

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

APR 5 2000

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

John S. Thornton, Director
Product Registrations and Regulatory Affairs
Bayer Corporation, Agriculture Division
8400 Hawthorn Road
P.O. Box 4913
Kansas City, MO 64120-0013

Subject: Amendment - Addition of Sprinkler Irrigation
Application Use for Potatoes to Label
Di-Syston 8 Emulsifiable Systemic Insecticide
EPA Registration No. 3125-307
Your submission dated January 10, 2000

Dear Mr. Thornton:

The labeling referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, is acceptable, subject to the comments listed below. A stamped copy of the label is enclosed for your records. Submit two copies of the finished labeling before you release the product for shipment.

1. EPA will issue a PR Notice revising first aid statements in the near future. The following are revised statements that will be required for products placed in toxicity category III and above. You may wish to incorporate these statements on your labeling at this time.

"IF SWALLOWED: Call a poison control center or doctor immediately for treatment advice. Have a 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 a doctor.

IF ON SKIN OR CLOTHING: Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eyes. Call a poison control center for treatment advice.

IF INHALED: 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.

2. In the "To Physician" section of your label, please add the following information to this section: Company telephone number to specific medical personnel who can provide specialized medical advice.

7525C
SPRINT

3. Under your "ENVIRONMENTAL HAZARDS" section, please change the statement "Do not contaminate water..." to read "Do not contaminate water when cleaning equipment or when disposing of equipment washwaters."

If you have any questions, please call Dr. William Sproat of my team at 703-308-8587.

Sincerely,



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

Enclosure

cc: Christine Scheltema, SRRD

RESTRICTED USE PESTICIDE

Due to acute human oral, dermal, and inhalation toxicity

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.

Di-System® 8

ACCEPTED
with COMMENTS
for EPA Label Referral

APR 15 2000

Emulsifiable Systemic Insecticide

8 pound per Gallon Formulation

Low Odor Formula

Formulated for Effective Soil Treatment.

ACTIVE INGREDIENT:

Disulfoton, *O,O*-Diethyl *S*-[2-(ethylthio)ethyl]-phosphorodithioate 85%

INERT INGREDIENTS: 15%
100%

Contains 8 lbs. *O,O*-Diethyl *S*-[2-(ethylthio)ethyl] phosphorodithioate per gallon.

EPA Reg. No. 3125-307 NET CONTENTS: ___ GALLONS

STOP - Read the label before use.
Keep out of reach of children.

POISON

DANGER



PELIGRO

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.)

STATEMENTS OF PRACTICAL TREATMENT

Organophosphate

In case of poisoning, call a physician immediately. Have patient lie down and keep quiet. If **swallowed**, vomiting should be induced. Administer water freely and induce vomiting by giving one dose (1/2 oz or 15 mL) of syrup of ipecac. If vomiting does not occur within 10 to 20 minutes, administer second dose. If syrup of ipecac is not available, induce vomiting by sticking finger down throat. Repeat until vomit fluid is clear. Never give anything by mouth to an unconscious person. Professional medical assistance should be secured immediately. If **on skin**, remove contaminated clothing and wash skin immediately with soap and warm water. Get medical attention immediately. If **in eyes**, wash with plenty of flowing water. Get medical attention

immediately.

To Physician: ANTIDOTE - Administer atropine sulfate in large therapeutic doses. Repeat as necessary to the point of tolerance. 2-PAM is also antidotal and may be administered, but only in conjunction with atropine.

Compound inhibits cholinesterase resulting in stimulation of the central nervous system, the parasympathetic nervous system, and the somatic motor nerves. Do not give morphine. Watch for pulmonary edema, which may develop in serious cases of poisoning even after 12 hours. At first sign of pulmonary edema, the patient should be placed in an oxygen tent and treated symptomatically.

SYMPTOMS OF POISONING: A sense of "tightness" in the chest. Sweating. Contracted pupils. Stomach pains. Vomiting and diarrhea.

PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS

DANGER: Poisonous if swallowed, inhaled, or absorbed through the skin. Rapidly absorbed through the skin. Do not get in eyes, on skin, or on clothing. Do not breathe fumes or spray mist.

Do not contaminate feed or food.

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 F on an EPA chemical-resistance category selection chart.

Applicators and other handlers must wear:

- Coveralls over long-sleeved shirt and long pants
- Chemical-resistant gloves, such as barrier laminate or butyl rubber or nitrile rubber or viton
- Chemical-resistant footwear plus socks
- Protective eyewear
- Chemical-resistant headgear for overhead exposure
- Chemical-resistant apron when cleaning equipment, mixing or loading
- For exposures in enclosed areas, a respirator with either an organic vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G)
- For exposures outdoors, dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C)

Fungicide, and Rodenticide Act is recorded for the pesticide registered under EPA Reg. No.

