

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY

SEP 29

260/425538
MB/24

Mr. John S. Thornton, Manager
Miles Inc.
Agricultural Chemicals Division
P.O. Box 4913
Kansas City, Missouri 64120-0013

Dear Mr. Thornton,

Subject: Revised Labeling - Avian Granular Initiative
Di-Syston 5% Granular
EPA Registration Number 3125-58
Di-Syston 10% Granular
EPA Registration Number 3125-61
Di-Syston Systemic Insecticide for Vegetables
EPA Registration Number 3125-126
Di-Syston 15% Granular Insecticide
✓ EPA Registration Number 3125-172
Your Submissions Dated August 24, 1992

The label revisions referred to above submitted in response to EPA's Avian Granular Initiative are acceptable. Please submit 5 copies of complete labeling for our records.

Sincerely,

George T. LaRocca
Product Manager (13)
Insecticide-Rodenticide Branch
Registration Division (H7505C)

Enclosure

cc: Margaret Rice
Special Review and Reregistration Division

CONCURRENCES

SYMBOL								
SURNAME	TML							
DATE	89/20/92							

172-7628.YLD

Base Pre-Reg. (7628)

U.S. LABEL

Date of Pre-Reg Draft: 8/18/92 (C)

Reason to Issue: To reduce avian exposure by adding soil incorporation to applications and decreasing the number of applications on peanuts and sorghum.

EPA Reg. No. 3125-172

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
15% GRANULAR
SYSTEMIC INSECTICIDE

ACTIVE INGREDIENT:	
O,O-Diethyl S-[2-(ethylthio)ethyl]	
phosphorodithioate	15%
INERT INGREDIENTS:	85%
	<u>100%</u>

AMENDMENT

To Previously Registered Labeling

RECOMMENDED APPLICATIONS

CROP	INSECT	DOSAGE DI-SYSTON 15% G	REMARKS									
FIELD CROPS												
Alfalfa Clover	Aphids Mites	6.7 pounds per acre	Apply only one broadcast treatment but not within 28 days of grazing or cutting for forage. Make only one application per crop season.									
Barley	Aphids Mites	6.7 pounds per acre	Apply by drilling or broadcast at planting time, or as a broadcast after emergence. Do not apply more than twice per season nor within 60 days of harvest for grain. Allow a minimum of 21 days between applications. Do not graze or cut for forage within 30 days of treatment									
Cotton	Aphids Mites Thrips	5 to 8 ozs per 1000 feet of row (for any row spacing*) -or- 4 to 6.7 lbs per acre (40-inch row spacing)	<p><u>At Planting:</u> Place the granules in the seed furrow or in a soil incorporated band on each side of the furrow.</p> <p style="text-align: center;">RATE CHART FOR PLANTING TIME APPLICATION</p> <table border="1"> <thead> <tr> <th>Heavy Soils</th> <th>Medium Soils</th> <th>Light Soils</th> </tr> </thead> <tbody> <tr> <td>8 oz. 15% Gran./1000 ft. of row</td> <td>6.6 oz 15% Gran./1000 ft. of row</td> <td>5 oz. 15% Gran./1000 ft. of row</td> </tr> <tr> <td>6.7 lbs. 15% Gran./acre</td> <td>5.3 lbs. 15% Gran./acre</td> <td>4 lbs. 15% Gran./acre</td> </tr> </tbody> </table>	Heavy Soils	Medium Soils	Light Soils	8 oz. 15% Gran./1000 ft. of row	6.6 oz 15% Gran./1000 ft. of row	5 oz. 15% Gran./1000 ft. of row	6.7 lbs. 15% Gran./acre	5.3 lbs. 15% Gran./acre	4 lbs. 15% Gran./acre
			Heavy Soils	Medium Soils	Light Soils							
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6.7 lbs. 15% Gran./acre	5.3 lbs. 15% Gran./acre	4 lbs. 15% Gran./acre										
<p><u>Post Plant:</u> (Irrigated Cotton Only) If an additional treatment is necessary, make one soil incorporated side-dress application. Do not apply more than twice per season. Allow at least 21 days between applications and at least 28 days between last application and harvest. Read "IMPORTANT" statement under "Recommended Application" for additional information before use on this crop.</p>												
		2.5 to 3.3 ozs. per 1000 ft. of row (for any row spacing*) -or- 2 to 2.7 lbs per acre (40-inch row spacing)	<u>HILL DROPPED COTTON:</u> Apply specified dosage with the seed at planting. Use the lower rate where hill spacing is greater than 14 inches apart or where applications are made to light, sandy soils. Read "IMPORTANT" statement under "Recommended Applications" for additional information before use on this crop.									

