



**STATE OF MAINE**  
**DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY**  
**BOARD OF PESTICIDES CONTROL**  
28 STATE HOUSE STATION  
AUGUSTA, MAINE 04333

**JANET T. MILLS**  
GOVERNOR

**AMANDA E. BEAL**  
COMMISSIONER

To: Board of Pesticides Control Members  
From: Mary Tomlinson, Pesticides Registrar/Water Quality Specialist  
Re: Application to extend EPA FIFRA, Section 24(c) SLN ME-190001, use of Express Herbicide with TotalSol (EPA Reg. No. 279-9594) for bunchberry control in wild blueberry  
Date: January 11, 2021

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On March 8, 2019, the Board approved a two-year extension of Section 24(c) SLN ME-190001 registration with the stipulation that Maine Cooperative Extension conduct groundwater testing. The registration is now expired and Dr. Lily Calderwood, University of Maine Cooperative Extension Blueberry Specialist, requests an extension.

Previous research demonstrated tribenuron methyl, the active ingredient in Express, degraded rapidly and failed to migrate deeply into the soil profile, making it an unlikely groundwater contaminant. To confirm this prediction, Cooperative Extension collected samples from three test wells in blueberry barren soils, May to October 2019, following the initial spray application. Tribenuron-methyl was not detected in any of the samples analyzed by the Massachusetts Pesticide Analysis Laboratory. The report is included with this request.

As mentioned in the 2019 request, tribenuron-methyl was not detected in the 2011 blueberry groundwater monitoring. Since 2014, the Board of Pesticides Control has contracted with the Montana Analytical Laboratory for water analyses and this compound is not included in the 100-plus analyte sampling panel analyzed using the laboratory's MTUniversal method.

The SLN allows a fall application for bunchberry control or a spring application in the non-crop year at one ounce in 20-30 gallons of water and spot applications to control alders, bracken fern, wild rose, and yellow loosestrife at the rate of one ounce in 20 gallons of water during the summer and early fall. Application within 365 days of harvest is not permitted.

At present the company has no plans to incorporate the use into the marketplace label.

Please review the following documents and let me know if you have any questions.

- Letter of request from Lily Calderwood, Ph.D., University of Maine Cooperative Extension Blueberry Specialist
- Letter of support from FMC Corporation
- Groundwater test results University of Maine Cooperative Extension
- 2019 Memo from Pamela Bryer, Ph.D., BPC toxicologist
- FMC Express Herbicide with TotalSol Section 24(c) expired label
- FMC Express Herbicide with Section 3 label
- EPA stamped approved label
- FMC Express Herbicide with MSDS

**MEGAN PATTERSON, DIRECTOR**  
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November 30, 2020

Dear FMC,

On behalf of the University of Maine Cooperative Extension and lowbush (wild) blueberry producers in Maine, I request an extension of the 24C label for Express herbicide (tribenuron-methyl) for use on broadleaf weeds in wild blueberry fields. The current 2 year 24C label will expire on December 31, 2020. In 2018 a 2 year 24C Express label was approved under the condition that well testing was conducted before the product came up for review again in 2020.

Bunchberry (*Cornus canadensis*) is a low growing woody weed in wild blueberry fields that is difficult to manage. Bunchberry grows via rhizomes and underneath the blueberry canopy competing with wild blueberry for space, nutrients and water. Through my Extension program, growers are encouraged to identify weeds in their fields and use cultural methods of weed management including sulfur application and mechanical weed removal before using chemical control. Bunchberry is one of the weeds that escapes our cultural methods of weed management and applications of other herbicide products. Express is a group 2 herbicide and therefore fills an important rotational niche, reducing the risk of resistance development. The UMaine Extension herbicide chart, which contains 21 products, only contains three Group 2 products (Express tribenuron-methyl, Matrix rimsulfuron, and Sandea halosulfuron-methyl).

As requested by the Maine Board of Pesticide Control, in 2019 I led an effort to test well water before and after Express application in collaboration with the blueberry industry. Three wells located in wild blueberry fields were selected for repeated well water testing. Each of the three wells were sampled on May 21<sup>st</sup> (before application), August 7<sup>th</sup> and October 29<sup>th</sup>, 2019. No tribenuron-methyl was detected in any sample. Samples were tested by the University of Massachusetts Pesticide Analysis Laboratory. For more detail please read the attached study report.

I support the extension of the Express 24C label for lowbush blueberry in Maine. The Maine Board of Pesticide Control has also received a similar letter request.

Sincerely,

  
Lily Calderwood, PhD  
University of Maine  
Extension Wild Blueberry Specialist  
Assistant Professor of Horticulture

January 8, 2021

Mary E. Tomlinson  
Pesticide Registrar / Water Quality Specialist  
Maine Board of Pesticides Control / 28 SHS / Augusta, ME 04333

**Subject: Extension/Renewal for Special Local Need (SLN) Registration (Section 24(c)) for the use of Express® Herbicide with TotalSol™ Soluble Granules (279-9594) in Spot Application and Bunchberry Control in Lowbush Blueberry only in the State of Maine**

Dear Ms. Tomlinson,

FMC Corporation herein requests the extension/renewal of the FIFRA Section 24(c) Special Local Need (SLN) registration for Express® Herbicide with TotalSol™ (soluble granules), EPA Reg. No. 279-9594 identified as SLN No. ME-190001. This extension/renewal would allow the continued use of Express® for Spot Application and Bunchberry Control in Lowbush Blueberry (also known as, wild blueberry) only in the State of Maine.

Occurrence of bunchberry lowers the value of a blueberry harvest. In addition, bunchberry infestation in a wild blueberry field competes with the crop for nutrients and other resources. Wild blueberry growers have for many years consistently indicated that bunchberry is a major weed problem and have requested a solution.

Lily Calderwood, PhD, Wild Blueberry Specialist, Asst. Prof. of Horticulture the University of Maine requested the extension/renewal of this specific use for control of bunchberry and other weeds in wild blueberry fields. There has been extensive research with tribenuron methyl (the active ingredient in this product) using the specific rates and timing specified in this proposed SLN labeling and it has been found to be safe and effective. Dr. Calderwood has written a letter supporting the extension of this registration using the approved SLN label on file.

To my knowledge, a registration for the same use has not previously been denied, suspended or cancelled by the U.S. EPA, or voluntarily cancelled by the registrant subsequent to issuance by U.S. EPA of a notice of intent to cancel that registration because of health or environmental concerns about an ingredient contained in the pesticide product.

Also to the best of my knowledge, this SLN application is in accordance with the purposes of FIFRA.

Per our conversation of January 8<sup>th</sup> 2021, enclosed is a copy of the following:

- The current Section 3 label (identified as SL-4304 120519 12-05-19) for Express® Herbicide with TotalSol™ Soluble Granules (279-9594)
- The current stamped approved label for EPA Reg # 279-9594

Should you have questions, please contact me at 302-388-7432 or e-mail at [bonnie.bieber@fmc.com](mailto:bonnie.bieber@fmc.com).

Sincerely,



Bonnie J Bieber  
US Product Registration Specialist

# WEED SCIENCE

## RESEARCH & EXTENSION

**INVESTIGATOR:** L. Calderwood, D. Hammond, J. Stubbs, and B. Tooley

**8. TITLE:** Well Water Testing for Tribenuron-methyl (Express)

### OBJECTIVES

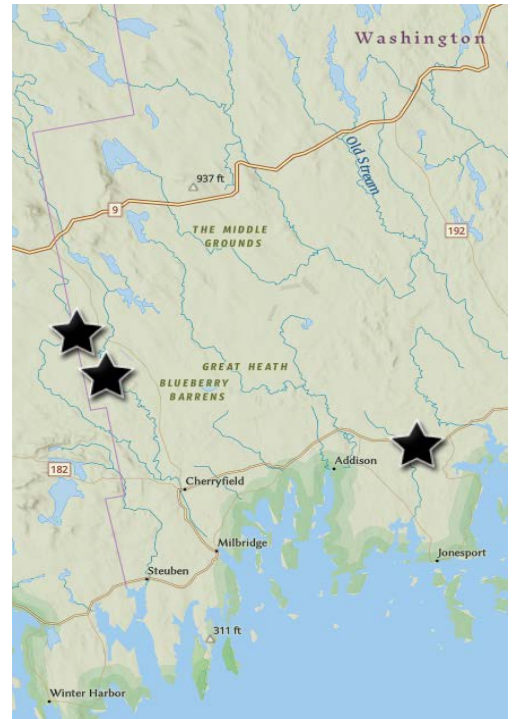
- Select three representative wells proximal to spray locations
- Apply Tribenuron Methyl at the recommended rate in the specified locations
- Collect and test well water samples on 3 dates following the initial spray application

**LOCATION:** Deblois and Jonesboro, ME

**PROJECT TIMEFRAME:** May 2019 – October 2019

### INTRODUCTION:

Tribenuron-methyl, trade name Express with TotalSol soluble granules manufactured by FMC Corporation, is a selective post-emergence broadleaf herbicide that has been granted a Special Local Need Label 24(C) in Maine for bunchberry (*Cornus canadensis*) control in wild (lowbush) blueberries since 2008. The use of Express (EPA Reg. No. 279-9594) to control primarily bunchberry in wild blueberry fields in Maine expired in December 31<sup>st</sup>, 2018 and has been renewed for a one-year 24(c) Special Local Need label which will expire December 31<sup>st</sup>, 2020. In order to establish the potential efficacy and safety of this product in Maine wild blueberry fields, a performance trial was conducted in 2018 which was followed by this well water evaluation for the Board of Pesticide Control in 2019.



**Figure 1.** Well water sampling performed in Washington County in 2019. Map created using the Esri/CGIAR/USGS resource, (<https://www.maine.gov/megis/>)

The Board of Pesticide Control (BPC) oversees the Pesticides and Groundwater Monitoring Program to help preserve one of Maine's most vital resources. Wild blueberry fields are known to have high leachate potential (Perkins & Yarborough 2006) and undergo intensive management in numerous locations throughout the state. Pesticides have been detected in some of Maine's wells (BPC 2005). In wild blueberry, the pre-emergent herbicide, Hexazinone, has been documented to have the greatest presence and persistence in Maine's groundwater than any other wild blueberry pesticide (BPC 2005). Since the 1994 discovery of frequent trace amounts of Hexazinone in ground water, the BPC has implemented a 'State Management Plan for Protection' to ensure environmental and public safety. This monitoring program is employed when relatively new products are introduced or renewed, or when a previously detected product requires monitoring. In this case, Extension was asked by the BPC to test three wells on three dates in 2019 for the presence of tribenuron-methyl (Express) for future renewal following expiration of the current 24(C) on December 31<sup>st</sup>, 2020.

