

U.S. LABEL

Reason for Issue: To add use on sorghum
for control of aphids.

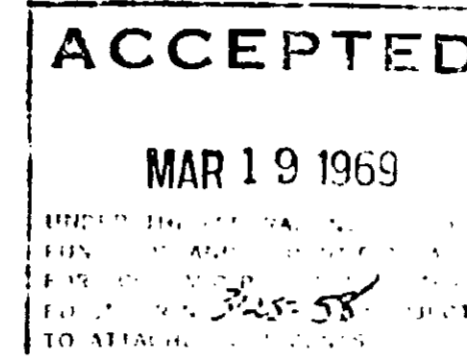
Date of Draft: 6/19/68 (Pre-Reg.)

USDA Reg. No. 3125-58

(R)
DI-SYSTON

5% GRANULAR

Systemic Insecticide



AMENDMENT
To Previously Registered Label

To add the following:

RECOMMENDED DI-SYSTON APPLICATIONS

CROP	INSECT	DOSAGE DI-SYSTON 5%	REMARKS
Sorghum	Aphids	12 to 24 ounces per 1000 ft. of row (for any row spacing*) or 19 to 20 pounds per acre (40 inch row spacing)	Apply specified dosage by broadcasting into the whorl. Do not apply more than once per crop season nor within 82 days of harvest for grain or 14 days of harvest for forage and fodder.

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

ABOVE AMENDMENT IS THE ORIGINAL SUBMITTED WITH APPLICATION.

T-54
Ref. 1

Base Reg. (685)

U.S. LABEL - (S)

Reason to Issue: To show registration of new use on corn (furrow & topical) on basis of increased tolerance; add six new insect claims on shrubs, trees, and forest plantings; delete patent license statement and add disclaimer statement.

Date of Draft: 2/2/68
Supersedes Draft Dated: 4/12/67
Pre-Reg. Drafts Dated: 5/17/67 & 10/17/66

Reg. U.S. 2/27/67

®

DI-SYSTON

5% GRANULAR

SYSTEMIC INSECTICIDE

FOR EFFECTIVE SYSTEMIC CROP PROTECTION

NET WEIGHT POUNDS



DANGER

KEEP OUT OF REACH OF CHILDREN
(See rear panel for antidote and warning statements)

GUARANTEE

ACTIVE INGREDIENT:	
<u>O,O</u> -Diethyl <u>S</u> -[2-(ethylthio)ethyl] phosphorodithioate/	5%
INERT INGREDIENTS:	<u>95%</u>
	100%

U.S. Patent No. 2,759,010
Canadian Patent No. 518,967

USDA Reg. No. 3125-58

STOP - READ THE LABEL BEFORE USE

MANUFACTURED BY

CHEMAGRO CORPORATION

KANSAS CITY, MO.

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

DI-SYSTON 5% Gran.

DIRECTIONS FOR USE

IMPORTANT: Read these entire Directions and Conditions of Sale, including the Warranty and Limitation of Damages provision, before using DI-SYSTON 5% Granular.

CONDITIONS OF SALE: These Directions for Use reflect the opinion of experts based on tests of effectiveness, of toxicity to plants and laboratory animals and of residues on or in food and feed under normal conditions of use. However, because of the wide range of conditions under which this product may be used, even though label directions are followed, it is impossible to eliminate all risks associated with its use because of abnormal conditions beyond the control of the seller. Chemagro Corporation and the Seller offer, and the Buyer uses, this product subject to the understanding that the Buyer assumes all such risks.

DI-SYSTON 5% Granular is a systemic insecticide that enters the plant through the root system. The insecticide when placed near the roots, is picked up and moves in the sap stream to all parts of the plant where it kills insects as they feed on the plant.

DI-SYSTON 5% Granular formulation is highly versatile and may be applied by various methods. It can be drilled in the furrow with seed, broadcast, or banded on each side of the seed furrow. Foliage broadcast application may be applied by ground or air equipment. Time and method of application and limits for use are discussed in detail for each specific crop under "Remarks" below.

