

62719-340

2/17/2000

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U.S. ENVIRONMENTAL PROTECTION AGENCY
Office of Pesticide Programs
Registration Division (7505C)
401 "M" St., S.W.
Washington, D.C. 20460

EPA Reg. Number:
62719-340

Date of Issuance:
FEB 17 2000

NOTICE OF PESTICIDE:

Registration
 Reregistration
(under FIFRA, as amended)

Term of Issuance:
Conditional

Name of Pesticide Product:
MSMA Plus S

Name and Address of Registrant (include ZIP Code):

Dow AgroSciences LLC
9330 Zionsville Road
Indianapolis, IN 46268-1054

Note: Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration 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/reregistered under the Federal Insecticide, Fungicide and Rodenticide Act.

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 his 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 product is conditionally registered in accordance with FIFRA sec. 3(c)(7)(A) provided that you:

1. Submit and/or cite all data required for registration/reregistration of your product when the Agency requires all registrants of similar products to submit data.

2. Make the following label changes listed below before you release the product for shipment:

a. Add the phrase, "EPA Reg. No. 62719-340".

b. The Agency has recently revised its recommended First Aid statements for pesticide products and intends to issue a PR Notice announcing the changes in the near future. In the interim we are encouraging registrants to begin using the new statements. The new statements were developed as part of the Consumer Labeling Initiative in close cooperation with poison control center personnel and other medical experts. While it is not mandatory that you revise your label at this time,

Signature of Approving Official:

Date:

2-17-00

you are strongly encouraged to substitute the revised statements (below) for those statements currently on the label at your next label printing:

FIRST AID

If swallowed:	<ul style="list-style-type: none"> • Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to by a poison control center or doctor.
If in eyes:	<ul style="list-style-type: none"> • 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. • Call a poison control center or doctor for treatment advice.
If on skin:	<ul style="list-style-type: none"> • 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 inhaled:	<ul style="list-style-type: none"> • Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible. • Call a poison control center or doctor for further treatment advice.

Have the product container or label with you when calling a poison control center or doctor or going for treatment.

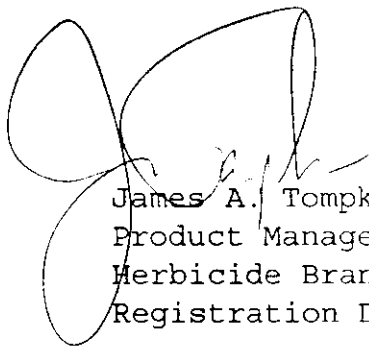
c. The statements "Do not contaminate waters used for domestic consumption or by animals, wildlife and aquatic life, or water for irrigation purposes. Do not feed treated foliage to livestock or graze treated areas" are not required environmental hazard statements and should be placed in the directions for use if retained on the label.

d. On page 3 delete the Agricultural Use Requirements box since it duplicates the statements on page 2 and since the complete Agricultural Use Requirements section appears in the label booklet on page 6.

3. Submit one (1) copy of your final printed labeling before you release the product for shipment. Refer to the A-79 enclosure for a further description of final printed labeling.

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 constitutes acceptance of these conditions.

A stamped copy of the label is enclosed for your records.



James A. Tompkins
Product Manager (25)
Herbicide Branch
Registration Division (7505C)

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ACCEPTED
with COMMENTS
In EPA Letter Dated:
FEB 17 2000

00XXXXXX

(Base Label):

[Insert 2-Point Black Line]

(logo) **Dow AgroSciences LLC**

MSMA Plus "S"

**Under the Federal Insecticide,
Fungicide, and Rodenticide Act,
as amended, for the pesticide
registered under EPA Reg. No.
62019-340**

MSMA plus surfactant for selective post-emergence weed control

Active Ingredient:

Monosodium Acid Methanearsonate	47.8%
Inert Ingredients	52.2%
Total	100.0%

Total arsenic (as elemental) all in water-soluble form 22.1%
Product contains 6 pounds of MSMA per gallon

Keep Out of Reach of Children

CAUTION PRECAUCION

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.)

