



3125-307

09/21/87

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

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OFFICE OF  
PESTICIDES AND TOXIC SUBSTANCES

Mr. J.S. Thornton  
Mobay Corporation  
Hawthorn Road  
P.O. Box 4913  
Kansas City, MO 64120-0013

SEP 21 1987

Dear Mr. Thornton:

Subject: Amendment - Label Updates/Disulfoton Registration Standard/  
Di-Syston 5% Granular Systemic Insecticide  
EPA Registration No. 3125-130  
Di-Syston 5% Granular  
EPA Registration No. 3125-58  
Di-Syston 10% Granular  
EPA Registration No. 3125-61  
Di-Syston 15% Granular  
EPA File Symbol 3125-172-AA  
Di-Syston Liquid Concentrate  
EPA File Symbol 3125-119-AA  
Di-Syston 8  
EPA Registration No. 3125-307  
Your Letter Dated February 4, 1987

The amendment referred to above, submitted in connection with reregistration under Federal Insecticide, Fungicide, and Rodenticide Act, is acceptable provided that you:

1. Make the labeling changes listed below before you release the product for shipment bearing the amended labeling.
  - a. The "Precautionary Statements" heading should follow the signal word. (Pertains to 3128-130 only.)
  - b. Note: The child hazard warning and signal word should be 12-point and 18-point type, respectively.

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d. Revise the Statement of Practical Treatment subheadings as follows:

"If On Skin: . . . and warm water. Get medical attention immediately."

"If In Eyes: Wash with plenty of flowing water. Get medical attention immediately."

e. The subheading "To Physician" should read "Note To Physician."

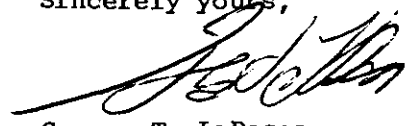
f. Revise the sentence to read, ". . . and may be administered, but only in conjunction with atropine."

2. Submit five (5) copies of your final printed labeling before you release the product for shipment.

If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6(e). Your release for shipment of the product bearing the amended labeling constitutes acceptance of these conditions.

A stamped copy of the labeling is enclosed for your records.

Sincerely yours,



George T. LaRocca  
Product Manager (15)  
Insecticide-Rodenticide Branch  
Registration Division (TS-767C)

Enclosure

P.S. We note that the crop rotation restriction may be deleted based upon Pr Notive 87-3.

You have previously indicated that Mobay would delete the following crops in lieu of generating residue chemistry data: pineapple, oats, corn(sweet), hops, rice, sugarbeets, spinach, alfalfa(seed crop). Some of these crops are still on the subject labels in addition to being referenced on the manufacturing use labels. These crops must be deleted from all labels in addition to the tech. labels.

The product label for 3125-110 needs the vine and bay feeding restrictions under the sites beans and peas.

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U.S. LABEL

Reason to Issue: To include grazing and cutting for forage restrictions for all applications to wheat; delete pineapple; revise trademark acknowledgement statement.

Date of Draft: 2/4/87 (M)  
Supersedes Draft Dated: 3/17/86 and 9/1/86; Pre-Reg Drafts Dated: 10/2/85, 2/4/86, and 4/10/86.

EPA Reg. No. 3125-307

RESTRICTED USE PESTICIDE  
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-SYSTON 8

EMULSIFIABLE SYSTEMIC INSECTICIDE  
8 POUND PER GALLON FORMULATION

FORMULATED FOR EFFECTIVE SOIL TREATMENT

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

NET CONTENTS GALLONS

KEEP OUT OF REACH OF CHILDREN

~~DANGER POISON~~

(See rear panel for Statements of Practical Treatment and Other Precautionary Statements)

ACCEPTED with COMMENTS in EPA Letter Dated:

SEP 21 1987

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

3125-307

STOP - READ THE LABEL BEFORE USE

MOBAY CORPORATION  
AGRICULTURAL CHEMICALS DIVISION  
Box 4913, Kansas City, Mo. 64120

ACTIVE INGREDIENTS:

O,O-Diethyl S-[2-(ethylthio)ethyl] phosphorodithioate ..... 85%  
Aromatic Petroleum Distillate .... 3%

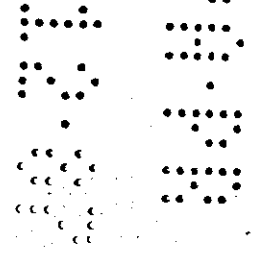
INERT INGREDIENTS: ..... 12%  
100%

EPA Reg. No. 3125-307  
EPA Est. 3125-MO-1

PELIGRO

PRECAUCION AL USUARIO: Si usted no puede leer o entender ingles, no use este producto hasta que la etiqueta le haya sido explicada ampliamente.

