

# UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

April 17, 2020

Edward Bockrath Product Registration Manager FMC Corporation 2929 Walnut Street Philadelphia, PA 19104

Subject: Registration Review Label Mitigation for Thifensulfuron and Metsulfuronmethyl Product Name: Travallas Herbicide EPA Registration Number: 279-9625 Application Date: 11/06/2018 Decision Numbers: 556456, 556449

Dear Mr. Bockrath:

The Agency, in accordance with the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA), as amended, has completed reviewing all of the information submitted with your application to support the Registration Review of the above referenced product in connection with the Sulfonylurea (SU) Herbicides Interim Decision, and has concluded that your submission is acceptable. The agency also completed review of your amended label referred to above, submitted in connection with registration under FIFRA, as amended, and has determined the label is also acceptable.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

A copy of your label stamped "Accepted" is enclosed. Products shipped after 12 months from the date of this amendment must bear the new revised label. Your release for shipment of the product bearing the amended label constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA

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section 6.

If you have any questions about this letter, please contact Srijana Shrestha by phone at 703-305-6471, or via email at <u>Shrestha.srijana@epa.gov</u>.

Sincerely,

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Linda Arrington, Branch Chief Risk Management and Implementation Branch 4 Pesticide Re-Evaluation Division Office of Pesticide Programs

Enclosure

# **TRAVALLAS™**

METSULFURON-METHYL	GROUP	2	HERBICIDE
THIFENSULFURON-METHYL	GROUP	2	HERBICIDE
FLUROXYPYR 1-METHYLHEPTYL ESTER	GROUP	4	HERBICIDE

#### HERBICIDE

Oil Dispersion SHAKE WELL BEFORE USING. For Use on Wheat (Spring, Durum, and Winter), Barley and Triticale

Active Ingredients	By Weight
Metsulfuron-methyl	0.3%
Thifensulfuron-methyl	3.0%
Fluroxypyr 1-methylheptyl ester	21.9%
Other Ingredients	74.8%
TOTAL	100.0%

Contains: 0.025 lb/gal of metsulfuron methyl 0.25 lb/gal of thifensulfuron methyl Acid Equivalent: fluroxypyr: -15.2% - 1.3 lb/gal

EPA Est. No.		
Nonrefillable Containe	<b>Refillable Container</b>	
Net:	OR	Net:

EPA Reg. No. 279-9625

# KEEP OUT OF REACH OF CHILDREN CAUTION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle.

(If you do not understand this label, find someone to explain it to you in detail.)

#### 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 person sip a glass of water if able to swallow. Do not induce vomiting unless told to do so by a 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 treatment advice.

Have the product container or label with you when calling a poison control center, or doctor, or going for treatment. You may also contact 1-800-331-3148 for emergency medical treatment information.

# PRECAUTIONARY STATEMENTS HAZARD TO HUMANS AND DOMESTIC ANIMALS CAUTION

Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Avoid contact with skin or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.

# PERSONAL PROTECTIVE EQUIPMENT (PPE)

#### Mixers, loaders, applicators, and other handlers must wear:

Long-sleeved shirt and long pants. Waterproof gloves. Shoes plus socks.

Follow manufacturer's instructions for cleaning/maintaining PPE. If no such instructions for washables exist, use detergent and hot water. Keep and wash PPE separately from other laundry.





279-9625

pesticide registered under

EPA Reg. No.

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# ENGINEERING CONTROL STATEMENTS

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 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**: Remove clothing/PPE 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 and aquatic plants. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Drift or runoff may be hazardous to non-target plants and aquatic organisms in neighboring areas. Do not apply where runoff is likely to occur. Do not apply when weather conditions favor drift from treated areas. Do not contaminate water when cleaning equipment or disposing of equipment washwaters or rinsate.

#### **Groundwater Advisory**

This product is known to leach through soil into groundwater under certain conditions as a result of label use. This product may leach into groundwater if used in areas where soils are permeable, particularly where the water table is shallow.

#### Surface Water Advisory

This product may impact surface water quality due to runoff of rain water. This is especially true for poorly draining soils and soils with shallow ground water. This product is classified as having high potential for reaching surface water via runoff for several weeks or more after application. A level, well-maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential loading of this product from runoff water and sediment. Runoff of this product will be greatly reduced by avoiding applications when rainfall or irrigation is expected to occur within 48 hours.

#### Windblown Soil Particles Advisory

This product has the potential to move off-site due to wind erosion. Soils that are subject to wind erosion usually have a high silt and/or fine to very fine sand fractions and low organic matter content. Other factors which can affect the movement of windblown soil include the intensity and direction of prevailing winds, vegetative cover, site slope, rainfall, and drainage patterns. Avoid applying this product if prevailing local conditions may be expected to result in off-site movement.

#### Non-target Organism Advisory

This product is toxic to plants and may adversely impact the forage and habitat of non-target organisms, including pollinators, in areas adjacent to the treated area. Protect the forage and habitat of non-target organisms by minimizing spray drift. For further guidance and instructions on how to minimize spray drift, refer to the Spray Drift Management section of this label.

# DIRECTIONS FOR USE

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

DO NOT apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application.

For any requirements specific to your State or Tribe, consult the agency responsible for pesticide regulation.

# AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and 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 Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 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, including plants, soil, or water, is:

Coveralls.

Chemical resistant gloves made of any waterproof material including polyethylene or polyvinylchloride. Shoes plus socks.

TRAVALLAS<sup>™</sup> herbicide, also referred to below as TRAVALLAS herbicide, must be used in accordance with instructions on this label or as otherwise permitted by FIFRA. Always read the entire label, including the Limitation of Warranty and Liability.

TRAVALLAS herbicide may be used on wheat (including durum), barley and triticale in most states. Check with your state extension service or Department of Agriculture before use, to be certain TRAVALLAS herbicide is registered in your state.

# **PRODUCT INFORMATION**

TRAVALLAS herbicide is used for selective postemergence control or suppression of broadleaf weeds in wheat (winter, spring and durum), barley and triticale not underseeded with legumes or grasses. TRAVALLAS herbicide contains three active ingredients formulated as an oil dispersion. TRAVALLAS herbicide is to be mixed with water and applied as a uniform broadcast spray early postemergence to the crop, to the main flush of actively growing broadleaf weeds. In the case of tank mixes with other herbicides, it is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

#### **Biological Activity and Environmental Conditions**

Warm, moist growing conditions promote active weed growth and enhance the activity of TRAVALLAS herbicide by allowing maximum foliar uptake and contact activity. Weeds hardened off by cold weather or drought stress may not be adequately controlled or suppressed and regrowth may occur. TRAVALLAS herbicide may injure crops that are stressed from adverse environmental conditions (including extreme temperatures or moisture), abnormal soil conditions, or cultural practices. For best results, ensure thorough spray coverage of target weeds. See remaining "DIRECTIONS FOR USE" sections of this label for complete use details.

