7001-284 12/09/2003 1/12

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

OFFICE OF
PREVENTION, PESTICIDES AND
TOXIC SUBSTANCES

DEC 9 2003

Lisa J. Strong
Regulatory Consultant
J.R. Simplot Company
P.O. Box 198
Lathrop, CA 95330-0198

Subject: METAM (Soil Fumigant)
EPA Reg. No. 7001-284
Your amendment dated September 23, 2003

Dear Ms Strong:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act as amended is acceptable provided the following changes are made:

1. Add the following statement at the bottom of the First Aid box: "NOTE TO PHYSICIAN: Possible mucosal damage may contraindicate the use of gastric lavage. This product may pose an aspiration pneumonia hazard."

2. Under "Personal Protective Equipment" subsections (1) and (3), change "Waterproof gloves" to "Chemical resistant gloves made of any waterproof material."

3. Under "Personal Protective Equipment" subsections (1), (2) and (3), change the respirator specifications to read: "A respirator with an organic-vapor removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G), or a NIOSH approved respirator with an organic vaopr (OV) cartridge or canister with any N, R, P, or HE prefilter."

4. On page 10 under "PEANUTS / CBR resistant cultivar" change "acre of 4.1 pints" to acre or 4.1 pints"

One copy of the label stamped "Accepted with comments" is enclosed for your records. This label supercedes all labels previously accepted for this product. Please submit one copy of the final printed label that incorporates the required changes before the product is released for

shipment.

If you have any questions, please contact Robert Westin by phone at (703) 305-5721 or via email at westin.robert@epa.gov.

Sincerely,

Mary L. Waller

Mary Waller
Product Manager (21)
Fungicide Branch
Registration Division (7505C)

Enclosure

Metam

(Soil Fumigant)

ACTIVE INGREDIENT:	BY WT.
Sodium methyldithiocarbamate (anhydrous)	32.7%
OTHER INGREDIENTS:	67.3%
TOTAL:	100.0%

Contains 3.16 lbs. Sodium methyldithiocarbamate per gallon.

EPA Reg. No. 7001-284 EPA Est.

KEEP OUT OF REACH OF CHILDREN

DANGER – PELIGRO

Si usted no entiende la etiqueta, busque a alquien 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.)

Read The Entire Label Before Using This Product.

Use Only According To Label Instructions.

NOTICE: Before using this product, read the entire Precautionary Statements, Conditions of Sale and Warranty, Directions for Use, Use Restrictions and Storage and Disposal Instructions. If Conditions of Sale ard Warranty are not acceptable, return the product unopened within thirty days of purchase to the place of purchase.

NET CONTENTS: XXX Gallons

ACCEPTED
with COMMENTS
In EPA Letter Dated:
DEC 9 2003
Under the Federal Insecticide, Fungicide and Rodenticide Act, for the pesticide Reg. No.
7001-284

Manufactured For:
Simplot
J. R. SIMPLOT COMPANY
P. O. Box 198, Lathrop, CA 95330

FIRST AID	
IF ON SKIN OR CLOTHING:	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
IF IN EYES:	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
IF SWALLOWED:	• Call a poison control center or doctor immediately for treatment advice. • Have a person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by the poison control center or doctor. • Do not give anything by mouth to an unconscious person.
IF INHALED:	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.
HOT LINE NUMBER	
Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact the National Pesticide Information Center at 1-800-858-7378 for emergency medical treatment information.	