(TO THE USER: If you cannot read or understand English, do not use this product until the label has been fully explained to you.)



Note: Underlined letters in chemical nomenclature should be italicized when printed, not underlined.

## DIRECTIONS FOR USE

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

**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. MOBAY 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 MOBAY 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. When mixing with certain liquid high phosphorous fertilizers, the use of COMPEX<sup>®</sup> compatibility agent or other equivalent agents at the rate of 1 quart per 100 gal. of mixture may be needed to assure proper mixing. 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, 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 certain pre-emergent herbicides are used in conjunction with DI-SYSTON.

DI-SYSTON 8

RECOMMENDED APPLICATIONS  
(Continued)

CROP	INSECT	DOSAGE DI-SYSTON 8	REMARKS
<b>FIELD CROPS</b>			
Barley	Aphids Mites	1 pint per acre	Apply as a soil injection in a water emulsion or with liquid fertilizer at planting time. Do not apply within 60 days of harvest. Do not graze or cut for forage within 30 days of treatment.
Barley (Foliar Application Spring or Fall)	Aphids (Including Greenbugs)  (See NOTE in Remarks)	1/2 to 1 pt. per acre	<p>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. 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. Do not make any applications within 30 days of grain harvest.</p> <p style="text-align: center;">NOTE</p> <p>(1) Do not graze treated fields after any application of DI-SYSTON 8. (2) 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>

RECOMMENDED APPLICATIONS  
(Continued)

CROP	INSECT	DOSAGE DI-SYSTON 8	REMARKS
<u>FIELD CROPS (Cont'd)</u>			
Corn Field Popcorn	Aphids Leafhoppers Mites Thrips	1.2 fl. ounces per 1000 feet of row for any row spacing*. (for 40 inch row spacing use 1 pint per acre)	<p><u>TREATMENT AT PLANTING TIME:</u> As a water emulsion, spray in 4- to 6-inch band directly behind the planter shoe in front of the press wheel or apply with liquid fertilizer in split bands on each side of the corn row. Do not apply directly to the seed. Do not forage or cut treated corn for food, feed or ensilage within 28 days of treatment.</p> <p><u>POST-PLANT SIDE-DRESS TREATMENT:</u> An alternative treatment for early season control of aphids, leafhoppers, mites and thrips, may be made in a water emulsion or with liquid fertilizer as a soil injection on each side of the furrow after emergence. Do not forage or cut treated corn for food, feed, or ensilage within 28 days of treatment.</p>
	Aphids Mites	8 to 16 fl. ozs.  Note: Apply only one soil treatment and one foliar treatment per crop season.	<u>FOLIAR TREATMENT:</u> Apply specified dosage per acre as a foliar spray in sufficient water for thorough coverage but not less than 1 gallon total volume per acre. Do not forage or cut treated corn for food, feed, or ensilage within 28 days of treatment.

DI-SYSTON 8

RECOMMENDED APPLICATIONS  
(Continued)

