatment area. Additional information may be obtained by consulting your Cooperative Extension Service.

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 (such as nitrile, butyl, neoprene, and/or barrier laminate)
- Shoes plus socks

IMPORTANT: Read these entire Directions for Use and Conditions of Sale before using RENOUNCE 20WP Insecticide. If the terms for the Condition of Sale are unacceptable, return the unopened product immediately to an authorized dealer.

CONDITIONS OF SALE

THE DIRECTIONS ON THIS LABEL WERE DETERMINED THROUGH RESEARCH TO BE THE DIRECTIONS FOR CORRECT USE OF THIS PRODUCT. THIS PRODUCT HAS BEEN TESTED FOR A RANGE OF WEATHER CONDITIONS SIMILAR TO THOSE WEATHER CONDITIONS THAT ARE ORDINARY AND CUSTOMARILY EXPECTED IN THE GEOGRAPHIC AREA WHERE THE PRODUCT IS USED. INSUFFICIENT CONTROL OF PESTS AND/OR INJURY TO THE CROP TO WHICH THE PRODUCT IS APPLIED MAY RESULT FROM THE OCCURRENCE OF EXTRAORDINARY OR UNUSUAL WEATHER, OR FROM FAILURE TO FOLLOW LABEL DIRECTIONS. IN ADDITION, FAILURE TO FOLLOW LABEL DIRECTIONS MAY CAUSE INJURY TO OTHER CROPS, ANIMALS, MAN, OR THE ENVIRONMENT. BAYER OFFERS, AND THE BUYER ACCEPTS AND USES THIS PRODUCT SUBJECT TO THE CONDITIONS THAT EXTRAORDINARY OR UNUSUAL WEATHER, OR FAILURE TO FOLLOW LABEL DIRECTIONS ARE BEYOND THE CONTROL OF BAYER AND ARE THEREFORE, THE RESPONSIBILITY OF THE BUYER.

RENOUNCE 20WP may be used for control of a broad spectrum of insect pests by contact and ingestion. Because of this contact activity, good spray coverage of the crop is needed for the highest level of control.

PACKAGE HANDLING

RENOUNCE 20WP is packaged in 4.0 ounce Poly-Vinyl Acetate (PVA) packets. PVA packets are designed to dissolve in water and allow the contents to mix. These PVA packets represent a closed-handling system and must not be opened prior to adding to water in spray tank. Do not allow packets to become wet prior to adding to the spray tank. Do not handle with wet hands. Reseal outer bag to protect remaining packets from moisture.

MIXING

The enclosed packets containing RENOUNCE 20WP are water-soluble. To prepare the spray mixture, drop the required number of unopened packets into the spray tank while filling with water to the desired level. Operate the agitator while mixing. Depending on the water temperature and the degree of agitation, the packets should be completely dissolved within approximately 5 minutes from the time they were added to the water.

COMPATIBILITY / ORDER-OF-MIXING

RENOUNCE 20WP is physically and biologically compatible with many registered pesticides and fertilizers and micronutrients. Do not use PVA packets in a tank-mix with products that contain boron or release free chlorine. The resultant reaction of PVA and boron or free chlorine is a plastic that is not soluble in water or solvents. When considering mixing RENOUNCE 20WP with other pesticides, or with liquid fertilizer, first contact your supplier. For further information, contact your local Bayer representative. If your supplier and Bayer representative have no experience with the combination you are considering, you should conduct a test to determine physical compatibility. To determine physical compatibility, pour the recommended proportions of each chemical with the same proportion of water as will be present in the chemical supply tank into a suitable container, mix thoroughly and allow to stand for five minutes. If the combination remains mixed, or can be re-mixed readily, the mixture is considered physically compatible.

The proper mixing procedure for RENOUNCE 20WP alone or in tank-mix combinations with other pesticides is:

- 1) Fill the spray tank 1/4 to 1/3 full with clean water;
- 2) While recirculating and with the agitator running, add the required number of unopened RENOUNCE 20WP packets;
- 3) Allow enough time for thorough mixing. Depending on water temperature the packets should completely dissolve in 5 to 10 minutes;
- 4) Continue to fill spray tank with water until 1/2 full;
- 5) If applicable, add remaining tank mix components in the following order: wettable powders (WP) or wettable granules (WG), flowables (FL or SC), and emulsifiable concentrates (EC). Ensure good agitation as each component is added. Do not add a tank mix component until the previous component is thoroughly mixed;
- 6) Fill spray tank to desired level and maintain constant agitation to ensure uniformity of spray mixture.