Degree of control and duration of effect are dependent on weed sensitivity, weed size, crop competition, growing conditions at and following treatment, and spray coverage.

TRAVALLAS herbicide is rain-fast 1 hour after application.

#### RESTRICTIONS

Injury to or loss of desirable trees, adjacent sensitive crops, or vegetation may result from failure to observe the following:

**DO NOT** apply, drain or flush equipment on or near desirable trees or other plants or on areas where their roots may extend, or in locations where the chemical may be washed or moved into contact with their roots.

DO NOT discharge excess material on the soil at a single spot in the field, grove, or mixing/loading station.

DO NOT store pesticides near well sites.

**DO NOT** apply TRAVALLAS herbicide to wheat, barley and triticale that is stressed by severe weather conditions, drought, low fertility, water-saturated soil, disease, or insect damage, as crop injury may result. Risk of injury is greatest when crop is in the 2 to 5- leaf stage. Severe winter stress, drought, disease, or insect damage following application also may result in crop injury.

DO NOT apply to irrigated land where tailwater will be used to irrigate crops other than wheat, barley and triticale.

**DO NOT** apply by air in the State of New York.

DO NOT use in Alamosa, Conejos, Costilla, Rio Grande, and Saguache counties of Colorado.

**DO NOT** apply TRAVALLAS herbicide within 60 days of crop emergence where an organophosphate insecticide has been applied as an in-furrow treatment because crop injury may result.

DO NOT use TRAVALLAS herbicide plus Malathion because crop injury may result.

DO NOT apply to crops underseeded to legumes or grasses as injury to forage may result.

**DO NOT** use low rates of liquid nitrogen fertilizer solution as a substitute for a surfactant. Liquid nitrogen fertilizer solutions that contain sulfur may increase crop response.

DO NOT use with liquid fertilizer solutions with a pH less than 3.0.

**DO NOT** make applications using equipment and/or spray volumes or during weather conditions that might cause spray to drift onto non-target sites. For additional information on spray drift refer to the Spray Drift Management section of label.

The maximum amount of metsulfuron methyl for all uses per year is 0.0038 lb. ai/A.

The maximum amount of thifensulfuron methyl for all uses per year is 0.0469 lb. ai./A.

The maximum amount of fluroxypyr 1-methylheptyl ester for all uses per year is 0.25 lb. ai./A.

When using TRAVALLAS herbicide in tank mixtures or sequential applications with other products containing thifensulfuron, metsulfuron, or fluroxypyr, **DO NOT** exceed the following limits:

Crop/Use	Application Timing	Active Ingredient (AI)	Maximum Oz/A of Product per Single Application	Maximum Lb. AI/A per Single Application	Maximum Oz/A of Product per Year	Maximum Lb. AI/A per Year	Maximum Number of Application per Year	Minimum Treatment Interval (Days)	Pre-Harvest Interval (Days)
Wheat	After the crop is in the 2-leaf	Thifensulfuron methyl		0.0137		0.0469			
(Spring, Durum, and Winter),	stage, but before the	Metsulfuron methyl	7	0.0014	7	0.0038	1	-	45 (for grain
Barley and Triticale	flag leaf is visible	Fluroxypyr meptyl		0.0711		0.25			

Crop/Use	Application Timing	Active Ingredient (AI)	Maximum Oz/A of Product per Single Application	Maximum Lb. AI/A per Single Application	Maximum Oz/A of Product per Year	Maximum Lb. AI/A per Year	Maximum Number of Application per Year	Minimum Treatment Interval (Days)	Pre-Harvest Interval (Days)
Wheat (Spring,	After the crop is in the 2-leaf	Thifensulfuron methyl		0.0234		0.0469			
(Spring, Durum, and Winter),	stage, but before the	Metsulfuron methyl	12	0.0023	12	0.0038	1	-	45 (for grain
Barley and Triticale	flag leaf is visible	Fluroxypyr meptyl		0.1219		0.25			

#### PRECAUTIONS

- Varieties of wheat (including durum) barley and triticale may differ in their response to various herbicides. Consult your state experiment station, university, or extension agent as to crop sensitivity to any herbicide. If no information is available, limit the initial use to a small area.
- Application of TRAVALLAS herbicide to crops that are stressed by severe weather conditions, drought (including low levels of subsoil moisture), near freezing temperatures prior to, at, and following time of application, low fertility, water-saturated soil, disease, or insect damage, may result in crop injury and reduced weed control may occur.
- Under certain conditions including heavy rainfall, prolonged cold weather, or wide fluctuations in day/night temperatures prior to or soon after TRAVALLAS herbicide application, temporary discoloration and/or crop injury may occur. To reduce the potential of crop injury, tank mix TRAVALLAS herbicide with 2,4-D (ester formulations perform best see the "TANK MIXTURES" section of this label) and apply after the crop is in the tillering stage of growth.
- Effects of Temperature on Herbicidal Activity: Herbicidal activity of TRAVALLAS herbicide is influenced by weather conditions. Optimum activity requires active plant growth. The temperature range for optimum herbicidal activity is 55°F to 75°F. Reduced activity will occur when temperatures are below 45°F or above 85°F. Frost before application (3 days) or shortly after (3 days) may reduce weed control and crop tolerance.
- Calibrate sprayers only with clean water away from the well site. Make scheduled checks of spray equipment. Ensure that all operation employees accurately measure pesticides. Mix only enough product for the job at hand, and avoid overfilling of spray tank.
- When triple-rinsing the pesticide container, be sure to add the rinsate to the spray mix.

#### WEED RESISTANCE MANAGEMENT

TRAVALLAS herbicide, which contains the active ingredients metsulfuron-methyl, thifensulfuron-methyl and fluroxpyr, contains group 2 and 4 herbicides based on the mode of action classification system of the Weed Science Society of America.

Proactively implementing diversified weed control strategies to minimize selection for weed populations resistant to one or more herbicides is a best management practice. A diversified weed management program may include the use of multiple herbicides with different sites of action and overlapping weed spectrum with or without tillage operations and/or other cultural practices. Research has demonstrated that using the labeled rate and directions for use is important to delay the selection for resistance.