As a preplant treatment for ornamental flowers, shrubs, and trees, apply granules evenly to seed bed and mix into soil; seeds or transplants are then placed in the normal manner. Established plants may be treated by distributing granules uniformly under foliage canopy. Mixing the granules into top soil and watering will accelerate entry into the plant, as the chemical will leach into the root zone and be taken up by the root system.

RECOMMENDED DI-SYSTON APPLICATIONS

IMPORTANT: When used on cotton, sugar beets, tomatoes, beans, 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.

CROP	INSECT	DOSAGE DI-SYSTON 5%	REMARKS
FIELD CROPS			
Alfalfa	Aphids Mites	20 pounds per acre	Apply by broadcast treatment as needed. Allow a minimum of 28 days between applications.
Clover	Aphids Mites	20 pounds per acre	Apply by broadcast treatment as needed but not within 7 days of harvest or grazing. Allow a minimum of 28 days between applications.
Barley Oats	Aphids Mites	20 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. Allow a minimum of 21 days between applications. Do not graze or cut for forage within 30 days of treatment.

DI-SYSTON 5% Gran.

RECOMMENDED DI-SYSTON APPLICATIONS

CROP	INSECT	DOSAGE DI-SYSTON 5%	REMARKS							
FIELD CROPS (Continued)										
Corn	Rootworms Aphids Leafhoppers Mites Thrips	24 ounces per 1000 feet of row (for any row spacing*) or 20 pounds per acre (40 inch row spacing)	Corn Rootworms: For control of rootworms, place the granules in a 4- to 6-inch band directly behind the planter shoe in front of the press wheel. Do not place granules in direct contact with the seed. A second application of DI-SYSTON granules may be applied to the soil as a side-dress treatment later in the season. Aphids, Mites, Thrips, and Leafhoppers: For control of these insects apply DI-SYSTON granules to the soil as a side-dress treatment or to the foliage by broadcasting into the whorl. Do not apply DI-SYSTON within 40 days of harvesting for food, feed, or ensilage.							
		Note: Do not apply to corn more than twice per season regardless of the method of application.	At Planting: Place the granules in the seed furrow or in a band on each side of the furrow. RATE CHART FOR PLANTING TIME APPLICATION <table border="1"> <thead> <tr> <th>Heavy Soils</th> <th>Medium Soils</th> <th>Light Soils</th> </tr> </thead> <tbody> <tr> <td>24 oz. 5% Gran./1000 ft. of row</td> <td>20 oz. 5% Gran./1000 ft. of row</td> <td>14 oz. 5% Gran./1000 ft. of row</td> </tr> <tr> <td>20 lbs. 5% Gran./acre.</td> <td>16 lbs. 5% Gran./acre.</td> <td>12 lbs. 5% Gran./acre.</td> </tr> </tbody> </table>	Heavy Soils	Medium Soils	Light Soils	24 oz. 5% Gran./1000 ft. of row	20 oz. 5% Gran./1000 ft. of row	14 oz. 5% Gran./1000 ft. of row	20 lbs. 5% Gran./acre.
Heavy Soils	Medium Soils	Light Soils								
24 oz. 5% Gran./1000 ft. of row	20 oz. 5% Gran./1000 ft. of row	14 oz. 5% Gran./1000 ft. of row								
20 lbs. 5% Gran./acre.	16 lbs. 5% Gran./acre.	12 lbs. 5% Gran./acre.								
Cotton	Aphids Mites Thrips	14 to 24 ounces per 1000 feet of row (for any row spacing*) -or- 12 to 20 pounds per acre (40 inch row spacing)	Post-Plant: (Irrigated Cotton Only) If an additional treatment is necessary make one side-dress application or a single broadcast application over the foliage. Rates up to 40 pounds per acre can be applied to first squaring cotton (90 days before harvest) and rates up to 20 pounds per acre can be applied to within 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 DI-SYSTON Applications" for additional information before use on this crop.							
Peanuts	Aphids Leafhoppers Mites Thrips	22 to 44 ounces per 1000 feet of row (for any row spacing*) -or- 20 to 40 pounds per acre (36 inch row spacing)	Place the granules in a band on each side of the seed furrow at planting, or as a side-dressing after plants are established. Do not apply directly on the seed. Where necessary, granular may be applied in a band over the row or as a side-dressing at pegging time.							

