

NOV 26 1996

James Yowell
Griffin Corporation
P.O. Box 1847
Valdosta, GA 31603

Dear Mr. Yowell:

Subject: Revised Labeling
Tenn-Cop 5E
EPA Registration No. 1812-381
Your Submission Dated November 20, 1996

The amendment referred to above, submitted in connection with registration under section 3(c)(7)(A) of the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), is acceptable provided that you:

1. Submit/cite all data required for registration/-reregistration of your product under FIFRA section 3(c)(5) or 4(a) when the Agency requires all registrants of similar products to submit such data.

2. Make the labeling changes listed below before you release the product for shipment bearing the amended labeling:

a. For Clarity in the directions for use after 100 gallons add in parenthesis:

(Spray Volume)

b. For clarity in the heading for the Ornamentals table specify:

RATE/Gallons of Water

c. In the Apple directions align the text under the appropriate column.

d. Under Cherry (Sour) indicate for Brown Rot Blossom Blight if 3 Tbsp. is per 100 gallons of spray volume or per acre.

3. Submit one (1) copy 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 label is enclosed for your records.

Sincerely yours,



for

Philip V. Errico
Acting Product Manager (22)
Fungicide-Herbicide Branch
Registration Division (7505C)

Enclosure

3926

10/14/96 Amend

11/08/96 Revisions

Tenn-Cop® 5E

Fungicide/Bactericide

EMULSIFIABLE LIQUID

ACTIVE INGREDIENT

Copper salts of fatty and rosin acids*

58.0%

INERT INGREDIENTS

42.0%

TOTAL

100.0%

(* Metallic Copper equivalent 5.14%)

KEEP OUT OF REACH OF CHILDREN CAUTION

Si Usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.
(if you do not understand the label, find someone to explain it to you in detail.)

STATEMENT OF PRACTICAL TREATMENT

IF ON SKIN: Wash with soap and water. Get medical attention.

IF SWALLOWED: Drink promptly a large quantity of milk, egg whites, or gelatin solution, or, if these are not available, drink large quantities of water. Do not induce vomiting as it may cause aspiration pneumonia. Avoid alcohol. Call a physician immediately.

IF INHALED: Remove victim to fresh air. If not breathing, give artificial respiration, preferably by mouth-to-mouth. Get medical attention.

IF IN EYES: Flush eyes with plenty of water. Call a physician if irritation persists.

See label for Additional Precautions and Directions for Use.

GRIFFIN CORPORATION

Valdosta, Georgia 31603

EPA Reg No. 1812-381

**ACCEPTED
with COMMENTS
In EPA Letter Dated**

NOV 26 1996

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

1812-381

4926

PRECAUTIONARY STATEMENTS
HAZARDS TO HUMANS (AND DOMESTIC ANIMALS)
CAUTION

Contains petroleum distillates. Causes skin irritation. Harmful if swallowed, absorbed through the skin or inhaled. Causes moderate eye irritation. Avoid contact with eyes or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals.

PERSONAL PROTECTIVE EQUIPMENT

Applicators and other handlers must wear:

- Coveralls over short-sleeved shirt and short pants
- Chemical resistant gloves such as Nitrile rubber, Neoprene rubber or Polyvinyl chloride
- Chemical resistant headgear for overhead exposure
- Chemical resistant apron when cleaning equipment, mixing, or loading
- Protective eyewear
- Shoes plus socks

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's 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 Statement:

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.

ENVIRONMENTAL HAZARDS

This pesticide is toxic to fish and aquatic organisms. Do not apply directly to water, or areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when disposing of equipment washwaters.

PHYSICAL OR CHEMICAL HAZARDS

Do not spray into or near fire or open flames.

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 the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for protection of agricultural workers on farms, forests, nurseries, and greenhouses and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted-entry intervals. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted-entry interval (REI) of 12 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

- Coveralls over short-sleeved shirt and short pants
- Chemical resistant gloves such as Nitrile rubber, Neoprene rubber or Polyvinyl chloride
- Chemical resistant headgear for overhead exposure
- Protective eyewear
- Shoes plus socks

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NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are not within the scope of the Worker Protection Standard for agricultural pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries or greenhouses.

Do not enter treated area without protective clothing until sprays have dried.

STORAGE AND DISPOSAL

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

STORAGE: Store in a cool, dry, secure place away from fire or open flame. Open dumping is prohibited. Keep container closed and reseal after use. Product is not damaged by freezing, but preferably store at temperatures above 32° F. If spilled, use absorbent materials and dispose of in approved landfill.

PESTICIDE DISPOSAL: Pesticide wastes are toxic. 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, or plastic containers by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

MIXING INSTRUCTIONS

Pour Tenn-Cop 5E into spray tank at least ½ filled with water with adequate agitation. When mixed with other products proven or known to be compatible, wettable powders should be added first, followed in order by flowables and then emulsifiable concentrates including Tenn-Cop 5E.

TANK MIX INFORMATION: Tenn-Cop 5E can be used in tank mix with the products specified in the table below for use on the crops shown to enhance control of diseases for which the products are labeled. The products should be used as labeled in regard to dosage, timing, maximum number of applications and preharvest interval. The tank mix should be used in accordance with the most restrictive of any label's limitations and precautions. No label dosage rates should be exceeded. Tenn-Cop 5E may be applied up to day of harvest. When tank mixed with other products, do not apply the mixture closer to harvest than stated on the

product label. Tenn-Cop 5E cannot be mixed with any product bearing a label prohibition against such mixing.