CROP	INSECT	DOSAGE DI-SYSTON 8	REMARKS									
<u>FIELD CROPS (Continued)</u>												
Cotton	Aphids Mites Thrips	.75 to 1.2 fluid ounces per 1000 feet of row (for any row spacing*) or 9 to 16 fluid ounces per acre (40 inch row spacing)	<p>Preplant: As a preplant soil incorporated treatment, DI-SYSTON 8 may be applied in approximately a 16 inch band as a water emulsion either alone or with a pre-emergent herbicide. Request Chemagro Bulletin No. DS 6720 for specific recommendations on a herbicide to be used with DI-SYSTON.</p> <p>Planting: Apply as a water emulsion or with liquid fertilizer. Spray in the furrow on either side of the seed or soil inject on each side of the furrow. Do not apply directly on the seed.</p> <p>RATE CHART FOR PREPLANT OR PLANTING</p> <table border="1" data-bbox="917 787 1502 997"> <thead> <tr> <th colspan="3">TIME APPLICATION</th> </tr> <tr> <th>Heavy Soil</th> <th>Medium Soil</th> <th>Light Soil</th> </tr> </thead> <tbody> <tr> <td>1.2 fl. ozs. /1000 ft. of row or 1 pt. /acre</td> <td>1 fl. oz. /1000 ft. of row or 12 fl. ozs. /acre</td> <td>.75 fl. oz. /1000 ft. of row or 9 fl. ozs. /acre</td> </tr> </tbody> </table> <p>Post-Plant: If an additional treatment is needed, 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 2 pints /acre may be applied up to first squaring (90 days before harvest) or a single post-plant application at rates up to 1 pint /acre may be applied up to 28 days of harvest. Do not apply more than twice per season. Allow a minimum of 21 days between applications. Read "IMPORTANT" STATEMENT under "Recommended Applications" for additional information before use on this crop.</p>	TIME APPLICATION			Heavy Soil	Medium Soil	Light Soil	1.2 fl. ozs. /1000 ft. of row or 1 pt. /acre	1 fl. oz. /1000 ft. of row or 12 fl. ozs. /acre	.75 fl. oz. /1000 ft. of row or 9 fl. ozs. /acre
TIME APPLICATION												
Heavy Soil	Medium Soil	Light Soil										
1.2 fl. ozs. /1000 ft. of row or 1 pt. /acre	1 fl. oz. /1000 ft. of row or 12 fl. ozs. /acre	.75 fl. oz. /1000 ft. of row or 9 fl. ozs. /acre										
	Aphids Thrips	3 to 9 fluid ounces  Note: If foliar applications are made do not apply soil treatments within the same crop year	<p>FOLIAR - Prior to Bloom: Apply specified dosage per acre as a foliar spray, using aircraft or ground equipment, in sufficient water for thorough coverage but not less than 1 gallon total volume per acre. Repeat as necessary but do not apply more than 3 times per season, with the last application no later than bloom.</p>									

## RECOMMENDED APPLICATIONS (Cont'd)

CROP	INSECT	DOSAGE DI-SYSTON 8	REMARKS
FIELD CROPS. (Cont.)		.9 to 1.2 fl. ozs. per 1000 ft. of row (for any row spacing*) (for 40 inch row spacing use 12 to 16 fl. ozs. per acre)	<u>AT PLANTING APPLICATION: FURROW</u> Apply as a water emulsion or in liquid fertilizer in the seed furrow approximately 1/2 inch above the seed. Do not apply directly on the seed.
		1.2 fl. ozs. per 1000 ft. of row (for any row spacing*) (for 40 inch row spacing use 1 pint per acre)	<u>AT PLANTING APPLICATION: BAND</u> Apply as a water emulsion or in liquid fertilizer in a 4 to 6 inch band directly behind the planter shoe in front of the press wheel. Do not apply directly on the seed.
		<u>NOTICE:</u> The following side-dress and/or foliar applications may be made in addition to granular or liquid at planting applications. A <u>total of 5 applications</u> may be made to a single sorghum crop (2 soil applications, granular or liquid, plus 3 foliar applications of rates 8 fluid ounces or less/acre).	
		1.2 fl. ozs. per 1000 ft. of row (for any row spacing*) (for 40 inch row spacing use 1 pint per acre)	<u>POST PLANTING APPLICATION: SIDE-DRESS</u> 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	Aphids (Greenbugs) (See NOTE below)		



DI-SYSTON 8

RECOMMENDED APPLICATIONS (Continued)