RECOMMENDED DI-SYSTON APPLICATIONS
(Continued)

CROP	INSECT	DOSAGE DI-SYSTON 5%	REMARKS
FIELD CROPS (Continued)			
Rice	Leafhoppers	40 pounds per acre	Apply as a broadcast application at planting or prior to flooding. Do not apply more than twice per season nor within 100 days of harvest.
Sugar Beets	Aphids Leafhoppers Mites	18 ounces per 1000 feet of row (for any row spacing*) -or- 20 pounds per acre (30 inch row spacing)	Place the granules in the seed furrow 2 inches under the seed or in a band on each side of the seed furrow at planting; or apply to foliage and crown after emergence. Do not apply directly on the seed. Do not apply more than 3 times per season nor within 30 days of harvest. Allow a minimum of 21 days between applications. Read "IMPORTANT" statement under "Recommended DI-SYSTON Applications" for additional information before use on this crop.
Tobacco	Aphids Flea beetles	60 to 120 ounces per 1000 feet of row (for any row spacing*) -or- 40 to 80 pounds per acre (48 inch row spacing)	Apply in a 6- to 12-inch band over the row immediately before transplanting. Incorporate the granules by working them into the top 2 to 3 inches of soil. Set tobacco transplants into the band of treated soil.
	Southern Potato wireworm	40 to 80 pounds per acre	When applied in the above manner, DI-SYSTON will aid in control of this wireworm.
Wheat (Fall)	Hessian fly	20 pounds per acre	Apply by drilling or broadcast at planting time in the fall.
SEED FIELD CROPS			
Clover	Aphids Mites	30 pounds per acre	Apply by broadcast treatment as needed. Allow a minimum of 21 days between applications. Do not pasture or use treated crop for feed or forage.
Corn Soybeans	Aphids Leafhoppers Mites Thrips	24 ounces per 1000 feet of row (for any row spacing*) or 20 pounds per acre (40 inch row spacing)	Place the granules in a band on each side of the seed furrow at planting or as a side-dressing after plants are established. Do not pasture or use treated crop for feed, food, or forage. Do not apply directly to seed.
FRUIT			
Coffee (Puerto Rico Only)	Leaf miner	6 to 12 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.



RECOMMENDED DI-SYSTON APPLICATIONS
(Continued)

CROP	INSECT	DOSAGE DI-SYSTON 5%	REMARKS
FRUIT, (Continued)			
Pineapple	Mealybug	50 pounds per acre	Apply as a broadcast application, or topically by base leaf feeding after plants have developed root systems. Repeat as necessary but not more than twice per crop period nor within 60 days of harvest. When two treatments are used, do not ensile foliage less than one year after last application.
NON-BEARING FRUIT			
Fruit Trees	Aphids Lace bug Leafhoppers Mites Thrips Whiteflies	1/2 to 5 pounds per tree or 8 ounces 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.
Strawberries (Propagating Plants Only)	Aphids Mites (except cyclamen mite)	52 to 104 ounces per 1000 feet of row (for any row spacing*) -or- 40 to 80 pounds 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.
NUTS			
Pecans (South Central & Southwestern States)	Aphids	30 to 60 pounds 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 granular 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.
VEGETABLES			
Beans	Aphids Leafhoppers Mexican bean beetle (larvae) Mites Thrips	18 to 38 ounces per 1000 feet of row (for any row spacing*) -or- 20 to 40 pounds per acre (30 inch row spacing) If grain drills or similar equipment are used which give narrow row spacing, do not exceed the 40-lb. per acre rate	For snap or green Lima beans, place the granules in a band on each side of the seed furrow at planting time only. For dry beans, apply as above at planting time or 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. Read "IMPORTANT" statement under "Recommended DI-SYSTON Applications" for additional information before use on this crop.