The continued effectiveness of this product depends on the successful implementation of a weed resistance management program. To aid in the prevention of developing weeds resistant to this product, users should:

- Scout fields before application to ensure herbicides and rates will be appropriate for the weed species and weed sizes present.
- Start with a clean field, using either a burndown herbicide application or tillage.
- Control weeds early when they are relatively small (less than 4 inches).
- Apply full rates of TRAVALLAS herbicide, for the most difficult to control weed in the field at the specified time (correct weed size) to minimize weed escapes.
- Scout fields after application to detect weed escapes or shifts in control of weed species.
- Control weed escapes before they reproduce by seed or proliferate vegetatively.
- Report any incidence of non-performance of this product against a particular weed to your FMC representative, local retailer, or county extension agent.
- Contact your FMC representative, crop advisor, or extension agent to find out if suspected resistant weeds to these MOAs have been found in your region. **DO NOT** assume that each listed weed is being controlled by multiple sites of action.
- Products with multiple active ingredients are intended to broaden the spectrum of weeds that are controlled. Some weeds may be controlled by only one of the active ingredient in this product.
- If resistance is suspected, treat weed escapes with an herbicide having a site of action other than Group 2 and/or use nonchemical methods to remove escapes, as practical, with the goal of preventing further seed production.
- Suspected herbicide-resistant weeds may be identified by these indicators:
  - Failure to control a weed species normally controlled by the herbicide at the dose applied, especially if control is achieved on adjacent weeds;
  - A spreading patch of non-controlled plants of a particular weed species; and
  - Surviving plants mixed with controlled individuals of the same species.

Additionally, users should follow as many of the following herbicide resistance management practices as is practical:

- Use a broad spectrum soil-applied herbicide with other sites of action as a foundation in a weed control program.
- Utilize sequential applications of herbicides with alternative sites of action.
- Rotate the use of this product with non-Group 2 herbicides.
- Avoid making more than two applications of TRAVALLAS herbicide, and any other Group 2 herbicides within a single growing season unless mixed with an herbicide with a different site of action with an overlapping spectrum for the difficult-to control weeds.
- Incorporate non-chemical weed control practices, including mechanical cultivation, crop rotation, cover crops and weed-free crop seeds, as part of an integrated weed control program.
- Use good agronomic principles that enhance crop development and crop competitiveness.
- Thoroughly clean plant residues from equipment before leaving fields suspected to contain resistant weeds.
- Manage weeds in and around fields, during and after harvest to reduce weed seed production.

#### INTEGRATED PEST MANAGEMENT

This product may be used as part of an Integrated Pest Management (IPM) program that can include biological, cultural, and genetic practices aimed at preventing economic pest damage. IPM principles and practices include field scouting or other detection methods, correct target pest identification, population monitoring, and treating when target pest populations reach locally determined action thresholds. Consult your state cooperative extension service, professional consultants or other qualified authorities to determine appropriate action treatment threshold levels for treating specific pest/crop systems in your area.

# RATE CONVERSION CHART FOR TRAVALLAS HERBICIDE

TRAVALLAS herbicide	Active Ingredient Equivalent				
Rate (Fl Oz/A)	Metsulfuron methyl (Lb. ai/A)	Thifensulfuron methyl (Lb. ai/A)	Fluroxypyr (Lb. ai/A)		
7	0.0014	0.0137	0.0711		
10	0.0020	0.0195	0.1016		
12	0.0023	0.0234	0.1219		

# **APPLICATION INFORMATION – Wheat, Barley and Triticale**

#### APPLICATION TIMING

Apply TRAVALLAS herbicide after the crop is in the 2-leaf stage, but before the flag leaf is visible.

**DO NOT** harvest grain within 45 days of the last application.

#### **APPLICATION DIRECTIONS**

Make a single application of TRAVALLAS herbicide at 7 Lb. ai /A, (10 Fl Oz /A are allowed in the states of Idaho, Oregon and Washington) for infestations of those weeds listed under the "WEEDS CONTROLLED/SUPPRESSED" section of this label.

**DO NOT** make more than one application of TRAVALLAS herbicide per season. Consult table for use product rates required to control/suppress listed weeds.

#### **GRAZING/HARVESTING RESTRICTIONS**

DO NOT graze or feed to livestock within 7 days of application.

**DO NOT** harvest treated hay within 30 days of application.

DO NOT harvest treated grain within 45 days of application.

#### **CROP ROTATION/PLANT-BACK RESTRICTIONS**

Before using TRAVALLAS herbicide carefully consider your crop rotation plans and options. For rotational flexibility, **DO NOT** treat all of your acres at the same time.

#### SOIL PH LIMITATIONS

TRAVALLAS herbicide must not be used on soils having a pH above 7.9, because extended soil residual activity could extend crop rotation intervals beyond normal. Under certain conditions, TRAVALLAS herbicide could remain in the soil for 34 months or more, injuring crops other than wheat or barley. In addition, other crops planted in high-pH soils can be extremely sensitive to low concentrations of TRAVALLAS herbicide.

#### **CHECKING SOIL PH**

Before using TRAVALLAS herbicide, determine the soil pH of the areas of intended use. To obtain a representative pH value for the test area, take several 0" to 4" samples from different areas of the field and analyze them separately. Consult local extension publications for additional information on specified soil sampling procedures.

#### **CROP ROTATION**

#### Rotational Intervals for All States Except Idaho, Oregon, and Washington

Сгор	Soil pH	Minimum Rotation Interval (months)
Alfalfa	6.8 or lower	10
	6.9 to 7.9	22
Beans, Dry	6.8 or lower	10
	6.9 to 7.9	22
Canola	7.9 or lower	10
Cotton	7.9 or lower	10
Flax	7.9 or lower	10
Field Corn	7.9 or lower	12
Lentils	6.8 or lower	12
	6.9 to 7.9	22
Peas, Dry/Green	7.9 or lower	10
Sorghum, Grain	7.9 or lower	4
Soybeans	7.9 or lower	12
Sunflower	7.9 or lower	11
Wheat (spring, durum or winter) barley, and triticale	7.9 or lower	1 day

#### Rotational Intervals for the States of Idaho, Oregon, and Washington

Сгор	Soil pH	Minimum Cumulative Precipitation (inches)	Minimum Rotation Interval (Months)
Alfalfa	6.8 or lower	No restrictions	10 (7 oz/A rate & 6.8 or lower pH)
	6.9 to 7.9	28	34 (greater than 7 oz/A, any pH)
Beans, Dry	6.8 or lower 6.9 to 7.9	No restrictions 28	10 (7 oz/A rate & 6.8 or lower pH) 34 (greater than 7 oz/A, any pH)
Canola	6.8 or lower 6.9 to 7.9	18 18	10 22
Chickpeas (Garbanzo beans)	7.3 or lower	10	10
	7.4 or higher	28	34
Condiment mustard	7.3 or lower	10	10
	7.4 or higher	28	34
Field Corn	7.9 or lower	No restrictions	12
Flax	7.9 or lower	No restrictions	12 (7 oz/A rate) 22 (greater than 7 oz/A rate)
Lentils	6.8 or lower 6.9 to 7.9	18 28	10 34
Peas, Dry/Green	6.8 or lower	18	10
	6.9 to 7.9	18	15
Sorghum, Grain	7.9 or lower	No restrictions	4
Soybeans	7.9 or lower	No restrictions	12
Sunflower	7.9 or lower	No restrictions	11
Wheat (spring, durum or winter) barley and triticale	7.9 or lower	No restrictions	1 day

