

5905-594

7/28/2014

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY



U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Biopesticides and Pollution Prevention Division
(7511C)
1200 Pennsylvania Avenue NW
Washington, DC 20460

EPA Reg. Number: 5905-594

Date of Issuance: JUL 28 2014

Term of Issuance: UNCONDITIONAL

Name of Pesticide Product: HM-1354-A

NOTICE OF PESTICIDE:

[X] Registration [] Re-registration
(under FIFRA, as amended)

Name and Address of Registrant (include ZIP Code):

Helena Chemical Company
225 Schilling Blvd., Suite 300
Collierville, Tennessee 38017

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Biopesticides and Pollution Prevention Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on her motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This registration does not eliminate the need for continual reassessment of the pesticide. If the EPA determines at any time that additional data are required to maintain in effect an existing registration, the Agency will require submission of such data under section 3(c)(2)(B) of FIFRA.

This product is unconditionally registered in accordance with FIFRA Sec. 3(c)(5) and is subject to the following terms:

- 1. Submit and/or cite all data required for registration of your product under FIFRA section 3(c)(5) and section 4 when the Agency requires all registrants of similar products to submit such data.
2. Revise the EPA Registration Number to read, "EPA Reg. No. 5905-594."
3. A one year study is required to satisfy the Storage and Stability and Corrosion Characteristics requirements (Guidelines: OCSPP 830.6317 and 830.6320). You have 18 months from the date of registration to provide these data.
4. Submit three (3) copies of the revised final printed labeling before you release the product for shipment.

A stamped copy of the label and an A-79 Enclosure are enclosed for your records.

Signature of Approving Official:

[Handwritten Signature]

Date:

7/28/14

CONCURRENCES

Table with 4 columns: SYMBOL, SURNAME, DATE, and initials. Rows include Robert McNally, Director; Biopesticides and Pollution Prevention Division; EPA Form 8570-6; and dates 6/10/14, 7/28/14, 7/28/14.

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HM-1354-A

PLANT GROWTH REGULATOR FOR USE ON FIELD CROPS, VEGETABLES, TREE CROPS,
SMALL FRUITS AND BERRIES, HERBS, ORNAMENTALS, SOD FARMS, TURF

HORMONE COMPOUNDS TO IMPROVE FERTILIZER EFFICIENCY AND STIMULATE PLANT
GROWTH

ACTIVE INGREDIENTS:

Indole-3-butyric Acid	0.0042%
Gibberellic Acid	0.0026%
Kinetin	0.0084%

OTHER INGREDIENTS:	<u>99.9848%</u>
TOTAL	100.0000%

Contains 1.27 mgs of indole-3-butyric acid, 0.78 mgs of gibberellic acid and 2.54 mgs of kinetin /fluid ounce.
Concentrations based on biological activity.

KEEP OUT OF REACH OF CHILDREN
CAUTION
SEE INSIDE PANEL FOR ADDITIONAL PRECAUTIONARY STATEMENTS

EPA REG. NO. 5905-XXX
EPA EST. NO.
BATCH CODE NO. _____

AD XXXXXX

NET CONTENTS: □ 2.5 Gallons (9.46 L)

MANUFACTURED FOR
HELENA CHEMICAL COMPANY
225 SCHILLING BOULEVARD, SUITE 300
COLLIERVILLE, TENNESSEE 38017

ACCEPTED

JUL 28 2014

Under the Federal Insecticide, Fungicide,
and Rodenticide Act, as amended, for
the pesticide registered under
EPA Reg. No. **5905-594**

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PRECAUTIONARY STATEMENTS

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear: Long-sleeved shirt and long pants, shoes plus socks.

USER SAFETY REQUIREMENT

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.

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

Wash hands before eating, drinking, chewing gum, using tobacco or using the toilet.

ENVIRONMENTAL HAZARDS

For terrestrial uses:

- Do not apply directly to water, or to areas where surface water is present or to intertidal areas below the mean high water mark.
- Do not contaminate water when disposing of equipment washwater or rinsate.

AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This Standard contains requirements for the 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 interval (REI). The requirements in this box 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 4 hours unless wearing appropriate PPE. PPE and work clothing 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
- Waterproof gloves
- Shoes plus socks.

ACCEPTED
JUL 1 1991

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. Keep unprotected persons out of treated areas until sprays have dried.

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 regulations.

GENERAL CHEMIGATION INSTRUCTIONS

Apply **HM-1354-A** through fixed or standing irrigation systems. Apply this product only through the following types of irrigation systems:

- 1. Sprinkler including big gun, solid set or hand move irrigation systems.
- 2. Calibrated overhead watering booms.
- 3. Drip (or micro sprinkler) irrigation systems.

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 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 PRZ, 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 and the fill pipe in 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 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 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 the pesticides and capable of being fitted with a system interlock.

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 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 a point where pesticide distribution is adversely affected.