INSECT RESISTANCE STATEMENT

Some insects are known to develop resistance to products used repeatedly for control. Because the development of resistance cannot be predicted, the use of this product should conform to resistance management strategies established for the use area. Consult your local or State agricultural authorities for details. If resistance to this product develops in your area, this product alone may not continue to provide adequate control of resistant pests. If poor performance cannot be attributed to improper application or rate, extreme weather conditions, etc., a resistant strain of insect may be present. If you experience difficulty with control and resistance is a reasonable cause, immediately consult your local Bayer representative, agricultural advisor or Cooperative Extension Service agent for the best alternative method of control in your area and insect resistance management strategies in your area.

APPLICATION GUIDELINES

Foliar Application

Foliar applications may be made using properly calibrated ground sprayers, fixed- or rotary-winged aircraft or through properly designed, sprinkler-type, chemigation equipment. See Chemigation Application directions below. Thorough and uniform coverage of plants, with direct contact of the spray mixture to the target pests, is required for satisfactory control.

Avoid application procedures where thorough coverage of plant is not possible. Applications made with less than thorough coverage may result in slower activity and/or less overall control from a single application than an application made with higher water volumes. See general, Spray Drift Reduction Management, section below for application guidelines on all application methods.

Ground applications should be made in a minimum of **10 gallons/A**.

Aerial applications should be made in a minimum of **2 gallons/A**, however 5 gallons/A are recommended. See crop specific gallonage requirements. Do not apply as Ultra-Low Volume (ULV). Aerial applications made to dense canopies may not provide sufficient coverage of lower leaves to provide pest control. Higher labeled rates of RENOUNCE 20WP may be necessary for aerial applications.

Chemigation Application

Applications should be made as concentrated as possible. For best results, apply at 100% input/travel speed for center pivots, or 0.10 inch (2,716 gallons) up to 0.15 inch (4,073 gallons) of water/A for other systems. Higher labeled rates of RENOUNCE 20WP may be necessary for chemigation applications.

Types of Irrigation Systems: RENOUNCE 20WP may be applied through sprinkler type irrigation systems. These types include; center pivot, lateral move, or solid set irrigation systems. Do not apply RENOUNCE 20WP through any other type of irrigation system.

Injection for Chemigation: Inject the specified dosage of RENOUNCE 20WP into the irrigation main, water stream: (1) after the filtration system; (2) through a constant flow, metering device; (3) into the center of the main line flow via a pitot tube or equivalent; (4) at a point ahead of at least

one, right-angle turn in main stream flow such that thorough mixing with the irrigation water is ensured.

Uniform Water Distribution and System Calibration: The irrigation system must provide uniform distribution of RENOUNCE 20WP treated water. Crop injury, lack of effectiveness, or illegal pesticide residues in or on the crop can result from non-uniform distribution. The system must be calibrated to uniformly distribute the rates specified for chemigation application to specific crops. If you have questions about calibration, contact your local Bayer representative, Cooperative Extension Service agent, equipment manufacturers, or other experts.

Chemigation Monitoring: 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.

Required Injection and Sprinkler System Safety Devices: 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 back-flow. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection. 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/engine stops, or in cases where there is no water pump, when water pressure decreases to the point where pesticide distribution is adversely affected. Injection systems must use a metering pump or equivalent, such as a positive displacement injection pump (e.g., diaphragm pump, venturi injection) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

Public Water Systems: DO NOT APPLY RENOUNCE 20WP THROUGH ANY IRRIGATION SYSTEM, PHYSICALLY CONNECTED TO A PUBLIC WATER SYSTEM. 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. RENOUNCE 20WP may be applied through any of the recommended types of irrigation systems which may be supplied by a public water system ONLY IF the water from the public water system is 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. Before beginning chemigation, always make sure that the air gap exists and that there is no blockage of the overflow of the reservoir tank. Any irrigation system using water supplied from a public water system must also meet the same safety requirements as for any other type of water supply and include the same safety devices.

