

SOIL
TRIGGRR

Plant Growth Regulator to Increase Yield



APPLICATION GUIDE

 **Westbridge**

San Diego, CA

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ACCEPTED

JUL 17 1989

Under the Federal Insecticide, Fungicide, and
Rodenticide Act, as amended, for the
purpose of registering this
EPA Reg. No. 51517-3



SOIL

TRIGGRR

Plant Growth Regulator to Increase Yields

EPA Reg. No. 51517-3

DIRECTIONS FOR USE

GENERAL CLASSIFICATION

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

General Information

Soil TRIGGRR is a plant growth regulator which stimulates plant growth and development leading to increased yields, earlier emergence, increased stands, fuller root development, increased vegetative growth, earlier blossoming, increased resistance to environmental stress, earlier maturity and improved crop quality.

Soil TRIGGRR can be used in combination with other chemicals and in programs with Foliar TRIGGRR, Liquid Seed TRIGGRR, Dry Seed TRIGGRR and M.S.E.[™] fertilizers.

For best results use Soil TRIGGRR with full fertilization programs.

Recommended Crops

Soil TRIGGRR is recommended for use on:



FIELD CROPS

Alfalfa, Corn (includes Popcorn), Cotton, Lupine, Peanuts, Rice, Sorghum (Milo), Soybeans, Sugar Beets, Triticale, Wheat.

FRUITS

Apples, Bananas, Grapes, Oranges, Peaches, Plantains, Strawberries.

VEGETABLES

Asparagus, Beans (also includes Black-eyed Peas, Catjang, Chick Peas, Cowpeas, Crowder Peas, Garbanzo Beans, Southern Peas), Broccoli, Brussels Sprouts, Cabbage, Carrots, Cauliflower, Celery, Corn (Sweet), Cucumber, Eggplant, Florence Fennel* (Anise, Finocchio), Garlic, Leeks, Lettuce, Melons, Okra, Onions, Parsley, Peas, Peppers, Potatoes, Pumpkins, Radishes, Shallots, Spinach, Squash, Sweet Potatoes, Tomatoes, Yams.

*Fresh leaves and stalks only

NON-FOOD CROPS

Jojoba, Ornamentals, Trees, Turf.

Mixing Instructions

Soil TRIGGRR is water soluble and suitable for use in conventional liquid application systems. Shake Soil TRIGGRR thoroughly and dilute in sufficient water to assure adequate and even coverage. Alkaline dilution water (pH greater than 7) should be adjusted to pH 5-6.5 prior to the addition of Soil TRIGGRR, using WB 50[™] or another suitable acidifier. Agitate the tank mixture during application and use within 12 hours after dilution.



Compatibility

Soil TRIGGRR can be tank mixed with herbicides, insecticides, fungicides, nematicides and fertilizers.

- ✓ Soil TRIGGRR can also be impregnated on granular fertilizers.

For use in tank mixes, Soil TRIGGRR should be added last to the spray tank containing the other fully diluted chemicals.

Test the compatibility of the intended tank mixture before use. Add the proportionate amounts of each diluted ingredient to a jar. Cover, shake and let stand 15 minutes. Formation of precipitates that do not readily redisperse indicates an incompatible mixture.

The following procedures may be helpful in the event of incompatibility:

Predilute Soil TRIGGRR in 5 gallons of water before adding to the spray tank.

Increase the amount of water per acre to be applied.

Add a buffer/compatibility agent to the spray tank.

For use with fertilizers containing a high phosphorus analysis, add one gallon of water to the spray tank for each three gallons of fertilizer, and add a buffer/compatibility agent, prior to adding Soil TRIGGRR.



Application Rates and Timings

(See also "Chemigation," page 17.)

Nursery and container use: Apply Soil TRIGGRR to container-grown plants at the rate of 1 pint per 100 gallons of water as a soil drench. Water containers thoroughly, but not to the point of excessive runoff. Repeat applications at intervals of 1-4 weeks.

Transplant use: Apply Soil TRIGGRR in transplant water at the rate of 1 pint per 100 gallons of water.