#### **Rotation Intervals for Crops Not Covered in Above Table**

The minimum rotation interval is 34 months with at least 28" of cumulative precipitation during the period:

- to any major field crop not listed (See the appropriate Rotation Intervals table)
- if the soil pH is not in the specified range
- or if the minimum cumulative precipitation has not occurred since application. A field bioassay must be successfully completed before rotation to any minor crops (as determined by the USDA criteria). See section on Field Bioassay for further information.

#### FIELD BIOASSAY

A field bioassay is necessary if crops other than wheat, barley, triticale or those listed on this label are to be planted on land previously treated with TRAVALLAS herbicide. To conduct a field bioassay, grow test strips of the crop or crops you plan to grow the following year in fields previously treated with TRAVALLAS herbicide. Crop response to the bioassay will indicate whether or not to rotate to the crop(s) grown in the test strips. If a field bioassay is planned, check with your local FMC representative for information detailing field bioassay procedure.

#### WEED CONTROL INFORMATION

TRAVALLAS herbicide effectively controls or suppresses the growth of the following weeds when applied according to label directions (refer to following table). For best results, apply to young, actively growing weeds that are less than 4" in height or diameter. Thorough coverage of target weeds is essential.

	WEEDS CONTRO	LLED	
Application Rate for	Active In	gredient Equivalent (Lb. ai /A)	
TRAVALLAS herbicide (Fl Oz/A)	Metsulfuron methyl	Thifensulfuron methyl	Fluroxypyr
7	0.0014	0.0137	0.0711
Annual knawel	Cress (mouse-ear)	Dandelion (fall or spring rosettes up to 10 inches in diameter)	Smallflower buttercup
Black mustard	Curly dock	Mallow (little)	Stinking mayweed/Dogfenne
Bushy wallflower/Treacle mustard	Dandelion (fall or spring rosettes up to 10 inches in diameter)	Marshelder†	Stinkweed
Carolina geranium	False chamomile	Miners lettuce	Swinecress
Coast fiddleneck	Field pennycress	Mouseear chickweed	Tarweed fiddleneck
Common buckwheat	Flixweed	Narrow leaved hawk's beard	Tumble/Jim Hill mustard
Common chickweed <sup>†</sup>	Green smartweed	Pennsylvania smartweed	Volunteer canola <sup>8</sup>
Common chickweed <sup>†1</sup> (ALS Resistant)	Hemp nettle	Prostate knotweed	Volunteer lentils
Common groundsel	Kochia† (including ALS resistant)	Redmaids	Volunteer peas
Common lambsquarters	Ladysthumb	Redroot pigweed <sup>†</sup>	Volunteer sunflower
Corn chamomile	London rocket	Russian thistle <sup>5</sup> † (Including ALS Resistant)	Wild chamomile
Corn spurry	Cress (mouse-ear)	Scentless chamomile/mayweed	Wild mustard†
Cow cockle	Curly dock	Shepherdspurse	1
Application Rate for TRAVALLAS herbicide		gredient Equivalent (Lb. ai /A)	
(Fl Oz /A)	Metsulfuron methyl	Thifensulfuron methyl	Fluroxypyr
7	0.0014	0.0137	0.0711
Annual sowthistle	Deadnettle (purple, red)	Mallow (common)	Velvetleaf
Canada thistle <sup>7</sup>	Devilsclaw	Mallow (Venice)	Volunteer flax
Catchweed bedstraw (Cleavers) 1-6 whorls	Field bindweed	Marestail	Volunteer potato
Clover, white	Field horsetail	Morningglory	Wild buckwheat <sup>2</sup>
Coffeeweed	Giant ragweed	Nightshade species	Wild garlic <sup>3</sup>
Common cocklebur	Grape, species	Prickly lettuce†	Wild radish <sup>4</sup>
Common purslane	Hemp dogbane	Puncturevine	Volunteer flax
Common ragweed Cutleaf eveningprimose	Henbit Knotweed	Sunflower Tansymustard	
WFFDS CO	NTROLLED Allowed for Idebe	) Oregon and Washington Only	
	ONTROLLED Allowed for Idaho		
Application Rate for TRAVALLAS herbicide		o, Oregon and Washington Only gredient Equivalent (Lb. ai /A) Thifensulfuron methyl	Fluroxypyr
Application Rate for TRAVALLAS herbicide (Fl Oz /A)	Active In Metsulfuron methyl	gredient Equivalent (Lb. ai /A) Thifensulfuron methyl	
Application Rate for TRAVALLAS herbicide (Fl Oz /A) 10-12*	Active In Metsulfuron methyl 0.0020 – 0.0023	gredient Equivalent (Lb. ai /A) Thifensulfuron methyl 0.0195 – 0.0234	0.1016 - 0.1219
Application Rate for TRAVALLAS herbicide (Fl Oz /A) 10-12* Annual sowthistle	Active In Metsulfuron methyl 0.0020 – 0.0023 Deadnettle (purple, red)	gredient Equivalent (Lb. ai /A) Thifensulfuron methyl 0.0195 – 0.0234 Mallow (common)	<b>0.1016 – 0.1219</b> Velvetleaf
Application Rate for TRAVALLAS herbicide (Fl Oz /A) 10-12*	Active In Metsulfuron methyl 0.0020 – 0.0023	gredient Equivalent (Lb. ai /A) Thifensulfuron methyl 0.0195 – 0.0234	0.1016 - 0.1219

† Naturally occurring resistant ALS biotypes are known to occur

\*Use the 12 Fl Oz /A rate when weed infestations are heavy or when application timing and environmental conditions are marginal (refer to the "APPLICATION TIMING" and "PRODUCT INFORMATION" sections of this label).

<sup>1</sup> **Common chickweed (ALS resistant)**: Apply 7 fl oz/A of TRAVALLAS herbicide when the majority of the chickweed has germinated and are past the cotyledon stage but are small (1 to 6 leaf, less than 4 inches tall) and actively growing but before crop canopy prevents thorough coverage of weeds. Chickweed emerging after application will not be controlled.