## **METHODS**

### **Site Selection & Tribenuron-methyl Application**

Three existing drilled wells were selected in eastern Maine for sampling in 2019. Two were located in Deblois and one in Jonesboro (Figure 1) to monitor groundwater for residual Tribenuron-methyl following a localized application. Tribenuron-methyl was applied within ¼ mile of the target well while still maintaining the standard minimum 50' buffer. The herbicide was applied on June 4<sup>th</sup> at the two Deblois sites and on June 5<sup>th</sup> at Blueberry Hill Farm in Jonesboro. The standard application rate of 1 oz/A as stated on the Special Local Need 24(C) for bunchberry in Maine was applied.

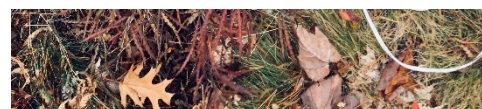
### **Well Water Collection & Testing**

Each of the three wells were sampled on May 21<sup>st</sup>, August 7<sup>th</sup> and October 29<sup>th</sup>, 2019. The depth to static well water was recorded using a Solinst water level meter at the time of each sampling. A high quality, low voltage Super Whale Pump attached to a portable 12V battery and single use HDPE plastic tubing was used to extract water from the well. Well water was pumped for 10 minutes prior to collection to prevent air bubbles or surface water contamination. One liter was collected per site and date. The three samples collected per date were shipped on ice overnight to University of Massachusetts Pesticide Analysis Laboratory for tribenuron-methyl residue testing. Following each sample, all equipment was rinsed (decontaminated) using distilled bottled water. Water sampling procedure was adapted from the Maine Board of Pesticide Control Standard Operating Procedure of the Groundwater Monitoring Program (BPC 2019).

## **RESULTS**



**Figure 2.** Well head at the Deblois 2 site with sounding tape, HDPE tubing, post-sample extraction and pre-decontamination.



Total well depths varied across sites with the deepest well at 104' (Table 1). Residues were not detected in any of the three sampled wells over the 6-month time period. Results have been sent to the BPC for review.

**Table 1.** 2019 Ground water test result summary by month. No residues were detected across all months.

| Wells     | Total Water Depth (ft) | Average Water Depth (ft) | Detection Results |        |         |
|-----------|------------------------|--------------------------|-------------------|--------|---------|
|           |                        |                          | May               | August | October |
| Jonesboro | 97.3                   | 53.5                     | ND*               | ND     | ND      |
| Deblois 1 | 57.7                   | 22.8                     | ND                | ND     | ND      |
| Deblois 2 | 104.25                 | 49.45                    | ND                | ND     | ND      |

ND = No residues detected at or above a level of 0.004 µg/L of water (ppb)

### CURRENT RECOMMENDATIONS

Continue to monitor pesticide update sources for product information. Express TotalSol is currently labeled as a special local need 24(C) product until December 31, 2020. Therefore, wild blueberry farms in Maine are allowed to use this product for bunchberry control.

This product should be applied according to the Maine 24(C) label at the recommended 1.0 oz/acre rate. Application timing is in the fall after blueberry harvest prior to the first killing frost OR in the spring of a non-crop year. This product is most effective when bunchberry leaves are at a 45 degree angle before flowering, which usually occurs in mid to late May. Bunchberry turns pink/red to yellow after application but can take weeks to die. As the current Maine 24(C) label states, this product can be used as a spot spray to control additional weeds including alder, bracken fern, wild rose, and yellow loosestrife. Note that other species are tolerant, such as birch, bayberry, and sweet fern. Some stunting to blueberry plants should be expected, yet stunting does not appear to reduce production at this time. Please see additional resources below.

Maine 24C Label: <https://extension.umaine.edu/blueberries/wp-content/uploads/sites/41/2020/01/Express-Herbicide-withTotalSol-24c-2020-label.pdf>

UMaine Herbicide Chart: <https://extension.umaine.edu/blueberries/factsheets/weeds/weed-control-for-wild-blueberries-2/>

NPIRS: <http://npirspublic.ceris.purdue.edu/state/>

CMDS: <http://www.cdms.net/>

### NEXT STEPS

- Attend BPC meeting for well sampling review.
- Renew 24C before current 24C expires December 31<sup>st</sup>, 2020.

### ACKNOWLEDGEMENTS

This project was funded by the Wild Blueberry Commission of Maine.

## REFERENCES

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AUGUSTA, MAINE 04333

**JANET T. MILLS**  
GOVERNOR

**AMANDA E. BEAL**  
COMMISSIONER

To: Board Members  
From: P. Bryer, BPC Toxicologist  
Re: Summary of toxicity topics for the Specialized Local Needs (SLN) application of Express, *a.i. tribenuron-methyl*  
[Allows the use of Express to control bunchberry on lowbush blueberry crops.]  
Date: February 28, 2019

Tribenuron-methyl is an herbicide in the sulfonylurea family. It is typically used as a post-emergent herbicide in cereal crops; there is no tolerance for tribenuron-methyl for blueberries. It is taken up across the leaf surface and has little to no soil activity. Tribenuron-methyl acts by inhibiting cell division, specifically by inhibiting acetolactate synthase (ALS). Chlorosis appears within days then typically followed by plant death within 3 weeks.

**Known fate summary:**

Tribenuron-methyl is not expected to volatilize from wet or dry soils. In the air it will remain in particulate form. Sunlight does not cause the molecule to breakdown. The  $K_{oc}$  (63) of tribenuron-methyl indicates potential for groundwater leaching. Once in the soil breakdown is promoted by microbial communities and acid soils. The microbial biodegradation half-life is approximately 10 days. The abiotic degradation half-life ranges from 1 to 15.8 days in soils of pHs of 5 to 7, respectively.

Long term soil leaching studies show that tribenuron-methyl penetrates to a depth of 2-6 inches but not deeper. The same study showed an aquatic tracer to move through the entire soil column (much deeper than 6 inches). These field data indicate that in practice this *a.i.* does not pose a significant threat to groundwater because of rapid biodegradation and decay of the molecule.

**Known toxicity summary:**

In laboratory animals (rabbits, rats, dogs, and guinea pigs) the following areas have been examined: dermal responses, hematology, urinalysis, histopathology, ophthalmologic changes, organ weights, blood markers of organ function, growth, development, reproduction, chromosome alterations, gene mutation (Ames assay), and estrogenic activity. Tribenuron-methyl can be a sensitizer in some situations, though the animal data are inconsistent. Tribenuron-methyl is classified as a possible human carcinogen though there are no animal data supporting carcinogenicity. Tribenuron-methyl and several metabolites have weak estrogenic activity in female rats. The NOAEL is 20 mg/kg/d and the LOAEL is 125 mg/kg/day.

The short-term, acute, data indicate that fairly high levels are required to kill a variety of organisms. This compound has  $LD_{50}$ s developed on rats, rabbits, mallard ducks, bobwhite quail, honey bees, bluegill sunfish, freshwater microalgae, rainbow trout, water flea, and green algae. Of this list only the algae showed unusual sensitivity to the compound. For example, in rainbow trout the  $LD_{50}$  was >1,000 ppm in a static exposure test of the formulated product; whereas, the freshwater microalgae, *Chlorella fusca*, has a  $LD_{50}$  of 80 ppb. The honey bee oral  $LD_{50}$  is >100 ug; in honey bees 100 ug is a benchmark level that indicates no significant oral toxicity.

Once in the body tribenuron-methyl is rapidly and extensively metabolized. The primary route of elimination is the urine. The potential for bioaccumulation in aquatic organisms is low, its BCF is 3 (calculated from a Kow of 0.78).

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With TotalSol™ Soluble Granules

## FIFRA 24(c) Special Local Need Label (SLN)

For Distribution and Use only in the State of Maine  
For Spot Application and Bunchberry Control in Lowbush Blueberry  
Only in the State of Maine

EPA REG No. 279-9594

SLN No. ME-190001

(REGISTRATION TRANSFERRED FROM EPA REG. NO. 352-632 ON MAY 25, 2018)

This label expires and must not be distributed or used in accordance with this SLN registration after December 31, 2020

### DIRECTIONS FOR USE:

- It is a violation of Federal law to use this product in a manner inconsistent with its labeling
- This state-specific 24(c) labeling must be in the possession of the user at the time of application
- Follow all applicable directions, restrictions, and precautions on the EPA registered label for EPA Reg No. 279-9594

### GENERAL INFORMATION

EXPRESS® Herbicide with TotalSol™ soluble granules) (EXPRESS® herbicide) is recommended for selective postemergence control/suppression of certain broadleaf weeds in lowbush blueberry (also known as wild blueberry). EXPRESS® herbicide may be used on lowbush blueberry providing user accepts all risk of possible crop injury

### USE RATES AND APPLICATION TIMING

Apply EXPRESS® herbicide at 1.0 ounce per acre in the Fall after blueberry harvest, until a killing frost occurs, after which bunchberry control will not occur. EXPRESS® herbicide applied earlier in the Fall will result in increased blueberry cover and increased bunchberry control the year following application. The degree and duration of effect are dependent upon the rate used, sensitivity and size of the target weeds and environmental conditions at the time and following application.

#### Spot applications

EXPRESS® herbicide can be used as a directed spot spray with a backpack sprayer or handgun to control alders, bracken fern, wild rose and yellow loosestrife. Mix the equivalent of 1 oz in 20 gallons (1.5 grams in 1 gallon) of water plus a non-ionic surfactant at the label rate. To apply, spray to thoroughly wet the foliage. Apply only during the summer of the prune year when the weed foliage is fully expanded. Alders and wild rose can be controlled with early fall applications as they retain their leaves longer. Bracken fern shows few symptoms after application but control the following year is excellent. Foliage of the other species turns yellow or red and the stem terminals die soon after application. Control of vetch, poplars, willows, goldenrods and fly honeysuckle has been erratic and others like chokepear, bayberry, black bulrush, sweet fern, and birch, are resistant. Blueberries growing among treated weeds generally show few symptoms. However, when the blueberry plant is sprayed directly, it may be stunted, with reduced bloom and yield.

#### Spring non-crop year application

Apply EXPRESS® herbicide at 1 oz per acre in 20 to 30 gal of water with a surfactant in the spring of the non-crop year. For best results, applications should be made when the majority of the emerged bunchberry plant leaves have unfolded to form a 45 degree angle, but no later than when the first white blossoms are visible on the most advanced plants. Bunchberry plants generally turn pinkish red to yellow following spraying but may take weeks to die down. If EXPRESS® herbicide applications are made too late, bunchberry plants turn red and remain so for the entire

season and reduced control can be expected. If EXPRESS® herbicide is applied too early, bunchberry regrowth can be expected later in the season.

EXPRESS® herbicide should also be applied before blueberry emerging stems exceed one inch in height. Some stem height reduction, with yellowing and reddening of the blueberry leaves, may be observed for 6 to 8 weeks after application. This is more likely to occur if there have been prolonged cool temperatures or wide fluctuations in day and night temperatures just prior to or soon after treatment. Blueberry plants, however, recover and fruit bud numbers and potential yields are not generally affected. Recommended fertilizer applications before or after EXPRESS® herbicide applications will help the blueberry plants recover. Applications made at later stages of blueberry development or applications in spring-burnt fields should not be made due to potential crop injury and potential yield reductions.