CROP	INSECT	DOSAGE DI-SYSTON 8	REMARKS										
Sorghum	Aphids (Greenbugs) (See NOTE below)	4 to 8 fluid ounces per acre	<p><u>POST PLANTING APPLICATION: FOLIAR SPRAY - A Maximum of 3 Foliar Applications May Be Made of Rates 8 Fluid Ounces or Less/Acre.</u></p> <p>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.</p>										
	Sorghum Midge (Arkansas, Louisiana, Oklahoma, Texas)		<p><u>DAYS FROM LAST APPLICATION TO HARVEST FOR FOLIAR RATES OF</u></p> <table border="1" data-bbox="927 772 1495 1031"> <thead> <tr> <th data-bbox="927 772 1198 877">APPLICATION SCHEDULE</th> <th data-bbox="1198 772 1333 877">FOR GRAIN</th> <th data-bbox="1333 772 1495 877">FOR FORAGE OR FODDER</th> </tr> </thead> <tbody> <tr> <td data-bbox="927 877 1198 940">4 to 8 Fluid Ounces/ACRE Any soil plus any foliar</td> <td data-bbox="1198 877 1333 940">34</td> <td data-bbox="1333 877 1495 940">45</td> </tr> <tr> <td data-bbox="927 961 1198 993">1 or 2 foliar</td> <td data-bbox="1198 961 1333 993">7</td> <td data-bbox="1333 961 1495 993">45</td> </tr> <tr> <td data-bbox="927 993 1198 1024">3 foliar</td> <td data-bbox="1198 993 1333 1024">34</td> <td data-bbox="1333 993 1495 1024">60</td> </tr> </tbody> </table> <p>For Banks Grass Mites: The 8 fluid ounce rate may be applied as directed above for aphids. Rates above 8 fluid ounces per acre may not be applied if any soil applications have been made. If rates above 8 fluid ounces per acre are used, do not apply more than twice per crop season nor within 7 days of harvest of grain or 45 days of use as forage or fodder.</p>	APPLICATION SCHEDULE	FOR GRAIN	FOR FORAGE OR FODDER	4 to 8 Fluid Ounces/ACRE Any soil plus any foliar	34	45	1 or 2 foliar	7	45	3 foliar
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4 to 8 Fluid Ounces/ACRE Any soil plus any foliar	34	45											
1 or 2 foliar	7	45											
3 foliar	34	60											
<p>NOTE: 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>													
Tobacco	Aphids Flea beetles	4 pints (1/2 gallon) per acre	<p>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 DI-SYSTON used.</p>										

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RECOMMENDED APPLICATIONS (Cont'd)

CROP	INSECT	DOSAGE DI-SYSTON 8	REMARKS																					
FIELD CROPS- (Cont'd)																								
Wheat (Foliar Appli- cation Spring or Fall)	Aphids (Greenbugs) Mites (See NOTE in "REMARKS")	4 to 12 fluid ounces per acre	<p>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 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.</p> <p>Fall Applications: Two applications may be made in the fall. Allow 30 days between applications.</p> <p>Spring Applications: Application at green-up may be made following "fall applications." A second application may be made 30 days following the first spring application. Do not make any applications within 30 days of grain harvest.</p> <p style="text-align: center;">NOTE</p> <p>(1) Do not graze treated fields or cut for forage after any application of DI-SYSTON 8. (2) 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>																					
Wheat (Fall)	Hessian fly Aphids (Greenbugs & Oat bird Except Calif- ornia)	0.25 fl. ounces per 1000 ft. of row (see chart below) or per acre	<p>Apply as a soil injection in water emulsion or with liquid fertilizer at planting time in the fall.</p> <p>NOTE: (1) Do not graze treated fields or cut for forage after any application of DI-SYSTON 8. (2) 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>																					
		<table border="1" style="width: 100%;"> <thead> <tr> <th style="text-align: left;">Row Spacing</th> <th style="text-align: left;">Ounces/Acre</th> <th style="text-align: left;">Ounces DI-SYSTON 8 per 1000 ft. of row based on 3 inch band</th> </tr> </thead> <tbody> <tr> <td>7 or 8 inch rows</td> <td>15.5</td> <td>.25</td> </tr> <tr> <td>10 inch rows</td> <td>13.25</td> <td>.25</td> </tr> <tr> <td>12 inch rows</td> <td>10.75</td> <td>.25</td> </tr> <tr> <td>14 inch rows</td> <td>9.5</td> <td>.25</td> </tr> <tr> <td>16 inch rows</td> <td>8.5</td> <td>.25</td> </tr> <tr> <td>18 inch rows</td> <td>7.0</td> <td>.25</td> </tr> </tbody> </table>		Row Spacing	Ounces/Acre	Ounces DI-SYSTON 8 per 1000 ft. of row based on 3 inch band	7 or 8 inch rows	15.5	.25	10 inch rows	13.25	.25	12 inch rows	10.75	.25	14 inch rows	9.5	.25	16 inch rows	8.5	.25	18 inch rows	7.0	.25
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14 inch rows	9.5	.25																						
16 inch rows	8.5	.25																						
18 inch rows	7.0	.25																						