3125-307

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this products concentrate. Do not reuse them. 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:

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 fish and wildlife. For terrestrial uses, do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark. Drift and runoff from treated areas may be hazardous to fish in neighboring areas. Do not contaminate water by disposing of equipment washwaters. Cover or incorporate spills.

This pesticide is toxic to bees exposed to direct application. Applications should be timed to coincide with periods of minimum bee activity, usually between late evening and early morning.

RESTRICTIONS

Not for home garden use. Do not use on other crops used for food or forage. Use only according to label directions. Application at rates above those shown may result in illegal crop residues. Do not treat food crops grown in the greenhouse. Do not apply in any manner not specified on the label.

DIRECTIONS FOR USE

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Do not apply this product in 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), notification to workers, 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 48 hours.

The REI is 72 hours in outdoor areas where average rainfall is less than 25 inches a year.

Exception: If the product is soil-injected or soil-incorporated, the Worker Protection Standard, under certain circumstances, allows workers to enter the treated area if there will be no contact with anything that has been treated.

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 over long-sleeved shirt and long pants
- Chemical-resistant gloves, such as barrier laminate or butyl rubber, or nitrile rubber or viton
- Chemical-resistant footwear plus socks
- Protective eyewear
- Chemical-resistant headgear for overhead exposure

Notify workers of the application by warning them orally and by posting warning signs at entrances to treated areas.

IMPORTANT: Read these entire Directions and Conditions of Sale before using DI-SYSTON 8 emulsifiable systemic insecticide.

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 CUSTOMARY 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.

DI-SYSTON systemic insecticide enters the plant by absorption through the roots. The insecticide placed near the roots is translocated to all parts of the plant and kills sucking insects feeding on the plant.

The formulation of DI-SYSTON 8 is highly versatile and offers many forms of application. It can be sprayed or injected into the furrow at planting time or soil injected as a side-dress treatment at planting time or after plants become established. Applications may be made in water emulsion, with liquid fertilizer, or undiluted in specially designed equipment for low volume soil injection but never on crops for which less than 1 quart DI-SYSTON 8 per acre is the recommended dosage. Time and method of application and limits for use are discussed in detail for each specific crop under "Remarks" below.

RECOMMENDED APPLICATIONS

IMPORTANT: When used on cotton, dry beans, tomatoes, or lettuce at the maximum recommended rates under adverse conditions such as extremely cool or wet or extremely dry weather, DI-SYSTON may cause some delay in emergence, stunting of seedlings, or reduction of stand. Such damage may be more pronounced in light sandy soils. Plant injury may also occur or may be enhanced when herbicides are used in conjunction with DI-SYSTON. Refer to herbicide labels for special precautions.

MIXING WITH LIQUID FERTILIZER OR OTHER PESTICIDES: DI-SYSTON 8 is physically compatible with many registered pesticides and liquid fertilizers. When considering mixing DI-SYSTON 8 with other pesticides or with liquid fertilizer, first contact your dealer. For further information, contact your Bayer representative. If your dealer and Bayer representative have no experience with the combination you are considering, you should conduct tests to determine physical compatibility. A compatibility test should be conducted with each batch of liquid fertilizer because of the variability of these fertilizers. When mixing with certain high phosphorous liquid fertilizers, the use of COMPEX compatibility agent (or other equivalent agents) at 1 quart per 100 gallons of mixture may be needed to assure proper mixing.

WHEN CONDUCTING COMPATIBILITY TESTS, WEAR ALL PROTECTIVE GEAR AND OBSERVE ALL PRECAUTIONS LISTED IN THE PRECAUTIONARY STATEMENTS SECTION OF THIS LABEL.

To determine physical compatibility, pour the recommended proportions of each chemical with the proportion of water which will be present in the spray tank or chemical supply tank into a suitable container. Mix thoroughly and allow to stand for five minutes. If the combination remains mixed, or can be remixed readily, the mixture is considered physically compatible. When mixing with wettable powder or dry flowable formulations, add and disperse these first, then add liquid pesticides. If application will be through an irrigation system, conduct another compatibility test at the concentrations which will be present in the irrigation lines. If there is any separation which cannot be remixed readily, Bayer recommends that the combination not be used. Combinations should be kept agitated and should be applied immediately. Do not allow combinations to sit for prolonged periods in a spray or chemical supply tank or irrigation line.