Precautionary Statements

Hazards to Humans and Domestic Animals

Causes **Moderate Eye Irritation • Harmful if Swallowed, Inhaled, Or Absorbed Through Skin**

Avoid contact with eyes, skin, or clothing. Avoid breathing spray mist.

Personal Protective Equipment (PPE)

Applicators and other handlers (other than mixers and loaders) must wear

- Long-sleeved shirt and long pants
- Chemical-resistant gloves
- Chemical-resistant footwear plus socks
- For exposures outdoors, use a dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C).
- For exposures in enclosed areas, use a respirator with either an organic-vapor-removing cartridge with a pre-filter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G).

Mixers and Loaders must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves
- Chemical-resistant footwear plus socks
- Protective eyewear
- Chemical-resistant apron when mixing or loading
- For exposures outdoors, use a dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C).
- For exposures in enclosed areas, use a respirator with either an organic-vapor-removing cartridge with a pre-filter approved for pesticides (MSHA/NOSH approval number prefix TC-23C) or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G).

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

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirement listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR part 170.240 (d) (4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

Handwritten notes:
MSMA Plus
Substance
Insecticide

Handwritten notes:
MSMA
Insecticide

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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.

First Aid

If swallowed: Call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger, or if available by administering syrup of ipecac. If person is unconscious, do not give anything by mouth and do not induce vomiting.

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

If in eyes: Flush eyes with plenty of water. Get medical attention if irritation persists.

If on skin: Wash with plenty of soap and water. Get medical attention.

Environmental Hazards

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 apply when weather conditions favor drift from target area. Do not contaminate water when disposing of equipment washwaters. Do not contaminate waters used for domestic consumption or by animals, wildlife, and aquatic life, or water for irrigation purposes. Do not feed treated foliage to livestock or graze treated areas.

Agricultural Use Requirements

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. Refer to the label booklet under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

Refer to label booklet for Directions for Use including Storage and Disposal.

Notice: Read the entire label. Use only according to label directions. Before buying or using this product, read "Warranty Disclaimer" and "Limitation of Remedies".

In case of emergency endangering health or the environment involving this product, call 1-800-992-5994. If you wish to obtain additional product information, visit our web site at www.dowagro.com.

Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

EPA Reg. No. 62719-XXX

EPA Est. XX XX
Superscripts correspond to places 7 & 8 of lot number
900-000000 / 00000000

Manufactured in South Africa
Dow AgroSciences LLC • Indianapolis, IN 46268

Herbicide

Net Contents __gal

[Insert Bar Code FPO]

[Insert DOT shipping classification and diamond(s)]

Lot

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Label Booklet:

(logo) Dow AgroSciences LLC

MSMA Plus "S"

MSMA plus surfactant for selective post-emergence weed control

Active Ingredient:

Monosodium Acid Methanearsonate	47.8%
Inert Ingredients	52.2%
Total	100.0%

Total arsenic (as elemental) all in water-soluble form 22.1%
Product contains 6 pounds of MSMA per gallon

Keep Out of Reach of Children **CAUTION PRECAUCION**

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.)

Agricultural Use Requirements
Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. Refer to the label booklet under "Agricultural Use Requirements" in the Directions for Use section for information about this standard.

Refer to label booklet for additional precautionary information including Personal Protective Equipment (PPE), User Safety Recommendations and Directions for Use including Storage and Disposal.

Notice: Read the entire label. Use only according to label directions. **Before buying or using this product, read "Warranty Disclaimer" and "Limitation of Remedies" inside label booklet.**

In case of emergency endangering health or the environment involving this product, call 1-800-992-5994. If you wish to obtain additional product information, visit our web site at www.dowagro.com.

Agricultural Chemical: Do not ship or store with food, feeds, drugs or clothing.