CROP TANK MIX PRODUCTS*

Apple	Dithane M-45, Manzate 200, Maneb 80WP, Polyram 80WP
Celery	Bravo 500, Bravo 720, Bravo W-75
Tomato	Dithane M-45, Manzate 200, Maneb 80WP, Bravo 500, Bravo 720, Bravo W-75
Peanut	Dithane F-45, Dithane M-45, Bravo 720, Topsin M 70W

*Products which are equivalents of the specified products and labeled for the use can be substituted.

Do not apply this product through any irrigation (chemigation) system using aluminum parts or components as damage to the system may occur. Such application is prohibited regardless of whether the irrigation system is flushed with water after use of this product.

Apply this product only through one or more of the following types of systems: sprinkler including center pivot, lateral move, traveler, big gun, plastic pipe solid set system(s) which contain no aluminum parts or components. Do not apply this product through any other type of irrigation system.

Compatibility Information

Tenn-Cop 5E includes compatibility with Bravo (WP, 720, 500), Captan, Daconil 2787, Ferbam, Maneb (WP or Flowable), Dithane M-45 and Manzate 200, Sulfur (wetttable or flowable), organophosphates. Thiodan, Bacillus thuringiensis Berliner, Guthion, Diazinon, and Malathion. Do not mix Tenn-Cop 5E with oil when applied to citrus. Do not mix Tenn-Cop 5E with chelated or liquid fertilizers. Use product with other fungicides and insecticides with caution. Observe all cautions and limitations on all products used in mixtures.

Tenn-Cop 5E should be used in sufficient water to provide thorough coverage unless specific dilutions and spray volumes have been provided in the specific crop directions.

FRUITS AND NUTS

APPLE: Fireblight - Tank mix 2½ to 3 pints of Tenn-Cop 5E with recommended rates of Dithane M-45, Manzate 200, Maneb 80WP, Polyram 80WP or equivalent in other formulations of these products per 100 gallons of water on a dilute spray basis. (NOTE: The quantity of each formulation must be calculated based on the contained active ingredient.) Spray at silver tip and bud break and repeat on 3 to 5 day intervals as needed up to petal fall. Use the lower rate if disease pressure is light and higher rate when conditions favor heavy disease pressure. **NOTE:** Tenn-Cop 5E as used in this recommendation may cause severe russetting of Golden Delicious and similar susceptible apple varieties. Mild russetting of other varieties may occur when used on bearing trees. Preferred use is on non-bearing or processing varieties where russetting is not a problem. Treatment after leaves emerge may cause limited defoliation of young leaves.

Crop	Disease	Rate	Use Instructions
Apple	Fireblight	2½-3 pts. Per 100 gals	Tank mix Tenn-Cop 5E with recommended rates of Dithane M-45, Manzate 200, Maneb 80WP, Polyram 80WP or equivalent in other formulations of these products. (NOTE: The quantity of each formulation must be calculated based on the contained active ingredient.) Spray at silver tip and bud break and repeat on 3 to 5 day intervals as needed up to petal fall. Use lower rate if disease pressure is light and higher rate when conditions favor heavy disease pressure. NOTE: Tenn-Cop 5E as used in this recommendation may cause severe russetting of Golden Delicious and similar susceptible apple varieties. Mild russetting of other varieties may occur when used on bearing trees. Preferred use is on

non-bearing or processing
varieties where russeting is
problem. Treatment
leaves emerge may
limited defoliation of
leaves.

not a
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cause
young

Avocado	Anthracnose, Blotch (Cercospora Leaf Spot)	6 qts. (acre)	Apply when bloom buds begin to swell. Repeat monthly until September.
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AVOCADO (Except California): Anthracnose - Apply 6 quarts/acre in sufficient water for good coverage when bloom buds begin to swell and repeat monthly until September.

Berry (Blackberry, Boysenberry, Dewberry, Loganberry, Raspberry)	Anthracnose, Leaf and Cane Spots, Yellow Rust	4-6 pts. (Acre)	Apply when leaf buds begin to open. Repeat when flower buds show white and continue at 10-14 intervals until harvest. Also make a post-harvest spray after pruning but before fall rains using 4 qts. 100 / gal.
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BERRY (Blackberry, Boysenberry, Dewberry, Loganberry, Raspberry): Anthracnose - Apply 4 to 6 pints/acre in sufficient water for good coverage. Begin spray when leaf buds begin to open. Repeat when flower buds show white and continue at 10 to 14 day intervals up to day of harvest. **Leaf and Cane Spots and Yellow Rust** - In spring sprays use 4 to 6 pints/acre and apply when leaf buds begin to open and repeat when flowers show white. Also make a postharvest spray after pruning, but before fall rains begin to fall, using 4 quarts/100 gallons of water.

Cherry (Sour)	Bacterial Canker (Pseudomonas syringae), Leaf Spot	3 pts./100 gal.	Apply in spring as buds begin to swell. Repeat at bud burst and weekly thereafter as needed for up to 6 sprays. In fall apply a spray at both 10 and 80% leaf fall. CAUTION: Sprays after leaf emergence may cause some leaf defoliation.
	Brown Rot Blossom Blight	3 Tbsp.	Apply at popcorn bud, full bloom and at petal fall. During wet weather

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additional bloom sprays may be necessary

CHERRY (Sour): Bacterial Canker (*Pseudomonas Syringae*), Brown Rot Blossom Blight, Leaf and Fruit Spots - Mix 3 pints/100 gallons of water on a diluted basis. For bacterial canker (spring applications) make a dormant spray as buds begin to swell; repeat at bud-burst stage and weekly thereafter as needed up to six sprays. **NOTE:** Sprays after leaf emergence may cause some leaf defoliation. In fall, spray again at 10% and 80% leaf fall. For brown rot blossom blight, apply full cover spray at popcorn, full bloom, and petal fall stages. During wet weather additional bloom sprays may be necessary. For better leaf and fruit spot control, tank mix with other labeled products, following all label directions and limitations on these products when used in the tank mix.