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS & DOMESTIC ANIMALS

DANGER: Corrosive. Causes skin damage. May be fatal if absorbed through the skin. Do not get on skin or clothing. Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Harmful if swallowed. Harmful if inhaled. Irritating to eyes, nose, and throat. Avoid breathing vapor or spray mist. Irritating to eyes. Do not get in eyes.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

(1) Handlers Performing Direct-contact Tasks

Direct-contact tasks include:

- mixing, loading, or fumigant transfer with or without dry-disconnect fittings
- equipment calibration or adjustment
- equipment cleanup and repair
- product sampling
- application or soil-sealing outside an enclosed cab
- any activity less than 6 feet from an unshielded pressurized hose containing this product
- spill cleanup
- removal of tarp or plastic film
- rinsate disposal
- cleanup of small spills
- preparing containers for aeration
- any other handling task not otherwise listed in (2) or (3) below

Applicators and other handlers performing direct-contact activities must wear:

- Coveralls over long-sleeved shirt and long pants
- Waterproof gloves
- Chemical-resistant footwear plus socks
- Chemical-resistant headgear for overhead exposure
- Chemical-resistant apron when cleaning equipment, or when mixing, loading, or transferring without dry-disconnect fittings
- Face-sealing goggles, unless full-face respirator is worn
- A respirator with either an organic-vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G)

(2) **Handlers in Enclosed Cabs**
Applicators and other handlers in enclosed cabs must wear:
- Coveralls
- Shoes and socks

Plus, if pungent rotten-egg odor of this product can be detected inside the enclosed cab, the handlers in the cab must wear:
- Face-sealing goggles, unless full-face respirator is worn
- A respirator with either an organic-vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G)

In addition, the PPE specified in (1) for direct-contact activities must be immediately available in the enclosed cab and must be worn if the handler leaves the enclosed cab to perform any direct-contact activity.

The enclosed cab must meet the requirements listed in the Worker Protection Standard (WPS) for agricultural pesticides — 40 CFR 170.240 (d)(5).

(3) **Handlers in Treated Areas While Entry is Restricted**
While entry is restricted (see "Entry Restrictions" in the Agricultural Use Requirements box elsewhere in this labeling), only the following handling tasks may be performed in a treated area outdoors in which a treatment took place:
- Assessing/adjusting the soil seal
- Assessing pest control, application technique, or application efficacy
- Operating ventilation equipment
- Sampling air or soil for this product

All other tasks are prohibited until the entry restriction is over.

Handlers performing the above tasks must wear:
- Coveralls over long-sleeved shirt and long pants
- Waterproof gloves
- Chemical-resistant footwear and socks

Plus: Handlers must wear if a pungent, rotten egg odor from this product can be detected outdoors.
- Face-sealing goggles (unless full-face respirator is worn) and
- A respirator with either an organic-vapor-removing cartridge with a prefilter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G)

User Safety Requirements

1. **Respirator Requirements:** When a respirator is required for use with this product, the following criteria must be met:
   a. Cartridges or canisters must be replaced daily or when odor or irritation from this product becomes apparent, whichever is sooner.
   b. Respirators must be fit-tested and fit-checked using a program that conforms to OSHA's requirements (described in 29 CFR Part 1910.134).
2. **Dispose of Contaminated Clothing:** Discard clothing and other absorbent materials that have been drenched or heavily contaminated with liquid from this product. Do not reuse them.
3. **Clean and Maintain PPE:** 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. Wash PPE after each day's use.

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.
- Remove PPE immediately after handling this product. Wash the outside of gloves before removing. As soon as possible, wash thoroughly and change into clean clothing.

ENVIRONMENTAL HAZARDS

This product is toxic to fish. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not apply where runoff is likely to occur. Do not contaminate water by disposal of equipment washwaters.

USE PRECAUTIONS

All METAM uses described on this label are intended for soil preparation purposes only. All plant foliage and established plants growing on the treatment site will be damaged or destroyed.

Keep METAM off desirable lawns and plants. Do not apply within 3 feet of the drip line of desirable plants, shrubs or trees. Do not use in confined areas or where fumes may enter nearby dwellings. Do not use in greenhouses. Keep container tightly closed when not in use. Do not store near feed or food.

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 in be in the area during application. For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

Use only according to product label booklet and/or side panel instructions. Refer to supplemental labeling entitled METAM (Soil Fumigant) Booklet, for use directions for chemigation. Do not apply this product through any irrigation system unless the supplemental labeling on chemigation is followed.