USE IN CHEMIGATION SYSTEMS

DI-SYSTON 8 may be applied through irrigation systems only on those crops listed under Recommended Applications where application through irrigation systems is recommended.

Types of Irrigation Systems: Apply DI-SYSTON 8 only through sprinkler, including center pivot, lateral move, side roll, or overhead solid set irrigation systems; or low pressure drip (trickle) irrigation systems. Do not apply DI-SYSTON 8 through any other type of irrigation system.

GENERAL DIRECTIONS FOR ALL RECOMMENDED TYPES OF IRRIGATION SYSTEMS

Uniform Water Distribution and System Calibration: The irrigation system must provide uniform distribution of treated water. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-

uniform distribution of treated water.

The system must be calibrated to uniformly apply the rates specified. If you have questions about calibration, you should contact State Extension Service specialists, 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.

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

Required 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 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.

Using Water from Public Water Systems: DO NOT APPLY DI-SYSTON 8 THROUGH ANY IRRIGATION SYSTEM 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.

Posting Requirements: This sign is in addition to any sign posted to comply with the Worker Protection Standard. Posting of areas to be chemigated is required when 1) any part of a treated area is within 300 feet of sensitive areas such as residential areas, labor camps, businesses, day care centers, hospitals, in-patient clinics, nursing homes or any public areas such as schools, parks, playgrounds, or other public facilities not including public roads, or 2) when the chemigated area is open to the public such as golf courses or retail greenhouses.

Posting must conform to the follow requirements: Treated areas shall be posted with signs at all usual points of entry and along likely routes of approach from the listed sensitive areas. When there are no usual points of entry, signs must be posted in the corners of the treated areas and in any other location affording maximum visibility to sensitive areas. The printed side of the sign should face away from the treated area towards the sensitive area. The signs shall be printed in English. Signs must be posted prior to application and must remain posted until foliage has dried and soil surface water has disappeared. Signs may remain in place indefinitely as long as they are composed of materials to prevent deterioration and maintain legibility for the duration of the posting period.

All words shall consist of letters at least 2 1/2 inches tall, and all letters and the symbol shall be a color which sharply contrasts with their immediate background. At the top of the sign shall be the words KEEP OUT, followed by an octagonal stop sign symbol at least 8 inches in diameter containing the word STOP. Below the symbol shall be the words PESTICIDES IN IRRIGATION WATER.

Posting required for chemigation does not replace other posting and reentry interval requirements for farm worker safety.

Agitation: For application of DI-SYSTON 8 alone, a chemical supply tank is not necessary for premixing since DI-SYSTON 8 mixes well with water in the irrigation line. If a chemical supply tank is used, constant strong mechanical or hydraulic agitation must be maintained in the chemical supply tank during the entire period of application.

Chemical Supply Tank Dilution: If a chemical supply tank is used, you must determine the required amounts of DI-SYSTON 8 and water to mix in the tank.

The amount of DI-SYSTON 8 needed equals the number of pints of DI-SYSTON 8 to be applied per acre multiplied by the number of acres to be chemigated.

The amount of emulsion needed equals the gallons of emulsion delivered per hour by the injection pump multiplied by the number of hours chemigation will take place.

The amount of water needed equals the amount of emulsion needed minus the amount of DI-SYSTON 8 needed.

For example, for center-pivot or automatic-move linear systems, if you want to apply 3 pints of DI-SYSTON 8 per acre to 130 acres in 20 hours and your injection pump delivers 15 gallons per hour, you need: 3 pints of DI-SYSTON 8 per acre X 130 acres = 390 pints or 48.75 gallons of DI-SYSTON 8. And, you need: 15 gallons per

hour X 20 hours = 300 gallons of emulsion, minus 48.75 gallons of DI-SYSTON 8 = 251.25 gallons of water.

Another example, for solid set and manually controlled linear systems, is if you want to apply 3 pints of DI-SYSTON 8 per acre during the last 60 minutes of a set irrigating 6 acres and your injection pump delivers 20 gallons per hour, you need 3 pints of DI-SYSTON 8 per acre X 6 acres = 18 pints or 2.25 gallons of DI-SYSTON 8 for the 6 acre set. And, you need 20 gallons per hour X 1 hour = 20 gallons of emulsion, minus 2.25 gallons of DI-SYSTON 8 = 17.25 gallons of water for the 6 acre set.

Cleaning the Chemical Injection System: In order to accurately apply pesticides, the chemical injection system must be kept clean; free of chemical or fertilizer residues and sediments. Refer to your owners 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 for all lines to flush the pesticide through all nozzles or emitters 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.