<sup>2</sup> Wild buckwheat: Apply 7 fl oz/A of TRAVALLAS herbicide when the majority of the wild buckwheat has germinated and are past the cotyledon stage but are small (less than 3 inches tall or across) and actively growing but before crop canopy prevents thorough coverage of weeds.

<sup>3</sup> Wild garlic: Apply TRAVALLAS herbicide when wild garlic plants are less than 12 inches tall with 2 to 4 inches of new growth. Control may be reduced when plants are hardened-off by cold weather and/or drought stress. Control is enhanced when applications are made during warm temperatures to actively growing wild garlic plants. Typical symptoms of dying wild garlic plants (discoloration and collapse) may not be noticeable for 2-5 weeks.

<sup>4</sup> Wild radish: Apply 7 fl oz/A of TRAVALLAS herbicide plus surfactant in the fall or spring to wild radish rosettes less than 6 inches in diameter. Applications made later than 30 days after weed emergence will result in reduced control. Fall applications must be made prior to hardening-off of plants.

<sup>5</sup> **Russian thistle**: For best results use TRAVALLAS herbicide in a tank mix with dicamba and 2,4- D or MCPA (ester or amine) or bromoxynil containing products.

<sup>6</sup> Volunteer ExpressSun®/Clearfield® sunflower control: TRAVALLAS herbicide alone may not be adequately control volunteer sunflowers including ExpressSun sunflowers that are bred for resistance to sulfonyl-urea (SU) herbicides.

<sup>7</sup> **Canada Thistle**: Apply when the majority of thistles have emerged and are actively growing. For best top growth control, apply before bud stage when thistles are no larger than 6" in height and before crop canopy prevents thorough coverage of weeds. A single application will effectively inhibit the ability of emerged thistles to compete with the crop. Later emerging thistles will not be controlled.

<sup>8</sup> Volunteer Clearfield® Canola: TRAVALLAS herbicide alone will not control or may only provide partial control of Clearfield canola varieties that are bred for resistance to imidazolinone (IMI) herbicides.

#### TANK MIXTURES

In the case of tank mixes with other herbicides, it is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions and limitations and directions for use on all product labels involved in tank mixing. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

Product Name	Active Ingredient(s)	EPA Registration Number			
Aim® EC herbicide	Cafentrazone-ethtyl	279-3241			
Express® Herbicide (with TotalSol® Soluble Granules)	Tribenuron methyl	279-9594			
GR1 <sup>™</sup> Herbicide	Pyroxsulan	279-9623			
Harmony® SG Herbicide (with TotalSol® Soluble Granules)	Thifensulfuron-methyl	279-9595			

**REGISTERED PRODUCTS REFERENCED IN THIS LABEL** 

#### **Physical Compatibility**

TRAVALLAS herbicide is physically compatible with many common used herbicides, fungicides, insecticides, liquid fertilizers, nonionic surfactants, crop oils, methylated seed oils and drift control additives. However, since the formulations of products change, it is important to test the physical compatibility of desired tank mixes and check for undesirable physical effects, including settling out or flocculation. To determine physical compatibility, add the proportions of the tank mix products and water to a clear glass quart container with lid, mix thoroughly and allow to stand for 30 minutes. If the combination remains mixed, or can be re-mixed readily, it may be considered physically compatible.

TRAVALLAS herbicide may be tank mixed with other suitable registered herbicides to control weeds listed as partially controlled, weeds resistant to TRAVALLAS herbicide or weeds not listed under the "WEEDS CONTROLLED/SUPPRESSED" section of this label.

Read and follow all manufacturers' label instructions for any companion herbicides, fungicides, and/or insecticides. If those instructions conflict with this label, **DO NOT** tank mix that product with TRAVALLAS herbicide. Follow the most restrictive labeling.

Crop varieties can differ in their responsiveness to tank mixtures, and environmental conditions can have an influence on product performance and crop response. It is not possible to test TRAVALLAS herbicide alone or with all possible tank mix combinations and sequences on all varieties under all environmental conditions. When considering the use of a tank mixture on a labeled crop without prior experience, or which is not specifically described on TRAVALLAS herbicide product labeling or in other FMC product use instruction, it is important to check crop safety first. To test for crop safety, prepare a

small volume of the intended tank mixture or sequence, apply it to an area of the target crop as directed by both this and the tank mix partner products labels, and observe the treated crop to ensure that a phytotoxic response does not occur.

Use of TRAVALLAS herbicide in any tank mixture or sequence of applications that is not specifically described on TRAVALLAS herbicide product labeling or in other FMC product use instructions, could potentially result in crop injury. Follow the restrictions and precautions on this label and on the label for any other product to be used in tank mixtures or in sequential applications before making such applications to your crops. Follow the most restrictive label. To the extent consistent with applicable law, FMC will not be responsible for any crop injury arising from the use of a tank mixture or sequence of applications that is not specifically described on TRAVALLAS herbicide product labeling or in other FMC product use instruction.

#### With 2,4-D (amine or ester) or MCPA (amine or ester)

TRAVALLAS herbicide may be tank mixed with the amine and ester formulations 2,4-D and MCPA herbicides. For best results in the Red River Valley and adjacent areas of North Dakota and Minnesota, add the ester formulations of these herbicides to the tank at 3/8 lb active ingredient/A. No additional surfactant is needed with this mixture. For best results in other areas, add the ester formulations of 2,4-D or MCPA herbicides to the tank at 0.25 to 0.375 lb active ingredient. Nonionic surfactant may be added to the mixture at 0.5 to 1 quart per 100 gallons of spray solution; however, adding nonionic surfactant may increase the potential for crop injury, especially at the higher phenoxy rates.

#### With dicamba

TRAVALLAS herbicide may be tank mixed with dicamba. Nonionic surfactant may be added to the mixture at 0.5 to 1 quart per 100 gallons of spray solution; however, adding nonionic surfactant may increase the potential for crop injury.

#### With 2,4-D (amine or ester) or MCPA (amine or ester) and dicamba

TRAVALLAS herbicide may be applied in a 3-way tank mix with formulations of 2,4-D or MCPA and dicamba. Nonionic surfactant may be added to the mixture at 0.5 to 1 quart per 100 gallons of spray solution; however, adding nonionic surfactant may increase the potential for crop injury, especially at the higher phenoxy rates. Apply to winter wheat after the crop is tillering and prior to jointing (first node). In Spring Wheat (including Durum), apply after the crop is tillering and before it exceeds the 5-leaf stage. In Spring Barley, apply after the crop is tillering and before it exceeds the 4-leaf stage.