CALIFORNIA ONLY: Application must be in compliance with Technical Information Bulletin, California "Guidelines for All Application Methods for Metam Sodium in California." This information bulletin may be obtained from your local pesticide dealer or a metam sodium registration.

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 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 in this labeling about personal protective equipment, restricted-entry intervals, and notification to workers. The requirements in this book only apply to uses of this product that are covered by the Worker Protection Standard (WPS).

ENTRY RESTRICTIONS:

Outdoors: Entry (including early entry that would otherwise be permitted under the WPS) by any person — other than a correctly trained and equipped handler who is performing a handling task permitted on this labeling — is PROHIBITED from the start of application until 48 hours after application. In addition, if tarps are used for the application, non-handler entry is prohibited while tarps are being removed.

NOTIFICATION: Notify workers of the application by warning them orally and by posting warning signs. The signs must state: (1) "DANGER/PELIGRO," (2) "PESTICIDES/PESTICIDAS," (3) KEEP OUT/NO ENTRE," (4) the date and time of fumigation, (5) **[FUMIGANT NAME AND CONCENTRATION]**, and (6) "name, address, and telephone number of the applicator." Post the WPS sign in compliance with 40 CFR part 170, and follow the WPS requirements pertaining to location, legibility, color, size, and timing of posting and removal.

Outdoors: Post the fumigant warning signs at entrances to treated areas.

PPE FOR ENTRY DURING THE RESTRICTED PERIOD: PPE for entry that is permitted by this labeling is listed in the "Hazards to Humans and Domestic Animals" section of this labeling.

PRODUCT INFORMATION

METAM is a water soluble liquid. When applied to properly prepared soil, the liquid is converted into a gaseous fumigant. After sufficient interval of time, the gas dissipates, leaving the soil ready for planting.

METAM is recommended for the control of certain soilborne pests that attack ornamental, food and fiber crops causing reductions in yield and quality. NOTE: METAM will control only those pests in fumigation zone at the time of treatment. Reinfestation may be subsequent to the fumigant's dissipation from the soil.

Weeds and germinating weed seeds that are controlled include annual bluegrass, Bermudagrass, chickweed, dandelion, ragweed, henbit, lambsquarter, Amaranthus sp. (pigweed, careless weed), watergrass, Johnsongrass, nutgrass, wild morningglory, purslane, barnyardgrass, crabgrass, groundsel, prickly lettuce, pineappleweed, nettleleaf goosefoot, nightshade, shepherd's purse, stinging nettle, Malva, London rocket, and fiddleneck. The best weed control is obtained when METAM is applied to weeds that are actively growing.

The soilborne plant pathogenic fungi controlled include species of Verticillium, Rhizoctonia, Pythium, Phytophthora, Sclerotinia, as well as Sclerotium roltsii, Armillania mellea (Oak root fungus), and Plasmodiophora brassicae (Club root of crucifers).

The plant parasitic nematodes which METAM controls include root knot, lesion, dagger, lance, needle, pin, reniform, stunt, stubby root, sting, and spiral. NOTE: METAM will only control nematodes that are in the fumigated zone at the time of treatment. In Oregon and Washington, METAM will only suppress Meloidogyne chitwood.

Other pests controlled include symphilids or garden centipedes.

METAM TREATMENT GUIDELINES:

For optimum results from soil fumigation with METAM, certain procedures should be observed at designated times in the treatment program. Described in this section are important guidelines for each of the four stages of the treatment process:

- planning a METAM application
- field preparation prior to application
- application of METAM
- preparing for planting after application of METAM

Your sales representative will help you select the best treatment program for your particular needs.

PLANNING A METAM APPLICATION:

Time of Application:
METAM is applied after harvest and 14-21 days before a new crop is planted, in some areas of North America, fall applications are preferred because the fumes dissipate over the winter, allowing planting as soon as favorable springtime conditions arrive.