Field use:

APPLICATION METHODS

Soil TRIGGRR may be applied to fields using the following methods:

Preplant incorporated: Broadcast Soil TRIGGRR over the field surface, or band Soil TRIGGRR over the seed bed, and incorporate thoroughly prior to planting. Apply Soil TRIGGRR the day of planting for best results.

In seed furrow: Band or dribble and incorporate Soil TRIGGRR into the seed furrow at planting. Soil TRIGGRR may also be knifed in below and to the side of the seeds in combination with starter fertilizer.

Side-dress: Knife Soil TRIGGRR into the soil near the root zone after crops have emerged.



Surface applied/irrigated: Spray Soil TRIGGRR on the soil surface and water in to the root zone in established crops, or to the depth of the seed in newly planted crops. For best results irrigate immediately following the Soil TRIGGRR application.

In irrigation water: Soil TRIGGRR may be applied through sprinkler, flood (basin), furrow, border and drip irrigation systems. (See also "Chemigation," page 17.)

In transplant water: See "Transplant use," page 5.

✓ **ROW SPACING RATE TABLE**

For many crops Soil TRIGGRR is applied in the seed furrow or as a side-dress application at the rate of 0.75-1 oz/1000 feet of row, up to a maximum of 20 oz/A. The following table shows the amount of Soil TRIGGRR to use with such crops, in ounces per acre, for different row spacings.

Row Spacing (Inches)	Ounces of Soil TRIGGRR per Acre
40 or more	10-13
35	11-15
30	13-17
25	16-20
20 or less	20

FIELD CROPS

ALFALFA

Apply Soil TRIGGRR using one or both of the following methods:

In seed furrow: Broadcast Soil TRIGGRR over the open seed furrows at planting, at the rate of 15 oz/A.

Surface applied/irrigated: Broadcast Soil TRIGGRR at the rate of 10 oz/A after each cutting, followed by irrigation as per the instructions on page 6.

CORN

In seed furrow or side-dress: Apply Soil TRIGGRR at 10 oz/A.

COTTON

Apply Soil TRIGGRR using one of the following methods:

In seed furrow or side-dress: Apply Soil TRIGGRR at the rate of 5-10 oz/A.

Drip Irrigation: Apply Soil TRIGGRR at the rate of 5-10 oz/A. (See also "Chemigation," page 17.)

Note: Soil TRIGGRR should not be used on cotton in soils with a high clay content.

LUPINE

See "Soybeans," page 8.

PEANUTS

In seed furrow or side-dress: Apply Soil TRIGGRR at the rate of 0.75-1 oz/1000 feet of row, up to a maximum of 20 oz/A (see "Row Spacing/Rate Table," page 6).

RICE

Apply Soil TRIGGRR using one of the following methods:

Preplant incorporated or surface applied/irrigated: Apply Soil TRIGGRR at the rate of 20 oz/A prior to seeding or just prior to flooding the field

Flood irrigation: Apply Soil TRIGGRR at the rate of 20 oz/A in irrigation water at any time up to panicle initiation. (See also "Chemigation," page 17.)

SORGHUM (MILCO), SOYBEANS, SUGAR BEETS

Apply Soil TRIGGRR using one of the following methods:

Preplant incorporated: Apply Soil TRIGGRR broadcast and incorporated at the rate of 20 oz/A.

In seed furrow or side-dress: Apply Soil TRIGGRR at the rate of 0.75-1 oz/1000 feet of row, up to a maximum of 20 oz/A (see "Row Spacing/Rate Table," page 6).

Note: Apply Soil TRIGGRR in the seed furrow or as a side-dress for best results.

TRITICALE, WHEAT

Apply Soil TRIGGRR using one of the following methods:

Preplant incorporated: Apply Soil TRIGGRR broadcast and incorporated at the rate of 20 oz/A.

In seed furrow: Apply Soil TRIGGRR at the rate of 20 oz/A.

FRUITS

APPLES

Apply Soil TRIGGRR in the spring prior to bud break. Applications may be repeated at 4-8 week intervals until dormancy.