DI-SYSTON 5% Gran.

RECOMMENDED DI-SYSTON APPLICATIONS
(Continued)

CROP	INSECT	DOSAGE DI-SYSTON 5%	REMARKS
VEGETABLES, (Continued)			
Brussels Sprouts	Aphids Flea beetles Leafhoppers Mites Thrips	22 ounces per 1000 feet of row (for any row spacing*) or 20 pounds per acre (36 inch row spacing)	Place the granules in a band on each side of the seed furrow at planting or as a side-dressing after plants become established. Do not apply directly on the seed. Do not apply more than twice 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 applications.
	Cauliflower		
Broccoli	Aphids Flea beetles Leafhoppers	22 ounces per 1000 feet of row (for any row spacing*) or - 20 pounds per acre (36 inch row spacing)	Place the granules as a band on each side of the seed furrow at planting or as a side-dressing after plants become established. Do not apply directly on the seed. Do not apply more than once per season. Do not use within 14 days of harvest for broccoli or 42 days of harvest for cabbage.
Cabbage	Aphids Flea beetles Root aphid		
Lettuce	Aphids Leafhoppers Mites Thrips	12 to 24 ounces per 1000 feet of row (for any row spacing*) -or- 20 to 40 pounds per acre (20 inch row spacing)	Spring or Summer Seeded Lettuce: Use the higher rate on heavy organic soils. Place the granules in a band on each side of the row at seeding time only. Do not apply directly on the seed. Do not apply to transplanted lettuce.
			Fall or Winter Seeded Lettuce: Apply as a side-dressing at thinning time. Do not apply within 60 days of harvest. Read "IMPORTANT" statement under "Recommended DI-SYSTON Applications for additional information before use on this crop.
Peas	Aphids Leafhoppers	20 to 50 pounds per acre	Apply by drilling or broadcasting at planting time, or as a side-dress on each side of the row after emergence. Do not apply more than once per season nor within 50 days of harvest.
Potatoes	Aphids Flea beetles (except tuber flea beetles) Leafhoppers Potato psyllid Southern potato wireworm Colorado potato beetle (early season reduction)	46 to 70 ounces per 1000 feet of row (for any row spacing*) -or- 40 to 60 pounds per acre (38 inch row spacing)	Place the granules in the seed furrow or in a band on each side of the seed furrow at planting. An application may also be made as a side-dressing after plants become established. Do not apply within 75 days of harvest. Higher rate to be used in organic soils.
Spinach	Aphids Leafhoppers Mites Thrips	12 ounces per 1000 feet of row (for any row spacing*) -or- 20 pounds per acre (20 inch row spacing.)	Place the granular in a band on each side of the seed furrow at planting time only. Do not apply directly on the seed.

RECOMMENDED DI-SYSTON APPLICATIONS
(Continued)