Application Rate:
Apply 20 to 100 gallons of METAM per treated acre depending on crop, target pest, and soil properties. Soil properties to consider when determining the application rate include the depth of soil to be treated, soil texture, and percent organic matter.

Target Pest and Depth of Treatment:
When rate ranges for METAM are given, use the higher rate if pests (insects, nematodes, etc.) are present in high numbers or if the area to be treated has a history of pest problems.

Consult with state nematologist, entomologist and plant pathologist to determine if crop rotation is more feasible than fumigation. Note: METAM will only control pests, unless otherwise specified on this label, that are in the fumigated zone at the time of treatment.

For control of weeds and fungi causing seed or seeding diseases, treatment of only the top 2 to 4 inches of soil may be required. For control of nematodes and fungi which occur throughout the rhizosphere, treatment to depths greater than 4 inches may be required. For a given soil type, the required application rate will increase proportionately with the depth of treatment required. For example, if 25 gallons of METAM per acre is required to treat 4 inches, then 50 gallons of METAM will be required to treat to a depth of 8 inches. Choose the appropriate application method to distribute METAM evenly throughout the soil to the required depth.

Soil Characteristics:
Soil properties to consider when determining the application rate include the depth of soil to be treated, soil texture, and percent organic matter.

Except in the case of cover crops, plant material under the soil surface should be thoroughly decomposed before METAM is applied. Because of the absorbing effect of humus, soils with high levels of organic matter under the surface require higher than usual doses of METAM. For example, muck soils require twice the amount of fumigant that would be used in mineral soils.

Application rates will vary with the soil texture. For instance, heavy clay soils require more METAM than light sandy soils.

FIELD PREPARATION PRIOR TO APPLICATION:

Soil Cultivation:
Always cultivate thoroughly the area to be treated to loosen soil and to break up clods. Then sprinkle or flood irrigate to moisten loosened soil as needed. Immediately before treatment, cultivate lightly to break up sod crust.

Soil Temperature During Treatment:
At the time of fumigation, the soil temperature should be the range of 40°F to 90°F in the treated zone. Treated zone is defined at the depth of treatment that METAM achieves at the time of application. To prevent rapid evaporation of the product from the soil, avoid treating soil during times of the day when soil temperatures exceed 90°F two inches deep; instead, make the application during the early morning hours when the soil temperature is coolest.

Measuring the Soil Moisture:
Application should be made under "good seed bed moisture conditions" that is, the soil moisture should be about 50-80% of field capacity. As a simple field test, squeeze a handful of soil into a ball and then gently try to break it apart with your fingers. If it breaks easily, the soil moisture content is sufficient. If it will not break apart or if water can be squeezed out, it is too wet. When necessary, 1-2 weeks prior to treatment sprinkle or flood irrigate the soil to increase the moisture content. The soil must be moistened to at least the desired treatment depth.

Phytotoxicity:
METAM is phytotoxic. Protect valuable, nontarget plants by stopping soil applications of METAM at least 3 feet short of the drip line of trees, shrubs, and other desirable plants. Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform distribution of treated water.

APPLICATION OF METAM:

Apply METAM according to the methods and rates outlined under "USES, APPLICATION METHODS, & RATES" section below.

Use of Diluted METAM:
USE PROMPTLY AFTER MIXING WITH WATER. DO NOT STORE THE DILUTED PRODUCT. DO NOT ALLOW SOLUTION TO STAND OVERNIGHT. Flush all equipment with water after each day's use. Disassemble valves and clean carefully.

Odors During or After Application:
Strong odors during or after application are a signal that the fumigant is escaping and needs to be sealed in the soil. If increasingly strong odors are occurring, the application should be stopped immediately and not resumed until the source of the odor problem is identified and corrected. For sprinkler application or whenever possible with other application methods, a water seal should be applied immediately to the treated areas of the field.