Citrus

Melanose

1 1/8 - 1 1/2 gal
in 10 gal
Water

Apply by aircraft

per
acre

3 pts/500
Gal water

Apply 1-3 weeks after petal fall and repeat 4 weeks later. Do not apply with any oil on any oil as some defoliation may occur

Citrus

Red Algae

1 1/2 gal
in 500 gal
Water

Apply in spring as a preventative spray. Repeat in late summer to control new alga colonies. Do not apply with any oil as some defoliation may occur

CITRUS (Florida Only): Melanose - Mix 1 1/8 to 1 1/2 gallons Tenn-Cop 5E in 10 gallons of water and apply to 1 acre by aircraft. Use 3/4 gallon in 500 gallons of water if applied by dilute ground spray. Apply 1 to 3 weeks after petal fall. Repeat 4 weeks later if necessary. Do not mix Tenn-Cop 5E with oil when applied on any citrus.

CITRUS, INCLUDING LIMES (Florida Only): Red Alga - Mix 1 1/2 gallons in 500 gallons of water when applied as a dilute ground spray. Apply in spring as a preventive spray. Repeat in late summer to control new alga colonies. Do not mix with oil and apply on citrus.

Grapes

Downy Mildew, Powdery
Mildew, Black Rot
(suppression)

1 1/2 - 4 1/2 pts
(Acre)

For dilute spray mix 1 1/2 pints/100 gallons of water or for concentrate sprays mix 3 1/2 to 4 1/2 pints Tenn-Cop 5E in 20 to 250

gallons of water and apply to 1 acre. Begin spray when new growth is 1/2 inch long. Repeat every 7-10 days throughout growing season.

NOTE: Do not mix with lime. Certain varieties and hybrids may be slightly sensitive to copper sprays resulting in marginal leaf burn.

GRAPE: Downy Mildew - For dilute spray mix 1 1/2 pints/100 gallons of water or for concentrate sprays mix 3 to 4 1/2 pints Tenn-Cop 5E in 20 to 250 gallons of water and apply to 1 acre. For best control, begin treatment when new growth reaches 1/2 inch and repeat at 7 to 14 day intervals throughout the growing season. Also aids in control of black rot at low disease levels. If more severe, tank mix a recommended black rot specific fungicide for control. **NOTE:** Do not mix with lime. Certain Vinifera and French Hybrid varieties may be slightly sensitive to copper sprays resulting in marginal leaf burn. Before spraying these varieties, consult your State Experiment Station or make test sprays.

Mangoes	Anthraco	6 qts	Apply weekly beginning when
		(Acre)	panicles are 2 inches long until fruit
			are set. Repeat monthly through
			September.

Mango: Anthracnose - Apply 6 quarts/acre weekly from the time the panicles are 2 inches in length until all fruit are set. After fruit set, apply monthly through September. Apply in sufficient water for good coverage.

Olive	Olive Leaf Spot	6-9 qts	Apply before fall rains begin. Make a
	(Peacock Spot)	(Acre)	second application in late winter or
			early spring before bud swell if
			disease is severe.

Olive: Olive Leaf Spot (Peacock Spot) - Make first application at 3 to 5 pints/100 gallons of water or 6 to 9 quarts/acre before fall rains begin. Make a second application in late winter or early spring before bud swell if disease is severe.

Peaches	Pear Curl, Shot Hole	6-9 qts	Apply at leaf fall and repeat in late
Nectarines	Blossom Brown Rot	(Acre)	dormant up to bud swell and at pink

bud. May be mixed and used with dormant spray oil. Do not apply after full bloom.

Bacterial Spot

3 pts./100
gal. water

Apply late dormant but no later than late bud swell.

2 pt./100
gal. water

Apply post-bloom cover spray. Do not make more than 6 applications. NOTE: Slight defoliation and spotting of leaves may occur.

PEACH, NECTARINE: Blossom Brown Rot - Apply 6 to 9 quarts/acre at delayed dormant (bud swell) and repeat at pink bud. May be mixed and used with dormant spray oil. Do not apply at or after full bloom. **Leaf Curl, Shot Hole** - Apply 6 to 9 quarts/acre at leaf fall to protect buds and shoots from infection during rainy period. Repeat in late dormant up to late bud swell. **Bacterial Spot (Except California)** - In late dormant not later than late bud swell, apply 3 pints/100 gallons of water. In post-bloom cover sprays, use 1/4 pint/100 gallons of water. Do not make more than 6 cover sprays. NOTE: Slight defoliation and spotting of leaves may occur. This usually increases as the number of cover sprays increase.

Pecan

Phytophthora Blight
(Shuck and Kernel Rot)
Zonate Leaf Spot
(suppression)

3-5 pts.
(Acre)

Begin application when nuts begin to form and repeat at 10 to 21 day intervals through September. Use higher rate and narrower intervals during wet periods.

PECAN (Except California): Phytophthora Blight (Shuck and Kernel Rot), Zonate Leaf Spot - To suppress, apply 3 to 5 pints/acre in sufficient water for good coverage. Begin application when young "nuts" begin to form and repeat at 10 to 21 day intervals through September. Use higher rate and narrower intervals during wet periods.

Strawberry

Leaf Spot, Scorch

3-4 pts.
(Acre)

Apply beginning when new growth starts and repeat at 7-10 day intervals until harvest.

STRAWBERRY: Leaf Spot, Scorch - Apply 3 to 4 pints/acre at 7 to 10 day intervals from time new growth starts until harvest.