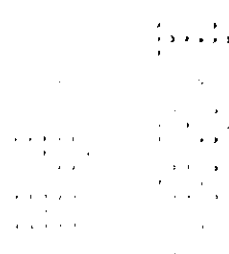
EPA Reg. No. 62719-XXX

EPA Est. XX XX
Superscripts correspond to places 7 & 8 of lot number
900-000000 / 00000000

Manufactured in South Africa
Dow AgroSciences LLC • Indianapolis, IN 46268

Herbicide

Net Contents gal



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Precautionary Statements

Hazards to Humans and Domestic Animals

CAUTION

Causes Moderate Eye Irritation • Harmful If Swallowed, Inhaled, Or Absorbed Through Skin

Avoid contact with eyes, skin, or clothing. Avoid breathing spray mist.

Personal Protective Equipment (PPE)

Applicators and other handlers (other than mixers and loaders) must wear

- Long-sleeved shirt and long pants
- Chemical-resistant gloves
- Chemical-resistant footwear plus socks
- For exposures outdoors, use a dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C).
- For exposures in enclosed areas, use a respirator with either an organic-vapor-removing cartridge with a pre-filter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C), or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G).

Mixers and Loaders must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves
- Chemical-resistant footwear plus socks
- Protective eyewear
- Chemical-resistant apron when mixing or loading
- For exposures outdoors, use a dust/mist filtering respirator (MSHA/NIOSH approval number prefix TC-21C).
- For exposures in enclosed areas, use a respirator with either an organic-vapor-removing cartridge with a pre-filter approved for pesticides (MSHA/NIOSH approval number prefix TC-23C) or a canister approved for pesticides (MSHA/NIOSH approval number prefix TC-14G).

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

When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirement listed in the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR part 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.
- 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.

First Aid

If swallowed: Call a physician or Poison Control Center. Drink 1 or 2 glasses of water and induce vomiting by touching back of throat with finger, or if available by administering syrup of ipecac. If person is unconscious, do not give anything by mouth and do not induce vomiting.

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

If in eyes: Flush eyes with plenty of water. Get medical attention if irritation persists.

If on skin: Wash with plenty of soap and water. Get medical attention.

Environmental Hazards

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 apply when weather conditions favor drift from target area. Do not contaminate water when disposing of equipment washwaters. Do not contaminate waters used for

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domestic consumption or by animals, wildlife, and aquatic life, or water for irrigation purposes. Do not feed treated foliage to livestock or graze treated areas.

Directions for Use

It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read all Directions for Use carefully before applying.

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 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. The requirements in this box only apply to uses of this product that are covered by the Worker Protections 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
- Chemical-resistant gloves
- Chemical-resistant footwear plus socks

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 and domestic animals out of treated areas until sprays have dried.

Storage and Disposal

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

Storage: Store in a dry location away from children, animals, foods, feeds, seeds, or other agricultural chemicals. Handle in accordance with information given under Precautionary Statements. In the event of spillage or leakage, soak up material with absorbent clay, sand, sawdust, or other absorbent material. Scrape up and dispose of in accordance with information given under Disposal. Repackage and re-label usable product in a sound container.

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: Triple rinse (or equivalent). Then offer for recycling or reconditioning, or puncture and dispose of in a sanitary landfill, or incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

GENERAL INFORMATION

MSMA Plus "S" herbicide is a selective post-emergent product for weed control in cotton, non-bearing fruit and nut trees, bearing and non-bearing citrus, bluegrass, fescue and ryegrass grown for seed, in forestry, and noncrop areas. This product is a combination of herbicide and surfactant. It is not necessary to add a surfactant to the spray solution when applying this product. Local conditions and recommendations vary. Consult local agricultural experiment station or extension service weed specialists for recommendations in your area.

Best results are obtained on young, actively growing weeds at air temperatures above 70°F.

Chemigation: Do not use this product through any type of irrigation system.