Sealing METAM In Soil:
To be most effective, METAM should be sealed in the soil. Sealing methods include applying irrigation water or tarpaulins (plastic, paper or fabric) and packing soil with a roller or draft. Tarpaulins should be spread loosely over the treated area and secured to prevent removal by wind. They should remain in place for at least 48 hours. If tarped, the sealed area should be cultivated to a depth of 2 inches to aerate the soil 7 days after treatment. When tarpaulins are used to seal the soil, wait at least 21 days before planting.

Application In Tank Mix With Liquid Fertilizer:
METAM may be injected in a mixture with liquid fertilizers. Since the composition of liquid fertilizers vary considerable, the physical compatibility of each fertilizer METAM tank mix should be checked by using the following procedure:

Mix a small quantity of METAM and liquid fertilizer in a glass container. METAM and fertilizer should be mixed in the same ratio as they will be applied to the field (i.e., if 40 gallons of METAM and 40 gallons of liquid fertilizer are to be applied per acre, then METAM and fertilizer should be mixed in the jar in a 40:40 or 1:1 ratio). Agitate the liquids to attain a complete mixture.

If a uniform mix cannot be made, the mixture should not be used. If the mixture remains uniform for 30 minutes, the combination may be used. Should the mixture separate after 30 minutes, but readily remix uniformly with agitation, the mixture can be used if adequate agitation is maintained in the tank.

DO NOT PLACE CAPS ON JAR AS INCOMPATIBLE MIXES MAY EVOLVE HYDROGEN SULFIDE GAS.

USE PROMPTLY AFTER MIXING WITH WATER OR FERTILIZER. DO NOT ALLOW SOLUTION TO STAND.

Flush all equipment with water after each day's use, disassemble valves and clean carefully.

GENERAL PRECAUTIONS FOR IRRIGATION SYSTEMS:

When applying by chemigation methods the following directions or warnings must be observed:

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

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from nonuniform 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 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.

Posting of areas to be chemigated is required when 1) any part of a treated area is within 300 feet of sensitive areas such as residential areas, labor camps, businesses, day care centers, hospitals, inpatient clinics, nursing homes or near public areas such as schools, parks, playgrounds, or other public facilities not including public roads, or 2) when the chemigated area is open to the public such as golf courses.

Posting must conform to the following requirements. Treated areas shall be posted with signs at all usual points of entry and along likely routes of approach from the listed sensitive areas. When there are no usual points of entry, signs must be posted in the corners of the treated areas and in any other location affording maximum visibility to sensitive areas. The printed side of the sign should face away from the treated area towards the sensitive area. The signs shall be printed in English. Signs must be posted prior to application and must remain posted until foliage has dried and soil surface water has disappeared. Signs may remain in place indefinitely as long as they are composed of materials to prevent deterioration and maintain legibility for the duration of the posting period.

All words shall consist of letters of at least 2½ inches tall, and all letters and the symbol shall be a color which sharply contrasts with their immediate background. At the top of the sign shall be the words KEEP OUT, followed by an octagonal stop sign symbol of at least 8 inches in diameter containing the word STOP. Below the symbol shall be the words PESTICIDES IN IRRIGATION WATER.

This sign is in addition to any sign posted to comply with the Worker Protection Standard.

Use Precautions For Sprinkler Irrigation:

- 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.
- 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.
- Application of more than recommended quantities of irrigation water may result in decrease product performance by removing the chemical from the zone of effectiveness.
- Do not apply when wind speed favors drift beyond the area intended for treatment.
- Use only sprinkler systems that give uniform coverage.

Use Precautions For Flood (Basin), Furrow and Border Irrigation:

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

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

- 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.
- 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.

Use Precautions For Drip (Trickle) Irrigation:

- 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 that 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.

Chemigation Systems Connected To Public Water Systems:

NOTE: J. R. Simplot Company does not encourage connection of chemigation systems to public water systems. The following information is provided for users who have evaluated all alternative application and water source options before choosing to make such a connection.

A "public water system" is one that provides piped water for human consumption to the public, and the system also either has at least 2 service connections or regularly serves an average of at least 2 individuals daily at least 60 days a year.