Side-dress: Knife Soil TRIGGRR into the soil within the drip line at the rate of 10-30 oz/A.

Surface applied/irrigated: Spray Soil TRIGGRR within the drip line, followed by irrigation as per the instructions on page 6. Use a broadcast-equivalent rate of 45-60 oz/A for single applications and 20-30 oz/A for multiple applications. (Adjust the rates in proportion to the percent of the total land surface covered by the spray.)

In irrigation water: Apply Soil TRIGGRR at the rates indicated under "Surface applied/irrigated," above, adjusting the rate in proportion to the percent of the total land surface covered, or saturated, by the irrigation. (See also "Chemigation," page 17.)

In transplant water: See instructions on page 5.

BANANAS

Apply Soil TRIGGRR at transplant or at the start of new sucker growth. Applications may be repeated at 4-8 week intervals.

Surface applied/irrigated: Spray Soil TRIGGRR around the base of each plant, followed by irrigation as per the instructions on page 6. Use a broadcast-equivalent rate of 45-60 oz/A for single applications and 20-30 oz/A for multiple applications. (Adjust the rates in proportion to the percent of the total land surface covered by the spray.)

In irrigation water: Apply Soil TRIGGRR at the rates indicated under "Surface applied/irrigated," above, adjusting the rate in proportion to the percent of the total land surface covered, or saturated, by the irrigation. (See also "Chemigation," page 17.)

In transplant water: See instructions on page 5.

GRAPES

Apply Soil TRIGGRR in the spring prior to bud break. Applications may be repeated at 4-8 week intervals until dormancy.

Surface applied/irrigated: Spray Soil TRIGGRR on the soil around the base of each vine, followed by irrigation as per the instructions on page 6. Use a broadcast-equivalent rate of 45-60 oz/A

for single applications and 20-30 oz/A for multiple applications. (Adjust the rates in proportion to the percent of the total land surface covered by the spray.)

In irrigation water: For drip irrigation, apply Soil TRIGGRR at the rate of 10 oz/A for single applications and 5-10 oz/A for multiple applications. For all other irrigation methods, apply Soil TRIGGRR at the rates indicated under "Surface applied/irrigated," above, adjusting the rate in proportion to the percent of the total land surface covered, or saturated, by the irrigation. (See also "Chemigation," page 17.)

In transplant water: See instructions on page 5.

ORANGES

For non-bearing trees, apply Soil TRIGGRR prior to the beginning of each flush of new growth. Applications may be repeated at 4-8 week intervals during the growth period.

For bearing trees, apply Soil TRIGGRR at the beginning of flower bud formation. Applications may be repeated at 4-8 week intervals throughout the growing season.

Surface applied/irrigated: Spray Soil TRIGGRR within the drip line, followed by irrigation as per the instructions on page 6. Use a broadcast-equivalent rate of 45-60 oz/A for single applications and 20-30 oz/A for multiple applications. (Adjust the rates in proportion to the percent of the total land surface covered by the spray.)



In irrigation water: Apply Soil TRIGGRR at the rates indicated under "Surface applied/irrigated," above, adjusting the rate in proportion to the percent of the total land surface covered, or saturated, by the irrigation. (See also "Chemigation," page 17.)

In transplant water: See instructions on page 5.

PEACHES

See "Apples," page 9.

PLANTAINS

See "Bananas," page 10.

STRAWBERRIES

See "All other vegetables," page 13.

VEGETABLES

ASPARAGUS

Apply Soil TRIGGRR prior to or at planting, and at the beginning of each cycle of new growth. An additional application may be made 3-6 weeks after the beginning of each harvest.

Preplant incorporated: Apply Soil TRIGGRR broadcast and incorporated at the rate of 45-60 oz/A.

In seed furrow or side-dress: Apply Soil TRIGGRR at the rate of 0.75-1 oz/1000 feet of row.



Surface applied/irrigated: Apply Soil TRIGGRR at a broadcast-equivalent rate of 45-60 oz/A, followed by irrigation as per the instructions on page 6. If applied in a band, adjust the rates in proportion to the percent of the total land surface covered by the spray.