Chemical Supply Tank Dilution and Agitation: For injection of RENOUNCE 20WP use a chemical supply tank for pre-mixing RENOUNCE 20WP with water before injecting

mixture into the irrigation line. Dilution ratio should be at least 0.5 gal. water to 1 lbs RENOUNCE 20WP. It is necessary to provide constant mechanical or hydraulic agitation to maintain RENOUNCE 20WP in suspension in the chemical supply tank during the entire period of application. Determine the required amounts of RENOUNCE 20WP and water to mix in the tank. The amount of RENOUNCE 20WP needed equals the number of ounces of RENOUNCE 20WP to be applied per acre multiplied by the number of acres to be chemigated. The amount of suspension/mixture needed equals the gallons of suspension delivered per hour by the injection pump, multiplied by the number of hours chemigation will take place.

Cleaning the Chemical Injection System: In order to apply pesticides accurately, the chemical injection system must be kept clean; free from chemical or fertilizer residues and sediments. Refer to your owner's manual or ask your equipment supplier for the cleaning procedure for your injection system.

Flushing the Irrigation System: At the end of the application period, allow time to flush the pesticide through all nozzles before turning off irrigation water. To ensure the lines are flushed and free of pesticides, a dye indicator may be injected into the lines to mark the end of the application period.

Center-Pivot and Automatic-Move Linear Systems: Inject the specified dosage per acre continuously for one complete revolution (center pivot) or move of the system. The system should be run at maximum speed. It is recommended that nozzles in the immediate area of control panels, chemical supply tanks, pumps and system safety devices are plugged to prevent chemical contamination of these areas. The use of END GUNS is NOT recommended. End guns that provide uneven distribution of treated water can result in less effectiveness or illegal pesticide residues in or on the crop.

Solid Set and Manually Controlled Linear Systems: Injection should be during the last 30 to 60 minutes of a regular irrigation period or as a separate 30 to 60 minute application not associated with a regular irrigation.

OBSERVE THE FOLLOWING PRECAUTIONS WHEN SPRAYING IN THE VICINITY OF AQUATIC AREAS SUCH AS LAKES; RESERVOIRS; RIVERS; PERMANENT STREAMS, MARSHES OR NATURAL PONDS; ESTUARIES AND COMMERCIAL FISH FARM PONDS.

SPRAY DRIFT REDUCTION MANAGEMENT

Do not apply when wind speed favors drift beyond the area intended for treatment. The interaction of many equipment and weather related factors determine the potential for spray drift. The applicator is responsible for considering all of these factors when making application decisions. Avoiding spray drift is the responsibility of the applicator.

Buffer Zone Requirements:

Ground, Foliar Applications: Do not apply by ground within 25 feet of lakes; reservoirs; rivers; permanent streams, marshes or natural ponds; estuaries and commercial fish farm ponds.

Aerial Applications: Do not apply by air within 150 feet of lakes; reservoirs; rivers; permanent streams, marshes or natural ponds; estuaries and commercial fish farm ponds. The spray boom should be mounted on the aircraft so as to minimize drift caused by wing tip vortices. The minimum practical boom length should be used, and must not exceed 75% of the wingspan or rotor diameter.

Importance of Droplet Size: An important factor influencing drift is droplet size. Small droplets (<150 to 200 microns) drift to a greater extent than large droplets. Within typical equipment specifications, applications should be made to deliver the largest droplet spectrum that provides sufficient control and coverage. Formation of very small droplets may be minimized by appropriate nozzle selection, by orienting nozzles away from the air stream as much as possible and by avoiding excessive spray boom pressure. Spray should be released at the lowest possible height consistent with good pest control and flight safety. Applications more than 10 feet above the crop canopy should be avoided.

Low humidity and high temperatures increase the evaporation rate of spray droplets and therefore the likelihood of spray drift to aquatic areas. Avoid spraying during conditions of low humidity and/or high temperature.

Wind Speed Restrictions: Drift potential increases at wind speeds of less than 3 mph (due to inversion potential) or more than 10 mph. However, many factors, including droplet size, canopy and equipment specifications determine drift potential at any given wind speed. Do not apply when winds are greater than 15 mph and avoid gusty and windless conditions. Avoiding applications when wind direction is toward the aquatic area can reduce risk of exposure to sensitive aquatic areas.