Equipment Area Contamination Prevention

It is recommended that nozzles in the immediate area of control panels, chemical supply tanks, pumps and system safety devices be plugged to prevent chemical contamination of these areas.

Center-Pivot and Automatic-Move Linear Systems: Inject the specified dosage per acre continuously for one complete revolution or move of the system. DO NOT USE END GUNS. The system should be run at maximum speed.

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

| RECOMMENDED APPLICATIONS | | | | | | | | | | | | | | | | | |
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| CROP | INSECT | DOSAGE | REMARKS | | | | | | | | | | | | | | |
| FIELD CROPS Barley | Aphids (including Greenbugs) Mites (except wheat curl mite) Hessian fly Thrips | 0.25 fl oz per 1000 ft of row* up to 1 pt per acre | <p>SOIL APPLICATION: Apply as a soil injection in a water emulsion or with liquid fertilizer at planting time. Do not apply within 60 days of harvest. For control of Hessian fly, apply at planting. In addition, a foliar application to control later generations in southern growing areas may be beneficial.</p> <table border="1"> <thead> <tr> <th>Row Spacing (Inches)</th> <th>Fluid Ounces Per Acre</th> </tr> </thead> <tbody> <tr> <td>6, 7 or 8</td> <td>16.0</td> </tr> <tr> <td>10</td> <td>13.1</td> </tr> <tr> <td>12</td> <td>10.9</td> </tr> <tr> <td>14</td> <td>9.3</td> </tr> <tr> <td>16</td> <td>8.2</td> </tr> <tr> <td>18</td> <td>7.3</td> </tr> </tbody> </table> <p>Do not graze or cut for forage within 30 day of treatment.</p> | Row Spacing (Inches) | Fluid Ounces Per Acre | 6, 7 or 8 | 16.0 | 10 | 13.1 | 12 | 10.9 | 14 | 9.3 | 16 | 8.2 | 18 | 7.3 |
| | | Row Spacing (Inches) | Fluid Ounces Per Acre | | | | | | | | | | | | | | |
| | | 6, 7 or 8 | 16.0 | | | | | | | | | | | | | | |
| 10 | 13.1 | | | | | | | | | | | | | | | | |
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| 14 | 9.3 | | | | | | | | | | | | | | | | |
| 16 | 8.2 | | | | | | | | | | | | | | | | |
| 18 | 7.3 | | | | | | | | | | | | | | | | |
| 1/2 to 1 pt per acre | <p>FOLIAR APPLICATION: For application by aircraft or ground equipment: Apply specified dosage per acre in sufficient water to obtain thorough coverage but not less than 1 gallon total volume per acre. Use the lower rates on plants up to tillering (stooling). Higher rates should be used after plants begin to tiller.</p> | | | | | | | | | | | | | | | | |
| <p>For application in liquid fertilizer: Mix 1/2 to 1 pint of DI-SYSTON 8 in the amount of liquid fertilizer to be applied per acre. Apply this mixture as a top dressing with suitable ground equipment. Two foliar applications may be made, following an at-planting application, however, regardless of method of application, do not apply more than a total of 2 pints per acre of DI-SYSTON 8 per crop season. Allow a minimum of 21 days between applications of either DI-SYSTON 8 or DI-SYSTON 15G. Do not make any applications within 30 days of grain harvest.</p> <p>Do not graze treated fields after any application of DI-SYSTON 8.</p> | | | | | | | | | | | | | | | | | |