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DI-SYSTON 8

RECOMMENDED APPLICATIONS (Continued)

CROP	INSECT	DOSAGE DI-SYSTON 8	REMARKS
<u>NON-BEARING FRUIT</u>	Aphids Mites (except cyclamen mite)	2.8 to 5 fluid ounces per 1000 feet of row (for any row spacing*) or 2 to 4 pints per acre (42 inch row spacing)	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.
Strawberries (Propagating Plants Only)			
<u>NUTS</u>  Pecans (South Central & South Western States Only)	Aphids	1.5 to 3 pints per acre	Apply by spraying 6-foot bands of soil on both sides of the trees. The bands should be located under the main drip area of the trees. Work the treated soil to a depth of 2 to 3 inches. On irrigated pecans, apply water as soon as possible after treatment. Make only 1 application per season. Early spring treatment is recommended. Do not harvest nuts within 80 days of treatment. Do not graze grass under treated trees. Do not tank mix this product with Phosalone.
Pecans	Aphids	4 to 6 fluid ounces	<u>Foliar Applications:</u> Apply specified dosage in 100 gallons of water as a full coverage spray using not more than 400 gallons of finished spray per acre. Repeat as necessary up to 3 times per season. Do not apply within 30 days of harvest. Do not graze grass under treated trees. Do not tank mix this product with Phosalone.
Pecans	Aphids	3/4 to 1 pint	<u>Application by Aircraft:</u> Apply specified dosage per acre in sufficient water to obtain thorough coverage but not less than 5 gallons total volume... per acre. Do not apply more than 3 times per season nor within 30 days... of harvest. Do not graze grass under treated trees. Do not tank mix this product with Phosalone.

## RECOMMENDED APPLICATIONS (Continued)

CROP	INSECT	DOSAGE DI-SYSTON 8	REMARKS
VEGETABLES			
Beans	Aphid Leaf- hoppers Mexican bean beetle (larvae) Mites Thrips	.9 to 1.9 fluid ounces per 1000 feet of row (for any row spacing*) - or - 1 to 2 pints per acre (30 inch row spacing) (For extremely narrow row spacing, do not exceed the 2 pints per acre rate)	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. Read "IMPORTANT" statement under "Recommended Applications" for addi- tional information before use on this crop.
Brussels Sprouts	Aphids Flea beetles Leafhoppers Mites Thrips	1.1 fluid ounces per 1000 feet of row (for any row spacing*) - or - 1 pint per acre (36 inch row spacing)	<u>Transplant Seed Beds:</u> 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. <u>Field Applications:</u> 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 directly on the seed. Do not apply more than two field applications per season nor within 30 days of harvest for Brussels sprouts, or 40 days of harvest for cauliflower. Allow a minimum of 21 days between applica- tions.
Cauli- flower	Aphids Flea beetles Leafhoppers		

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DI-SYSTON 8

RECOMMENDED APPLICATIONS (Continued)