RECOMMENDED APPLICATIONS (Continued)

CROP	INSECT	DOSAGE DI-SYSTON 15% G	REMARKS
<u>FIELD CROPS</u>	(Continued)		
Peanuts	Aphids Leafhoppers Mites Thrips	7.4 to 14.7 ozs per 1000 feet of row (for any row spacing*) -or- 6.7 to 13.3 lbs per acre (36-inch row spacing)	Place the granules in a soil incorporated band on each side of the seed furrow at planting, or as a soil incorporated side-dressing after plants are established. Do not feed treated vines.
Sorghum	Aphids (Greenbugs) (See "NOTE" below)	6 to 8 ozs per 1000 ft. of row (for any row spacing*) -or- 5 to 6.7 lbs per acre (40-inch row spacing)	<u>PLANTING: IN-FURROW</u> Placing the granules in the seed furrow approximately 1/2 inch above the seed at planting. Do not apply directly on the seed. See "NOTE" below.
		8 ozs per 1000 ft. of row (for any row spacing*) -or- 6.7 lbs per acre (40-inch row spacing)	<u>PLANTING: BAND</u> Place the granules in a 4 to 6 inch soil incorporated band directly behind the planter shoe in front of the press wheel. Do not apply directly on the seed. See "NOTE" below. <u>POST-PLANTING: WHORL</u> Apply specified dosage by broadcasting into the whorl. Do not apply more than 1 time per season. Allow at least 30 days between last application and harvest of grain and at least 45 days between last application and harvest for forage or fodder.
		<u>NOTE:</u> (1) The post-planting broadcast application into the whorl may be made following an at-planting application. (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.	

RECOMMENDED APPLICATIONS (Continued)

CROP	INSECT	DOSAGE DI-SYSTON 15% G	REMARKS
FIELD CROPS Soybeans	(Continued) Aphids Leafhoppers Mites Thrips (except flower thrips) Mexican bean beetle	8 ozs per 1000 ft of row (for any row spac- ing*) -or- 6.7 lbs per acre (36 inch row spacing)	Place the granules in a 4-inch soil incorporated band over the seed furrow behind the planter shoe and in front of the press wheel or in a soil incorporated band on each side of the seed furrow at planting time. Do not apply directly on the seed. <u>Soybeans Grown for Seed Only:</u> As an alternate to the applications above, soybeans grown for seed only can be treated with a soil incorporated band on each side of the seed furrow at planting time or with a soil incorporated side-dress after plants are established. Soybeans treated in this way should not be pastured and the treated crop cannot be used for feed, food or forage.
Tobacco	Aphids Flea beetles	<u>Transplant Seed Beds:</u> 1 ounce per 100 square feet of bed	Apply evenly over bed area. Incorporate the granules thoroughly into the top 2 to 3 inches of soil; seed beds in normal manner. An alternative treatment may be made by broadcasting the granules evenly over the plants after emergence and watering to thoroughly incorporate the granules. Only one application may be made to transplant seed beds.
	Aphids Flea beetles **Southern potato wireworm	<u>Field Application:</u> 20 to 40 ounces per 1000 feet of row (for any row spacing*) -or- 13.3 to 26.7 lbs per acre (broadcast or with 48 inch row spacing)	Apply in a 6- to 12-inch soil incorporated band over the row or as a soil incorporated broadcast treatment immediately before transplanting. Incorporate the granules by working them into the top 2 to 3 inches of soil. Plant crop in the usual way. Only one field application may be made per crop season regardless of DI-SYSTON formulation used. **DI-SYSTON 15% Granular will aid in control of this wireworm.
Wheat (Fall)	Hessian fly Aphids (Greenbugs) (Oat bird cherry) Grasshoppers	6.7 lbs per acre	Apply by drilling or broadcast at planting time in the fall. Make only one application and do not graze or cut for forage within 75 days of treatment. <u>NOTE:</u> 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.