CROP	INSECT	DOSAGE DI-SYSTON 5%	REMARKS
VEGETABLES, Cont.			
Tomatoes	Aphids Flea beetles Leafhoppers Leaf miners Mites Colorado potato beetle (early season reduction)	24 to 70 ounces per 1000 feet of row (for any row spacing*) or 20 to 60 pounds per acre (38 inch row spacing)	Apply in a band on each side of the seed furrow at planting time. Do not apply directly on the seed. Where 2 treatments are required, use only 24 to 48 ozs. of 5% Gran. per 1000 ft. of row, or 20 to 40 lbs. per acre, applied in a band on each side of the seed furrow at planting and as a side-dressing after plants become established. Allow a minimum of 21 days between applications. (Note: <u>Florida Only</u> - Rates up to 220 ozs. of 5% Gran. per 1000 ft. of row, with a 72 inch row spacing may be applied to highly alkaline soils in a band on each side of the seed furrow at planting time only; or where 2 treatments are required, up to 110 ozs. of 5% Gran. per 1000 ft. of row, with a 72 inch row spacing at planting time, and up to 110 ozs. of 5% Gran. per 1000 ft. of row as a side-dressing after plants become established.) Do not apply within 30 days of harvest. Read " <u>IMPORTANT</u> " statement under "Recommended DI-SYSTON Applications" for additional information before use on this crop.
SEED VEGETABLES			
Cowpeas (Southern Peas, Black-eyed Peas, Crowder Peas)	Aphids Leafhoppers Mites Thrips	24 to 48 ounces per 1000 feet of row (for any row spacing*) -or- 20 to 40 pounds per acre (38 inch row spacing)	Place the granules in a band on each side of the seed furrow at planting, or as a side-dress application after plants are established. Do not apply directly on the seed. Repeat as necessary. Do not pasture or use treated crop for feed, food, or forage.
Carrots Garlic Onions Radishes Turnips	Aphids Leafhoppers Mites Thrips	12 to 22 ounces per 1000 feet of row (for any row spacing*) -or- 20 to 40 pounds per acre (18 inch row spacing)	Place the granules in a band on each side of the seed furrow at planting. Do not apply directly on the seed. Broadcast or side-dress applications may be made after plants become established. Repeat as necessary. Do not pasture or use treated crop for feed, food, or forage.

DI-SYSTON 5% Gran.

RECOMMENDED DI-SYSTON APPLICATIONS
(Continued)

CROP	INSECT	DOSAGE DI-SYSTON 5%	REMARKS
ORNAMENTALS			
Flowers (Note 1)	Aphids Lace bug Leafhoppers Mites Thrips Whiteflies	32 ounces per 150 to 300 feet of row	Apply in a band on each side of the seed furrow or as a band over the row. Work into soil and water thoroughly. For treatment of Easter lilies and gladiolus, apply the specified dosage 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. The higher dosage is recommended for heavy organic or muck soils.
Shrubs Trees Forest Plantings (Note 1)	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 (Coccus hesperidium) Tea scale Thrips Whiteflies	1/2 to 5 pounds per tree or 8 ounces 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 or by dipping seedling in a puddling clay slurry made up of 2 parts by weight of DI-SYSTON 5% in 4 to 9 parts by weight of clay.

Note 1: For use by commercial growers or professional applicators only.

*FOR EXTREMELY NARROW ROW SPACING OR BROADCAST APPLICATION, DO NOT EXCEED THE MAXIMUM PER ACRE RATE.

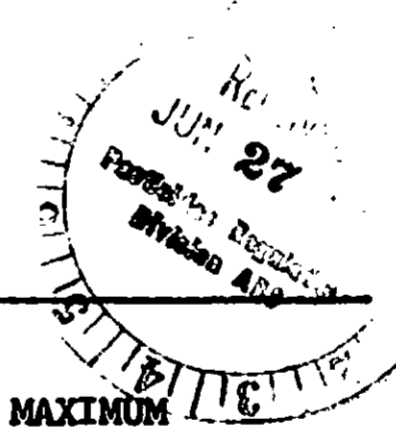
SEED CROPS

Applications at the rates shown may be made at any time to all crops listed on this label provided they are being grown for seed purposes only and are not to be used for feed, food, or forage. For specific recommendations regarding timing of applications, etc., consult your local Agricultural Experiment Station or Extension Service.

RESTRICTIONS

Not for home garden use. In commercial topping of flowers by hand, clean gloves should be worn. 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.

This product is poisonous to fish and wildlife. Keep out of lakes, ponds and streams. Do not apply in any manner not specified on the label.



DI-SYSTON 5% Gran

CONTAINER DISPOSAL

DO NOT RE-USE THE CONTAINER - Completely empty the contents and bury the unused chemical at least 18 inches deep in an isolated location away from water supplies.