### **WEEDS CONTROLLED**

The following weeds are controlled in addition to the weeds listed on the EPA registered package label:

Bunchberry

### **Surfactant**

Always use a nonionic surfactant of at least 80% active ingredient at the rate of 0.25% volume/volume (1 quart per 100 gallons of spray solution)

### **PRECAUTIONS/RESTRICTIONS**

- **Do Not** use methylated seed oil (MSO) or crop oils with Express® herbicide on lowbush blueberry as these adjuvants may produce unsatisfactory crop injury
- **Do Not** apply more than 1.0 ounce of EXPRESS® herbicide per acre per growing season
- **Do Not** graze or cut for hay, or feed associated by-products to livestock, after application
- **Do Not** apply within 365 days of blueberry harvest
- **Do Not** apply EXPRESS® herbicide in a tank mix with organophosphate insecticides as severe crop injury may occur
- **Do Not** apply to lowbush blueberry that is under stress from severe weather conditions, drought, low fertility, water saturated soil, disease, or insect damage, as crop injury may result. Under certain conditions such as prolonged cool weather (daily high temperature less than 50°F) or wide fluctuations in day/night temperatures just prior to or soon after treatment, temporary yellowing and/or crop stunting may occur.
- EXPRESS® herbicide may degrade in water and so should be applied the same day it is mixed.

FMC, FMC logo, Express and TotalSol are trademarks or registered trademark of FMC Corporation or an affiliate.

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Sold By:

FMC Corporation 2929  
Walnut Street Philadelphia,  
PA 19104



|                   |       |   |           |
|-------------------|-------|---|-----------|
| TRIBENURON METHYL | GROUP | 2 | HERBICIDE |
|-------------------|-------|---|-----------|

HERBICIDE WITH TOTALSOL®  
SOLUBLE GRANULES

### Soluble Granule

**For Use on Cereals, ExpressSun®, Sunflowers, Grass grown for seed, Fallow and as a Pre-plant or Post-harvest Burndown Herbicide**

| Active Ingredient | By Weight |
|-------------------|-----------|
| Tribenuron methyl | 50%       |
| Other Ingredients | 50%       |
| TOTAL             | 100%      |

EPA Reg. No. 279-9594

Contains 0.50 lb active ingredient per pound.

EPA Est. No. \_\_\_\_\_

**Nonrefillable Container**

**Refillable Container**

Net: \_\_\_\_\_ OR Net: \_\_\_\_\_

### 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:** 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.

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

#### HAZARDS TO HUMANS AND DOMESTIC ANIMALS

**Caution:** Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Avoid contact with skin, eyes or clothing.

For medical emergencies involving this product, call toll free 1-800-331-3148.

### PERSONAL PROTECTIVE EQUIPMENT (PPE)

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

Long-sleeved shirt and long pants.

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

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

Sold By:



FMC Corporation  
2929 Walnut Street  
Philadelphia, PA 19104

## 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.

Important: When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for "Applicators and Other Handlers" and have such PPE immediately available for use in an emergency, including a spill or equipment breakdown.

## USER SAFETY RECOMMENDATIONS

### USERS SHOULD:

- Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.
- 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

**DO NOT** apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. **DO NOT** contaminate water when cleaning equipment or disposing of equipment washwaters or rinsate.

### 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 including 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 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, including plants, soil, or water, is:

Coveralls.

Chemical resistant gloves made of any waterproof material.

Shoes plus socks.

EXPRESS® herbicide (with TotalSol® soluble granules), referred to below as EXPRESS herbicide, must be used only 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.

To the extent consistent with applicable law, FMC will not be responsible for losses or damages resulting from the use of this product in any manner not specified by FMC.

EXPRESS herbicide may be used on wheat (including durum), barley, triticale, oats, burndown, certain grasses grown for seed, and ExpressSun® sunflowers in most states. Check with your state extension service or Department of Agriculture before use, to be certain EXPRESS herbicide is registered in your state.

## **PRODUCT INFORMATION**

EXPRESS herbicide is a water soluble granule that is used for selective postemergence weed control in wheat (including durum), barley, triticale, oats and ExpressSun® sunflowers; and for post-harvest burndown, fallow, and pre-plant burndown weed control. The best control is obtained when EXPRESS herbicide is applied to young, actively growing weeds. The use rate will depend on weed spectrum and size of weeds at time of application. The degree and duration of control may depend on the following:

- Weed spectrum and infestation intensity
- Weed size at application
- Environmental conditions at and following treatment

EXPRESS herbicide is noncorrosive, nonflammable, nonvolatile, and does not freeze. Mix EXPRESS herbicide in water and apply as a uniform broadcast spray.

### **Biological Activity**

EXPRESS herbicide is absorbed through the foliage of broadleaf weeds, rapidly inhibiting their growth. Leaves of susceptible plants appear chlorotic from 1 to 3 weeks after application and the growing point subsequently dies.

EXPRESS herbicide provides the best control in vigorously growing crops that shade competitive weeds. Weed control in areas of thin crop stand or seeding skips may not be as satisfactory. However, a crop canopy that is too dense at application can intercept the spray and reduce weed control.

EXPRESS herbicide may injure crops that are stressed from adverse environmental conditions (including extreme temperatures or moisture), abnormal soil conditions, or cultural practices. In addition, different varieties of the crop may have differing levels of sensitivity to treatment with EXPRESS herbicide under otherwise normal conditions.

Treatment of sensitive crop varieties may injure crops. To reduce the potential of crop injury to cereals, tank mix EXPRESS 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.

In warm, moist conditions, the expression of herbicide symptoms is accelerated in weeds; in cold, dry conditions, the expression of herbicide symptoms is delayed. In addition, weeds hardened-off by drought stress are less susceptible to EXPRESS herbicide.

Weed control may be reduced if rainfall or snowfall occurs soon after application. Several hours of dry weather are needed to allow EXPRESS herbicide to be sufficiently absorbed by weed foliage.

## RESTRICTIONS

- Injury to or loss of desirable trees 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** use on lawns, walks, driveways, paved surfaces, or tennis courts. Prevent drift of spray to desirable plants.
  - **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 EXPRESS herbicide by air in the state of New York.
- The maximum amount of the active ingredient tribenuron-methyl for all uses is 0.5 ounces (0.0313 lb ai) per acre per year.
- The maximum amount of EXPRESS herbicide for all uses per acre per year is 1 ounce (0.0313 lb ai/A).
- The maximum number of applications per year of EXPRESS herbicide for all uses is four (when using less than the maximum single application rate), refer to the summary table in each use section for specific number of application for a given crop.

## PRECAUTIONS

- Injury to or loss of adjacent sensitive crops and vegetation may result from failure to observe the following:
  - Take all necessary precautions to avoid all direct or indirect contact (including spray drift) with non-target plants or areas.
  - Carefully observe all sprayer cleanup instructions both prior to and after using this product, as spray tank residue may damage crops other than wheat, barley, oats and ExpressSun® sunflowers.
- Varieties of wheat (including durum), barley, oats 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.
- Under certain conditions including heavy rainfall, prolonged cold weather, or wide fluctuations in day/night temperatures prior to or soon after EXPRESS herbicide application, temporary discoloration and/or crop injury may occur. To reduce the potential of crop injury, tank mix EXPRESS 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.
- Dry, dusty field conditions may result in reduced control in wheel track areas.
- Calibrate sprayers only with clean water away from wellsites.
- Make scheduled checks of spray equipment.
- Ensure that all operation employees accurately measure pesticides.
- Mix only enough product for the job at hand.
- Avoid overfilling of spray tank.
- Dilute and agitate excess solution and apply at labeled rates or uses.
- When triple-rinsing the pesticide container, be sure to add the rinsate to the spray mix.

## WEED RESISTANCE MANAGEMENT

EXPRESS herbicide, which contains the active ingredient tribenuron-methyl is a group 2 herbicide 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 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 EXPRESS 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 this MOA have been found in your region. If resistant biotypes of target weeds have been reported, use the application rates of this product specified for your local conditions. Tank mix products so that there are multiple effective sites of actions for each target weed.
- 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 EXPRESS 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.

## **APPLICATION INFORMATION**

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

## **TANK MIX INFORMATION**

Read and follow all label instructions on timing, precautions, and warnings for any companion products before using these tank mixtures. 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.

## WHEAT, BARLEY, OATS AND TRITICALE

### APPLICATION TIMING

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

For spring oats, make applications after the crop is in the 3-leaf stage, but before jointing. **DO NOT** use on "Ogle", "Porter" or "Premier" seed varieties as crop injury may occur.

Since EXPRESS herbicide has very little or no soil activity, it controls only those weeds that have germinated; therefore, apply EXPRESS herbicide when all or most of the weeds have germinated. Annual broadleaf weeds must be past the cotyledon stage, actively growing, and less than 4" tall or wide.

#### Restriction:

- **DO NOT** apply to wheat, barley, oats or triticale underseeded with another crop.
- **DO NOT** apply EXPRESS herbicide to wheat, barley, oats or 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.
- Grazing, Feeding, and Harvesting
  - Allow at least 7 days between application and grazing of treated forage.
  - Allow at least 7 days between application and feeding of forage (green chop) from treated areas to livestock.
  - Allow at least 30 days between application and feeding of hay from treated areas to livestock.
  - Allow at least 45 days between application and harvesting of grain. Harvested straw may be used for bedding and/or feed.

### CEREALS USE RATE

Use EXPRESS herbicide at 0.5 oz/A (0.0156 lb ai/A) (except oats) for heavy infestation of those weeds listed under the "WEEDS CONTROLLED" section of this label or when application timing and environmental conditions are marginal (see "BIOLOGICAL ACTIVITY").

Use EXPRESS herbicide at 0.25 (0.0078 lb ai/A) to 0.375 oz/A (0.0117 lb ai/A) (except oats) for light infestation of the weeds listed under the "WEEDS CONTROLLED" section of this label. Conditions at application shall be optimum for effective treatment of these weeds.

Two applications of EXPRESS herbicide may be made on this crop provided the total amount does not exceed 0.5 oz/A (0.0156 lb ai/A) per year.

**For oats**, apply 0.2 oz/A (0.0063 lb ai/A) of EXPRESS herbicide for control of light populations of the weeds listed in Weeds Controlled table. In oats, EXPRESS herbicide must be tank mixed with another registered herbicide. **DO NOT** make more than one application of EXPRESS herbicide on oats per year.

#### Restrictions:

| Active Ingredient in EXPRESS herbicide: Tribenuron-methyl |                    |                                                |                                        |                                  |                          |                                         |                                   |                            |
|-----------------------------------------------------------|--------------------|------------------------------------------------|----------------------------------------|----------------------------------|--------------------------|-----------------------------------------|-----------------------------------|----------------------------|
| Crop/ Use                                                 | Application Timing | Maximum Oz/A of Product per Single Application | Maximum AI lb/A per Single Application | Maximum Oz/A of Product per Year | Maximum AI lb/A per Year | Maximum Number of Applications per Year | Minimum Treatment Interval (Days) | Pre-Harvest Interval, Days |
| Wheat, Barley, Triticale                                  | Postemergence      | 0.5                                            | 0.0156                                 | 0.5                              | 0.0156                   | 2                                       | 14                                | 45 (for grain)             |
| Oats                                                      | Postemergence      | 0.2                                            | 0.0063                                 | 0.2                              | 0.0063                   | 1                                       | Not Applicable                    | 45 (for grain)             |

## **TANK MIXTURES FOR CEREALS**

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.