CROP	INSECT	DOSAGE DI-SYSTON 8	REMARKS
VEGETABLES	(Cont'd)		
Broccoli	Aphids Flea beetles Leafhoppers	1.1 fluid ounces per 1000 feet of row (for any row spacing*) - or -	<p><u>Transplant Seed Beds:</u> 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.</p> <p><u>Field Applications:</u> 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.</p> <p><u>Spring or Summer Seeded Lettuce:</u> Apply in a water emulsion or with liquid fertilizer as an injection on each side of the seed furrow at planting time only. Use the higher rate on heavy organic soils. Do not apply directly on the seed. Do not apply to transplanted lettuce.</p> <p><u>Fall or Winter Seeded Lettuce:</u> Apply specified dosage in a water emulsion or as a soil injected side-dressing with liquid fertilizer at thinning time. Do not apply within 60 days of harvest. Read "IMPORTANT" statement under "Recommended Applications" for additional information before use on this crop.</p>
Cabbage	Aphids Flea beetles	1 pint per acre (36 inch row spacing*)	
Lettuce	Root aphids   Aphids Leafhoppers Mites Thrips	1.7 fluid ounces per 1000 feet of row (for any row spacing*)   .6 to 1.2 fluid ounce per 1000 feet of row (for any row spacing*) or 1 to 2 pints per acre (20 inch row spacing)	
Peas	Aphids Leafhoppers	1 to 2.5 pints 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.

## RECOMMENDED APPLICATIONS (Continued)

CROP	INSECT	DOSAGE DI-SYSTON 8	REMARKS
VEGETABLES (Cont'd)			<b>SOIL APPLICATION -- PRE-PLANT BROADCAST:</b> 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 two <u>soil</u> applications of DI-SYSTON per crop season regardless of method of application or formulation used. Do not tank mix this product with Phosalone.
Potatoes	Aphids	3 to 4 pints per acre	
	Aphids Flea beetles (except tuber flea beetles) Leafhoppers Potato psyllid Southern potato wireworm Colorado potato beetle (early season reduction)	2.25 to 3.5 fl. ozs. per 1000 feet of row (for any row spacing*) (for 38 inch row spacing use 2 to 3 pints per acre)	<b>SOIL APPLICATION - FURROW:</b> Apply undiluted in specifically designed equipment for low volume soil injection, or apply in a water emulsion, or with liquid fertilizer as an in-furrow spray, or injection on each side of the seed furrow at planting. An <u>additional</u> side-dress application may be made as a water emulsion injection after plants become established. Do not make more than two <u>soil</u> applications of DI-SYSTON per crop season regardless of method of application or formulation used. Do not apply second soil application within 75 days of harvest. Higher rate to be used in organic soils. Do not tank mix this product with Phosalone.
Potatoes	Green peach aphids	6 to 16 fluid ounces per acre	<b>FOLIAR APPLICATIONS:</b> 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 not more than 3 times per season nor within 30 days of harvest. In Arizona and California, do not make foliar applications of DI-SYSTON 8 to the potato variety, Centennial. Do not tank mix this product with Phosalone.
<b>NOTE:</b> Foliar applications may be made following at-planting soil treatment as recommended above or on the label for DI-SYSTON 15% Granular.			

\*ON ROW CROPS WHERE ROW SPACING IS EXTREMELY NARROW, DO NOT PLACE TREATED ZONES (BAND OR FURROW) CLOSER TOGETHER THAN 6 INCHES.

SPRINKLER IRRIGATION APPLICATION TO POTATOES:

For control of green peach aphid, and Colorado potato beetle on potatoes in the States of Oregon, Washington, Idaho, and Utah, apply DI-SYSTON 8 at the rate of 1 to 3 pints per acre through sprinkler irrigation systems. Use only in solid set or center pivot systems equipped with automatic shutoff devices and valves to prevent backflow into the water source. Do not apply when wind velocities exceed 10 mph.

Up to 3 applications of the 1 pint per acre rate may be made but not within 30 days of harvest, or, only 1 application of rates above 1 pint per acre may be made but not within 60 days of harvest. Applications may be made following at-planting soil treatments as recommended on this label or on the label for DI-SYSTON 15% Granular. Do not tank mix this product with Phosalone.

Solid Set Systems: Apply specified dosage for the entire length of the irrigation period or for a 30 to 60 minute period at the end of a regular irrigation set or as a 30 to 60 minute injection as a separate application not associated with a regular irrigation. Allow time for all lines to flush the pesticide through all nozzles before turning off irrigation water. To ensure the lines are flushed and free of remaining pesticide, a dye indicator may be injected into the lines to mark the end of the application period. See Note.