#### With Other Broadleaf Control Products

TRAVALLAS herbicide may be tank mixed with other broadleaf herbicides registered on cereals including HARMONY® SG herbicide (with TotalSol® soluble granules), EXPRESS® herbicide (with TotalSol® soluble granules), Aim® EC herbicide, as well as herbicides containing bromoxynil, metribuzin and glyphosate.

Tank mixtures of TRAVALLAS herbicide plus metribuzin may result in reduced control of wild garlic.

#### With Grass Control Products

For improved control of grass weeds, TRAVALLAS herbicide may be tank mixed with other grass control herbicides registered on cereals including GR1<sup>TM</sup> herbicide. Antagonism generally does not occur; however, FMC advises that you first consult your state experiment station, university, or extension agent, Agricultural dealer, or FMC representative as to the potential for antagonism before using the mixture. If no information is available, limit the initial use of TRAVALLAS herbicide and the grass product to a small area.

#### With Fungicides

TRAVALLAS herbicide may be tank mixed or used sequentially with fungicides registered for use on cereal crops.

#### With Insecticides

TRAVALLAS herbicide may be tank mixed or used sequentially with insecticides registered for use on cereal crops; however, under certain conditions (drought stress, cold weather, or if the crop is in the 2 to 4 leaf stage), tank mixtures or sequential applications of TRAVALLAS herbicide with organophosphate insecticides (including chlorpyrifos and malathion containing insecticides) may produce temporary crop yellowing or, in severe cases, crop injury. The potential for crop injury is greatest when wide fluctuations in day/night temperatures occur just prior to or soon after application.

Test these mixtures in a small area before treating large areas.

#### With Liquid Nitrogen Solution Fertilizer

Liquid nitrogen fertilizer solutions may be used as a carrier in place of water. Run a tank mix compatibility test before mixing TRAVALLAS herbicide in fertilizer solution. TRAVALLAS herbicide must first be mixed with water and then added to liquid nitrogen solutions (e.g., 28-0-0, 32-0-0). Ensure that the agitator is running while the TRAVALLAS herbicide is added. Use of this mixture may result in temporary crop yellowing and stunting.

If using low rates of liquid nitrogen fertilizer in the spray solution (less than 50% of the spray solution volume), the addition of surfactant is necessary. Add surfactant at 0.5 to 2 pt per 100 gal of spray solution (0.06 to 0.25% v/v) based on local guidance.

When using high rates of liquid nitrogen fertilizer solution in the spray solution, adding surfactant increases the risk of crop injury. If 2,4-D or MCPA is included with TRAVALLAS herbicide and fertilizer mixture, ester formulations tend to be more compatible (see manufacturer's label). Additional surfactant may not be needed when using TRAVALLAS herbicide in tank mix with 2,4-D ester or MCPA ester and liquid nitrogen fertilizer solutions. Consult your agricultural dealer, consultant, field advisor, or FMC representative for guidance before adding an adjuvant to these tank mixtures.

Note: In certain areas, east of the Mississippi river unacceptable crop response may occur with use of straight or dilute nitrogen fertilizer carrier solutions where cold temperatures or widely fluctuating day/night temperatures exist. In these areas consult your agricultural dealer, consultant, field advisor, or FMC representative for guidance before using nitrogen fertilizer carrier solutions.

#### SPRAY ADJUVANTS - ALL CROPS OR USES

Include a spray adjuvant with applications of TRAVALLAS herbicide. In addition, an ammonium nitrogen fertilizer may be used. See TANK MIXTURES for additional information on adjuvant directions for certain tank mixtures. Consult your Ag dealer or applicator, local FMC fact sheets and technical bulletins prior to using an adjuvant system. If another herbicide is tank mixed with TRAVALLAS herbicide select adjuvants authorized for use with both products. Products must contain only EPA- exempt ingredients.

#### NONIONIC SURFACTANT (NIS)

- Apply 0.06 to 0.25% v/v (0.5 to 2 pt per 100 gal of spray solution).
- Surfactant products must contain at least 60% nonionic surfactant with a hydrophilic/lipophilic balance (HLB) greater than 12.

#### CROP OIL CONCENTRATE (COC) - PETROLEUM OR MODIFIED SEED OIL (MSO)

- Apply at 1% v/v (1 gal per 100 gal spray solution). MSO adjuvants may be used at 0.5% v/v if specified on local FMC product literature or service policies.
- Oil adjuvants must contain at least 80% high quality, petroleum (mineral) or modified vegetable seed oil with at least 15% surfactant emulsifiers.

#### AMMONIUM NITROGEN FERTILIZER

- Use 2 qt/A of a high-quality urea ammonium nitrate (UAN), including 28%N or 32%N, or 2 lb/A of a spray-grade ammonium sulfate (AMS). Use 4 qt/A UAN or 4 lb/A AMS under arid conditions.
- See TANK MIXTURES with Liquid Nitrogen Fertilizer for instructions on using fertilizer as a carrier in place of water.

#### SPECIAL ADJUVANT TYPES

- Combination adjuvant products may be used at doses that provide the required amount of NIS, COC, MSO and/or ammonium nitrogen fertilizer. Consult product literature for use rates and restrictions.
- In addition to the adjuvants specified above, other adjuvant types may be used if they provide the same functionality and have been evaluated and approved by FMC product management.

#### MIXING INSTRUCTIONS

Select a spray volume that will ensure thorough coverage and a uniform spray pattern. If tank mixing with other herbicides, always consult the label of the tank mix partner(s) for minimum spray volume requirements and apply the tank mixture using a water volume directed for all products.

- 1. Always start with a clean and empty sprayer tank.
- 2. Fill the tank with clean water one half of the required spray volume.

3. With the agitator running, **shake product well** then add the required amount of TRAVALLAS Herbicide. Continue to agitate for a minimum of 5 minutes to ensure that TRAVALLAS herbicide is **completely** dispersed.

4. If tank mixing TRAVALLAS herbicide with another herbicide, follow this mixing order: dry flowables and soluble granules, followed by liquids, TRAVALLAS herbicide, then oil dispersions (OD) or emulsifiable concentrates (EC). Maintain continuous agitation.

- 5. Add the rest of the water.
- 6. If required for the tank mixture, add the appropriate adjuvant. If an antifoam agent is required, add last.
- 7. Continue agitation sufficient enough to maintain a uniform spray solution.
- 8. Refer to the tank mix sections of this booklet for mixing order and other mixing instructions.

#### **SPRAY EQUIPMENT**

For specific application equipment, refer to the manufacturer's instructions for additional information on GPA, pressure, speed, nozzle types and arrangements.