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

EXPRESS herbicide may be tank mixed with 2,4-D and MCP (preferably ester formulations) herbicides for use on wheat, barley, oats and triticale. In tank mixes containing 2,4-D or MCP, add 1 to 2 pt of nonionic surfactant per 100 gallons of spray solution; in tank mixes containing the active ingredients 2,4-D or MCP, add 1 pt of nonionic surfactant per 100 gallons of spray solution.

When using higher rates, use of additional nonionic surfactant may not be needed, unless specified otherwise in the 2,4-D or MCP label, or local guidance.

### **With 2,4-D or MCP (amine or ester) and Dicamba**

EXPRESS herbicide may be applied in a 3-way tank mix with formulations of dicamba including-Clarity® herbicide, and 2,4-D or MCP.

Make applications at 0.25 oz/A (0.0078 lb ai/A) - 0.5 oz/A (0.0156 lb ai/A) of EXPRESS herbicide +Clarity herbicide + 2,4-D or MCP (ester or amine) at label rates. Use higher rates when weed infestation is heavy. Add 1-2 pt of nonionic surfactant per 100 gallons of spray solution to the 3-way mixture, where necessary, as deemed by local guidance. Use of additional nonionic surfactant may not be needed with the higher phenoxy rates and ester phenoxy formulations. Consult the specific 2,4-D or MCP and dicamba labels, or local guidance for more information.

Apply this 3-way combination 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.

**DO NOT** apply this 3-way mixture at high rates more than once a year, or more than twice per year at the low rates.

### **With Bromoxynil containing products**

EXPRESS herbicide may be tank mixed with bromoxynil containing herbicides registered for use on wheat, barley or triticale. For best results, add bromoxynil containing herbicides to the tank at label rates. Tank mixes of EXPRESS herbicide plus bromoxynil may result in reduced control of Canada thistle.

### **With fluroxypyr containing products**

EXPRESS herbicide may be tank mixed with fluroxypyr containing herbicides for improved control of Kochia (2-4" tall) and other broadleaf weeds. For best results, add fluroxypyr containing herbicides at label rates. 2,4-D and MCP herbicides (preferably ester formulations) may be tank mixed with EXPRESS herbicide plus fluroxypyr.

### **With Other Broadleaf Control Products**

EXPRESS herbicide can be tank mixed with other broadleaf herbicides registered on cereals including HARMONY® SG Herbicide (with TotalSol® soluble granules), ALLY® XP herbicide, WideMatch® herbicide, Aim® EC herbicide, Stinger® herbicide, or Curtail® herbicide.

Tank mixes of EXPRESS herbicide plus metribuzin may result in reduced control of wild garlic.

Tank mixes of EXPRESS herbicide plus Clarity herbicide-may result in reduced control of some broadleaf weeds.

### **With Pinoxaden**

EXPRESS herbicide can be tank mixed with Axial® XL herbicide for improved control of wild oats and other grasses.

### **With Clodinafop-propargyl**

EXPRESS herbicide can be tank mixed with Discover® NG herbicide-for improved control of weeds in spring wheat.

### **With Flucarbazone-sodium**

EXPRESS herbicide can be tank mixed with Everest® 3.0 herbicide for improved control of weeds in spring wheat.

### **With Mesosulfuron-methyl**

EXPRESS herbicide can be tank mixed with Osprey® herbicide for improved control of weeds in Fall-sown or winter wheat.

### **With Pyroxulam**

EXPRESS herbicide can be tank mixed with PowerFlex® HL herbicide-GR1 Herbicide, or GR2 Herbicide for improved control of weeds in winter wheat and triticale.

EXPRESS herbicide can be tank mixed with Simplicity™ CA herbicide for improved control of weeds in spring and winter wheat including durum and triticale.

EXPRESS herbicide can be tank mixed with TeamMate™ herbicide (for improved control of weeds in spring and winter

wheat including durum and triticale.

#### **With Other Grass Control Products**

EXPRESS herbicide can be tank mixed with other grass control herbicides registered on cereals.

#### **With Fungicides**

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

#### **With Insecticides**

EXPRESS herbicide may be tank mixed or used sequentially with insecticides registered for use on cereal crops. However, under certain conditions (drought stress, or if the crop is in the 2-4 leaf stage), tank mixes or sequential applications of EXPRESS herbicide with organophosphate 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.

#### **Restriction:**

- **DO NOT** apply EXPRESS 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 EXPRESS herbicide plus Malathion because crop injury may result.

#### **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 EXPRESS herbicide in fertilizer solution. EXPRESS herbicide must first be slurried 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 EXPRESS 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 pt - 1 qt per 100 gal of spray solution (0.06 -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 MCP is included with EXPRESS herbicide and fertilizer mixture, ester formulations tend to be more compatible (see manufacturer's label). Additional surfactant may not be needed when using EXPRESS herbicide in tank mix with 2,4-D ester or MCP 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.

#### **Restriction:**

- **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.

### **BURNDOWN - POST HARVEST, FALLOW, PRE-PLANT**

#### **APPLICATION TIMING**

EXPRESS herbicide may be used as a burndown treatment when the majority of weeds have emerged and are actively growing. EXPRESS herbicide may be applied to crop stubble, as a fallow treatment, or as a pre-plant burndown prior to planting any crop. See "CROP ROTATION" for the minimum interval allowed between the burndown application and when a crop may be planted.

#### **BURNDOWN USE RATE**

Apply 0.25 oz/A (0.0078 lb ai/A) to 0.5 oz/A (0.0156 lb ai/A) of EXPRESS herbicide as a burndown treatment prior to planting any crop (except cotton), or shortly after planting wheat (including durum), barley or triticale (prior to emergence). Use the 0.5 oz/A (0.0156 lb ai/A) rate when weed infestation is heavy or predominantly consists of those weeds listed under the "Weeds Partially Controlled" section of this label, or when application timing and environmental conditions are marginal.

See "CROP ROTATION" for the minimum interval allowed between the burndown application and when a crop may be planted.

Sequential treatments of EXPRESS herbicide may also be made provided the total amount of EXPRESS herbicide applied during one post harvest/fallow/pre-plant time period does not exceed 0.5 oz/A (0.0156 lb ai/A).

Apply EXPRESS herbicide in combination with other suitable registered burndown herbicides (See the "TANK MIXTURES" section of this label for additional information).

**For cotton**, apply 0.25 oz/A (0.0078 lb ai/A) of EXPRESS herbicide as a burndown treatment any time up to 14 days prior to planting. Seedling disease, nematodes, cold weather, deep planting (more than 2"), excessive moisture, high salt concentration, and/or drought may weaken cotton seedlings and increase the possibility of crop injury. Cotton resumes normal growth once favorable growing conditions return.

#### Restrictions:

| Active Ingredient in EXPRESS herbicide: Tribenuron-methyl |                                    |                                                |                                        |                                  |                          |                                         |                                   |                            |
|-----------------------------------------------------------|------------------------------------|------------------------------------------------|----------------------------------------|----------------------------------|--------------------------|-----------------------------------------|-----------------------------------|----------------------------|
| Crop/ Use                                                 | Application Timing                 | Maximum Oz/A of Product per Single Application | Maximum AI lb/A per Single Application | Maximum Oz/A of Product per Year | Maximum AI lb/A per Year | Maximum Number of Applications per Year | Minimum Treatment Interval (Days) | Pre-Harvest Interval, Days |
| Fallow, Burndown, Post-Harvest                            | -----                              | 0.5                                            | 0.0156                                 | 0.5                              | 0.0156                   | 2                                       | 14                                | --                         |
| Burndown Prior to Cotton Seedling                         | -----                              | 0.25                                           | 0.0078                                 | 0.25                             | 0.0078                   | 2                                       | 14                                | --                         |
| Soybeans                                                  | pre-plant & burndown, Post-harvest | 1                                              | 0.0313                                 | 1                                | 0.0313                   | 1                                       | Not Applicable                    | --                         |
| Field Corn                                                | Pre-plant & burndown, Post-Harvest | 1                                              | 0.0313                                 | 1                                | 0.0313                   | 1                                       | Not applicable                    | --                         |

#### TANK MIXTURES IN BURNDOWN APPLICATIONS

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.

EXPRESS herbicide may be tank mixed with one or more herbicides that are registered for use at the appropriate burndown timing, including glyphosate, 2,4-D, and dicamba. Read and follow all label instructions on timing, precautions, and warnings for any companion products before using these tank mixtures.

#### EXPRESSSUN® SUNFLOWERS

EXPRESS herbicide is intended for application only to sunflowers with the ExpressSun® trait. Apply only on sunflowers labeled ExpressSun® and warranted by the seed supplier to not be sensitive to direct application of EXPRESS herbicide. **DO NOT** apply EXPRESS herbicide to sunflowers that are not labeled ExpressSun®.

#### APPLICATION TIMING

Apply EXPRESS herbicide to ExpressSun® sunflowers any time from the 2-leaf stage of growth up to but not including the bud formation stage.

Temporary crop yellowing may be observed shortly after application of EXPRESS herbicide, especially when applied to crops growing under environmentally stressful conditions.

Depending upon rainfall or other environmental conditions, annual weeds may have a second flush of germinating seedlings. To maximize control of such weeds, it may be necessary to apply EXPRESS herbicide again, 14 or more days after the prior application.

Application to ExpressSun® sunflowers that are, or have been, stressed by severe weather conditions, frost, abnormally hot or cold or wet or dry conditions, low fertility, drought, water saturated soil, disease and/or insect damage prior to application may result in crop injury. If the above stress conditions are expected to occur within 3 days after application of EXPRESS herbicide to ExpressSun® sunflowers, crop injury may also occur.

#### Restriction:

- **DO NOT** apply EXPRESS herbicide within 70 days of sunflower harvest.
- **DO NOT** apply EXPRESS herbicide to ExpressSun® sunflower fields in which germination is uneven (i.e., some plants are outside the specified leaf stage for application), as crop injury may result.
- The combined rate of the postemergence applications cannot exceed 1.0 oz/A (0.0313 lb ai/A) of EXPRESS herbicide per year.
- **DO NOT** apply EXPRESS 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 EXPRESS herbicide plus Malathion because crop injury may result

#### EXPRESSSUN® SUNFLOWER USE RATE

Apply EXPRESS herbicide at a rate of 0.25 oz/A (0.0078 lb ai/A) to 0.5 oz/A (0.0156 lb ai/A). Use the 0.5 oz/A (0.0156 lb ai/A) rate when weed infestation is heavy or predominantly consists of those weeds listed under the "Weeds Partially Controlled" section of this label, or when application timing and environmental conditions are marginal.