Restrictions During Temperature Inversions: Do not make aerial or ground applications during temperature inversions. Drift potential is high during temperature inversions. Temperature inversions restrict vertical air mixing, which causes small, suspended droplets to remain close to the ground and move laterally in a concentrated cloud. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog. However, if fog is not present, the movement of smoke from a ground source can also identify inversions. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical mixing.

RUNOFF MANAGEMENT

Do not cultivate within 10 feet of the aquatic areas to allow growth of a vegetative filter strip. When used on erodible soils, best management practices for minimizing runoff should be employed. Consult your local Soil Conservation Service for recommendations in your use area. Do not apply if soil is saturated with water or under conditions that favor runoff. Do not apply in the rain.

FIELD CROPS

RECOMMENDED APPLICATIONS – RENOUNCE 20WP

For all crops, apply specific dosage of RENOUNCE 20WP at early threshold for target pest, as population begins to develop. Degree of control or suppression of additional labeled pests will be determined, in part by the stage of pest development at application and infestation level of those pests.

Application timing should be based on local economic thresholds. Use the higher rates for moderate to heavy insect pressure. Lower rates are generally adequate for low to moderate insect pressure but require careful scouting and may require more frequent application. RENOUNCE 20WP is a wettable powder formulation and is active by contact and ingestion. Thorough coverage is necessary for optimum performance.

See application recommendations at the beginning of each section: **FIELD CROPS; VEGETABLE CROPS; TREE and VINE CROPS.**

ALFALFA		
PESTS CONTROLLED	Rate ounces/Acre	Rate lbs AI/Acre
Alfalfa looper Cutworms Green cloverworm Meadow spittlebug Potato leafhopper	1.0 – 2.0	0.013 – 0.025
Alfalfa caterpillar Alfalfa plant bug Alfalfa webworm Alfalfa weevil Aster leafhopper Beet armyworm (1 st and 2 nd instar) Corn earworm Egyptian alfalfa weevil Fall armyworm (1 st and 2 nd instar) Lygus bug Tarnished plant bug	2.0 – 3.5	0.025 – 0.044
Blotch leafminer Grasshoppers Western yellowstriped armyworm (1 st and 2 nd instar)	2.5 – 3.5	0.031 – 0.044
PESTS SUPPRESSED		
Blue pea aphid Pea aphid Whitefly	3.5	0.044
<p>Notes: Pre-Harvest Interval (PHI) or Pre-Grazing Interval: 7 days. Maximum RENOUNCE 20WP allowed per cutting: 3.5 ounces/A (0.044 lbs AI/Acre). Maximum RENOUNCE 20WP allowed per crop season: 14.0 ounces/A (0.175 lbs AI/Acre). Maximum number of applications per season: 4. Minimum application volume (water): 10.0 GPA – ground, 2.0 GPA – aerial application. Due to potential injury to bees, do not apply to alfalfa grown for seed. Do not apply to mixed stands with intentionally-grown forage grasses. See CHEMIGATION statement in <i>Application Guidelines</i> section of this label.</p>		

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VEGETABLE CROPS

RECOMMENDED APPLICATIONS – RENOUNCE 20WP

For all crops, apply specific dosage of RENOUNCE 20WP at early threshold for target pest as population begins to develop. Degree of control or suppression of additional labeled pests will be determined, in part, by the stage of pest development at application and infestation level of those pests.

Application timing should be based on local economic thresholds. Use the higher rates for moderate to heavy insect pressure. Lower rates are adequate for low to moderate insect pressure but require careful scouting and may require more frequent application.

RENOUNCE 20WP is a wettable powder formulation and is active by contact and ingestion. Thorough coverage is necessary for optimum performance.