System 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 **HM-1354-A**. **HM-1354-A** should be applied at the end of the water application.

HM-1354-A should be applied at the end of the irrigation period in a sufficient amount of water to allow proper coverage of plant or crop but not to exceed 2 pints of **HM-1354-A** per acre per application.

IN-FURROW / DRIP CHEMIGATION

1. 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 water flow stops.

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

a. 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.

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

c. 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.

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

e. 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.

f. 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.

Maintain agitation in the supply tank while adding the required amount of **HM-1354-A**, and throughout the application. **HM-1354-A** should be added to the supply tank at the end of water application (prior to last complete cycle in moving systems). If the system has a sand media type filter, **HM-1354-A** should be injected into the water after it clears the filter.

IMPORTANT: Read the entire Directions For Use and the Warranty And Disclaimer Statement before using this product. If terms are not acceptable, return the unopened product container at once.

GENERAL INFORMATION

HM-1354-A is a plant growth regulator designed for use with fertilizers and/or pesticides.

HM-1354-A increases fertilizer use efficiency when used as part of a standard crop fertility program.

HM-1354-A can also be effective in the rate of growth and development of plant systems.

HM-1354-A is formulated with a unique set of carboxylic and polyphenolic acids that assist the plant growth regulator's impact on fertilizer use efficiency and can have a positive effect on beneficial soil micro-organisms.

HM-1354-A™ is can be mixed with most liquid fertilizers and plant nutritional products.

SPRAY MIX COMPATIBILITY

HM-1354-A™ is compatible with a wide range of fertilizer and pesticide products. Good agitation must be maintained for those applications that contain pesticides. Always check compatibility prior to mixing and apply any pesticide spray mixes as soon as possible. In the event of pesticide mixing problems, the addition of a compatibility agent is recommended.

If this product is to be tank mixed with fertilizers or with other pesticides, compatibility should be tested prior to mixing. To test for compatibility, use a small container and mix a small amount (0.5 to 1 quart) of spray, combining all ingredients in the same ration as the anticipated use. If any indications of physical incompatibility develop; such as separation, sedimentation, gel formation, etc., do not use this mixture for spraying. Indications of incompatibility usually will appear within 5 to 15 minutes after mixing.

MIXING SEQUENCE

1. Water.
2. Fertilizer
3. **HM-1354-A**
4. Compatibility agent (if needed)
5. Pesticides

APPLICATIONS WITH SOIL APPLIED LIQUID FERTILIZER

For in-furrow, banded, side-dressed and broadcast applications through conventional equipment, apply **HM-1354-A** in conjunction with and/or following the application of fertilizers and/or pesticides. Always jar test for compatibility. Best results are obtained when **HM-1354-A** is incorporated, injected, or applied in a zone or band in the soil at a minimum depth of two (2) to four (4) inches.

APPLICATIONS WITH DRY GRANULAR FERTILIZERS

HM-1354-A™ PGR may be directly impregnated on dry granular fertilizers. Apply sufficient **HM-1354-A** to provide the recommended label rates per acre when treated fertilizer is applied. Dry granular fertilizers treated with **HM-1354-A** have an indefinite shelf life.

*denotes alternate use language

TRANSPLANT SOLUTIONS

Mix 6-10 fl. oz. with each 100 gallons of transplant solution.

GENERAL DOSAGE RECOMMENDATIONS

Row or Band and Injection Applications: Use **HM-1354-A** at the rate of 1 - 2 pints per acre.

Broadcast Applications: Use **HM-1354-A** at the rate of 1 - 2 pints per acre.

RECOMMENDED CROPS

The following is a broad listing of crops on which **HM-1354-A** is recommended for use. All commodities within an established crop group, as classified under 40 CFR § 180.41, are considered to be appropriate for this product. A brief listing of crops within each grouping is given after the group name as an example of those crops represented. The examples given are not meant to be an exhaustive list of those crops within any grouping, and should not be construed as such.

For application rates for any given crop, use at the general dosage recommendation above, unless otherwise indicated.

VEGETABLES
BRASSICA (COLE) LEAFY VARIETIES: Broccoli, Brussels Sprouts, Cabbage, Chinese Cabbage, Cauliflower, Chinese Mustard, Collards, Kale, Kohlrabi, Mustard Greens, Rape Greens
CUCURBITS: Cantaloupe, Casaba Melons, Cucumbers, Gherkins, Gourds, Honeydew Melons, Mango Melons, Muskmelons, Pumpkins, Summer Squash, Watermelons, Winter Squash
LEAFY VEGETABLES (EXCEPT BRASSICA): Celery, Cress, Endive, Fennel, Lettuce, Orach, Spinach, Swiss Chard

ROOT, TUBER AND BULB VEGETABLES:
Artichokes, Burdock, Carrots, Cassava, Chicory, Garlic, Ginger, Ginseng, Horseradish, Leek, Onion, Parsley, Parsnip, Potato, Radish, Rutabaga, Salsify, Shallot, Sweet Potato, Turnips, Yams

FRUITING VEGETABLES:
Bell Peppers, Chile Peppers, Cooking Peppers, Eggplant, Ground Cherry, Pepinos, Pimentos, Sweet Peppers, Tomatillo, Tomatoes

LEGUMES:
Beans including *Lupinus spp.*, *Phaseolus spp.*, and *Vigna spp.*, Broad Beans, Chick Peas, Guar, Jackbean, Lablab Beans, Lentils, Peas, Peanuts, Soybeans.