RECOMMENDED APPLICATIONS (Continued)

CROP	INSECT	DOSAGE DI-SYSTON 15% G	REMARKS
<u>FRUIT</u> Coffee (Puerto Rico only)	Leaf miner	2 to 4 grams per foot of tree height	Distribute granules uniformly under the tree canopy. Do not apply more than twice per year. Make no more than one pre-harvest and one post-harvest application. Do not make the pre-harvest application within 90 days of harvest.
<u>NON-BEARING FRUIT</u> Fruit Trees (apples, apricots, cherries, crabapples, peaches, pears, plums, and prunes)	Aphids Lace bug Leafhoppers Mites Thrips Whiteflies	0.16 to 1.56 lbs per tree or 2.5 ozs per inch of trunk diameter	Spread granules uniformly from trunk to drip line on all sides. Work into soil and water thoroughly. The higher dosage is recommended for heavy organic or muck soils. For transplanting, equivalent quantities should be applied into planting hole. Do not apply to trees that will bear fruit during current crop year.
Strawberries (Propagating Plants only)	Aphids Mites (except cyclamen mite)	17 to 34.4 ozs per 1000 feet of row (for any row spacing*) -or- 13.3 to 26.7 lbs per acre (42-inch row spacing)	Apply by side-dressing on each side of the row or by broadcasting over the row as needed. Do not use fruit from treated plants for food purposes.
Raspberries (Nursery stock only) (Northeast States Only)	Aphids	53.3 pounds per acre	BAND APPLICATION: Apply specified dosage in a 24-inch band over the row to new or established plantings. Work granules 2 to 3 inches into the soil using a cultivator or other suitable equipment. A second application of granules may be applied to the soil later in the season. Consult your State Agricultural Experiment Station or Extension Service for proper timing of applications
<u>NUTS</u> Pecans (South Central and South-western States) (NOTE 1)	Aphids	10 to 20 lbs per acre	Apply by treating 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 granules into the upper 2 to 3 inches of soil. 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 mix this product with Phosalone.

RECOMMENDED APPLICATIONS (Continued)

CROP	INSECT	DOSAGE DI-SYSTON 15% G	REMARKS
<u>VEGETABLES</u> Beans	Aphids Leafhoppers Mexican bean beetle (larvae) Mites Thrips	6 to 12 ozs per 1000 feet of row (for any row spacing*) -or- 6.7 to 13.3 lbs per acre (30-inch row spacing)	For snap or green Lima beans, place the granules in a soil incorporated band on each side of the seed furrow at planting time only. For dry beans, apply as above at planting time or as a soil incorporated side-dressing on each side of the row. Allow at least 60 days between application and harvest. Do not apply directly on the seed. Only one application is allowed per season. Read " <u>IMPORTANT</u> " statement under "Recommended Applications" for additional information before use on this crop. Do not feed vines or hay.
Brussels Sprouts Broccoli Cabbage (Includes tight-heading varieties of Chinese cabbage) Cauliflower	Aphids Flea beetles Leafhoppers	7.4 ozs per 1000 feet of row (for any row spacing*) -or- 6.7 to 13.3 lbs per acre (36-inch row spacing)	<u>Transplant Seed Beds:</u> Apply granules evenly over bed area. Thoroughly incorporate into the top 2 to 3 inches of soil; seed beds in normal manner. An alternate seed bed treatment may be made by broadcasting the granules evenly over the plants after emergence and watering to thoroughly incorporate the granules. Do not apply more than one seed bed treatment. <u>Field Applications:</u> Place the granules as a soil incorporated band on each side of the seed furrow or transplanted row at planting and/or as a soil incorporated side-dressing after plants become established. Do not apply directly on the seed.
Brussels Sprouts	Mites Thrips		Only one field application is allowed for broccoli and cabbage. For broccoli, allow at least 14 days between application and harvest. For cabbage, allow at least 42 days between application and harvest.
Cabbage (Includes tight-heading varieties of Chinese cabbage)	Root Aphid	11.3 ozs per 1000 feet of row (for any row spacing*)	Two field applications are allowed for Brussels sprouts and cauliflower. For Brussels sprouts, allow at least 30 days between last application and harvest. For cauliflower, allow at least 40 days between last application and harvest. Allow a minimum of 21 days between applications.