See application recommendations at the beginning of each section: **FIELD CROPS; VEGETABLE CROPS; TREE and VINE CROPS.**

CARROT

PESTS CONTROLLED	Rate ounces/Acre	Rate lbs AI/Acre
Aster leafhopper	2.0	0.025
Carrot weevil	2.0 – 3.5	0.025 – 0.044
Cutworms	3.5	0.044

Notes: Pre-Harvest Interval (PHI): **0 day.**

Maximum RENOUNCE 20WP allowed per 7-day interval: **3.5 ounces/A (0.044 lbs AI/Acre).**

Maximum RENOUNCE 20WP allowed per crop season: **17.5 ounces/A (0.220 lbs AI/Acre).**

Maximum number of applications: **5.**

Minimum application volume (water): 10.0 GPA – ground, 2.0 GPA – aerial application.

Due to potential injury to bees, do not apply to carrot grown for seed.

See CHEMIGATION statement in *Application Guidelines* section of this label.

COLE CROPS

Broccoli, Chinese (gai lon) broccoli, Brussels sprouts, Cabbage, Chinese (napa) cabbage, Chinese mustard (gai choy) cabbage, Cauliflower, Cavalo broccoli, Kohlrabi, Mustard greens

PESTS CONTROLLED	Rate ounces/Acre	Rate lbs AI/Acre
Cutworms Potato leafhopper Thrips	1.0 – 2.0	0.013 – 0.025
Alfalfa looper Cabbage looper Cabbage web worm Imported cabbageworm Southern cabbageworm	2.0 – 3.0	0.025 – 0.038
Beet armyworm (1 st and 2 nd instar) Cabbage flea beetle Corn earworm Diamondback moth (larvae)* Fall armyworm (1 st and 2 nd instar) Grasshoppers Japanese beetle (adult) Lygus bug Meadow spittlebug Southern armyworm (1 st and 2 nd instar) Stink bugs Tarnished plant bug* Vegetable weevil (adult) Yellowstriped armyworm	3.0 – 3.5	0.038 – 0.044
PESTS SUPPRESSED		
Whitefly*	3.5	0.044

Notes: Pre-Harvest Interval (PHI): **0 day.**

Maximum RENOUNCE 20WP allowed per 7-day interval: **3.5 ounces/A (0.044 lbs AI/Acre).**

Maximum RENOUNCE 20WP allowed per crop season: **14.0 ounces/A (0.175 lbs AI/Acre).**

Maximum number of applications: **4.**

Minimum application volume (water): 10 GPA – ground, 5 GPA – aerial application.

Due to potential injury to bees, do not apply to cole crops grown for seed.

See CHEMIGATION statement in *Application Guidelines* section of this label.

*See INSECT RESISTANCE statement elsewhere on this label.

LETTUCE		
Head lettuce, Leaf lettuce		
PESTS CONTROLLED	Rate ounces/Acre	Rate lbs AI/Acre
Cutworms Potato leafhopper Thrips	1.0 – 2.0	0.013 – 0.025
Alfalfa looper Cabbage looper Green cloverworm Imported cabbageworm Saltmarsh caterpillar	2.0 – 3.0	0.025 – 0.038
Beet armyworm (1 st and 2 nd instar) Corn earworm Diamondback moth (larvae)* European corn borer Fall armyworm (1 st and 2 nd instar) Flea beetles Grasshoppers Japanese beetle (adult) Leafhoppers Lygus bug Meadow spittlebug Southern armyworm (1 st and 2 nd instar) Stink bugs Tarnished plant bug* Vegetable weevil (adult) Yellowstriped armyworm	3.0 – 3.5	0.038 – 0.044
PESTS SUPPRESSED		
Whitefly	3.5	0.044
<p>Notes: Pre-Harvest Interval (PHI): 0 day. Maximum RENOUNCE 20WP allowed per 7-day interval: 3.5 ounces/A (0.044 lbs AI/Acre). Maximum RENOUNCE 20WP allowed per crop season: 14.0 ounces/A (0.175 lbs AI/Acre). Maximum number of applications: 4. Minimum application volume (water): 10 GPA – ground, 5 GPA – aerial application. Due to potential injury to bees, do not apply to lettuce grown for seed. See CHEMIGATION statement in <i>Application Guidelines</i> section of this label. *See INSECT RESISTANCE statement elsewhere on this label.</p>		