- Chemigation systems connected to the 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 should be a complete physical break (air gap) between the outlet and of the fill pipe and the top or overflow rim of the reservoir tank measuring at least twice the inside diameter of the fill pipe.
- 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 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.

Preparation For Planting After Application of METAM:

Effect of Rain:

If a METAM application is rained on less than 24 hours after treatment, lack of control at and near the soil surface may result.

Recontamination:
Precautions must be taken to prevent recontamination of treated soil with plant pathogenic fungi and plant parasitic nematodes. Use clean seeds and plants. Before farm equipment is driven into the treated area, it should be rinsed free of the untreated soil from other fields.

Interval Between Treatment and Planting:
Because METAM is harmful to living plants, an appropriate interval must be observed between soil fumigation and planting. On well drained soils which have a light to medium texture and which are not excessively wet or cold following application, planting can begin 14-21 days after treatment. If soils are heavy or especially high in organic matter, or if they remain wet and/or cold (below 60°F) following application, a minimum interval of greater than 21 days should be observed, extending until the soil is sufficiently dry to allow for cultivation.

Aeration Before Planting:
Important: When treating heavier field soils, including soils high in clay or organic matter, should be allowed to aerate and dry thoroughly after treatment with METAM. During cold and/or wet weather, frequent shallow cultivation can aid the escape of METAM from the soil.

On heavy, wet soils, light surface cultivation to break up crusting and promote drying of the soil should be done 5 to 7 days after application. This cultivation may be repeated as necessary. To avoid reinfesting treated soil, cultural practices should be such that untreated soils are not mixed with treated soils.

Testing for Dissipation of METAM:
After the waiting period has passed, if there is any question about the complete escape of METAM from the soil, transplant a seedling into the treated soil. If the plant develops normally without any signs of chemical injury, crop planting can begin.

NOTE: METAM will suppress root knot nematodes in the fumigated zone at the time of treatment. The fumigated zone is defined as the depth of penetration that METAM achieves at the time of application.

If high numbers or deep nematodes are identified, anticipate nematodes to build up throughout the growing season. Some damage will occur unless additional action is taken.

METAM has no soil residual and reinfestation of a field can occur from numerous sources such as deep nematode populations, seed pieces, irrigation water, equipment contamination and blowing wind.

EARLY MATURITY DISEASES OF POTATOES IN OREGON: Apply 40 gallons METAM per treated acre using thin shank injector rig with shanks spaced 5 inches apart.

WHEAT AND BARLEY: For suppression of certain root diseases caused by Early Season Soil Fungi — before applying METAM cultivate the area to be treated to break up clods. Apply 2½ to 10 gallons per treated acre 14 to 21 days before planting. METAM may be diluted with water or non-acidic liquid fertilizer immediately before applying. Inject METAM to a depth of 5 to 8 inches into moist soil. Space injector shanks 2 to 12 inches apart.

Do not mix METAM with acidic fertilizer or other acidic solution. For best results, moisture in the treated zone should be 50% of field capacity or more.

Use only in areas which receive 15 or more inches of rainfall per year.

PEANUTS—CYLINDROCLADIUM BLACK ROT (CBR) CONTROL: Apply METAM at the following rates:

- CBR resistant cultivar (NC 8C): 10 gallons per treated acre of 4.1 pints per 1,000 feet of treated row.
- CBR susceptible peanut cultivars (Flongant, GK-3, NC-5, Keel 29): 20 gallons per treated acre or 11 pints per 1,000 feet of treated row.
- CBR highly susceptible cultivars (VA 818, NC7): use of METAM not recommended.

Soil Preparation: Before applying METAM residue from the previous crop should be decomposed (enhanced by fall discing) and plowed under in the spring with moldboard plow. Soil incorporated preplant herbicides must be applied before application of METAM.