RECOMMENDED APPLICATIONS (Continued)

CROP	INSECT	DOSAGE DI-SYSTON 15% G	REMARKS
<u>VEGETABLES</u>	(Continued)		
Lettuce	Aphids Leafhoppers Mites Thrips	4 to 8 ozs per 1000 feet or row (for any row spacing*) -or- 6.7 to 13.3 lbs per acre (20- inch row spacing)	<u>Spring or Summer Seeded Lettuce:</u> Use the higher rate on heavy organic soils. Place the granules in a soil incorpor- ated band on each side of the row at seeding time only. Do not apply directly on the seed. Do not apply to transplanted lettuce.
Peas	Aphids Leafhoppers	6.7 to 16.7 lbs per acre	Apply by drilling or broadcasting at planting time, or as a soil incorpor- ated side-dress on each side of the row after emergence. Do not apply more than once per season nor within 50 days of harvest. Do not feed vines or hay.
Peppers	Aphids	6.7 to 13.3 ozs per 1000 ft of row (for any row spacing*) -or- 6.7 to 13.3 lbs per acre (32- inch row spacing)	Apply 6.7 to 13.3 ounces per 1000 feet of row. Place the granules in a soil incorporated band on each side of seed furrow at planting or at transplanting. Do not apply more than once per crop season nor within 90 days of harvest. Do not apply directly on the seed.
Potatoes	Aphids Flea Beetles (except tuber flea beetles) Leafhoppers Potato psyllid Southern potato wireworm Colorado potato beetles (early season reduction)	15 to 23 ozs per 1000 feet of row (for any row spacing*) -or- 13.5 to 20.5 lbs per acre (38-inc: row spacing)	<u>ROW TREATMENTS</u> Place the granules in the seed furrow or in a soil incorporated band on each side of the seed furrow at planting. An additional application may also be made as a soil incorporated side-dress after plants become established. Higher rate to be used in organic soils.
		20 to 26.7 lbs per acre	<u>BROADCAST APPLICATION</u> Apply specified dosage per acre as a preplant broadcast application. In- corporate granules into soil to a depth of 2 to 3 inches using a disc or other suitable equipment. Plant crop in usual manner. A postemergence soil incorporated side-dress may also be made after the plants become estab- lished. A total of 2 soil incorporated appli- cations (row treatments and/or broad- cast) is allowed per season. Allow at least 75 days between last application and harvest. See <u>NOTE 1</u> below for "foliar applications". Do not mix this product with Phosalone.

RECOMMENDED APPLICATIONS (Continued)

NOTE 1: East of the Rocky Mountains foliar applications of DI-SYSTON 8 may be made in addition to an at-planting soil incorporated treatment. Refer to label for DI-SYSTON 8.

NOTE 2: Colorado potato beetle populations in Northeast U.S. (except Maine) and in Virginia and North Carolina have developed resistance to some insecticides, including DI-SYSTON. Consult your state extension agent/agricultural advisor for insect resistance management strategies and recommended insect control methods for your area.