**Restriction:** **DO NOT** apply more than 1.0 oz/A (0.0313 lb ai/A) of EXPRESS herbicide postemergence per year.

#### CULTIVATION

A timely cultivation may be necessary to control suppressed weeds, weeds that were beyond the maximum size at application, and/or weeds that emerge after an application of EXPRESS herbicide.

- Cultivation up to 7 days before the postemergence application of EXPRESS herbicide may decrease weed control by pruning weed roots, placing the weeds under stress, and/or covering the weeds with soil and preventing coverage by EXPRESS herbicide.
- Optimum timing for cultivation is 7 – 14 days after a postemergence application of EXPRESS herbicide.

#### Restrictions:

- **DO NOT** cultivate for 7 days after application to allow EXPRESS herbicide to fully control treated weeds.
- **DO NOT** use other products that contain tribenuron-methyl.

| Active Ingredient in EXPRESS herbicide: Tribenuron-methyl |                    |                                                |                                        |                                  |                          |                                         |                                   |                            |
|-----------------------------------------------------------|--------------------|------------------------------------------------|----------------------------------------|----------------------------------|--------------------------|-----------------------------------------|-----------------------------------|----------------------------|
| Crop/ Use                                                 | Application Timing | Maximum Oz/A of Product per Single Application | Maximum AI lb/A per Single Application | Maximum Oz/A of Product per Year | Maximum AI lb/A per Year | Maximum Number of Applications per Year | Minimum Treatment Interval (Days) | Pre-Harvest Interval, Days |
| ExpressSun® Sunflowers                                    | Postemergence      | 0.5                                            | 0.0156                                 | 1                                | 0.0313                   | 2                                       | 14                                | 70                         |

#### TANK MIXTURES FOR EXPRESSSUN® SUNFLOWERS

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.

For the control of annual grasses, apply a grass herbicide including ASSURE® II herbicide (refer to the ASSURE® II product labeling for use rates, weed size, adjuvant selection, precautions, and restrictions). For maximum performance, apply ASSURE® II Herbicide at least one day before, or seven days after, the application of EXPRESS herbicide.

#### GRASS GROWN FOR SEED (in the states of ID, MN, OR, UT, WA)

EXPRESS herbicide may be used for selective postemergence control or suppression of certain broadleaf weeds in seedling and established stands of bentgrass, bluegrass, timothy, annual ryegrass, orchardgrass, tall fescue, and fine fescue grown for seed.

EXPRESS herbicide may be used on seedling and established perennial ryegrass providing user accepts all risk of possible crop injury and/or reduced seed yield.

EXPRESS herbicide may cause temporary yellowing and stunting of grass. Certain varieties of grass may be sensitive to EXPRESS herbicide. When using EXPRESS herbicide for the first time on a particular variety, limit use to a small area.

Apply EXPRESS herbicide in combination with other suitable registered herbicides (See the "TANK MIXTURES" section of this label for additional information). Always use a nonionic surfactant of at least 80% active ingredient at the rate of 0.25% v/v (1 qt per 100 gal of spray solution).

#### Restrictions:

- **DO NOT** apply more than 0.5 oz/A (0.0156 lb ai/A) of EXPRESS herbicide per year.
- **DO NOT** apply EXPRESS herbicide in a tank mix with organophosphate insecticides as severe crop injury may occur.

- **DO NOT** apply to grass that is under stress from severe weather conditions, drought, low fertility, water saturated soil, disease or insect damage, as crop injury may result. Under certain conditions including prolonged cool weather (daily high temperature less than 50° F) or wide fluctuations in day/night temperatures just prior to or soon after treatment, temporary yellowing and/or crop stunting may occur.

| Active Ingredient in EXPRESS herbicide: Tribenuron-methyl                                                                                                                                                                                                                         |                    |                                                |                                        |                                  |                          |                                         |                                   |                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|------------------------------------------------|----------------------------------------|----------------------------------|--------------------------|-----------------------------------------|-----------------------------------|----------------------------|
| Crop/ Use                                                                                                                                                                                                                                                                         | Application Timing | Maximum Oz/A of Product per Single Application | Maximum AI lb/A per Single Application | Maximum Oz/A of Product per Year | Maximum AI lb/A per Year | Maximum Number of Applications per Year | Minimum Treatment Interval (Days) | Pre-Harvest Interval, Days |
| Grass Grown for Seed:<br><ul style="list-style-type: none"> <li>• Seedling stands of annual ryegrass, orchardgrass, fine fescue &amp; tall fescue</li> <li>• Seedling stands of bentgrass</li> <li>• Seedling stands of perennial ryegrass</li> </ul>                             | Postemergence      | 0.25                                           | 0.0078                                 | 0.25                             | 0.0078                   | 1                                       | Not Applicable                    | Not Applicable             |
| Grass Grown for Seed:<br><ul style="list-style-type: none"> <li>• Seedling stands of bluegrass</li> <li>• Established stands of bentgrass, bluegrass, annual ryegrass, orchardgrass, fine fescue &amp; tall fescue</li> <li>• Established stands of perennial ryegrass</li> </ul> | Postemergence      | 0.5                                            | 0.0156                                 | 0.5                              | 0.0156                   | 1                                       | Not Applicable                    | Not Applicable             |
| For Weed Control in Non-Food/Non-Feed Grass Grown for Seed Production Only in the State of Minnesota<br>Seedling stands of timothy                                                                                                                                                | Postemergence      | 0.25                                           | 0.0078                                 | 0.25                             | 0.0078                   | 1                                       | Not Applicable                    | Not Applicable             |
| For Weed Control in Non-Food/Non-Feed Grass Grown for Seed Production Only in the State of Minnesota<br>Established stands of timothy                                                                                                                                             | Postemergence      | 0.375                                          | 0.0117                                 | 0.375                            | 0.0117                   | 1                                       | Not Applicable                    | Not Applicable             |
| For Weed Control in Non-Food/Non-Feed Grass Grown for Seed Production Only in the State of Minnesota<br>Seedling stands of bluegrass                                                                                                                                              | Postemergence      | 0.375                                          | 0.0117                                 | 0.375                            | 0.0117                   | 1                                       | Not Applicable                    | Not Applicable             |
| For Weed Control in Non-Food/Non-Feed Grass Grown for Seed Production Only in the State of Minnesota<br>Established stands of bluegrass                                                                                                                                           | Postemergence      | 0.5                                            | 0.0156                                 | 0.5                              | 0.0156                   | 1                                       | Not Applicable                    | Not Applicable             |
| For Weed Control in Non-Food/Non-Feed Grass Grown for Seed Production Only in the State of Minnesota<br>Seedling stands of perennial ryegrass                                                                                                                                     | Postemergence      | 0.15                                           | 0.0047                                 | 0.15                             | 0.0047                   | 1                                       | Not Applicable                    | Not Applicable             |
| For Weed Control in Non-Food/Non-Feed Grass Grown for Seed Production Only in the State of Minnesota<br>Established stands of perennial ryegrass                                                                                                                                  | Postemergence      | 0.375                                          | 0.0117                                 | 0.375                            | 0.0117                   | 1                                       | Not Applicable                    | Not Applicable             |

## TANK MIXTURES FOR GRASS GROWN FOR SEED

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.

Always use EXPRESS herbicide in a tank mix with another broadleaf herbicide including 2,4-D, MCP or dicamba as these herbicides safen the effects of EXPRESS herbicide on grasses while improving weed control performance on most broadleaf weeds. Testing has shown that 2,4-D and dicamba are more effective in a tank mix with EXPRESS herbicide than MCP.

EXPRESS herbicide can be applied with liquid fertilizers. Liquid fertilizers (20%, 28%, 32% N at a minimum of 4 gal/100 gal of spray solution) enhance the performance of EXPRESS herbicide and may improve crop safety. Always use a surfactant and another broadleaf herbicide when using liquid fertilizer with EXPRESS herbicide.

## BENTGRASS, BLUEGRASS, ANNUAL RYEGRASS, ORCHARDGRASS, FINE FESCUE AND TALL FESCUE

**Seedling Stands:** For use on annual ryegrass, orchard grass, tall fescue and fine fescue, apply at 0.25 oz/A (0.0078 lb ai/A) after stand is in 4-leaf stage. For use on bentgrass, apply at 0.25 oz/A (0.0078 lb ai/A) after stolens are 3 to 5 inches across. For use on bluegrass, apply at 0.25 oz/A (0.0078 lb ai/A) to 0.5 oz/A (0.0156 lb ai/A) after stand is in the 4-leaf stage.

**Established Stands:** For stands that have been established for at least one growing season (fall or spring), apply EXPRESS herbicide at 0.25 oz/A (0.0078 lb ai/A) to 0.5 oz/A (0.0156 lb ai/A). Use the higher rate for larger weeds and hard to control weeds like wild carrot. Apply prior to jointing.

## PERENNIAL RYEGRASS

Perennial ryegrass is more sensitive to EXPRESS herbicide than other grass species. Crop injury in the form of stunting and possible reduced seed yield may occur. To minimize the risk of crop injury, use the 0.25 oz/A (0.0078 lb ai/A) rate and always use either 2,4-D or dicamba and liquid nitrogen with EXPRESS herbicide.

**Seedling Stands:** Apply EXPRESS herbicide at 0.25 oz/A (0.0078 lb ai/A) in a tank mix with another suitable broadleaf herbicide after grass is in the 5- to 6-leaf stage.

**Established Stands:** For stands that have been established for one growing season (fall or spring) apply EXPRESS herbicide at 0.25 oz/A (0.0078 lb ai/A) to 0.5 oz/A (0.0156 lb ai/A) in a tank mix with another suitable broadleaf herbicide. Apply prior to jointing.

**Note:** Use the 0.5 oz/A (0.0156 lb ai/A) rate of EXPRESS herbicide only for the control or suppression of problem weeds like wild carrot where the benefit of weed control may offset by possible crop injury including possible yield reduction.

## FOR WEED CONTROL IN NON-FOOD/NON-FEED GRASS GROWN FOR SEED PRODUCTION IN THE STATE OF MINNESOTA

### BLUEGRASS AND TIMOTHY

**Seedling stands:** For best results apply EXPRESS herbicide in a tank mix with another suitable broadleaf herbicide. For use on timothy, apply at 0.25 oz/A (0.0078 lb ai/A) after stand is in the 4-5 leaf stage. Always use in a tank mix with 2,4-D at 0.5 lb ai/A (1 pint of 4 lb/gal product). For use on bluegrass, apply at 0.15 to 0.375 oz/A (0.0047 to 0.0117 lb ai/A) after stand is in the 4 leaf stage.

**Established stands:** For stands that have been established for at least one growing season (fall or spring), apply EXPRESS herbicide at 0.15 to 0.5 oz/A (0.0047 - 0.0156 lb ai/A) in a tank mix with another suitable broadleaf herbicide. Apply prior to jointing. For application on timothy, limit maximum use rate to 0.375 oz/A (0.0117 lb ai/A) of EXPRESS herbicide and always use in a tank mix with 2,4 D at 0.5 lb ai/A (1 pint of 4 lb/gal product).