Circular Systems: Inject the specified dosage per acre continuously for one complete revolution of the system. See NOTE.

Sample Calculations:Center Pivot Calibrations:

- (1) To apply DI-SYSTON 8 at the rate of 1 pint per acre to 130 acres you will need  $130 \times 1$  pint or 130 pints (16-1/4 gallons) of product.
- (2) If your injection pump delivers 15 gallons per hour and your system takes 20 hours for 1 revolution, you will need to mix enough water with the DI-SYSTON 8 to obtain 300 gallons of emulsion.
- (3) Mix the required amounts of DI-SYSTON 8 and water in a nurse tank equipped with mechanical agitation, start the irrigation system and begin the injection.
- (4) Check frequently to insure all systems are functioning properly.

Solid Set Calibration:

- (1) Determine the area to be treated per irrigation set. If one set irrigates four 1/4 mile long lines on a 50' spacing,  $4 \times 1,320' \times 50 \text{ feet} = 264,000$  square feet or approximately 6 acres.
- (2) If 1 pint of DI-SYSTON 8 is to be applied per acre, 6 x 1 or 6 pints DI-SYSTON 8 is needed.
- (3) Dilute with sufficient water so injection time will require approximately 30 minutes or more per set. Under no circumstances should injection be less than 10 minutes.
- (4) Repeat applications until the entire field is treated.

SPRINKLER IRRIGATION APPLICATION (Cont'd)

## NOTE:

Apply the product only through systems containing anti-siphon and check valves which will prevent water source contamination and overflow of the slurry tank, and containing interlocking controls between the metering device and the water pump to insure simultaneous shut-off. Constant agitation must be maintained in the chemical supply tank during the entire period of insecticide application. Inject the product with a positive displacement pump into the main line ahead of a right angle turn to insure adequate mixing.

Application of more than label recommended quantities of irrigation water per acre may result in decreased product performance by removing the chemical from the zone of effectiveness. Do not apply when wind speed favors drift, when systems connections or fittings leak, when nozzles do not provide uniform distribution or when lines containing the product must be dismantled or drained.

Greater accuracy in calibration and distribution will be achieved by injecting a larger volume of a more dilute slurry per hour. Where sprinkler distribution patterns do not overlap sufficiently, unacceptable insect control may result. Where sprinkler distribution patterns overlap excessively, crop injury may result.

Allow foliage to dry thoroughly before entering field. If there is a need to enter fields earlier wear protective clothing.



CROP	INSECT	DOSAGE DI-SYSTON 8	REMARKS
Tomatoes	Aphids Flea beetles Leafhoppers Leaf miners Mites Colorado potato beetle (early season reduction)	1.2 to 3.5 fluid ounces per 1000 feet of row (for any row spacing*) -OR- 1 to 3 pints per acre (38 inch row spacing)	<p><b>Transplant Seed Beds:</b> Apply evenly over bed area in a water emulsion as a broadcast spray prior to seeding at the rate of 3 pints per acre. Work into the top 2- to 3-inches of soil and plant seed in normal manner.</p> <p><b>Field Applications:</b> 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 time. Do not apply directly on the seed. Where 2 field applications are required, use only 1.2 to 2.4 fluid ounces per 1000 feet of row, or 1 to 2 pints per acre, injected on each side of the seed furrow or transplanted row at planting and as a side-dressing after plants are established. Allow a minimum of 21 days between applications. Do not apply within 30 days of harvest.</p> <p>(NOTE: Florida Only - Rates up to 10.5 fluid ounces per 1000 feet of row, with a 72-inch row spacing, may be applied to highly alkaline soils as an injection on each side of the seed furrow or transplanted row at planting time only; or where 2 field applications are required, up to 5.25 fluid ounces per 1000 feet of row with a 72-inch row spacing, at planting time and up to 5.25 fluid ounces per 1000 feet of row as a side-dressing after plants become established. Do not apply within 30 days of harvest).</p> <p>Read "IMPORTANT" statement under "Recommended Applications" for additional information before use on this crop.</p>

\*ON ROW CROPS WHERE ROW SPACING IS EXTREMELY NARROW, DO NOT PLACE TREATED ZONES (BAND OR FURROW) CLOSER TOGETHER THAN 6 INCHES.