Walnuts

Bacterial Blight

2 1/2 gal.
500 gal.
Water
(Acre)

Apply beginning when leaflets start to unfold and before 1% pistillate blooms. Repeat weekly as needed, especially during rainy periods. Four

pints per 100 gallons of water is
equal to 2 1/2 gallons in 500 gallons of
water per acre

WALNUT: Blight - Mix 4 pints/100 gallons of water and apply 500 gallons/acre on a dilute basis in mature orchards. Make first application when leaflets start to unfold (prior to but not later than 1% pistillate bloom, not catkins) and repeat weekly as needed, especially until rainfall stops. When rain threatens, additional application made before or immediately after the rain is important.

VEGETABLES

Beans
(Green Snap)
Dry Colored
Navy

Bacterial Blight

3 pts
(Acre)

Apply by air, ground or sprinkler
irrigation equipment beginning at
trifoliate and continue at 7-10 day
intervals to harvest. Use 7 day
intervals during wet weather. When
applying by sprinkler
irrigation, also read and follow
special use directions elsewhere on
this label.

BEAN (Green Snap): Bacterial Blights - Apply 3 pints/acre applied by ground, aerial or sprinkler irrigation equipment in sufficient water for good coverage. Generally with aerial sprays, use 3 or more gallons of spray mixture per acre. Begin treatment when weather conditions favor disease development and continue at 7 to 10 day intervals to harvest. During wet weather, use 7 day intervals. When applying by sprinkler irrigation, also read and follow special use directions elsewhere on this label.

Beans (Red
Table)

Cercospora Leaf Spot

3 pts
(Acre)

Apply at first sign of disease. Repeat
at 7-10 day intervals as needed up to
day of harvest.

BEET (Red, Table): Cercospora Leaf Spot - Mix 3 pints in sufficient water for good coverage and apply to 1 acre. Begin treatment when first symptoms appear and repeat at 7 to 10 day intervals as needed.

Broccoli
Brussels
Sprout
Cauliflower

Downy Mildew, Alternaria
Blight

1/2 pts
(Acre)

Apply beginning when disease is
expected and repeat at 7-10 day
intervals as needed.

CAUTION: A slight reddening of
older leaves may occur especially in

Cabbage

**1½ pts
(Acre)**

late fall. Do not add spreader-stickers to spray. Do not spray when plants are under environmentally stressful conditions.

BROCCOLI, BRUSSELS SPROUT, CAULIFLOWER: Downy Mildew and Alternaria Blight - Use ¾ pint per acre using a minimum of 25 gallons of water/acre. Start application when disease is first expected and repeat at 7 day intervals as needed. **NOTE:** A slight reddening of older leaves may occur occasionally, especially in late fall. Do not add additional spreader-sticker to spray as it may promote phytotoxicity, especially if applied under environmental stress conditions.

CABBAGE: Downy Mildew and Alternaria Blight (Black Leaf Spot) - Apply 1½ pints per acre in 25 or more gallons of water. Begin treatment when disease is normally expected or when it first appears and repeat at 7 to 10 day intervals as needed. **NOTE:** Do not add additional spreader-sticker to spray as it may promote phytotoxicity, especially if applied under environmental stress conditions.

Carrots

**Early Blight, Late Blight,
Leaf Spot**

**3-4½ pts
(Acre)**

Apply two week before disease usually appears. Repeat at 7-10 day intervals as needed up to day of harvest.

CARROT: Leaf Spot - Mix 3 to 4½ pints in 5 or more gallons of water and apply to 1 acre. Begin treatment 2 weeks before disease normally appears for best preventive control, or make first application when disease first appears, and repeat at 7 to 10 day intervals as needed.

Celery

**Early Blight, Bacterial
Blight**

**3 pts
(Acre)**

Apply at first sign of disease. Repeat at 7-10 day intervals as needed up to day of harvest. If disease pressure is heavy, use 3 pints tank mixed with recommended rates of Bravo 500, 720, W-75 or other recommended compatible fungicide.

CELERY: Early Blight - Use 3 pints/acre in 25 to 100 gallons of water. If disease pressure is heavy, use 3 pints tank mixed with recommended rates of Bravo 500, 720, W-75 or other recommended compatible fungicide. Begin treatment 2 weeks before blight is expected for best preventive control or make first application when disease first appears and repeat at 7 to 10 day intervals as needed.

Cucurbits

Downy Mildew, Powdery

3 pts

Apply 2 weeks before disease

Cucumbers:	Mildew, Alternaria Blight	(Acre)	normally appears. Repeat at 7-10 day
Cantaloupe:	Scab, Angular Leaf Spot		intervals as needed up to day of
Muskmelon:	(Cucumber only)		harvest
Squash:			
Pumpkins and			
Watermelons			

CUCURBIT (CUCUMBER, CANTALOUPE, MUSKMELON, SQUASH, PUMPKIN AND WATERMELON): Downy Mildew, Powdery Mildew, Alternaria Blight - Mix 3 pints in sufficient water for good coverage (usually 25 gallons/acre or more by ground) and apply to 1 acre. Begin treatment 2 weeks before disease normally appears for best preventive control or when disease first appears and repeat at 7 to 10 day intervals.

CUCUMBER: Angular Leaf Spot - Same as for powdery mildew and downy mildew of Cucurbits.