Be sure to calibrate air or ground equipment properly before application. Select a spray volume and delivery system that will ensure thorough coverage and a uniform spray pattern with minimum drift. Use higher spray volumes to obtain better coverage when crop canopy is dense. Avoid swath overlapping, and shut off spray booms while starting, turning, slowing, or stopping, to avoid injury to the crop.

#### **GROUND APPLICATION**

For optimum spray distribution and thorough coverage, use flat-fan or low-volume flood nozzles.

- Overlaps or starting, stopping, slowing, and turning while spraying may result in crop injury.
- For flat-fan nozzles, use a spray volume of at least 8 gal/A (GPA).
- For flood nozzles on 30" spacing, use flood nozzles no larger than TK10 (or the equivalent), a pressure of at least 30 psi and a spray volume of at least 10 GPA only. For 40" nozzle spacing, use at least 13 GPA; for 60" spacing use at least 20 GPA. It is essential to overlap the nozzles 100% for all spacings.
- "Raindrop RA" nozzles are not advised for TRAVALLAS herbicide applications, as weed control performance maybe reduced.
- Use screens that are 50-mesh or larger.

#### **AERIAL APPLICATION**

For aerial application, select nozzles and pressure that deliver maximum coverage at 3 to 5 GPA. Use at least 3 GPA. **DO NOT** apply TRAVALLAS herbicide by air in the state of New York.

## MANDATORY SPRAY DRIFT MANAGEMENT

#### **Ground Boom Applications:**

- Apply with the nozzle height recommended by the manufacturer, but no more than 3 feet above the ground or crop canopy.
- For applications prior to the emergence of crops and target weeds, applicators are required to use a Coarse or coarser droplet size (ASABE S572.1).
- For all other applications, applicators are required to use a Medium or coarser droplet size (ASABE S572.1).
- DO NOT apply when wind speeds exceed 10 miles per hour at the application site.
- DO NOT apply during temperature inversions.

#### **Aerial Applications:**

- **DO NOT** release spray at a height greater than 10 feet above the vegetative canopy, unless a greater application height is necessary for pilot safety.
- For applications prior to the emergence of crops and target weeds, applicators are required to use a Coarse or coarser droplet size (ASABE S572.1).
- For all other applications, applicators are required to use a Medium or coarser droplet size (ASABE S572.1).
- The boom length must not exceed 65% of the wingspan for airplanes or 75% of the rotor blade diameter for helicopters.
- Applicators must use one-half swath displacement upwind at the downwind edge of the field.
- Nozzles must be oriented so the spray is directed toward the back of the aircraft.
- DO NOT apply when wind speeds exceed 10 miles per hour at the application site.
- DO NOT apply during temperature inversions.

#### **Boom-less Ground Applications:**

- Applicators are required to use a Medium or coarser droplet size (ASABE S572.1) for all applications.
- DO NOT apply when wind speeds exceed 10 miles per hour at the application site.
- DO NOT apply during temperature inversions.

## SPRAY DRIFT MANAGEMENT ADVISORIES

THE APPLICATOR IS RESPONSIBLE FOR AVOIDING OFF-SITE SPRAY DRIFT. BE AWARE OF NEARBY NON-TARGET SITES AND ENVIRONMENTAL CONDITIONS.

#### **IMPORTANCE OF DROPLET SIZE**

An effective way to reduce spray drift is to apply large droplets. Use the largest droplets that provide target pest control. While applying larger droplets will reduce spray drift, the potential for drift will be greater if applications are made improperly or under unfavorable environmental conditions.

#### **CONTROLLING DROPLET SIZE – GROUND BOOM**

• Volume - Increasing the spray volume so that larger droplets are produced will reduce spray drift. Use the highest practical spray volume for the application. If a greater spray volume is needed, consider using a nozzle with a higher flow rate.

• Pressure - Use the lowest spray pressure recommended for the nozzle to produce the target spray volume and droplet size.

• Spray Nozzle - Use a spray nozzle that is designed for the intended application. Consider using nozzles designed to reduce drift.

#### **CONTROLLING DROPLET SIZE – AIRCRAFT**

• Adjust Nozzles - Follow nozzle manufacturers recommendations for setting up nozzles. Generally, to reduce fine droplets, nozzles should be oriented parallel with the airflow in flight.

#### **BOOM HEIGHT – GROUND BOOM**

Use the lowest boom height that is compatible with the spray nozzles that will provide uniform coverage. For ground equipment, the boom should remain level with the crop and have minimal bounce.

#### **RELEASE HEIGHT - AIRCRAFT**

Higher release heights increase the potential for spray drift. When applying aerially to crops, **DO NOT** release spray at a height greater than 10 ft above the crop canopy, unless a greater application height is necessary for pilot safety.

#### SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce spray drift. Consider using shielded sprayers. Verify that the shields are not interfering with the uniform deposition of the spray on the target area.

#### **TEMPERATURE AND HUMIDITY**

When making applications in hot and dry conditions, use larger droplets to reduce effects of evaporation.

#### **TEMPERATURE INVERSIONS**

Drift potential is high during a temperature inversion. Temperature inversions are characterized by increasing temperature with altitude and are common on nights with limited cloud cover and light to no wind. The presence of an inversion can be indicated by ground fog or by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing. Avoid applications during temperature inversions.

#### **BOOM-LESS GROUND APPLICATIONS:**

• Setting nozzles at the lowest effective height will help to reduce the potential for spray drift.

#### HANDHELD TECHNOLOGY APPLICATIONS:

• Take precautions to minimize spray drift.

#### DRIFT CONTROL ADDITIVES

Using product compatible drift control additives can reduce drift potential. When a drift control additive is used, read and carefully observe cautionary statements and all other information on the additive's label. If using an additive that increases viscosity, ensure that the nozzles and other application equipment will function properly with a viscous spray solution. Preferred drift control additives have been certified by the Council of Producers & Distributors of Agrotechnology (CPDA).

#### SPRAY TANK CLEANOUT

#### **BEFORE SPRAYING TRAVALLAS HERBICIDE**

The spray equipment must be clean before TRAVALLAS herbicide is sprayed. Follow the cleanup procedures specified on the labels of the previously applied products. If no directions are provided, follow the four steps outlined in the After Spraying TRAVALLAS herbicide section of this label.

#### AT THE END OF THE DAY

When multiple loads of TRAVALLAS herbicide are applied, it is advised that at the end of each day of spraying the interior of the tank be rinsed with fresh water and then partially filled, and the boom and hoses flushed. This will prevent the buildup of dried pesticide deposits which can accumulate in the application equipment.