PEA, DRY		
Pigeon pea, Chick pea, Garbonzo bean, Lentil		
PESTS CONTROLLED	Rate ounces/Acre	Rate lbs AI/Acre
Cutworms Potato leafhopper	1.0 – 2.0	0.013 – 0.025
Stink bugs	2.0 – 3.0	0.025 – 0.038
Lygus bug Soybean looper* Tarnished plant bug Yellowstriped armyworm	3.0 – 4.0	0.038 – 0.050
PESTS SUPPRESSED		
Pea aphid	4.0	0.050
<p>Notes: Pre-Harvest Interval (PHI): 7 days (minimum time between final application and threshing for seed). Maximum RENOUNCE 20WP allowed per 14-day interval: 4.0 ounces/A (0.050 lbs AI/Acre). Maximum RENOUNCE 20WP allowed per crop season: 8.0 ounces/A (0.100 lbs AI/Acre). Maximum number of applications: 2. Minimum application volume (water): 10.0 GPA – ground, 2.0 GPA – aerial application. Do not feed treated vines or hay to livestock. See CHEMIGATION statement in <i>Application Guidelines</i> section of this label. *See INSECT RESISTANCE statement elsewhere on this label.</p>		

PEA, SOUTHERN		
PESTS CONTROLLED	Rate ounces/Acre	Rate lbs AI/Acre
Cutworms Potato leafhopper Thrips	1.0 – 2.0	0.013 – 0.025
Beet armyworm (1 st + 2 nd instars) Corn earworm Cowpea curculio Fall armyworm (1 st + 2 nd instars) Grasshoppers Lygus bug Tarnished plant bug Southern armyworm Stink bugs Yellowstriped armyworm	2.0 – 2.6	0.025 – 0.033
<p>Notes: Pre-Harvest Interval (PHI): 3 days. Maximum RENOUNCE 20WP allowed per 5-day interval: 2.6 ounces/A (0.033 lbs AI/Acre). Maximum RENOUNCE 20WP allowed per crop season: 13.0 ounces/A (0.163 lbs AI/Acre). Maximum number of applications: 5. Minimum application volume (water): 10.0 GPA – ground, 2.0 GPA – aerial application. Due to potential injury to bees, do not apply to Southern peas grown for seed. Do not feed treated vines or hay to livestock. Do not apply to cowpeas or Southern pea varieties grown for livestock feed. See CHEMIGATION statement in <i>Application Guidelines</i> section of this label. *See INSECT RESISTANCE statement elsewhere on this label.</p>		

PEPPER		
PESTS CONTROLLED	Rate ounces/Acre	Rate lbs AI/Acre
Celery leaf-tier Corn earworm European corn borer Garden webworm Potato leafhopper Stink bugs	2.0 – 3.5	0.025 – 0.044
Beet armyworm (1 st and 2 nd instar) Cabbage looper Thrips (except <i>Thrips palmi</i>) Western yellowstriped armyworm (1 st and 2 nd instar)	2.6 – 3.5	0.033 – 0.044
Flea beetles	3.5	0.044
PESTS SUPPRESSED		
Leafminers Pepper weevil* Whitefly	3.5	0.044
<p>Notes: Pre-Harvest Interval (PHI): 7 days. Maximum RENOUNCE 20WP allowed per 7-day interval: 3.5 ounces/A (0.044 lbs AI/Acre). Maximum RENOUNCE 20WP allowed per crop season: 21.0 ounces/A (0.263 lbs AI/Acre). Maximum number of applications: 6. Minimum application volume (water): 10.0 GPA – ground, 2.0 GPA – aerial application. See CHEMIGATION statement in <i>Application Guidelines</i> section of this label. *See INSECT RESISTANCE statement elsewhere on this label.</p>		

POTATO		
PESTS CONTROLLED	Rate ounces/Acre	Rate lbs AI/Acre
Cutworms Potato leafhopper	1.0 – 2.0	0.013 – 0.025
Cabbage looper Colorado potato beetle* European corn borer Flea beetles Potato tuberworm Potato psyllid Sweetpotato weevil (adults) Tarnished plant bug*	2.0 – 3.5	0.025 – 0.044
PESTS SUPPRESSED		
Aphids	3.5	0.044
<p>Notes: Pre-Harvest Interval (PHI): 0 day. Maximum RENOUNCE 20WP allowed per 5-day interval: 3.5 ounces/A (0.044 lbs AI/Acre). Maximum RENOUNCE 20WP allowed per crop season: 21.0 ounces/A (0.263 lbs AI/Acre). Maximum number of applications: 6. Minimum application volume (water): 10.0 GPA – ground; 2.0 GPA – aerial application. See CHEMIGATION statement in <i>Application Guidelines</i> section of this label. *See INSECT RESISTANCE statement elsewhere on this label.</p>		