Application: Apply METAM with a gravity flow regulator through chisel-type or counter-type applicators. Center each applicator, one per row, in front of a bedshaper to mark the location of chemical deposition. METAM should be deposited 6 to 8 inches below the soil surface of beds. Bed and applicator spacing should coincide with row spacing at planting. Soil temperatures must be in the range of 60°F to 90°F at 3-inch depth before application.

Tillage and Planting after Application: Do not mix treated soil with untreated soil by tillage or other cultural practices. Plant peanuts in the center of treated beds no earlier than 14 days following application of METAM. An at planting nematicide treatment will be necessary in fields with heavy infestations of root knot, ring, and/or string nematode.

TOBACCO PLANT BEDS: Fall applications are recommended wherever possible. Read and follow DIRECTIONS FOR USE carefully. Treatment in the South should generally be made before November 30.

A. **TARP METHOD:** Prepare the bed 5 to 7 days before application to ensure best conditions for weed seed germination and fumigant action of METAM. The bed should be free of clods, level and in good tilth. Apply 1 to 1½ gallons of METAM in a minimum of 40 gallons of water per 100 sq. yd. of treated soil. Apply uniformly over the entire bed. Cover the bed immediately with a plastic cover. Keep covered no less than one day, but not more than two days. The cover need not be tented, but should be secured to prevent wind from uncovering the treated area. Seven days after date of METAM application, loosen the treated soil to a depth of 2 inches. Do not seed tobacco earlier than 21 days after METAM application.

B. **DRENCH METHOD:** Apply 2½ gallons METAM in 150 to 200 gallons of water per 100 sq. yd. of treated soil. Application may be made with sprinklers, sprayers with nozzles or any suitable equipment. Follow directions given above for seed bed treatment.

SYMPHYLID CONTROL: Soil should be in good seed bed condition to a depth of 8 to 10 inches. Maintain adequate moisture during Spring season. Test during July-August when symphylids are in the upper soil surface. Apply 20 gallons METAM per treated acre (0.4 pints per 100 sq. ft. of treated soil) using blade or chisel injectors spaced 5 inches apart. Inject below level of symphylid concentration, usually 6 to 8 inches. Pack soil immediately after application.

PEPPERMINT: Verticillium wilt control. When infestation is limited to small spots in a field, spread can be reduced by treating the soil with 100 gallons. METAM per acre of soil treated (2 pints per 100 sq. ft. of treated soil) using injector blade or thin shank injector rig with injectors spaced 5 inches apart.

STORAGE AND DISPOSAL

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

STORAGE: Keep container tightly sealed during storage. Do not store below 0°F. Product crystallizes at lower temperatures. If exposed, warm or store at higher temperatures and mix to redissolve crystals and assure uniformity before use.

SPILL: In case of spill, collect liquid or absorb onto absorbent material and package for disposal according to Pesticide Disposal directions.

PESTICIDE DISPOSAL: Pesticide wastes are acutely hazardous. 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) containers or bulk storage tanks. **NOTE:** Only containers with minimal residue can be rinsed. 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. BULK CONTAINERS: Empty container as completely as possible and return to specified destination for cleaning and reuse.

CONDITIONS OF SALE AND WARRANTY

J.R. Simplot Company warrants that the product conforms to its chemical description and is reasonably fit for the purpose stated on the label only when used in accordance with label directions under normal conditions of use. J.R. SIMPLOT COMPANY MAKES NO OTHER EXPRESS OR IMPLIED WARRANTIES EITHER OF MERCHANTABLILITY OR FITNESS FOR A PARTICULAR USE. Handling, storage and use of the product by Buyer or User are beyond the control of J.R. Simplot Company and Seller. Risks such as crop injury, ineffectiveness or other unintended consequences resulting from, but not limited to, weather or soil conditions, presence of other materials, disease, pest, drift to other crops or property or failure to follow label directions will be assumed by the Buyer or User. In no case will J.R. Simplot Company or Seller be held liable for consequential, special or indirect damages resulting from the handling, storage or use of this product.

METAM /PM6/AGC 0299/0303