In irrigation water: For drip irrigation, apply Soil TRIGGRR at the rate of 0.75-1.25 oz/1000 feet of row. For all other irrigation methods, apply Soil TRIGGRR at the rates indicated under "Surface applied/irrigated," above, adjusting the rate in proportion to the percent of the total land surface covered, or saturated, by the irrigation. (See also "Chemigation," page 17.)

In transplant water: See instructions on page 5.

BEANS (DRY)

See "Soybeans," page 8.

ALL OTHER VEGETABLES: BEANS (FRESH MARKET AND PROCESSING), BROCCOLI, BRUSSELS SPROUTS, CABBAGE, CARROTS, CAULIFLOWER, CELERY, CORN (SWEET), CUCUMBER, EGGPLANT, FLORENCE FENNEL, FENNEL, GARLIC, LEEKS, LETTUCE, MELONS, OKRA, ONIONS, PARSLEY, PEAS, PEPPERS, POTATOES, PUMPKINS, RADISHES, SHALLOTS, SPINACH, SQUASH, SWEET POTATOES, TOMATOES, YAMS.

Apply Soil TRIGGRR prior to or at planting and/or in one or more applications after crops have emerged.

Preplant incorporated: Apply Soil TRIGGRR at the rate of 45-60 oz/A on a broadcast basis. If applied in a band, adjust the rate according to the percent of the total land surface covered.

In seed furrow or side-dress: Apply Soil TRIGGRR at the rate of 0.75-1 oz/1000 feet of row.

Surface applied/irrigated: Apply Soil TRIGGRR at a broadcast-equivalent rate of 45-60 oz/A, followed by irrigation as per the instructions on page 6. If applied in a band, adjust the rates in proportion to the percent of the total land surface covered by the spray.

In irrigation water: For drip irrigation, apply Soil TRIGGRR at the rate of 0.75-1.25 oz/1000 feet of row. For all other irrigation methods, apply Soil TRIGGRR at the rates indicated under "Surface applied/irrigated," above, adjusting the rate in proportion to the percent of the total land surface covered, or saturated, by the irrigation. (See also "Chemigation," page 17.)

In transplant water: See instructions on page 5.

NON-FOOD CROPS

JOJOBA

Apply Soil TRIGGRR prior to or at planting and twice a year at the beginning of each growth period.

In seed furrow or side-dress: Apply Soil

TRIGGRR at the rate of 0.75-1 oz/1000 feet of row.

Surface applied/irrigated: Apply Soil TRIGGRR at a broadcast-equivalent rate of 45-60 oz/A, followed by irrigation as per the instructions on page 6. If applied in a band, adjust the rates in proportion to the percent of the total land surface covered by the spray.

In irrigation water: For drip irrigation, apply Soil TRIGGRR at the rate of 0.75-1.25 oz/1000 feet of row. For all other irrigation methods, apply Soil TRIGGRR at the rates indicated under "Surface applied/irrigated," above, adjusting the rate in proportion to the percent of the total land surface covered, or saturated, by the irrigation. (See also "Chemigation," page 17.)

ORNAMENTALS

Apply Soil TRIGGRR prior to or at planting or transplant. Applications may be repeated at 2-8 week intervals.

In seed furrow or side dress: Apply Soil TRIGGRR at the rate of 0.75-1 oz/1000 feet of row.

Surface applied/irrigated: Apply Soil TRIGGRR at a broadcast-equivalent rate of 45-60 oz/A for single applications and 20-30 oz/A for multiple applications, followed by irrigation as per the instructions on page 6. If applied in a band, adjust the rates in proportion to the percent of the total land surface covered by the spray.

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In irrigation water: For drip irrigation, apply Soil TRIGGRR at the rate of 0.75-1.25 oz/1000 feet of row. For all other irrigation methods, apply Soil TRIGGRR at the rates indicated under "Surface applied/irrigated," above, adjusting the rate in proportion to the percent of the total land surface covered, or saturated, by the irrigation. (See also "Chemigation," page 17.)