Lettuce	Downy Mildew	1 1/2-3 pts. (Acre)	Apply at first sign of disease. Repeat at 7-10 day intervals as needed up to day of harvest. Full season use of the 3 pint rate may result in some yellowing of leaf margins on some varieties. Use lower rate when disease pressure is low or on copper sensitive varieties of iceberg head lettuce.
	Bacterial Soft Rot, Bottom Rot (Hawaii only)	3 pts. (Acre)	Apply at first sign of disease. Repeat at 7-10 day intervals as needed up to day of harvest.

LETTUCE: Downy Mildew - Mix 1 1/2 to 3 pints in 5 gallons or more of water and apply to 1 acre by aerial spray or in 25 or more gallons of water by ground. Begin when disease first appears or when conditions favor disease development and repeat as needed to suppress disease. (Full season use of the 3 pint rate may result in some yellowing of leaf margins on some varieties.) **Bacterial Soft Rot and Bottom Rot (Hawaii only)** - Mix 3 pints in 100 gallons of water and apply to 1 acre. Begin treatment before disease is expected or weather conditions favor disease development. Repeat weekly as needed. Use lower rate when disease pressure is low or on copper sensitive varieties of iceberg head lettuce.

Onion	Downy Mildew, Gray Mold Neck Rot, Bacterial	3 pts. (Acre)	Apply at first sign of disease. Repeat conditions favor disease and repeat
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Soft Rot

every 7 days up to harvest. When applied by sprinkler irrigation, read and follow special use directions on this label.

ONION: Downy Mildew - Aid in control of Neck Rot and Bacterial Soft Rot - Use 3 pints/acre in 3 or more gallons of water for good coverage by aerial or ground spray, or 3 pints/acre applied by overhead sprinkler irrigation. Begin when disease first appears or when conditions favor disease development. Repeat as needed to suppress disease. When applied by sprinkler irrigation, read and follow special use directions on this label.

Peas

Powdery Mildew, Bacterial Blight

3-4 pts (Acre)

Apply at first sign of disease. Repeat conditions favor disease and repeat every 7 days up to harvest.

PEA: Powdery Mildew - Apply 3 to 4 pints/acre in sufficient water for good coverage. Begin when disease is expected or at first symptoms and repeat at weekly intervals.

Peppers

Bacterial Spot, Cercospora Leaf Spot

3-4 1/2 pts (Acre)

Apply 2 weeks before disease normally appears. Repeat at 7-10 day intervals up to harvest.

PEPPER: Bacterial Spot - Use 3 to 4 1/2 pints/acre in 25 to 100 gallons of water applied by ground sprayer or in 3 to 10 gallons of water applied by aerial spray. Begin treatment 2 weeks before disease normally appears for best preventive control or make first application when disease first appears. Repeat at 7 to 10 day intervals as long as needed.

Potatoes

Late Blight, Early Blight

3 pts (Acre)

Apply beginning when weather conditions favor disease and repeat every 7 days up to harvest. When applied by sprinkler irrigation, read and follow special use directions on this label.

POTATO: Late Blight - Mix 3 pints in 9 or more gallons of water sufficient for good coverage and apply to 1 acre by ground or aerial spray. Begin treatment when weather conditions favor blight development and repeat at 7 day intervals up to day of harvest or in vine-kill spray or apply 3 pints/acre through sprinkler irrigation equipment. Begin treatment when weather conditions favor late blight development or 2 weeks before a late blight is normally expected to occur. Repeat applications at 7 day intervals after first application up to day of harvest or until irrigation is discontinued. When applied by sprinkler irrigation, read and follow special use directions on this label.

Spinach	Anthracnose, Downy Mildew, Cercospora Leaf Spot	3-4 pts (Acre)	Apply 2 weeks before disease normally appears. Repeat at 7-10 day intervals up to harvest.
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SPINACH (Except California): Anthracnose, Downy Mildew, Cercospora Leaf Spot - Apply 3 to 4 pints/acre in sufficient water for good coverage. Begin when disease is expected or at first appearance and repeat on 7 to 10 day intervals up to day of harvest.

Tomatoes	Bacterial Spot, Bacterial Speck, Early Blight, Septoria Leaf Spot, Anthracnose	3 pts (Acre)	Apply at first sign of disease. Repeat at 7-10 day intervals as needed up to day of harvest. When applied by irrigation, read and follow special use directions listed elsewhere on this label. Control of bacterial speck and spot may be enhanced by adding Maneb 80WP, Dithane M-45 or Manzate 200 at recommended rates to the tank mix. If anthracnose is also a problem, add Maneb 80WP, Dithane M-45, Manzate 200 or Bravo 500, 720 or W-75 at recommended rates with Tenn-Cop 5E in the tank mix. Where anthracnose is not an important problem, bacterial speck and spot, early blight and septoria can be controlled with a tank mix of Tenn-Cop 5E at 3 pints and recommended rates of Bravo 500, 720 or W-75 per acre. Apply by overhead irrigation only those fungicides with Tenn-Cop 5E that are specifically labeled by its manufacturer for irrigation applications.
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For control of disease on these crops in home greenhouses, gardens and garden plant beds.

TOMATO: Bacterial Spot and Speck, Early Blight, Septoria Leaf Spot - Use 3 pints/acre in 25 to 100 gallons of water applied by ground spray or in 5 to 10 gallons of water applied by aerial spray or applied through sprinkler irrigation equipment. When applied by irrigation, read and follow special use directions listed elsewhere on this label. Begin treatment when

disease threatens or before disease normally appears. Repeat at 7 to 10 day intervals as long as needed. Control of bacterial speck and spot may be enhanced by adding Maneb 80WP, Dithane M-45 or Manzate 200 at recommended rates to the tank mix. If anthracnose is also a problem, add Maneb 80WP, Dithane M-45, Manzate 200 or Bravo 500, 720 or W-75 at recommended rates with Tenn-Cop 5E in the tank mix. Where anthracnose is not an important problem, bacterial speck and spot, early blight and septoria can be controlled with a tank mix of Tenn-Cop 5E at 3 pints and recommended rates of Bravo 500, 720, or W-75 mixed with the above water rates and applied to 1 acre. Apply by overhead irrigation only those fungicides with Tenn-Cop 5E that are specifically labeled by its manufacturer for irrigation applications.