| <p>Due to Greenbug resistance in certain areas, DI-Syston used alone may not provide satisfactory control. Consult your local agricultural advisor or extension service for recommendations.</p> | | | | | | | | | | | | | | | | | |
| Cotton | Aphids Mites Thrips (Except Western flower thrips) | 0.75 to 1.2 fl oz per 1000 ft of row up to maximum of 16 fl oz/A -OR- 9 to 16 fl oz per acre | <p>Read "IMPORTANT" statement under "RECOMMENDED APPLICATIONS" for additional information before use on this crop.</p> | | | | | | | | | | | | | | |
| | | <p>PREPLANT: As a preplant soil incorporated treatment, DI-SYSTON 8 may be applied in approximately a 16-inch band as a water emulsion.</p> <p>- OR -</p> <p>PLANTING/REPLANTING: Apply as a water emulsion or with liquid fertilizer. Spray/apply in the furrow or soil inject on each side of the furrow. This application may be combined with a fungicide application which is registered and recommended for disease on this crop.</p> <p>RATE CHART FOR PREPLANT OR PLANTING TIME APPLICATION</p> <table border="1"> <thead> <tr> <th>Heavy Soil</th> <th>Medium Soil</th> <th>Light Soil</th> </tr> </thead> <tbody> <tr> <td>1.2 fl oz/1000 ft of row or 1 pt/acre</td> <td>1 fl oz/1000 ft of row or 12 fl oz/acre</td> <td>0.75 fl oz/1000 ft of row or 9 fl oz/acre</td> </tr> </tbody> </table> <p>This at planting application of DI-SYSTON 8 may be used in conjunction with a pre-emergent surface applied or preplant incorporated treatment of Command Herbicide. Refer to the herbicide product label for appropriate preplant or preemergent herbicide application directions and use rates. Do not reduce the application rate of DI-SYSTON 8 insecticide when Command herbicide is applied as a banded treatment.</p> <p>POST-PLANT: Apply in a water emulsion or with liquid fertilizer as a soil injection on each side of the row. A single post-plant application at rates up to 1 pint/acre may be applied up to 28 days of harvest. Regardless of the method of application to the soil, do not apply more than one soil application per season.</p> <p>If preplant, planting or post plant applications are made, no foliar application may be made within the same crop season.</p> <p>Do not graze treated fields after any application of DI-SYSTON 8.</p> | | Heavy Soil | Medium Soil | Light Soil | 1.2 fl oz/1000 ft of row or 1 pt/acre | 1 fl oz/1000 ft of row or 12 fl oz/acre | 0.75 fl oz/1000 ft of row or 9 fl oz/acre | | | | | | | | |
| Heavy Soil | Medium Soil | Light Soil | | | | | | | | | | | | | | | |
| 1.2 fl oz/1000 ft of row or 1 pt/acre | 1 fl oz/1000 ft of row or 12 fl oz/acre | 0.75 fl oz/1000 ft of row or 9 fl oz/acre | | | | | | | | | | | | | | | |
| <p>West of the Rocky Mountains, some mite populations have developed resistance to organophosphate insecticides, including Di-Syston. Consult your local cooperative extension service, agricultural advisor or Bayer representative for details.</p> | | | | | | | | | | | | | | | | | |
| <p>* On row crops where row spacing is extremely narrow, do not place treated zones (band or furrow) closer together than 6 inches.</p> | | | | | | | | | | | | | | | | | |