RADISH		
PESTS CONTROLLED	Rate ounces/Acre	Rate lbs AI/Acre
Cutworm Flea beetles	2.0 – 3.5	0.025 – 0.044
<p>Notes: Pre-Harvest Interval (PHI): 0 day. Maximum RENOUNCE 20WP allowed per 7-day interval: 3.5 ounces/A (0.044 lbs AI/Acre). Maximum RENOUNCE 20WP allowed per crop season: 14.0 ounces/A (0.175 lbs AI/Acre). Maximum number of applications: 4. Minimum application volume (water): 10.0 GPA – ground; 2.0 GPA – aerial application. Do not harvest radish tops (leaves) for human consumption. Due to potential injury to bees, do not apply to radish grown for seed. See CHEMIGATION statement in <i>Application Guidelines</i> section of this label.</p>		

SWEET CORN		
PESTS CONTROLLED	Rate ounces/Acre	Rate lbs AI/Acre
Black cutworm Granulate cutworm Sandhill cutworm	1.0 – 2.0	0.013 – 0.025
Amyworm Chinch bug Corn earworm Corn rootworm (adult) Corn silk fly European corn borer Flea beetles Southern corn leaf beetle Southwestern corn borer Stalk borer Western bean cutworm	2.0 – 3.5	0.025 – 0.044
Grasshoppers	2.5 – 3.5	0.031 – 0.044
Fall armyworm (1 st and 2 nd instar)	3.5	0.044
<p>Notes: Pre-Harvest Interval (PHI): 0 day. Maximum RENOUNCE 20WP allowed per 7-day interval: 3.5 ounces/A (0.044 lbs AI/Acre). Maximum RENOUNCE 20WP allowed per crop season: 35.0 ounces/A (0.440 lbs AI/Acre). Maximum number of applications: 10. Minimum application volume (water): 10.0 GPA – ground; 2.0 – aerial application. See CHEMIGATION statement in <i>Application Guidelines</i> section of this label.</p>		

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TOMATO		
PESTS CONTROLLED	Rate ounces/Acre	Rate lbs AI/Acre
Colorado potato beetle* Dipterous leafminer European corn borer Potato aphid Stink bugs Tomato fruitworm (corn earworm) Tomato hornworm	2.0 – 3.5	0.025 – 0.044
Beet armyworm (1 st and 2 nd instar) Cabbage looper Southern armyworm (1 st and 2 nd instar) Tarnished plant bug* Tomato pinworm Variegated cutworm Western flower thrips Western yellowstriped armyworm (1 st and 2 nd instar)	2.6 – 3.5	0.033 – 0.044
Flea beetles	3.5	0.044
PESTS SUPPRESSED		
Whitefly	3.5	0.044
Notes: Pre-Harvest Interval (PHI): 0 day. Maximum RENOUNCE 20WP allowed per 7-day interval: 3.5 ounces/A (0.044 lbs AI/Acre). Maximum RENOUNCE 20WP allowed per crop season: 21.0 ounces/A (0.263 lbs AI/Acre). Maximum number of applications: 6. Minimum application volume (water): 10.0 GPA – ground, 2.0 GPA – aerial application. See CHEMIGATION statement in <i>Application Guidelines</i> section of this label. *See INSECT RESISTANCE statement elsewhere on this label.		

TREE and VINE CROPS

RECOMMENDED APPLICATIONS – RENOUNCE 20WP

For tree and vine crops, application rates should be based on the Tree or Vine, Row-Volume/Density concept for either dilute or concentrate applications. For determining product required in concentrate applications, first determine amount of spray volume per acre necessary to spray-to-drip in a dilute application in a grove, yard, vineyard, or orchard. Based on this volume, calculate required formulation quantities per acre. Apply equivalent amount per acre for concentrate sprays. For orchard/vineyard airblast applications, do not spray above trees/vines and turn off outward pointing nozzles at row ends and outer rows.