FIELD CROPS

Corn (field)	Southern Leaf Blight (North Central States only)	3 pts. (Acre)	Apply at first sign of disease. Repeat at 10-20 day intervals until corn is mature.
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CORN (FIELD): Southern Leaf Blight (North Central States Only) - Use 3 pints/acre in sufficient water for adequate coverage, usually 3 to 5 gallons/acre by aircraft or 20 to 50 gallons/acre by ground equipment. Begin treatment when first spots appear. Apply at 10 to 20 day intervals after first application until corn is mature.

COLORED AND NAVY BEAN: Bacterial Blights (Halo, Common, and Brown Spot) - Apply 3 pints/acre in sufficient water for good coverage by aerial, ground, or sprinkler irrigation equipment. Generally, use 3 or more gallons spray mixture by aerial spray or 20 or more gallons per acre by ground spray. For best preventive cover, begin spray 2 weeks before disease normally appears. Follow first spray every 7 to 10 days with 3 to 5 sprays as needed. When applying by sprinkler irrigation, also read and follow special use direction elsewhere on this label.

Peanuts	Sclerotinia Blight, Stem Rot suppression	8-18 pts. Broadcast 3-6 pts. 18 inch band (Acre)	Apply at emergence, tea cup size and first bloom which are generally 10 to 14 day intervals. Highest rate suggested for severe disease history. For most effective control, continue the leaf spot spray program which follows.
	Leaf Spot and Web Blotch	3-4 pts. (Acre)	Apply at first sign of disease usually 25 to 40 days after emergence. Repeat at 7-10 day intervals as needed up to day of harvest. In tank mixes, apply 1 1/2 pints of Tenn-Cop 5E plus 1 pint of Bravo.

720 or 2 to 3 pints of Tenn-Cop 5E plus any of the other products specified for peanuts. See TANK MIX INFORMATION. If Sclerotinia is a problem, make first application 10 to 14 days after the last Sclerotinia spray applied at first bloom and continue until harvest. Use higher rates of Tenn-Cop 5E in leaf spot sprays when leaf spot is heavy or when or where Sclerotinia blight and stem rot infection is expected to be heavy. When above treatments are applied through an overhead sprinkler, be sure that good coverage is achieved with your sprinkler. Also read and follow special use directions elsewhere on this label when applying by sprinkler irrigation.

PEANUT: For Suppression of Sclerotinia Blight and Stem Rot - Apply 3 to 6 pints/acre in a 12-inch band at emergence, tea cup size and first bloom which are generally 10 to 14 day intervals. If broadcast applied, apply 9 to 18 pints/acre using the same timings listed above. Highest rate suggested for severe disease history. For most effective control, continue the leaf spot spray program which follows:

PEANUT: Leaf Spot (early and late) and Webb Blotch - Apply 3 to 4 pints of Tenn-Cop 5E to 1 acre in sufficient water for good coverage with aerial, ground, or sprinkler irrigation equipment. Generally, use 3 or more gallons of spray by aerial applications, 20 or more gallons of spray with ground application/acre. In tank mixes, apply 1½ pints of Tenn-Cop 5E plus 1 pint of Bravo 720 or 2 to 3 pints of Tenn-Cop 5E plus any of the other products specified for peanuts. See TANK MIX INFORMATION. Begin spray when disease first appears or for best control begin early, usually 25 to 40 days after emergence and repeat at 10 to 14 days until harvest. If Sclerotinia is a problem, make first application 10 to 14 days after the last Sclerotinia spray applied at first bloom and continue until harvest. (For Sclerotinia blight and stem rot suppression on peanuts, see that recommendation above.) Use higher rates of Tenn-Cop 5E in leaf spot sprays when leaf spot is heavy or when or where Sclerotinia blight and stem rot infection is expected to be heavy. When above treatments are applied through an overhead sprinkler, be sure that good coverage is achieved with your sprinkler. Also read and follow special use directions elsewhere on this label when applying by sprinkler irrigation.

Sugarbeet	Cercospora Leaf Spot Powdery Mildew	3 pints (Acre)	Apply at first sign of disease. Tenn-Cop 5E can be mixed with 2 pounds of sulfur (wetable or flowable) per acre. Repeat applications of Tenn-Cop 5E alone every 7 days or the Tenn-Cop 5E-sulfur tank mix every 10 to 14 days, depending on disease pressure. When above treatments are applied through an overhead sprinkler, be sure that good coverage is achieved with your sprinkler. Also read and follow special use directions elsewhere on this label when applying by sprinkler irrigation.
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SUGARBET: Cercospora Leaf Spot and Powdery Mildew - Mix 3 pints Tenn-Cop 5E in 5 to 40 gallons of water and apply to 1 acre, or tank mix 3 pints Tenn-Cop 5E with 2 pounds of sulfur (wetable or flowable) in 5 to 40 gallons of water, and apply to 1 acre. Begin when disease first appears or 2 weeks before disease is expected and continue to harvest, repeating Tenn-Cop 5E alone every 7 days or the Tenn-Cop 5E-sulfur tank mix every 10 to 14 days, depending on disease pressure. When above treatments are applied through an overhead sprinkler, be sure that good coverage is achieved with your sprinkler. Also read and follow special use directions elsewhere on this label when applying by sprinkler irrigation.