# AFTER SPRAYING TRAVALLAS HERBICIDE AND BEFORE SPRAYING CROPS OTHER THAN WHEAT AND BARLEY

To avoid subsequent injury to desirable crops, thoroughly clean all mixing and spray equipment immediately following applications of TRAVALLAS herbicide as follows:

1. Empty the tank and drain the sump completely.

2. Spray the tank walls with clean water using a minimum volume of 10% of the tank volume. Circulate the water through the lines, including all bypass lines, for at least two minutes. If boom is equipped with multiple nozzle bodies, be sure to rotate through all nozzles to ensure clean water reaches all parts of these assemblies. Flush the boom well and empty the sprayer. Completely drain the sump.

3. Visually inspect the tank to ensure removal of all visible herbicide residues. If necessary, repeat Step 2.

4. Fill the tank with clean water, and then add 1 gallon of a high pH sprayer tank cleaner, per 100 gallons of water, or an equivalent amount of household AMMONIA (containing minimum of 3% ammonia) per 100 gallons of water. A high pH tank cleaner or ammonia will not neutralize the herbicide, but helps dissolve any residual herbicide deposits.

5. Flush the solution through boom and hoses, and then add more water to completely fill tank. Allow to sit for at least 15 minutes with agitation.

6. Drain the tank and sump.

7. Remove the nozzles and screens and clean separately in a bucket containing cleaning agent and water.

8. Thoroughly rinse the tank with clean water for a minimum of 5 minutes, flushing water through the hoses and boom.

9. The rinsate solution may be applied back to the crop(s) specified on this label. If cleaners are used, consult the cleaner label for rinsate disposal instructions. If no instructions are given, dispose of the rinsate on site or at an approved waste disposal facility.

Notes:

1. Steam-cleaning aerial spray tanks is advised to facilitate the removal of any caked deposits.

2. When TRAVALLAS herbicide is tank mixed with other pesticides, all cleanout procedures for each product must be examined and the most rigorous procedure needs to be followed.

3. Follow any pre-cleanout guidelines specified on other product labels.

# STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Store product in original container only. Store in a cool, dry place.

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

# CONTAINER HANDLING: Refer to the Net Contents section of this product's labeling for the applicable "Nonrefillable Container" or "Refillable Container" designation.

Nonrefillable Rigid Plastic and Metal Containers (Capacity Equal to or Less Than 5 Gallons): Nonrefillable container. 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 1/4 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. Then, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

**Nonrefillable Rigid Plastic and Metal Containers (Capacity Greater Than 5 Gallons):** Nonrefillable container. 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 1/4 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. Then for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Nonrefillable Rigid Plastic and Metal Containers, e.g., Intermediate Bulk Containers [IBC] (Size or Shape Too Large to be Tipped, Rolled or Turned Upside Down): Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying the contents from this container into application equipment or mix tank and before final disposal using the following pressure rinsing procedure. Insert a lance fitted with a suitable tank cleaning nozzle into the container and ensure that the water spray thoroughly covers the top, bottom and all sides inside the container. The nozzle manufacturer generally provides instructions for the appropriate spray pressure, spray duration and/or spray volume. If the manufacturer's instructions are not available, pressure rinse the container for at least 60 seconds using a minimum pressure of 30 PSI with a minimum rinse volume of 10% of the container volume. Drain, pour or pump rinsate into application equipment or rinsate collection system. Repeat this pressure rinsing procedure two more times. Then, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

All Refillable Containers: Refillable container. Refilling Container: Refill this container with TRAVALLAS herbicide containing Metsulfuron Methyl, Thifensulfuron methyl and Fluroxypyr 1-Methylheptyl ester only. Do not reuse this container for any other purpose. Cleaning before refilling is the responsibility of the refiller. Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn out threads and closure devices. If damage is found, do not use container, contact FMC at the number below for instructions. Check for leaks after refilling and before transporting. If leaks are found, do not reuse or transport container, contact FMC at the number below for instructions. Disposing of Container: Do not reuse this container for any other purpose other than refilling (see preceding). Cleaning the container before final disposal is the responsibility of the person disposing of the container. To clean the container before final disposal, use the following pressure rinsing procedure. Insert a lance fitted with a suitable tank cleaning nozzle into the container and ensure that the water spray thoroughly covers the top, bottom and all sides inside the container. The nozzle manufacturer generally provides instructions for the appropriate spray pressure, spray duration and/or spray volume. If the manufacturer's instructions are not available, pressure rinse the container for at least 60 seconds using a minimum pressure of 30 PSI with a minimum rinse volume of 10% of the container volume. Drain, pour or pump rinsate into application equipment or rinsate collection system. Repeat this pressure rinsing procedure two more times. Then, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

If the container is damaged, leaking or obsolete, or in the event of a major spill, fire or other emergency, contact CHEMTREC (Transportation and Spills) at 1-800-424-9300, day or night.

**NOTICE TO BUYER:** Purchase of this material does not confer any rights under patents of countries outside of the United States.

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"Clearfield" is a registered trademark of BASF Corporation

"Raindrop RA" is a registered trademark of Delavan

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## CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

Notice: Read the entire Directions for Use and Conditions of Sale and Limitation of Warranty and Liability before buying or using this product. If the terms are not acceptable, return the product at once, unopened, and the purchase price will be refunded.

The Directions for Use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with the use of this product. Crop injury, ineffectiveness, or other unintended consequences may result because of such factors as manner of use or application, weather or crop conditions beyond the control of FMC or Seller. To the extent consistent with applicable law, all such risks shall be assumed by Buyer and User, and, to the extent consistent with applicable law, Buyer and User agree to hold FMC and Seller harmless for any claims relating to such factors.

Seller warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated on the Directions for Use when used in accordance with the directions under normal conditions of use. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, FMC MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE, NOR ANY OTHER EXPRESS OR IMPLIED WARRANTIES WITH RESPECT TO THE SELECTION, PURCHASE, OR USE OF THIS PRODUCT. Any warranties, express or implied, having been made are inapplicable if this product has been used contrary to label instructions, or under abnormal conditions, or under conditions not reasonably foreseeable to (or beyond the control of) Seller or FMC, and, to the extent permitted by applicable law, Buyer assumes the risk of any such use.

To the extent consistent with applicable law, FMC or Seller shall not be liable for any incidental, consequential or special damages resulting from the use or handling of this product. TO THE EXTENT CONSISTENT WITH APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF FMC AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF FMC OR SELLER, THE REPLACEMENT OF THE PRODUCT.

This Condition of Sale and Limitation of Warranty and Liability may not be amended by any oral or written agreement.