Burn the empty container completely. Exercise extreme caution and stay well away from the smoke.

Do not use container in any connection with feed, food, or drinking water.

DANGER

Poisonous if swallowed, inhaled, or absorbed through the skin. Rapidly absorbed through the skin. Do not get in eyes or on skin. Do not breathe dust. Wear protective clothing and cotton or natural rubber gloves. If cotton gloves are used, they must be laundered or discarded after each day's use. Do not wear the same gloves for other work. Rubber gloves should be washed with soap and water after each use.

When using DI-SYSTON 5% Granular on non-food crops in greenhouses or other enclosed areas, wear a mask or respirator of a type approved by the U.S. Department of Agriculture for DI-SYSTON protection.

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. Wash all contaminated clothing with soap and hot water before re-use.

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

TREATMENT: In case of poisoning, call a physician immediately. Have patient lie down and keep quiet. If swallowed, induce vomiting by giving a tablespoonful of salt in a glass of warm water. Administer milk or water freely and again induce vomiting until vomit fluid is clear. 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.



TO PHYSICIAN:

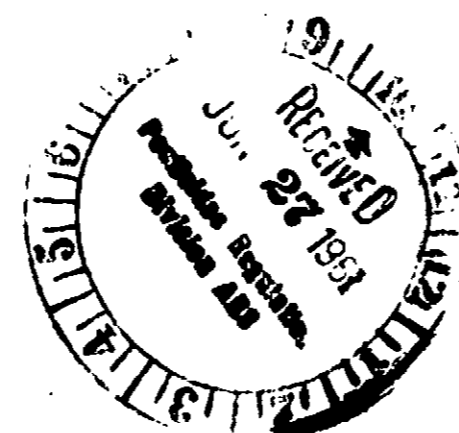
ANTIDOTE - Administer atropine sulfate in large therapeutic doses. Repeat as necessary to the point of tolerance. 2-PAM is also antidotal and may be administered in conjunction with atropine.

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.

WARRANTY AND LIMITATION OF DAMAGES

Chemagro Corporation warrants that this material conforms to the chemical description on the label and is reasonably fit for the purposes referred to in the Directions for Use and Conditions of Sale; subject to the risks referred to therein. Chemagro Corporation makes no other express or implied warranty, including any other express or implied warranty of FITNESS or of MERCHANTABILITY, and no agent of Chemagro Corporation is authorized to do so except in writing, with a specific reference to this warranty. Any damages arising from a breach of this warranty shall be limited to direct damages, and shall not include consequential commercial damages such as loss of profits or values, etc.

DI-SYSTON is Reg. TM in U.S. and Canadian Pat. Offs. by Farbenfabriken Bayer A.G., Chemagro Corporation licensee.



Reg # 3125-58

PM-15

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U.S. LABEL

Reason to Issue: To add use on sorghum for control of aphids.

Date of Draft: 6/19/68 (Pre-Reg.)

USDA Reg. No. 3125-58

Ⓡ
DI-SYSTON
5% GRANULAR
Systemic Insecticide

ACCEPTED
MAR 19 1969
UNDER THE FEDERAL INSECTICIDE
FUNGICIDE AND ROENTICIDAL ACT
FOR ECONOMIC POISON REGISTERED
UNDER NO. 3125-58 SUBJECT
TO ATTACHED COMMENTS.

AMENDMENT
To Previously Registered Label

To add the following:

RECOMMENDED DI-SYSTON APPLICATIONS

CROP	INSECT	DOSAGE DI-SYSTON 5%	REMARKS
Sorghum	Aphids	12 24 ounces per 1000 ft. of row (for any row spacing*) or 12 20 pounds per acre (40 inch row spacing)	Apply specified dosage by broadcasting into the whorl. Do not apply more than once per crop season nor within 82 days of harvest for grain or 14 days of harvest for forage and fodder.

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

ABOVE AMENDMENT IS THE ORIGINAL SUBMITTED WITH APPLICATION.