### PERENNIAL RYEGRASS

Perennial ryegrass is more sensitive to EXPRESS herbicide than other grass species. Crop injury in the form of stunting and possible reduced seed yield may occur. To minimize the risk of crop injury, use the 0.15 oz/A rate (0.0047 lb ai/A) and always use either 2,4-D or dicamba (including Clarity® herbicide) and liquid nitrogen with EXPRESS herbicide.

**Seedling stands:** Apply EXPRESS herbicide at 0.15 oz/A (0.0047 lb ai/A) in a tank mix with another suitable broadleaf herbicide after grass is in the 5 to 6 leaf stage.

**Established stands:** For stands that have been established for one growing season (fall or spring), apply EXPRESS herbicide at 0.15 to 0.375 oz/A (0.0047 to 0.0117 lb ai/A) in a tank mix with another suitable broadleaf herbicide. Apply prior to jointing.

## WEED CONTROL INFORMATION

### WEEDS CONTROLLED

EXPRESS herbicide effectively controls the following weeds when used according to label directions:

|                                                                                     |                                                                                  |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------|
| Black mustard                                                                       | Marestail***†                                                                    |
| Blue/Purple mustard                                                                 | Marshelder†                                                                      |
| Bushy wallflower/Treacle mustard†                                                   | Mayweed chamomile/Stinking chamomile/dog fennel ( <i>Anthemis cotula</i> L.)***† |
| Canada thistle**                                                                    | Miners lettuce                                                                   |
| Coast fiddleneck                                                                    | Narrowleaf hawksbeard** ***                                                      |
| Common Chickweed†                                                                   | Nightflowering catchfly                                                          |
| Common Groundsel                                                                    | Pineappleweed                                                                    |
| Common Lambsquarters†                                                               | Poison hemlock***                                                                |
| Common Purslane                                                                     | Prickly lettuce***†                                                              |
| Corn, Gromwell**                                                                    | Puncturevine                                                                     |
| Corn spurry                                                                         | Purslane speedwell (@ 0.5 oz/A, 0.0156 lb ai/A)***                               |
| Cowcockle                                                                           | Redroot pigweed†                                                                 |
| Cressleaf groundsel *** (butterweed)                                                | Russian thistle***†                                                              |
| Curly Dock**                                                                        | Shepherd's-purse                                                                 |
| Dandelion                                                                           | Slimleaf lambsquarters                                                           |
| Deadnettle††                                                                        | Small-flower buttercup (@ 0.5 oz/A, 0.0156 lb ai/A)***                           |
| Early whitlowgrass                                                                  | Smallseed falseflax†                                                             |
| False chamomile/Wild chamomile/Scentless chamomile ( <i>Matricaria maritima</i> L.) | Tansymustard                                                                     |
| Field pennycress                                                                    | Tarweed fiddleneck                                                               |
| Flixweed†                                                                           | Tumble pigweed (@ 0.5 oz/A, 0.0156 lb ai/A)                                      |
| Hairy buttercup                                                                     | Tumble/Jim Hill mustard**                                                        |
| Kochia***†                                                                          | White cockle (@ 0.5 oz/A, 0.0156 lb ai/A)                                        |
| London Rocket                                                                       | Wild mustard†                                                                    |

### WEEDS PARTIALLY CONTROLLED\*

EXPRESS herbicide partially controls the following weeds when used according to label directions:

|                                  |                        |
|----------------------------------|------------------------|
| Annual sowthistle                | Pennsylvania smartweed |
| Burning Nettle**                 | Prostrate knotweed     |
| Common cocklebur†                | Redmaids               |
| Common sunflower (volunteer)***† | Redstem filaree ***    |
| Common vetch**                   | Wild buckwheat         |
| Eastern black nightshade†        | Wild carrot            |
| Hairy nightshade                 | Wild garlic            |
| Hairy vetch**                    | Wild radish**          |
| Henbit                           |                        |

\* Partially controlled weeds exhibit a visual reduction in numbers as well as a significant loss of vigor. For better results, use 0.375 (0.0117 lb ai/A) to 0.5 oz/A (0.0156 lb ai/A) of EXPRESS herbicide and include a tank mix partner including 2,4-D, MCP, bromoxynil or dicamba. See the "TANK MIXTURES" section of this label.

\*\* See the Specific Weed Instructions section of this label for more information.

\*\*\*2,4-D LVE addition required.

† Naturally occurring resistant biotypes are known to occur.

†† 0.5 oz/A (0.0156 lb ai/A) EXPRESS herbicide only

## SPECIFIC WEED INSTRUCTIONS

**Burning Nettle:** For best results, apply 0.5 oz/A (0.0156 lb ai/A) of EXPRESS herbicide in a tank mix with Aim EC herbicide, Shark® EW herbicide, or ET® herbicide to small actively growing weeds less than 4" tall.

**Canada thistle:** For best results, apply 0.5 oz/A (0.0156 lb ai/A) of EXPRESS herbicide when all thistles are 4" to 8" with 2" to 6" of new growth. Make the application in the spring.

**Corn Gromwell :** For best results, apply 0.5 oz/A (0.0156 lb ai/A) of EXPRESS herbicide in combination with 2,4-D or MCP (refer to the Tank Mixtures section of this label).

**Curly Dock:** For best results, apply 0.375 oz/A (0.0117 lb ai/A) to 0.5 oz/A (0.0156 lb ai/A) of EXPRESS herbicide in combination with 2,4-D or MCP (refer to the Tank Mixtures section of this label).

**Kochia:** For best results, apply EXPRESS herbicide in a tank mix with Starane® Ultra herbicide Starane Ultra herbicide + Salvo® herbicide, Starane Ultra herbicide + Sword® herbicide, Clarity herbicide, and 2,4-D or MCP (ester or amine), or bromoxynil containing products.

Apply EXPRESS herbicide in the spring when kochia is less than 2" tall and is actively growing (refer to the Tank Mixtures section of this label for additional details on rates and restrictions).

**Mayweed chamomile/Stinking Chamomile/dog fennel:** For best results, apply 0.375 oz/A (0.0117 lb ai/A) to 0.5 oz/A (0.0156 lb ai/A) of EXPRESS herbicide.

**Narrowleaf hawksbeard:** During the post harvest, fallow, and/or pre-plant burndown period, EXPRESS herbicide may be used in a tank mix with ABUNDIT® Edge herbicide-(at labeled rates) for postemergence control of narrowleaf hawksbeard.

For wheat, EXPRESS herbicide may be used in a tank mix with 2,4-D for postemergence control of narrowleaf hawksbeard. Apply this tank mix only in the spring when the wheat is fully tillered and before the jointing stage.

**Russian thistle, Prickly lettuce:** For best results, use EXPRESS herbicide in a tank mix with Clarity herbicide and 2,4-D or MCP (ester or amine), or bromoxynil containing products.

Apply EXPRESS herbicide in the spring when Russian thistle, and prickly lettuce are less than 2" tall or 2" across and are actively growing (refer to the Tank Mixtures section of this label for additional details on rates and restrictions).

**Tumble/Jim Hill mustard:** For best results, apply 0.5 oz/A (0.0156 lb ai/A) of EXPRESS herbicide in combination with 2,4-D or MCP (refer to the Tank Mixtures section of this label).

**Vetch (common and hairy):** For best results, apply 0.375 oz/A (0.0117 lb ai/A) to 0.5 oz/A (0.0156 lb ai/A) of EXPRESS herbicide when vetch is less than 6" in length. For severe infestations of vetch, or when vetch is greater than 6" in length, apply EXPRESS herbicide in combination with 2,4-D or MCP (refer to the Tank Mixtures section of this label).

**Wild radish:** For best results, apply 0.25 oz/A (0.0078 lb ai/A) - 0.5 oz/A (0.0156 lb ai/A) EXPRESS herbicide plus MCP plus 0.25% v/v nonionic surfactant (1 qt per 100 gal of spray solution) to wild radish rosettes less than 6 " diameter. Make the application either in the fall or spring. Applications made later than 30 days after weed emergence will result in partial control. Make applications in the fall before plants harden-off.

**Volunteer ExpressSun® Sunflowers:** For best results, use EXPRESS herbicide in a tank mix with Starane Ultra herbicide, Starane Ultra herbicide + Salvo® herbicide, Starane Ultra herbicide + Sword herbicide or Clarity herbicide-and 2,4-D or MCP (ester or amine), or bromoxynil containing products.

## SPRAY ADJUVANTS - ALL CROPS OR USES

Include a spray adjuvant with applications of EXPRESS herbicide. In addition, an ammonium nitrogen fertilizer may be used.

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 EXPRESS herbicide, select adjuvants authorized for use with both products. Products must contain only EPA-exempt ingredients.

## NONIONIC SURFACTANT (NIS)

- Apply 0.06 to 0.50% v/v (0.5 pt to 4 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) or 2% under arid conditions. 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. Consult separate FMC technical bulletins for detailed information before using adjuvant types not specified on this label.

## CROP ROTATION

Labeled crops may be planted at specified time intervals following application of labeled rates of EXPRESS herbicide. Use the time intervals listed below to determine the required time interval before planting.

### Time Interval Before Planting\* (days after treatment with EXPRESS herbicide)

| Crop                                                                        | Days |
|-----------------------------------------------------------------------------|------|
| Barley, Rice, Triticale, ExpressSun® sunflowers and Wheat (including durum) | 0    |
| Oats and Soybeans (at EXPRESS herbicide rate of 0.25 oz/A) (0.0078 lb ai/A) | 1**  |
| Soybeans                                                                    | 7**  |
| Cotton, Field Corn, and Grain/forage, Sorghum                               | 14** |
| Sugarbeets, Winter Rape, and Canola                                         | 60   |
| Any other crop                                                              | 45   |

\* Refer to individual product labels to determine rotational crop restrictions when tank mixtures are used.

\*\*Where EXPRESS herbicide is used on light textured soils (including sands and loamy sands) or on high pH soils (>7.9), extend time to planting by 7 additional days.

## MIXING INSTRUCTIONS

### PRODUCT MEASUREMENT

EXPRESS herbicide can be measured using the EXPRESS herbicide volumetric measuring cylinder provided by FMC. The degree of accuracy of this cylinder varies by  $\pm 7.5\%$ . For more precise measurement, use scales calibrated in ounces.

### MIXING

1. Fill the tank 1/4 to 1/3 full of water.
2. While agitating, add the required amount of EXPRESS herbicide.
3. Continue agitation until the EXPRESS herbicide is fully dispersed, at least 5 minutes.
4. Once the EXPRESS herbicide is fully dispersed, maintain agitation and continue filling tank with water. Thoroughly mix EXPRESS herbicide with water before adding any other material.
5. As the tank is filling, add tank mix partners (if desired) then add the required volume of spray adjuvant. Always add spray adjuvant last. Antifoaming agents may be used. **DO NOT** use with spray additives that alter the pH of the spray solution below pH 6.0 as rapid product degradation can occur. Spray solutions of pH 7.0 and higher allow for optimum stability of EXPRESS herbicide.
6. If the mixture is not continuously agitated, settling will occur. If settling occurs, thoroughly re-agitate before using.
7. Apply EXPRESS herbicide spray mixture within 24 hours of mixing to avoid product degradation.
8. If EXPRESS herbicide and a tank mix partner are to be applied in multiple loads, pre-slurry the EXPRESS herbicide in clean water prior to adding to the tank. This will prevent the tank mix partner from interfering with the dissolution of the EXPRESS herbicide.