In transplant water: See instructions on page 5.

TREES

Apply Soil TRIGGRR prior to bud break in the Spring. Applications may be repeated at 1-4 month intervals during the growing season.

Surface applied/irrigated: Spray Soil TRIGGRR within the drip line, followed by irrigation as per the instructions on page 6. Use a broadcast-equivalent rate of 45-60 oz/A for single applications and 20-30 oz/A for multiple applications. (Adjust the rates in proportion to the percent of the total land surface covered by the spray.)

In irrigation water: Apply Soil TRIGGRR at the rates indicated under "Surface applied/irrigated," above, adjusting the rate in proportion to the percent of the total land surface covered, or saturated, by the irrigation. (See also "Chemigation," page 17.)

In transplant water: See instructions on page 5.

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Apply Soil TRIGGRR after seeds or stolons have been planted and prior to incorporation or coverage with mulch, or at the initiation of new growth in the Spring. Applications may be repeated at 2-4 week intervals.

Surface applied/irrigated: Broadcast Soil TRIGGRR at the rate of 45-60 oz/A for single applications and 20-30 oz/A for multiple applications, followed by irrigation as per the instructions on page 6.

Chemigation

Apply this product only through sprinkler including center pivot, lateral move, end tow, side (wheel) roll, traveler, big gun, solid set, or hand move, flood (basin), furrow, border, or drip (trickle) irrigation systems. Do not apply this product through any other type of irrigation 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 any 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.

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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

Chemigation systems connected to public water systems: Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year

Chemigation systems connected to public water systems must contain a functional, reduced-pressure zone, backflow preventer (RPZ) or the functional equivalent in the water supply line upstream from the point of pesticide introduction. As an option to the RPZ, the water from the public water system should be discharged into a reservoir tank prior to pesticide introduction. There shall be a complete physical break (air gap) between the outlet end of the fill pipe and the top or overflow rim of the reservoir tank of at least twice the inside diameter of the fill pipe

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 contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection

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pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops, or in cases where there is no water pump, 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.

The pesticide supply tank should be agitated throughout the application of Soil TRIGGRR

Soil TRIGGRR should be applied at the end of the water application

For mixing instructions see "Mixing Instructions," page 3, and "Compatibility," page 4

Soil TRIGGRR should be applied in sufficient water to penetrate into the root zone without excessive leaching into deeper soil.

Sprinkler Chemigation: The system must contain a functional check valve, vacuum relief valve, and

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low pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from backflow.

The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

The pesticide injection pipeline must also contain a functional, normally closed, solenoid operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down.

The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops.

The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock.

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

The pesticide supply tank should be agitated throughout the application of Soil TRIGGRR.

Soil TRIGGRR should be applied at the end of the water application.

For mixing instructions see "Mixing Instructions," page 3, and "Compatibility," page 4.

Soil TRIGGRR should be applied in sufficient water to penetrate into the root zone without excessive leaching into deeper soil.

Fluid (basin), furrow and border chemigation: Systems using a gravity flow pesticide dispensing system must meter the pesticide into the water at the head of the field and downstream of a hydraulic discontinuity such as a drop structure or weir box to decrease potential for water source contamination from backflow if the water flow stops.

Systems utilizing a pressurized water and pesticide injection system must meet the following requirements:

1. 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.
2. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump.

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3 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

4 The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops

5 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

6 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

A pesticide supply tank should be used for applying Soil TRIGGRR

For mixing instructions see "Mixing Instructions," page 3, and "Compatibility," page 4

The pesticide supply tank should be agitated throughout the application of Soil TRIGGRR

Soil TRIGGRR should be applied at the end of the water application

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Soil TRIGGRR should be applied in sufficient water to penetrate into the root zone without excessive leaching into deeper soil.

Drip (trickle) 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 motor stops

The irrigation line or water pump must include a functional pressure switch which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected

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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

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Soil TRIGGRR should be applied in sufficient water to penetrate into the root zone without excessive leaching into deeper soil



SOIL
TRIGGRR

Notes