| RECOMMENDED APPLICATIONS | | | | | | | | | | | | | | | | | | | | | | | | |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|-------------|----------------------|--------------------------|------|------|---------------|-------|------|--------------|-------|------|--------------|-----|------|--------------|-----|------|--------------|-----|------|
| CROP | INSECT | DOSAGE | REMARKS | | | | | | | | | | | | | | | | | | | | | |
| FIELD CROPS Continued Sorghum | Aphids (Greenbugs) | 0.9 to 1.2 fl oz per 1000 ft of row up to maximum of 16 fl oz/A OR 12 to 16 fl oz per acre | AT PLANTING APPLICATION: FURROW Apply as a water emulsion of the liquid fertilizer in the seed furrow approximately 1/2 inch above the seed. Do not apply directly on the seed. | | | | | | | | | | | | | | | | | | | | | |
| | | 1.2 fl oz per 1000 ft OR 16 fl oz/A | AT PLANTING APPLICATION: BAND Apply as a water emulsion or in liquid fertilizer in a 4 or 6 inch band directly behind the planter shoe in front of the press wheel. Do not apply directly on the seed. | | | | | | | | | | | | | | | | | | | | | |
| | | NOTICE: The following side-dress application may be made instead of the granular or liquid application at planting. Foliar applications may be made in addition to granular or liquid soil applications. A total of 3 applications may be made to a single sorghum crop (1 soil application, granular or liquid, plus 2 foliar applications at rates of 8 fluid ounces or less/acre). If following a soil application by one or two foliar applications, allow minimum of 14 days between the soil application and the first foliar application. | | | | | | | | | | | | | | | | | | | | | | |
| | | 1.2 fl oz per 1000 ft OR 16 fl oz/A | POST PLANTING APPLICATION: SIDE-DRESS Apply as a water emulsion or with liquid fertilizer injected into the row on both sides of the furrow at any time up to boot stage, but not within 45 days of use for forage or fodder. | | | | | | | | | | | | | | | | | | | | | |
| | Sorghum Midge (Arkansas, Louisiana, Oklahoma, Texas) | 4 to 8 fl oz per acre | POST PLANTING APPLICATION: FOLIAR SPRAY - A maximum of 2 foliar applications may be made of rates 8 fluid ounces or less/acre. Apply specified dosage per acre in sufficient water to obtain thorough coverage. For aerial application use not less than 1 gallon of water per acre. Use not less than 5 gallons of water per acre with ground equipment. For Midge: make one application when 50% of the seed heads have emerged from the boot. Make a second application 3 to 5 days later. | | | | | | | | | | | | | | | | | | | | | |
| | Banks grass mites (in Texas, excluding Trans-Pecos area, and in Oklahoma) | 8 fl oz per acre | Days From Last Application to Harvest for Foliar Rates of 4 to 8 Fluid Oz/Acre <table border="1"> <thead> <tr> <th>APPLICATION SCHEDULE</th> <th>FOR GRAIN</th> <th>FOR FORAGE OR FODDER</th> </tr> </thead> <tbody> <tr> <td>Any soil plus any foliar</td> <td>34</td> <td>45</td> </tr> <tr> <td>1 or 2 foliar</td> <td>7</td> <td>45</td> </tr> </tbody> </table> | APPLICATION SCHEDULE | FOR GRAIN | FOR FORAGE OR FODDER | Any soil plus any foliar | 34 | 45 | 1 or 2 foliar | 7 | 45 | | | | | | | | | | | | |
| APPLICATION SCHEDULE | FOR GRAIN | FOR FORAGE OR FODDER | | | | | | | | | | | | | | | | | | | | | | |
| Any soil plus any foliar | 34 | 45 | | | | | | | | | | | | | | | | | | | | | | |
| 1 or 2 foliar | 7 | 45 | | | | | | | | | | | | | | | | | | | | | | |
| Due to Greenbug resistance in certain areas, Di-Syston used alone may not provide satisfactory control. Consult your local agricultural advisor or extension service for recommendations. | | | | | | | | | | | | | | | | | | | | | | | | |
| Tobacco | Aphids Flea beetles | 4 pints (1/2 gallon) per acre | Apply as a water emulsion broadcast spray in sufficient water for thorough coverage. Disk or till the soil to a depth of 2 to 3 inches before setting plants. Do not make more than one field application per crop season regardless of the formulation of DISYSTON used. | | | | | | | | | | | | | | | | | | | | | |
| Wheat (Fall) | Hessian fly Aphids (Greenbugs and Bird cherry-oat Except California) | 0.25 fl oz per 1000 ft up to 1 pt per acre | Apply as a soil injection in water emulsion or with liquid fertilizer at planting time in the fall. Do not graze treated fields or cut for forage after any application of DI-SYSTON 8. | | | | | | | | | | | | | | | | | | | | | |
| | | | Ounces DI-SYSTON 8 per 1000 ft. of row based on <table border="1"> <thead> <tr> <th>Row Spacing</th> <th>Ounces/Acre</th> <th>3-inch band</th> </tr> </thead> <tbody> <tr> <td>7 or 8 inch rows</td> <td>15.5</td> <td>0.25</td> </tr> <tr> <td>10 inch rows</td> <td>13.25</td> <td>0.25</td> </tr> <tr> <td>12 inch rows</td> <td>10.75</td> <td>0.25</td> </tr> <tr> <td>14 inch rows</td> <td>9.5</td> <td>0.25</td> </tr> <tr> <td>16 inch rows</td> <td>8.5</td> <td>0.25</td> </tr> <tr> <td>18 inch rows</td> <td>7.0</td> <td>0.25</td> </tr> </tbody> </table> | Row Spacing | Ounces/Acre | 3-inch band | 7 or 8 inch rows | 15.5 | 0.25 | 10 inch rows | 13.25 | 0.25 | 12 inch rows | 10.75 | 0.25 | 14 inch rows | 9.5 | 0.25 | 16 inch rows | 8.5 | 0.25 | 18 inch rows | 7.0 | 0.25 |
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| Due to Greenbug resistance in certain areas, Di-Syston 8 used alone may not provide satisfactory control. Consult your local agricultural advisor or extension service for recommendations. | | | | | | | | | | | | | | | | | | | | | | | | |
| * On row crops where row spacing is extremely narrow, do not place treated zones (band or furrow) close together than 6 inches. | | | | | | | | | | | | | | | | | | | | | | | | |