### SPRAY EQUIPMENT

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.

For additional information on spray drift refer to Spray Drift Management section of label.

Continuous agitation is not required to keep EXPRESS herbicide in suspension but may be required to keep tank mix partners in solution or suspension. Refer to tank mix partner labels for additional information.

### BEFORE SPRAYING EXPRESS HERBICIDE

The spray equipment must be clean before EXPRESS 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 EXPRESS herbicide section of this label.

### AT THE END OF THE DAY

When multiple loads of EXPRESS herbicide are applied, it is specified 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 EXPRESS HERBICIDE AND BEFORE SPRAYING CROPS OTHER THAN WHEAT, BARLEY, OATS, AND TRITICALE**

To avoid subsequent injury to desirable crops, thoroughly clean all mixing and spray equipment immediately following applications of EXPRESS 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 by-pass lines, for at least two minutes. Flush the boom well and empty the sprayer. Completely drain the sump.
3. Repeat step 2.
4. Remove the nozzles and screens and clean separately in a bucket containing water. 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 required to facilitate the removal of any caked deposits.
2. When EXPRESS herbicide is tank mixed with other pesticides, examine all cleanout procedures for each product and follow the most rigorous procedure.
3. Follow any pre-cleanout guidelines on other product labels.

## **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 5 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 suitable for EXPRESS herbicide applications, as weed control performance may be reduced.
- Use screens that are 50-mesh or larger.

For application in California refer to the "CALIFORNIA APPLICATION REQUIREMENTS" section of this label for specific ground application requirements.

## AERIAL APPLICATION

For aerial application, select nozzles and pressure that provide optimum spray distribution and maximum coverage at 2 to 5 GPA.

Use at least 2 GPA. In Idaho, Oregon and Utah use at least 3 GPA.

**DO NOT** apply EXPRESS herbicide by air in the state of New York.

See the **Spray Drift Management** section of this label.

For application in California refer to the "CALIFORNIA APPLICATION REQUIREMENTS FOR PROTECTION OF SENSITIVE CROPS" section of this label for specific aerial application requirements.

## CHEMIGATION

EXPRESS herbicide may be applied through sprinkler irrigation systems in the State of Idaho for use in fall-seeded wheat, spring seeded barley and spring seeded wheat. Use 0.375 oz/A (0.0117 lb ai/A) to 0.5 oz/A (0.0156 lb ai/A) of EXPRESS herbicide in combination with bromoxynil containing herbicides. Apply to wheat and barley after the 3-leaf stage but before the flag leaf is visible. Make only one chemigation application of this tank mixture per year. For best results, apply to broadleaf weeds up to the 4-leaf stage, or 2 inches in height or 1 inch in diameter, whichever comes first.

Apply this tank mix through sprinkler irrigation systems including center pivot, lateral move, side (wheel) roll, solid set or hand move irrigation systems only. **DO NOT** apply these herbicides through any other type of irrigation system.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. If you have questions about calibration, contact State Extension Service specialists, equipment manufacturers or other experts. **DO NOT** connect an irrigation system (including greenhouse systems) used for EXPRESS herbicide application to any public water system. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

The sprinkler chemigation system must contain a functional check valve, vacuum relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from back flow. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops. The irrigation line or water pump must include a functional pressure switch, which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected. Systems must use a metering pump, including a positive displacement injection pump (e. g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock. **DO NOT** apply when wind speed favors drift beyond the area intended for treatment.

## CHEMIGATION REQUIREMENTS

1. In center pivot and continuous lateral move systems, apply EXPRESS herbicide + bromoxynil containing herbicides continuously for the duration of the water application. In solid set systems, apply the tank mix during the last 30 to 45 minutes of the irrigation.
2. Set the sprinkler system to deliver approximately 0.5 inch or less of water/A for best product performance.
3. Fill the supply tank with half of the water amount desired, add the EXPRESS herbicide and agitate it well. Add the bromoxynil containing herbicide and then add the remaining water amount with agitation. Bromoxynil containing herbicides require a dilution with at least 4 parts water to 1 part bromoxynil containing herbicide.
4. Agitation is required in the pesticide supply tank when applying this tank mix.
5. Inject the EXPRESS herbicide + bromoxynil containing herbicides solution at least 8 feet ahead of a right angle turn of irrigation pipe to insure adequate mixing. Allow sufficient time for the herbicide mixture to be flushed through the lines before turning off irrigation water.
6. Follow both EXPRESS herbicide and bromoxynil containing herbicides label instructions for spray tank cleanout both before and after application. Flush lines with clean water following application.
7. **DO NOT** apply when wind speed favors drift beyond the area intended for treatment. Avoiding spray drift is the responsibility of the applicator.

## **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.

## **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 aurally 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.

## WIND

Drift potential generally increases with wind speed. **AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS.** Applicators need to be familiar with local wind patterns and terrain that could affect 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).

## CALIFORNIA APPLICATION REQUIREMENTS FOR PROTECTION OF TOMATO, CUCUMBER, SUGARBEET, OTHER BROADLEAF CROPS, AND TREE & VINE CROPS

**Review the required "MANDATORY SPRAY DRIFT" section for all states before applying in California, the below requirements are in addition, duplicative or more restrictive when applying near listed crops in California.** The following drift management requirements must be followed to minimize the potential for exposure of sensitive crops. Determine the prevailing wind speed and direction before application.

### SPRAY QUALITY

Apply with nozzles that give a coarse droplet size spectrum (volume median diameter (VMD) of 350-400 microns) and minimize droplets that are less than 200 microns.

#### For aerial application:

- **Nozzle orientation:** Nozzles must be oriented so the spray is directed toward the back of the aircraft.
- **Spray volume:** Apply a spray volume between 5 and 10 GPA
- **Wind speed:** **DO NOT** apply when wind speeds exceed 10 miles per hour at the application site. **AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS.**
- **Aircraft equipment:** The boom length must not exceed 65% of the wingspan for airplanes or 75% of the rotor blade diameter for helicopters.
- **Application height:** **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. Applications must be made at the lowest application height that provides uniform coverage and must be consistent with safe operation of the aircraft.

#### For ground application,

- **Wind speed:** **DO NOT** apply when wind speeds exceed 10 miles per hour at the application site. **AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS.**
- **Boom height:** Apply with the nozzle height recommended by the manufacturer, but no more than 3 feet above ground or crop canopy. The buffer zones may be reduced when application is made with a low boom (20 inches) above the top of the crop canopy. The boom should remain level with the crop and have minimal bounce.

### California Buffer Zones

The following buffer zones between the treated area and sensitive crops (specified in the table below) are required when these below listed crops are downwind of the application site:

| Sensitive Crop                                                                 | Ground Application<br>Low boom | Ground<br>High Boom | Aerial<br>Application |
|--------------------------------------------------------------------------------|--------------------------------|---------------------|-----------------------|
| Tomato, cucumber, sugarbeet                                                    | 350 ft                         | 500 ft              | 1,300 ft              |
| Other broadleaf crops                                                          | 50 ft                          | 50 ft               | 500 ft                |
| Tree and vine crops                                                            | 50 ft                          | 50 ft               | 500 ft                |
| Dormant tree and vine                                                          | No buffer zone required        |                     |                       |
| Tree and vine crops <b>DO NOT</b> require buffer zones when crops are dormant. |                                |                     |                       |

### GRAZING, FEEDING, AND HARVESTING

Allow at least 7 days between application and grazing of treated forage. In addition, allow at least 7 days between application and feeding of forage (green chop) from treated areas to livestock. Allow at least 30 days between application and feeding of hay from treated areas to livestock. Allow at least 45 days between application and harvesting of grain. Harvested straw may be used for bedding and/or feed.

**IDENTIFICATION INFORMATION FOR PRODUCTS REFERENCED IN THIS LABEL**

| <b>Product Name</b>                                 | <b>Active Ingredient(s)</b>                 | <b>EPA<br/>Registration Number</b> |
|-----------------------------------------------------|---------------------------------------------|------------------------------------|
| ABUNDIT® Extra                                      | Glyphosate                                  | 71368-20                           |
| AIM® EC Herbicide                                   | Carfentrazone-ethyl                         | 279-3241                           |
| ALLY® XP herbicide                                  | Metsulfuron-methyl                          | 279-9575                           |
| ASSURE® II herbicide                                | Quizalofop p-ethyl                          | 352-541                            |
| Axial® XL herbicide                                 | Pinoxaden                                   | 100-1256                           |
| Clarity® herbicide                                  | Dicamba                                     | 7969-137                           |
| Curtail® Herbicide                                  | Clopyralid                                  | 62719-48                           |
| Discover® NG Herbicide                              | Clodinafop-Propargyl                        | 100-1173                           |
| ET® herbicide                                       | pyraflufen-ethyl                            | 71711-7                            |
| Everest® 3.0 Herbicide                              | Flucarbazone-Sodium                         | 66330-429                          |
| GR1 Herbicide                                       | Pyroxsulam                                  | 279-9623                           |
| GR2 Herbicide                                       | Pyroxsulam                                  | 279-9631                           |
| HARMONY® Extra SG (with TotalSol® Soluble Granules) | Thifensulfuron methyl,<br>Tribenuron methyl | 279-9602                           |
| Osprey® herbicide                                   | Mesosulfuron-methyl,                        | 264-802                            |
| PowerFlex® HL herbicide                             | Pyroxsulam                                  | 62719-643                          |
| Shark® EW herbicide                                 | Carfentrazone- ethyl                        | 279-3242                           |
| Simplicity™ CA herbicide                            | Pyroxsulam                                  | 62719-568                          |
| Stinger® Herbicide                                  | Clopyralid                                  | 62719-73                           |
| Starane® Ultra herbicide                            | fluroxypyr                                  | 62719-577                          |
| Salvo® herbicide                                    | 2,4-D                                       | 34704-609                          |
| Sword® herbicide                                    | MCPA                                        | 228-267-34704                      |
| TeamMate™ herbicide                                 | Pyroxsulam                                  | 62719-686                          |
| Widematch® Herbicide                                | Clopyralid + Fluroxypyr                     | 62719-512                          |

## PESTICIDE STORAGE AND DISPOSAL

**Pesticide Storage:** Store the product in original container only. **DO NOT** contaminate water, other pesticides, fertilizer, food, or feed in storage. Store in a cool, dry place.