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Mixing Instructions

MSMA Plus "S" must be thoroughly mixed. Fill the spray equipment reservoir with about half the required amount of water and, with the pump or agitator operating add the required amount of herbicide and continue filling the reservoir with the balance of the water and apply. After use, clean equipment thoroughly by flushing with water. Do not store spray solution in tanks for a prolonged period.

Aerial Spray Drift Management

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment-and-weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions. The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses or to applications using dry formulations.

1. The distance of the outer most nozzles on the boom must not exceed $\frac{3}{4}$ the length of the wingspan or rotor.
2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees. Where states have more stringent regulations, they should be observed.

The applicator should be familiar with and take into account the information covered in the following **Aerial Drift Reduction Advisory Information**:

Importance of Droplet Size: The most effective way to reduce drift potential is to apply large droplets. The best drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly, or under unfavorable environmental conditions (see Wind, Temperature and Humidity, and Temperature Inversion section of this label).

Controlling Droplet Size:

Volume-Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows product larger droplets.

Pressure-Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size and does not improve canopy penetration. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.

Number of nozzles-Use the minimum number of nozzles that provide uniform coverage.

Nozzle Orientation-Orienting nozzles so that the spray is released backwards, parallel to the airstream will produce larger droplets than other orientations. Significant deflection from the horizontal will reduce droplet size and increase drift potential.

Nozzle Type-Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce larger droplets than other nozzle types.

Boom Length-For some use patterns, reducing the effective boom length to less than $\frac{3}{4}$ of the wingspan or rotor length may further reduce drift without reducing swath width.

Application-Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

Swath Adjustment: When applications are made with a cross-wind, the swath will be displaced downwind. Therefore, on the up and downwind edges of the field, the applicator must compensate for this displacement by adjusting the path of the aircraft upwind. Swath adjustment distance should increase with increasing drift potential (higher wind, smaller drops, etc.).

Wind: Drift potential is lowest between wind speeds of 2-10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. Note: Local terrain can

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influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect drift.

Temperature and Humidity: When making applications in low relative humidity, set up equipment to produce larger droplets to compensate for evaporation. Droplet evaporation is most severe when conditions are both hot and dry.

Temperature Inversions: Applications should not occur during a temperature inversion, because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a connected cloud (under low wind conditions) indicates an inversion, while smoke that moves upwards and rapidly dissipates indicates good vertical air mixing.

Sensitive Areas: The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is minimal (e.g., when wind is blowing away from the sensitive areas).

Weeds Controlled

A partial list of weeds controlled includes:

bahiagrass	goosegrass
barnyardgrass	johnsongrass
brachiaria spp.	morningglory
bullnettle	nutsedge
chickweed	pigweed
cocklebur †	puncturevine
crabgrass (smooth and large)	ragweed
dallisgrass	sandbur
foxtail (green and yellow)	watergrass
	wood sorrel

† Arsenical resistant varieties may not be controlled.
See Golf Course and Turf Uses for weeds controlled in those sites.

Application Instructions

Broadcast Application: MSMA Plus "S" should be applied with a low volume, low pressure, properly calibrated sprayer having satisfactory pumping and bypass action. Nozzles should be placed so as to give good coverage of the weeds and grasses. Proper coverage is very important. Apply the recommended rate of MSMA Plus "S" in a broadcast spray volume of 40 gallons per acre using ground equipment or 5 to 10 gallons per acre by air. For band application, apply proportionally less.

COTTON

MSMA Plus "S" is effective for post-emergent control of weeds listed above in "Weeds Controlled" and many similar weeds. Applications can be made: (1) Preplant or postplant preemergence up to cracking of soil just before cotton emergence using ground or aircraft equipment; (2) Postemergence, over the top, when cotton is 3 to 6 inches tall or up to early first square stage, whichever occurs first using ground or aircraft equipment; or (3) Postemergence as a directed spray with ground equipment when cotton is 3 inches tall up to first bloom.