| RECOMMENDED APPLICATIONS | | | |
|----------------------------------------------------------------------------------------|------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CROP | INSECT | DOSAGE | REMARKS |
| FIELD CROPS Continued Wheat (Foliar Application Spring or Fall) | Aphids (Greenbugs) Mites | 4 to 12 fl oz per acre | FOR APPLICATION BY AIRCRAFT OR GROUND EQUIPMENT: Apply specified dosage per acre in sufficient water to obtain thorough coverage but not less than 1 gallon total volume per acre. Use the lower rates on plants up to tillering (stooling). Higher rates should be used after plants begin to tiller. |
| | | FOR APPLICATION IN LIQUID FERTILIZER: Mix 6 to 12 fluid ounces of DI-SYSTON 8 in the amount of liquid fertilizer to be applied per acre. Apply this mixture as a top dressing with suitable ground equipment. FALL/SPRING APPLICATION: one foliar application may be made in the spring or fall, but only one foliar application may be made during the growing season. Do not make any applications within 30 days of grain harvest. Do not graze treated fields or cut for forage after any application of DI-SYSTON 8. | Due to Greenbug resistance in certain areas, Di-Syston 8 used alone may not provide satisfactory control. Consult your local agricultural advisor or extension service for recommendations. West of the Rocky Mountains, some mite populations have developed resistance to organophosphate insecticides, including Di-Syston. Consult your local cooperative extension service, agricultural advisor or Bayer representative for details. |
| NON-BEARING FRUIT Strawberries (Propagating Plants Only) | Aphids Mites (except cyclamen mite) | 2.8 to 5 fl oz per 1000 feet of row (42-inch row spacing) - OR - 2 to 4 pt per acre | Apply in a water emulsion or with liquid fertilizer as a soil injection on each side of the row as needed. Do not use fruit from treated plants for food purposes. |
| VEGETABLES Beans | Aphid Leafhopper Mexican bean beetle (larvae) Mites Thrips | 0.9 to 1.9 fl oz per 1000 feet up to a maximum 2 pts/A -OR- 1 to 2 pt per acre | Read "IMPORTANT" statement under "Recommended Applications" for additional information before use on this crop. For snap or green Lima beans, apply in a water emulsion or with liquid fertilizer as a soil injection on each side of the seed furrow at planting time only. For dry beans, apply as above at planting time or inject as a side-dressing on each side of the row after plants become established but not within 60 days of harvest. Do not apply directly on the seed. Do not apply more than once per season. Do not feed vines or hay. |
| Brussels sprouts | Aphids Flea beetles Leafhopper Mites Thrips | 1.1 fl oz per 1000 feet of row (36" row spacing) up to maximum of 1 pt per acre | CHEMIGATION: Row treatment applications as listed below may be applied through low-pressure (drip or trickle) irrigation systems. Follow all directions under Chemigation section of this label. Do not apply to vegetables grown for seed. TRANSPLANT SEED BEDS: Apply evenly over bed area in a water emulsion as a broadcast spray prior to seeding at the rate of 1 pint per acre. Work into the top 2 to 3 inches of soil and plant seed in normal manner. FIELD APPLICATION: Apply specified dosage in a water emulsion or with liquid fertilizer as an injection on each side of the seed furrow or transplanted row at planting and where necessary, injected as a side-dressing after plants are established. Do not apply more than one field applications per season nor within 30 days of harvest for brussels sprouts, or 40 days of harvest for cauliflower. |
| Cauliflower | Aphids Flea beetles Leafhopper | | |