ORNAMENTALS

Spray foliage and stems to run off.

JUNIPER: Cercospora Needle Blight - Mix 3 tablespoons/gallon of water (3 pints/100 gallons). Make first spray as new growth begins and repeat monthly, making at least 2 or 3 sprays or through September if frequent rains occur.

PINE (AUSTRIAN, PONDEROSA, MUGO, SCOTCH): Dothistroma Needle Blight and Diplodia Tip Blight - Mix 3 tablespoons/gallon of water (3 pints/100 gallons) and apply to

point of spray run-off, thoroughly wetting needles. For dothistroma, make first application as new needles begin to emerge from needle sheaths (about mid-May in Eastern Nebraska) and repeat 3 to 4 weeks later. For Christmas trees or in continued wet seasons, repeat monthly through September. For diplodia tip blight, make first application when shoot buds open (about third week in April in Eastern Nebraska) and repeat at weekly intervals until needles break through needle sheaths.

ROSE: Powdery Mildew - Mix 3 pints Tenn-Cop 5E in 100 gallons of water and spray to point of run-off. Begin treatment when new spring growth emerges and repeat weekly as long as needed to control disease. Treatment will also control black spot if disease level is low to moderate. Where black spot and powdery mildew are usually severe or after midsummer when black spot or powdery mildew infection level increases, a more effective black spot and powdery mildew fungicide should be used alone or in a tank mix if compatible.

SYCAMORE: Anthracnose - Mix 3 pints/100 gallons of water. Make first application just before buds begin to swell and repeat twice at 7 day intervals.

of water

PLANT	PEST	RATE/GAL	INSTRUCTIONS
Azaleas	Cercospora Leafspot Botrytis Blight, Leaf Gall Phytophthora Dieback Powdery Mildew	3-5 tsp	Apply at first sign of disease. Repeat at 7-10 day intervals as needed. Use higher rates or shorter intervals when disease pressure is high.
Begonias	Xanthomonas Leaf Spot Anthracnose, Powdery Mildew	3-5 tsp	Apply at first sign of disease. Repeat at 7-10 day intervals as needed. Use higher rates or shorter intervals when disease pressure is high.
Camellias	Phytophthora Dieback	3-5 tsp	Apply at first sign of disease. Repeat at 7-10 day intervals as needed. Use higher rates or shorter intervals when disease pressure is high.
Chrysanthemum Gardenia Philodendron	Bacterial Blight	3-5 tsp	Apply at first sign of disease. Repeat at 7-10 day intervals as needed. Use higher rates or shorter intervals when disease pressure is high.
Cotoneaster	Botrytis Blight	3-5 tsp	Apply at first sign of disease. Repeat at 7-10 day intervals as needed. Use higher rates or shorter intervals when disease pressure is high.
Hydrangeas	Leafspots, Powdery Mildew	3-5 tsp	Apply at first sign of disease. Repeat at 7-10 day intervals as needed. Use higher rates or shorter intervals when disease pressure is high.
Ixora	Leafspots	3-5 tsp	Apply at first sign of disease. Repeat

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Magnolias			at 7-10 day intervals as needed. Use higher rates or shorter intervals when disease pressure is high.
Palms			
Iris	Scab	3-5 tsp.	Apply at first sign of disease. Repeat at 7-10 day intervals as needed. Use higher rates or shorter intervals when disease pressure is high.
Ivy	Bacterial Leafspot Xanthomonas Leafspot	3-5 tsp.	Apply at first sign of disease. Repeat at 7-10 day intervals as needed. Use higher rates or shorter intervals when disease pressure is high.
Pachysandra	Verticillium Blight	3-5 tsp.	Apply at first sign of disease. Repeat at 7-10 day intervals as needed. Use higher rates or shorter intervals when disease pressure is high.
Pyracantha	Fire Blight, Scab	3-5 tsp.	Begin spray during bloom period. Repeat at 3-4 day intervals. After bloom period continue at 7-10 day intervals.
Roses	Powdery Mildew Black Spot (suppression)	3-5 tsp.	Apply at first sign of disease. Repeat at 7-10 day intervals as needed. Use higher rates or shorter intervals when disease pressure is high.

Discoloration of blooms may occur on certain varieties or colors of these plants. To avoid problem, do not spray just before or during flower period.

TREES

Pine (Austrian Ponderosa Mugo Scorch)	Dothistroma Needle Blight	3 tsp./Gal. (3 pts/ 100 gal.)	Apply to run-off beginning as new needles emerge from needle sheaths. Repeat 3-4 weeks later.
	Diplodia Tip Blight	3 tsp. (3 pts/ 100 gal.)	Make first application when shoot buds open. Repeat weekly until needles break through needle sheaths.
Juniper	Cercospora Needle Blight	3 tsp./Gal. (3 pts/ 100 gal.)	Make first application as new growth begins. Repeat monthly making at least 2-3 sprays.
Maple, Oak Sycamore	Anthracoese Leafspots	3 tsp./Gal. (3 pts/ 100 gal.)	Make first application just before bud swell. Repeat at 7 day intervals as needed. Make at least 3 sprays.

Cedar	Cedar Apple Rust	3 tsp./Gal	Apply weekly in July and August
		(3 pts./100 gal.)	

GENERAL CHEMIGATION INSTRUCTIONS

Apply this product only through center pivot, lateral move, end tow, side (wheel) roll, solid set or hand move sprinkler irrigation systems. Do not apply this product through any other type of irrigation system. Do not apply this product with any sprinkler irrigation system connected directly to a public water system.

Crop injury, lack of effectiveness or illegal pesticide residues in the crop can result from non-uniform distribution of treated water.