RENOUNCE 20WP is a wettable powder formulation and is active by contact and ingestion. Thorough coverage of foliage and fruit is necessary for optimum performance.

For all crops, apply specific dosage of RENOUNCE 20WP at early threshold for target pest, as population begins to develop. Degree of control or suppression of additional labeled pests will be determined, in part by the stage of pest development at application and infestation level of those pests.

Application timing should be based on local economic thresholds. Use the higher rates for moderate to heavy insect pressure. Lower rates are generally adequate for low to moderate insect pressure but require careful scouting and may require more frequent application. See application recommendations at the beginning of each section: **FIELD CROPS; VEGETABLE CROPS; TREE and VINE CROPS.**

CITRUS (California and Arizona, Only)

Orange (sweet and sour), Grapefruit, Lemon, Lime, Calamondin, Citrus citron, Citrus hybrids (includes chironja, tangelo, and tanger), Kumquat, Mandarin (tangerine), Pummelo, Satsuma mandarin

PESTS CONTROLLED	Concentrate Rate ounces/Acre (in 100 - 250 GPA)	Dilute Rate ounces/100 Gallons (in 250 GPA)
Glassywinged sharpshooter	2.0 – 4.0	0.8 – 1.6
Foliar feeding cutworms		
Fuller rose beetle (larvae and adults on foliage)	3.0 – 4.0	1.2 – 1.6
Grasshoppers		
Root-weevil complex (larvae and adult on foliage)		
Citrus thrips	8.0	3.2

Notes: Pre-Harvest Interval (PHI): **0 day.**

Maximum RENOUNCE 20WP allowed per 7-day interval: **8.0 ounces/A (0.10 lbs AI/Acre).**

Maximum RENOUNCE 20WP allowed per crop season: **8.0 ounces/A (0.10 lbs AI/Acre).**

Maximum number of applications: **4** (at low rate).

Minimum application volume (water): 25 GPA – ground, 25 GPA – aerial application.

Maximum concentrate rate is based on canopy size requiring 250 gallons per acre, if sprayed to drip.

For concentrate spray application based on Row-Volume/Density, do not apply less than 1.3 ounces/A.

HOP

PESTS CONTROLLED	Concentrate Rate ounces/Acre (in 100 - 250 GPA)	Dilute Rate ounces/100 Gallons (in 250 GPA)
Hop aphid		
Hop flea beetle	4.0	1.6
Hop looper		
Hop plant bug		

Notes: Pre-Harvest Interval (PHI): **7 days.**

Maximum RENOUNCE 20WP allowed per 14-day interval: **4.0 ounces/A (0.050 lbs AI/Acre).**

Maximum RENOUNCE 20WP allowed per crop season: **20.0 ounces/A (0.250 lbs AI/Acre).**

Maximum number of applications: **5.**

Minimum application volume (water): 25 GPA – ground, 25 GPA – aerial application.

Maximum concentrate rate is based on canopy size requiring 250 gallons per acre, if sprayed to drip.

For concentrate spray application based on Row-Volume/Density, do not apply less than 1.3 ounces/A.

CROP ROTATION STATEMENT

Treated areas may be replanted with any crop as soon as practical after last application.

STORAGE AND DISPOSAL

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

Pesticide Storage: Store in a cool, dry place and away from open flame and extreme heat. Store in such a manner as to prevent cross contamination with other pesticides, fertilizers, food, and feed. Store in original container and out of the reach of children, preferably in a locked storage area.

Handle and open case and poly-bag container in a manner as to prevent spillage. Do not attempt to open PVA packets. If the container is leaking or material spilled for any reason or cause, carefully sweep material into a pile. Refer to Precautionary Statements on label for hazards associated with the handling of this material. Do not walk through spilled material. Dispose of as directed for pesticides above. In spill or leak incidents, keep unauthorized people away. You may contact the Bayer Emergency Response Team for decontamination procedures or any other assistance that may be necessary. Bayer Kansas City Emergency Response Telephone No. is 800-414-0244 or contact Chemtrec at 800-424-9300.

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 dispose of in a sanitary landfill or, incineration or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

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