FIELD CROPS:

CEREAL GRAINS:
Barley, Buckwheat, Corn, Millet, Oats, Popcorn, Rice, Rye, Sorghum (milo), Wheat (winter and spring), Wild Rice

COTTON

FORAGE:
Alfalfa, Clovers, Grasses, Timothy, Vetch

TREE CROPS

CITRUS:
Calamondin, Grapefruits, Kumquats, Lemons, Limes, Oranges, Tangelos, Tangerines

NUTS:
Almonds, Beech Nut, Brazil Nut, Butternut, Cashew, Chestnut, Chinquapin, Filberts, Hickory Nut, Macadamia Nut, Pecan, Pistachio, Walnut

POME FRUIT:
Apple, Crabapple, Mayhaw, Pear, Quince

STONE FRUIT:
Apricots, Cherries (Sweet and Sour), Nectarines, Peaches, Plums, Prunes

SMALL FRUITS AND BERRIES:
Blackberries, Blueberries, Boysenberries, Cranberries, Currants, Dewberries, Elderberries, Gooseberries, Grapes, Huckleberries, Olallieberries, Raspberries, Strawberries, Youngberries

MISCELLANEOUS COMMODITIES (NOT LISTED ELSEWHERE ON THIS LABEL):
AVACADO, HOPS, KIWIFRUIT, BANANAS, DATES, FIGS, PINEAPPLE, OLIVES, MANGO, OKRA, MUSHROOMS, PAPAYA, PERSIMMON.

ORNAMENTALS:
(Flowers, shrubs, trees, deciduous nursery stocks (trees, shrubs, and flowers), bedding plants and greenhouse crops and other ornamentals): Apply 1 pint in 100 gallons of water as a drench solution for soil and media, or apply 1 pint in 100 gallons of water as a directed spray. The applied spray solution should be incorporated into the root zone by irrigation or rainfall.

SOD FARMS:
Apply 1 pint per acre with fertilizer and irrigate to incorporate into the soil profile. Apply as needed during growing season.

TURF:

Greens, Tees, Fairways, Turfgrass and Lawns - Apply 1 - 2 pints in 100 gallons of water per acre and incorporate into the roots zone by irrigation.

STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: Protect from freezing. Store out of direct sunlight.

PESTICIDE DISPOSAL: Wastes resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

CONTAINER DISPOSAL:

NONREFILLABLE CONTAINER (EQUAL TO OR LESS THAN 5 GALLONS): Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Offer for recycling, if available.

NONREFILLABLE CONTAINER (GREATER THAN 5 GALLONS): Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Offer for recycling, if available.

REFILLABLE CONTAINER: Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller. To clean the container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times.

[See Container for Batch Code]

IN CASE OF EMERGENCY, CALL CHEMTREC:

1-800-424-9300.

WARRANTY AND DISCLAIMER STATEMENT

Read the Conditions of Sale - Warranty and Limitations of Liability and Remedies before using this product. If the terms are not acceptable, return the product, unopened, and the full purchase price will be refunded.

The directions on this label are believed to be reliable and should be followed carefully. Insufficient control of pests and/or injury to the crop to which the product is applied may result from the occurrence of extraordinary or unusual weather conditions or the failure to follow the label directions or good application practices, all of which are beyond the control of Helena Chemical Company (the "Company") or seller. In addition, failure to follow label directions may cause injury to crops, animals, man or the environment. The Company warrants that this product conforms to the chemical description on the label and is reasonably fit for the purpose referred to in the directions for use subject to the factors noted above which are beyond the control of the Company. The Company makes no other warranties or representations of any kind, express or implied, concerning the product, including no implied warranty of merchantability or fitness for any particular purpose, and no such warranty shall be implied by law.

The exclusive remedy against the Company for any cause of action relating to the handling or use of this product shall be limited to, at Helena Chemical Company's election, one of the following:

- Refund of the purchase price paid by buyer or user for product bought, or
- Replacement of the product used

To the extent allowed by law, the Company shall not be liable and any and all claims against the Company are waived for special, indirect, incidental, or consequential damages or expense of any nature, including, but not limited to, loss of profits or income. The Company and the seller offer this product and the buyer and user accept it, subject to the foregoing conditions of sale and limitation of warranty, liability and remedies.

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