CROP ROTATION STATEMENT

Do not plant any food or feed crop in rotation after a field treatment with disulfoton unless it is a registered use for disulfoton.

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.

## RE-ENTRY STATEMENTS FOR FARMWORKERS

Do not apply this product in such a manner as to directly or through drift expose workers or other persons. The area being treated must be vacated by unprotected persons. Do not allow reentry into treated fields within 24 hours of application unless appropriate protective clothing is worn. Because certain states may require more restrictive reentry intervals for various crops treated with this product, consult your State Department of Agriculture for further information.

(The following may appear on supplemental labeling accompanying the product)

Written or oral warnings must be given to workers who are expected to be in a treated area or in an area about to be treated with this product. Oral warnings should include those statements found under the label heading "Precautionary Statements" and "Re-entry Statements" included on this label. When oral warnings are given, warnings shall be given in a language customarily understood by workers. Oral warnings must be given if there is reason to believe that written warnings cannot be understood by workers. Written warnings must include the following information: DANGER, area treated with DI-SYSTON 8 on (date of application). Do not allow reentry into treated fields within 24 hours of application unless appropriate protective clothing is worn. If you skin, remove contaminated clothing and wash skin immediately with soap and warm water. If eyes are contaminated, wash with flowing water for at least 15 minutes. If swallowed, vomiting should be induced. (See Precautionary Statements on label).

## STORAGE AND DISPOSAL

Pesticide Disposal: Do not contaminate water, food or feed by storage or 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.

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 above. In spill or leak incidents, keep unauthorized people away. You may contact the Mobay Emergency Response Team for decontamination procedures or any other assistance that may be necessary. The Mobay Kansas City Emergency Response Telephone No. is 816-242-2582, or contact Chentrec at 300-424-9200.

## PRECAUTIONARY STATEMENTS

## HAZARDS TO HUMANS AND DOMESTIC ANIMALS

D A N G E R            P O I S O N

Poisonous if swallowed, inhaled, or absorbed through the skin. Rapidly absorbed through the skin. Do not get in eyes, on skin, or on clothing. Wear protective clothing, natural rubber gloves, and goggles.

Do not breathe fumes or spray mist. Wear a pesticide respirator jointly approved by the Mining Enforcement and Safety Administration (formerly the U.S. Bureau of Mines) and by the National Institute for Occupational Safety and Health under the provisions of 30 CFR Part 11.

Do not contaminate feed or food. Keep out of reach of children. Keep all unprotected persons out of the operating area or vicinity. Wash hands, arms, and face thoroughly with soap and warm water before eating or smoking.

HANDLING OF CONTAMINATED ARTICLES: Clothing and rags receiving undiluted DI-SYSTON 8 as a result of leaks, spills, or mishaps should be removed immediately and not reused. These contaminated articles should be buried in the same manner as the empty container; see container disposal section for directions. (Contaminated articles which should be discarded would include: hats, gloves, aprons, coats, boots, etc. not made of rubber or coated with rubber or other similar materials). Clothing receiving spray mist or droplets from the mixed, diluted DI-SYSTON 8 should be removed and decontaminated before reuse. This clothing can be decontaminated by machine washing separately from other items with soap or detergent and bleach in hot water twice before reuse. Protective clothing and equipment should be washed down with detergent or soap and bleach in water. Wash water from the cleaning of protective clothing or equipment should not be allowed to run off or otherwise enter water supplies.

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

## STATEMENTS OF PRACTICAL TREATMENT

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. If eyes are contaminated, wash with flowing water for at least 15 minutes.

## STATEMENTS OF PRACTICAL TREATMENT (Cont'd)

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 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.

## ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and wildlife. Do not apply directly to water or wetlands. Drift and runoff from treated areas may be hazardous to fish in neighboring areas. Do not contaminate water by cleaning of equipment or disposal of wastes. 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.

DI-SYSTON is a Reg. TM of Bayer AG, Leverkusen.

COMPEX is a Reg. TM of Kalo Laboratories, Inc.