Application: Apply the recommended rate in a spray volume of 40 gallons per acre of water for ground equipment or 5 to 10 gallons per acre of water for aircraft using properly calibrated sprayer equipment.

Restriction: Do not feed treated foliage to livestock or graze treated fields.

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1. **Preplant or Postplant Preemergence Application up to Cracking:** A single ground or aircraft application can be made to prepared cotton seedbeds when planting has been delayed and weeds have emerged, or as a postplant preemergence treatment, but not later than initial cracking of soil just before cotton emergence. Cotton may be planted immediately after a preplant application.

Application Rate: Use MSMA Plus "S" at 2 2/3 pt per acre.

2. **Postemergence Application to Cotton Using Ground or Aircraft Equipment as an Over-The-Top Broadcast Spray:** Apply only as a salvage operation to healthy, rapidly growing cotton when 3 inches tall, but no later than 6 inches tall or early square, whichever occurs first. A second or repeat application, if needed, should be timed 1 to 3 weeks after the initial application. Preference should be given to directed sprays to minimize injury to cotton. The second application should be made as a directed spray if possible.

Application Rate: MSMA Plus "S" at 1 to 1 1/4 pt per acre.

Restriction: Do not make more than two (2) applications of MSMA or DSMA, either alone or in combination, per season.

3. **Postemergence Directed Application when Weeds are Small Using Ground Equipment:** Apply only when cotton is 3 inches high to first bloom. A second application, if necessary, may be timed about 1 to 3 weeks after the first application. Direct the spray to the base of the cotton plant so as to avoid spraying the cotton foliage, but to give good coverage of the weeds and grasses. For band application to cotton grown in 40-inch rows, apply at a rate of 1 gallon of the spray solution per 1 inch of band width to be treated.

Slight burning and a reddish discoloration of the cotton leaves may occasionally occur following the recommended treatment, but the cotton plant will develop normally.

Application Rate: MSMA Plus "S" at 2 2/3 pt per acre.

Restrictions:

- Do not apply after first bloom.
- In Florida, apply to cotton only as a band treatment.

NON-BEARING FRUIT AND NUTS

Apple, Apricot, Cherry, Peach, Pear, Plum, Prune, Almond, and Walnut Orchards

MSMA Plus "S" is effective as a directed postemergence spray for post-emergent control of weeds listed above in "Weeds Controlled" and many similar weeds in non-bearing apple, apricot, cherry, peach, pear, plum, prune, almond, and walnut orchards. Do not use around trees and vines from which crops will be harvested within one year.

Rates and Methods of Application: Mix MSMA Plus "S" at the rate of 2 2/3 pt per acre and apply in 50 to 100 gallons of water, as needed for thorough coverage. For spot treatment, mix 2 2/3 pt of MSMA Plus "S" in 50 gallons of water and apply to point of runoff. Apply during warm weather when weeds are small and actively growing. If regrowth occurs, repeat applications may be made, but not more than three applications per year.

Precautions:

- Do not allow spray solution to contact the foliage, stems, or bark of trees.
- Do not use in orchards from which crops will be harvested within one year.
- Do not graze treated areas.
- In Florida, apply only as a spot treatment.

CITRUS (BEARING AND NON-BEARING)

Orange, Grapefruit, Tangerine, Lemon, and Lime Orchards

MSMA Plus "S" is effective as a directed postemergence spray for post-emergent control of weeds listed above in "Weeds Controlled" and many similar weeds in bearing and non-bearing citrus orchards.

Rates and Methods of Application: Mix MSMA Plus "S" at the rate of 2 2/3 to 5 1/3 pt per acre and apply in 50 gallon of water. Apply as a directed spray to interspaces and around the base of trees. Spray unwanted vegetation to just short of runoff. If regrowth occurs, repeat applications may be made, but not more than three applications per year. Use a spray shield, if necessary, to prevent sprays from contacting nursery plantings or small trees.