If you have questions about calibration, you should contact State Extension Service specialists, equipment manufacturers or other experts.

Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system unless the pesticide label prescribed safety devices for public water systems are in place.

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.

SPRINKLER CHEMIGATION

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 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.

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

SPECIAL USE DIRECTIONS FOR SPRINKLER APPLICATION OF TENN-COP 5E

To apply Tenn-Cop 5E and/or tank mixes with it through a sprinkler irrigation system on crops so labeled, apply the recommended rate to each sprinkled acre. Any sprinkler irrigation system must give thorough, complete and uniform coverage for best disease control. Use irrigation and injection equipment that complies with label instructions above.

Depending on the type of injection equipment, Tenn-Cop 5E may be injected undiluted into the irrigation lines or preferably it may be diluted with water for easier metering. If diluted, mix at least the same volume of water or more than the volume of Tenn-Cop 5E added to the tank. Add water first with agitation to mix pesticide with the water, and add Tenn-Cop 5E to the water. Use sufficient initial agitation to effect mixing and continue agitation during application. If tank mixed with other compatible products, add them to the water with agitation by first adding wettable powders, flowables and then emulsifiable pesticides including Tenn-Cop 5E. When Tenn-Cop 5E is used undiluted with water in the injection tank, the tank must be free of any water residue and make sure no water enters the tank until Tenn-Cop 5E has been completely emptied, as jelling may occur. Should water enter tank, and product has jellied, add additional water so that new added water volume at least equals the amount of Tenn-Cop 5E remaining and mix until jell returns to solution. If this dilution step is necessary, re-adjust injection device to compensate for this dilution.

Tenn-Cop 5E may be applied with up to 1.5 inches of irrigation water per acre in each irrigation. However, do not exceed rates for your soil that causes runoff.

SOLID SET (Lateral move, end tow, side roll, solid set or hand move) - Calibration and Use

Measure the acreage covered by the sprinklers in each set. Operate the solid set irrigation system and injection equipment at normal pressures. Add the required amount of Tenn-Cop 5E for this acreage to the injection tank with dilution water as required so that flow rate of the injection equipment will inject contents of injection tank over a 10 to 20 minute period. Preferably inject Tenn-Cop 5E in the last 30 minutes of the solid set irrigation set. Continue irrigation after pesticide addition, giving sufficient time to completely flush all sprinkler lines.

For example: If a solid set sprinkles an area 1000 feet long and 65 feet wide per set, if

Tenn-Cop 5E is to be applied at 3 pints/acre, and if the injection equipment is set to inject 5 gallons in a 20 minute period, then the following calculations demonstrate the above directions:

1. Acreage covered = $\frac{1000 \text{ feet} \times 65 \text{ feet}}{43,560 \text{ square feet/acre}} = 1.5 \text{ acres/set}$
2. Tenn-Cop 5E at 3 pints/acre - $3 \text{ pints} \times 1.5 \text{ acres} = 4.5 \text{ pints/set.}$
3. Add 4.5 pints Tenn-Cop 5E to injection tank plus 35.5 pints water to give a 5 gallon dilution and injection on each solid set.

Center-Pivot (or other continuous moving systems) - Calibration and Use

Do not use in water driven units in which water spills on plants or soil.

Tenn-Cop 5E can be applied in up to 1.5 inches of water/acre/application assuming thorough uniform coverage of the sprinkler.

Determine the acreage to be irrigated in each circle or field to be treated. Determine the time in hours that will be required to cover the proposed treated area to apply the desired water. Add the required Tenn-Cop 5E to treat entire field to injection tank along with the needed volume of dilution water so that entire quantity of Tenn-Cop 5E will be applied to the field or acreage to be treated. Using adequate agitation and an injection device or proportional positive displacement metering pump adjust the flow rate per hour to inject the recommended rate of Tenn-Cop 5E per acre sprinkled.

For example: If Tenn-Cop 5E is to be applied at 3 pints/acre sprinkled, if sprinkler is applying 600 gallons per minute of irrigation water, and if each acre is to receive 1 inch of water (27,156 gallons), then the time to sprinkle 1 acre =

1. $\frac{27,156 \text{ (gallons 1 acre inch of water)}}{600 \text{ (gallons per minute pumped)}} = 45.25 \text{ minutes}$
2. If the proportional injection pump is set and calibrated to inject 2 gallons of water in a 45.25 minute period, one would add 3 pints Tenn-Cop 5E plus 13 pints of diluting water to injection tank for each acre to be treated.

3. If sprinkler is set to cover 1 acre in a given time, inject the recommended per acre rate of Tenn-Cop 5E, or tank mix so labeled, plus any needed dilution water in that same time needed to cover 1 acre.

Consult State Agricultural Experiment Stations or State Agricultural Extension Service for additional information as the timing needs may vary with local conditions.

WARRANTY STATEMENT

GRIFFIN warrants that this product conforms to the chemical description on the label thereof and is reasonably fit for purposes stated on such label only when used in accordance with directions under normal use conditions. It is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials or the manner of use or application, all of which are beyond the control of **GRIFFIN**. In no case shall **GRIFFIN** be liable for consequential, special or indirect damages resulting from the use or handling of this product. All such risks shall be assumed by the Buyer. The exclusive remedy of any buyer or user of this product for any and all losses, injuries, or damages resulting from or in any way arising from the use, handling, or application of this product, whether in contract, warranty, tort, negligence, strict liability, or otherwise, shall not exceed the purchase price paid for this product or at Griffin Corporations election, the replacement of this product. **GRIFFIN MAKES NO WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS STATED ABOVE.**

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