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| RECOMMENDED APPLICATIONS | | | |
|-------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CROP | INSECT | DOSAGE | REMARKS |
| VEGETABLES Continued Broccoli | Aphids Flea beetles Leafhopper | 1.1 fl oz per 1000 ft of row (36" row spacing) up to maximum of 1 pt per acre | TRANSPLANT SEED BEDS: Apply evenly over bed area in a water emulsion as a broadcast spray prior to seeding at the rate of 1 pint per acre. Work into the top 2 to 3 inches of soil and plant seed in normal manner. FIELD APPLICATIONS: Apply specified dosage in a water emulsion or with liquid fertilizer as an injection on each side of the seed furrow or transplanted row at planting or injected as a side-dressing after plants are established. Do not apply directly on the seed. Do not apply more than one field application per season. Do not use within 14 days of harvest for broccoli or 42 days of harvest for cabbage. |
| Cabbage (Including tight-heading varieties of Chinese cabbage) | Aphids Flea beetles Root aphids | 2.1 fl oz per 1000 ft of row (for 36 inch row spacing) up to 2 pt per acre | FIELD APPLICATIONS: Apply specified dosage in a water emulsion or with liquid fertilizer as an injection on each side of the seed furrow or transplanted row at planting or injected as a side-dressing after plants are established. Do not apply directly on the seed. Do not apply more than one field application per season. Do not use within 14 days of harvest for broccoli or 42 days of harvest for cabbage. |
| Lettuce | Aphids Leafhoppers Mites Root aphids Thrips | 0.6 to 1.2 fl oz per 1000 ft of row (20" row spacing) up to maximum of 1 to 2 pt per acre | Read "IMPORTANT" statement under "RECOMMENDATIONS APPLICATIONS" for additional information before use on this crop. CHEMIGATION: Row treatment applications as listed below may be applied through low-pressure (drip or trickle) irrigation systems. Follow all directions given under Chemigation section of this label. SEEDED LETTUCE: Do not apply to transplanted lettuce. Apply at seeding or after seeding, in water or liquid fertilizer as a side-dress injection on each side of the row. Do not apply directly on the seed. Do not make more than one application per crop season. Do not apply within 60 days of harvest. Use the higher rate on heavy organic soils. |
| Peas Lentils | Aphids Leafhoppers | 1 to 2.5 pt per acre | Apply in a water emulsion or with liquid fertilizer as an in-furrow spray or as an injection on each side of the seed furrow at planting or injected as a side-dressing after plants are established. Do not apply more than once per season nor within 50 days of harvest. Do not feed vines or hay. |
| Potatoes | Aphids | 3 pts per acre | SOIL APPLICATION - PRE-PLANT BROADCAST: Apply specified dosage per acre as a preplant broadcast application. Incorporate to a depth of 2 to 3 inches. Plant crop in usual manner. Do not make more than one soil application of DI-SYSTON 8 per crop season regardless of method of application or formulation used. Do not tank mix this product with Phosalone. |
| | Aphids Flea beetles (except tuber beetles) Leafhoppers Potato psyllid Southern potato wireworm Colorado potato beetle (early season reduction) | 2.25 to 3.5 fl oz per 1000 ft of row up to maximum of 3 pts/A OR 2 to 3 pt per acre | SOIL APPLICATION - AT PLANTING: Apply undiluted in equipment specifically designed for low volume soil injection. Or, apply as an in-furrow spray in water or in liquid fertilizer. Or, inject on each side of the seed furrow in water or in liquid fertilizer. SOIL APPLICATION - POST PLANTING: Side-dress in water after plants are established. This application may be made in addition to an at-planting application. Do not apply within 75 days of harvest. Do not make more than 1 soil application of DI-SYSTON per crop season regardless of method of application or formulation used. Do not tank mix this product with Phosalone. NOTE; Colorado potato beetle populations in the northeast states (except Maine), as well as Virginia and North Carolina, have developed resistance to insecticides, including DI-SYSTON. Consult your local extension service or Bayer sales representative for details. |
| | Green peach aphids (East of the Rocky Mountains only) | 6 to 8 fl oz per acre | FOLIAR APPLICATIONS: Using aircraft or ground equipment, apply specified dosage per acre in sufficient water to obtain thorough coverage, but not less than 1 gallon total volume per acre. Begin applications when pest first appears. Use the higher rates for heavy infestations. Repeat as necessary, but do not apply more than 3 times per season nor within 30 days of harvest. Do not tank mix this product with Phosalone. Foliar applications may be made following at-planting soil treatment as recommended above or in the label for DI-SYSTON 15% Granular. Allow 14 days between all applications of DI-SYSTON. |
| | Green peach aphids Colorado potato beetle | 3 pt per acre | SPRINKLER IRRIGATION APPLICATION - ONLY IN OREGON, WASHINGTON, IDAHO AND UTAH: A single application at the rate of 3 pints per acre may be made for control of Green peach aphid and Colorado potato beetle. Do not apply within 60 days of harvest. Application may be made following at-planting soil application as recommended on this label or the label for DI-SYSTON 15% Granular. Follow all directions given under Chemigation section of this label. |

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11/11

STORAGE AND DISPOSAL

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

Pesticide Storage: Store in a cool, dry place and 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 container in a manner as to prevent spillage. If container is leaking invert to prevent leakage. If the container is leaking or material spilled for any reason or cause, carefully dam up spilled material to prevent runoff. Refer to Precautionary Statements on label for hazards associated with the handling of this material. Do not walk through spilled material. Absorb spilled material with absorbing type compounds and dispose of as directed for pesticides below. 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. The Bayer Kansas City Emergency Response Telephone No. is 800-414-0244, or contact Chemtrec at 800-424-9300.

Pesticide Disposal: Pesticide wastes are acutely hazardous. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

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

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