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

RECOMMENDED APPLICATIONS (Continued)

CROP	INSECT	DOSAGE DI-SYSTON 15% G	REMARKS
ORNAMENTALS Flowers and Ground cover	Aphids Lace bug Leafhoppers Mites Thrips Whiteflies	3.5 to 7.25 ozs per 100 ft. of row	<u>ROW TREATMENT</u> As a row treatment apply in a band on each side of the seed furrow, or as a band over the row. Incorporate thoroughly into soil and water heavily. The higher dosage is recommended for heavy organic or muck soils. For treatment of Easter lilies and gladiolus, apply in the furrow over the bulbs after they are set, but before covering with soil. Do not make in-furrow applications to garden lily bulbs.
		7 oz per 100 square feet	<u>BROADCAST</u> For mass planting apply as a broadcast treatment and incorporate into the soil before planting or apply after plants are established. Granules must be incorporated in the soil by mechanical means or thoroughly watered in so no pesticide remains on the soil surface. Repeat applications at 4- to 6-week intervals if necessary. SEE NOTE.
		2 gm/sq. ft.	<u>POTTED PLANTS</u> For application to potted plants, determine surface area of container, [diameter (inches) squared x 0.7865 divided by 144 equals square feet area of container]. Apply appropriate amount of DI-SYSTON 15% Granular by thorough incorporation as directed. SEE NOTE.

RECOMMENDED APPLICATIONS (Continued)

CROP	INSECT	DOSAGE DI-SYSTON 15% G	REMARKS
ORNAMENTALS Shrubs Trees Including Christmas trees	Aphids Birch leaf miner Camellia scale Elm leaf beetle European elm scale Holly leaf miner Lace bug Leafhoppers Mimosa webworm Mites Pine tip moth Soft scale (<u>Coccus hesperidium</u>) Tea scale Thrips Whiteflies	<u>SHRUBS</u> 3.75 to 7.5 grams per foot of height	<u>SHRUBS</u> Apply specified dosage per foot of shrub height. For shrubs 1-3 feet tall apply the lower rate and on plants 3-6 feet in height apply the higher rate. Distribute granules uniformly under the shrub canopy, incorporate thoroughly into the soil, and water heavily. (SEE NOTE) Repeat applications at 4- to 6- week intervals if necessary.
		<u>TREES</u> 2.5 ounces per inch of trunk diameter measured 4 feet from the ground	<u>TREES</u> <u>Broadcast:</u> Spread granules uniformly from trunk to drip line on all sides. Incorporate thoroughly into soil and water heavily so that no pesticide remains on the soil surface. (SEE NOTE) <u>Transplants:</u> For transplanting, equiv- alent quantities should be applied in the planting hole. Uniformly mix DI-SYSTON 15% Granular in the bottom one-half of the backfilled soil when planting. A minimum of 6 inches of untreated soil should be placed on the backfilled soil.
		2.5 ounces per inch of trunk diameter measured 4 feet from the ground	<u>Soil Implant:</u> With an auger or soil sampling tool, dig 2 equally spaced holes for each inch of trunk diameter. (Do not use less than 4 holes per tree.) Dig the holes 9 to 12 inches deep under the drip line. Place an equal amount of DI-SYSTON 15% Granular in each hole. Fill the holes to the surface with soil, compress, and add additional soil to level. Keep the treated area moist for 7 to 10 days.
		5 lbs per 1000 linear feet of row or a soil injection 4 to 6 inches be- neath the soil surface in 1 or 2 linear appli- cation trenches	<u>Soil Injection:</u> Use an opening disk or shoe to make a furrow 4 to 6 inches deep between trunk and drip line of tree parallel to the direction of the row. Apply DI-SYSTON 15% Granular through a tube so that the material is deposited in the bottom of the furrow. A device to close and seal the furrow should be used following the placement of the material so that no granules are present on the soil surface.