Precautions:

- Do not allow spray solution to contact the stems, foliage, fruit, or bark of trees.
- Do not graze treated areas.
- In Florida, apply only as a spot treatment.

GOLF COURSE, LAWN AND ORNAMENTAL TURF

Bermudagrass, Bluegrass and Zoysiagrass Turf

MSMA Plus "S" is useful for selective control of dallisgrass, sandbur, bahiagrass, nutsedge, barnyardgrass, chickweed, and wood sorrel with little or no injury to desirable turf grasses. For newly established turf, do not apply until after three mowings. Zoysiagrass, bluegrass, and bermudagrass are quite tolerant to MSMA Plus "S". Mow lawns 1 to 1-1/2 inches high before treatment. For broadcast application, apply MSMA Plus "S" at the rate of 2 1/2 to 2 2/3 pt per acre in a spray volume of 40 or more gallons of water. For spot treatment, mix 1 fluid ounce (2 tablespoons) of MSMA Plus "S" in 5 gallons of water and apply to an area of 1000 square feet. Spray thoroughly to wet all undesirable plants. Make applications when weather is warm, preferably between 80°F to 90°F. Repeat applications, 10 to 14 days apart, may be needed for effective control.

Precautions and Restrictions:

- Do not water turf for 24 hours after application.
- Desirable turf grasses may be temporarily discolored.
- Injury may result if applied to bentgrass and fescues.
- Do not reseed for 2 weeks after the last application.
- Do not apply to St. Augustinegrass, carpetgrass, centipedegrass or dichondra turf.
- Do not apply with hose-end applicators.

GRASSES GROWN FOR SEED (Pacific Northwest)

Bluegrass, Fescue and Ryegrass

MSMA Plus "S" is useful for selective control of wild oats and certain other broadleaf and grassy weeds. Broadcast apply MSMA Plus "S" at the rate of 6 to 8 pt per acre in sufficient spray volume to provide thorough coverage (40 or more gallons of water per acre). Apply any time after weeds emerge, but before grass crop has reached boot stage.

Precautions and Restrictions:

- Do not apply after boot stage.
- Use only on grasses grown for seed.
- Do not apply more than once per year.
- Do not graze treated crop or allow hay, seeds or seed screenings from treated crops to be used for food or feed.

FORESTRY

General Information on Tree Control: MSMA Plus "S" is useful for crown kill of undesirable trees through spaced-cut injection methods. It is useful for the control of the following conifer species: Cedar, Douglas fir, grand fir, lodgepole pine, ponderosa pine, jack pine, red pine, silver fir, and western hemlock. This product may also be used for the control of bigleaf maple, but not for most other hardwoods. MSMA

Plus "S" is entirely soluble in water. Rinse all injection equipment thoroughly after use. Stems of forked trees require individual treatment.

Use Instructions

1. **Spaced-Cut Injection with Ansul "Hypo-Hatchet" Injector:** The Ansul Hypo-Hatchet injector cuts and injects in one operation. When a tree is struck with the injector, a pre-determined amount of product is injected automatically into the sap stream of the tree immediately after impact. The injector works by inertia and is designed to inject at least 1 milliliter of chemical per stroke. The cuts should be evenly spaced around the trunk to give proper distribution into the sapwood. For detailed instruction on how to use the Ansul Hypo-Hatchet injector, refer to the Owner's Manual.

Conifers (See "General Information on Tree Control") and Bigleaf Maple (Growing Season): For trees less than 8-inches in diameter at breast height (DBH), make one cut per 2 inches of DBH (4 1/2 inch spacing between cut edges) at waist height or below. For trees 8 inches DBH and larger, make one cut per 1 inch DBH (1 1/2 inch spacing between cut edges) at waist height or below.

Conifers (Dormant Season): Make one cut per 1 inch of DBH (1 1/2 inch spacing between cut edges) at waist height or below.

Bigleaf Maple (Dormant Season): Make a complete frill at waist height or below (cuts need not be overlapping).

2. **Spaced-Cut Application:** Although spaced-cut application is facilitated by use of the Ansul Hypo-Hatchet injector, a hatchet or similar cutting tool can be used to make horizontal frills. The number of cuts per tree depends upon the size of the cuts and the volume to be injected, but in any case, should be sufficient to hold the herbicide without running down the trunk. Make certain that each cut penetrates into the sapwood. Large trees with full crown require almost overlapping frills to effect control. Apply MSMA Plus "S" with a pump-style oil can, plastic squeeze bottle, or other suitable dispenser.

Conifers (See "General Information on Tree Control") and Bigleaf Maple (Growing Season): For trees less than 8-inches in diameter at breast height (DBH), apply 1 to 2 milliliters of MSMA Plus "S" per cut per 2 inches of DBH (6 inch spacing between cut centerlines) at waist height or below. For trees 8 inches DBH and larger, apply 1 to 2 milliliters per cut per 1 inch of DBH (3 inch spacing between cut centerlines).

Conifers (Dormant Season): Apply 1 to 2 milliliters of MSMA Plus "S" per cut per 1 inch of DBH (3 inch spacing between cut centerlines).

Bigleaf Maple (Dormant Season): Apply 1 to 2 milliliters of MSMA Plus "S" per cut in a complete frill at waist height or below (cuts need not be overlapping).

1 fl oz = 29.6 milliliters
1 gallon = 3785 milliliters

NON-CROP AREAS

MSMA Plus "S" is useful for control of crabgrass, cocklebur, Dallisgrass, goosegrass, Johnsongrass, morningglory, nutsedge, pigweed, ragweed, watergrass, and similar weeds on rights-of-way (including highway, railroad, pipeline, and utility), fence rows, drainage ditch banks, golf course sand traps, storage yards, and many similar non-crop areas. Application should be made when weeds are small and conditions are favorable for active growth. Mix at the rate of 2 1/2 to 6 pt per acre of MSMA Plus "S" in a spray volume of 40 or more gallons of water. Use higher rates in the rate range and higher spray volume for dense weed growth. For spot treatment, use 1 to 2 fl oz per 1000 sq ft and apply in 5 gallons of water. Spray target vegetation to the point of runoff. Adequate coverage and complete wetting is important for effective control. Repeat applications may be necessary if regrowth occurs. Use only as a spot treatment in Florida.

Warranty Disclaimer

Dow AgroSciences warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the label when used in strict accordance with the directions, subject to the inherent risks set forth below. Dow AgroSciences MAKES NO OTHER EXPRESS OR

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IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE OR ANY OTHER EXPRESS OR IMPLIED WARRANTY.

Inherent Risks of Use

It is impossible to eliminate all risks associated with use of this product. Plant injury, lack of performance, or other unintended consequences may result because of such factors as use of the product contrary to label instructions (including conditions noted on the label, such as unfavorable temperature, soil conditions, etc.), abnormal conditions (such as excessive rainfall, drought, tornadoes, hurricanes), presence of other materials, the manner of application, or other factors, all of which are beyond the control of Dow AgroSciences or the seller. All such risks shall be assumed by buyer.

Limitation of Remedies

The exclusive remedy for losses or damages resulting from this product (including claims based on contract, negligence, strict liability, or other legal theories), shall be limited to, at Dow AgroSciences' election, one of the following:

1. Refund of purchase price paid by buyer or user for product bought, or
2. Replacement of amount of product used.

Dow AgroSciences shall not be liable for losses or damages resulting from handling or use of this product unless Dow AgroSciences is promptly notified of such loss or damage in writing. In no case shall Dow AgroSciences be liable for consequential or incidental damages or losses.

The terms of the "Warranty Disclaimer" above and this "Limitation of Remedies" cannot be varied by any written or verbal statements or agreements. No employee or sales agent of Dow AgroSciences or the seller is authorized to vary or exceed the terms of the "Warranty Disclaimer" or this "Limitation of Remedies" in any manner.

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