**Product Disposal:** **DO NOT** contaminate water, food, or feed by disposal. Wastes 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 Plastic and Metal Containers (Capacity Equal to or Less Than 50 Pounds):** 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 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 Plastic and Metal Containers (Capacity Greater Than 50 Pounds):** 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 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 incineration. 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 Paper or Plastic Bags, Fiber Sacks including Flexible Intermediate Bulk Containers (FIBC) or Fiber Drums With Liners:** Nonrefillable container. **DO NOT** reuse or refill this container. Completely empty paper or plastic bag, fiber sack or drum liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application or manufacturing equipment. Then offer for recycling if available or dispose of empty paper or plastic bag, fiber sack or fiber drum and liner in a sanitary landfill, or by incineration. **DO NOT** burn, unless allowed by state and local ordinances.

**Refillable Fiber Drums With Liners:** Refillable container (fiber drum only). Refilling Fiber Drum: Refill this fiber drum with EXPRESS herbicide containing tribenuron methyl only. **DO NOT** reuse this fiber drum for any other purpose. Cleaning before refilling is the responsibility of the refiller. Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application or manufacturing equipment. Disposing of Fiber Drum and/or Liner: **DO NOT** reuse this fiber drum for any other purpose other than refilling (see preceding). Cleaning the container (liner and/or fiber drum) before final disposal is the responsibility of the person disposing of the container. Offer the liner for recycling if available or dispose of liner in a sanitary landfill, or by incineration. **DO NOT** burn, unless allowed by state and local ordinances. If drum is contaminated and cannot be reused, dispose of it in the manner required for its liner. To clean the fiber drum before final disposal, completely empty the fiber drum by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application or manufacturing equipment. Then offer the fiber drum for recycling if available or dispose of in a sanitary landfill, or by incineration. **DO NOT** burn, unless allowed by state and local ordinances.

**All Other Refillable Containers:** Refillable container. Refilling Container: Refill this container with EXPRESS herbicide containing tribenuron methyl 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 including cracks, punctures, abrasions, worn out threads and closure devices. If damage is found, **DO NOT** use the 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.

**Outer Foil Pouches of Water Soluble Packets (WSP):** Nonrefillable container. **DO NOT** reuse or refill this container. Offer for recycling if available or, dispose of the empty outer foil pouch in the trash as long as WSP is unbroken. If the outer pouch contacts the formulated product in any way, the pouch must be triple rinsed with clean water. Add the rinsate to the spray tank and dispose of the outer pouch as described previously.

**DO NOT** transport if this container is damaged or leaking. 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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Salvo and Sword are trademarks of Loveland Products, Inc.

**SL-4304 120519 12-05-19**

## **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.**



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY  
AND POLLUTION PREVENTION

December 5, 2019

BONNIE J BIEBER  
REGISTRATION SPECIALIST  
FMC CORPORATION  
STINE RESEARCH CENTER  
1090 ELKTON ROAD  
NEWARK, DELAWARE 19711

Subject: Label Amendment – Add new Supplemental label and revise Master  
Product Name: EXPRESS HERBICIDE WITH TOTALSOL SOLUBLE  
GRANULES  
EPA Registration Number: 279-9594  
Application Date: 10/31/2019  
Decision Number: 557595

Dear Ms. Bieber:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable. This approval does not affect any conditions that were previously imposed on this registration. You continue to be subject to existing conditions on your registration and any deadlines connected with them.

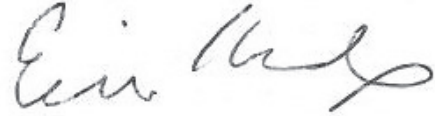
A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

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.

Page 2 of 2  
EPA Reg. No. 279-9594  
Decision No. 557595

Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA section 6. If you have any questions, please contact Francisco Llarena-Arias by phone at 703-347-0459, or via email at [llarena-arias.francisco@epa.gov](mailto:llarena-arias.francisco@epa.gov).

Sincerely,

A handwritten signature in dark ink, appearing to read "Erik Kraft", written in a cursive style.

Erik Kraft, Product Manager 24  
Fungicide and Herbicide Branch  
Registration Division (7505P)  
Office of Pesticide Programs

Enclosure



|                   |       |   |           |
|-------------------|-------|---|-----------|
| TRIBENURON METHYL | GROUP | 2 | HERBICIDE |
|-------------------|-------|---|-----------|

*HERBICIDE WITH TOTALSOL®  
SOLUBLE GRANULES*

**Soluble Granule**

**For Use on Cereals, ExpressSun®, Sunflowers, Grass grown for seed, Fallow and as a Pre-plant or Post-harvest Burndown Herbicide**

| Active Ingredient | By Weight |
|-------------------|-----------|
| Tribenuron methyl | 50%       |
| Other Ingredients | 50%       |
| TOTAL             | 100%      |

EPA Reg. No. 279-9594

Contains 0.50 lb active ingredient per pound.

EPA Est. No. \_\_\_\_\_

**Nonrefillable Container**

**Refillable Container**

Net: \_\_\_\_\_ OR Net: \_\_\_\_\_

**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:** 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.

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  
HAZARDS TO HUMANS AND DOMESTIC ANIMALS**

**Caution:** Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Avoid contact with skin, eyes or clothing.

For medical emergencies involving this product, call toll free 1-800-331-3148.

**PERSONAL PROTECTIVE EQUIPMENT (PPE)**

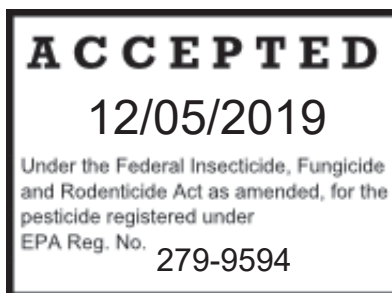
**Mixers, loaders, applicators, and other handlers must wear:**

Long-sleeved shirt and long pants.

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

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

Sold By:  
**FMC**  
FMC Corporation  
2929 Walnut Street  
Philadelphia, PA 19104



## 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.

Important: When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for "Applicators and Other Handlers" and have such PPE immediately available for use in an emergency, including a spill or equipment breakdown.

## USER SAFETY RECOMMENDATIONS

### USERS SHOULD:

- Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.
- 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

**DO NOT** apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. **DO NOT** contaminate water when cleaning equipment or disposing of equipment washwaters or rinsate.

### 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 including 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 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, including plants, soil, or water, is:

- Coveralls.
- Chemical resistant gloves made of any waterproof material.
- Shoes plus socks.

EXPRESS® herbicide (with TotalSol® soluble granules), referred to below as EXPRESS herbicide, must be used only 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.

To the extent consistent with applicable law, FMC will not be responsible for losses or damages resulting from the use of this product in any manner not specified by FMC.

EXPRESS herbicide may be used on wheat (including durum), barley, triticale, oats, burndown, certain grasses grown for seed, and ExpressSun® sunflowers in most states. Check with your state extension service or Department of Agriculture before use, to be certain EXPRESS herbicide is registered in your state.

## **PRODUCT INFORMATION**

EXPRESS herbicide is a water soluble granule that is used for selective postemergence weed control in wheat (including durum), barley, triticale, oats and ExpressSun® sunflowers; and for post-harvest burndown, fallow, and pre- plant burndown weed control. The best control is obtained when EXPRESS herbicide is applied to young, actively growing weeds. The use rate will depend on weed spectrum and size of weeds at time of application. The degree and duration of control may depend on the following:

- Weed spectrum and infestation intensity
- Weed size at application
- Environmental conditions at and following treatment

EXPRESS herbicide is noncorrosive, nonflammable, nonvolatile, and does not freeze. Mix EXPRESS herbicide in water and apply as a uniform broadcast spray.

### **Biological Activity**

EXPRESS herbicide is absorbed through the foliage of broadleaf weeds, rapidly inhibiting their growth. Leaves of susceptible plants appear chlorotic from 1 to 3 weeks after application and the growing point subsequently dies.

EXPRESS herbicide provides the best control in vigorously growing crops that shade competitive weeds. Weed control in areas of thin crop stand or seeding skips may not be as satisfactory. However, a crop canopy that is too dense at application can intercept the spray and reduce weed control.

EXPRESS herbicide may injure crops that are stressed from adverse environmental conditions (including extreme temperatures or moisture), abnormal soil conditions, or cultural practices. In addition, different varieties of the crop may have differing levels of sensitivity to treatment with EXPRESS herbicide under otherwise normal conditions.

Treatment of sensitive crop varieties may injure crops. To reduce the potential of crop injury to cereals, tank mix EXPRESS 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.

In warm, moist conditions, the expression of herbicide symptoms is accelerated in weeds; in cold, dry conditions, the expression of herbicide symptoms is delayed. In addition, weeds hardened-off by drought stress are less susceptible to EXPRESS herbicide.

Weed control may be reduced if rainfall or snowfall occurs soon after application. Several hours of dry weather are needed to allow EXPRESS herbicide to be sufficiently absorbed by weed foliage.

## RESTRICTIONS

- Injury to or loss of desirable trees 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** use on lawns, walks, driveways, paved surfaces, or tennis courts. Prevent drift of spray to desirable plants.
  - **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 EXPRESS herbicide by air in the state of New York.
- The maximum amount of the active ingredient tribenuron-methyl for all uses is 0.5 ounces (0.0313 lb ai) per acre per year.
- The maximum amount of EXPRESS herbicide for all uses per acre per year is 1 ounce (0.0313 lb ai/A).
- The maximum number of applications per year of EXPRESS herbicide for all uses is four (when using less than the maximum single application rate), refer to the summary table in each use section for specific number of application for a given crop.

## PRECAUTIONS

- Injury to or loss of adjacent sensitive crops and vegetation may result from failure to observe the following:
  - Take all necessary precautions to avoid all direct or indirect contact (including spray drift) with non-target plants or areas.
  - Carefully observe all sprayer cleanup instructions both prior to and after using this product, as spray tank residue may damage crops other than wheat, barley, oats and ExpressSun® sunflowers.
- Varieties of wheat (including durum), barley, oats 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.
- Under certain conditions including heavy rainfall, prolonged cold weather, or wide fluctuations in day/night temperatures prior to or soon after EXPRESS herbicide application, temporary discoloration and/or crop injury may occur. To reduce the potential of crop injury, tank mix EXPRESS 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.
- Dry, dusty field conditions may result in reduced control in wheel track areas.
- Calibrate sprayers only with clean water away from well sites.
- Make scheduled checks of spray equipment.
- Ensure that all operation employees accurately measure pesticides.
- Mix only enough product for the job at hand.
- Avoid overfilling of spray tank.
- Dilute and agitate excess solution and apply at labeled rates or uses.
- When triple-rinsing the pesticide container, be sure to add the rinsate to the spray mix.

## WEED RESISTANCE MANAGEMENT

EXPRESS herbicide, which contains the active ingredient tribenuron-methyl is a group 2 herbicide 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 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 EXPRESS 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 this MOA have been found in your region. If resistant biotypes of target weeds have been reported, use the application rates of this product specified for your local conditions. Tank mix products so that there are multiple effective sites of actions for each target weed.
- 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 EXPRESS 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.

## **APPLICATION INFORMATION**

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

## **TANK MIX INFORMATION**

Read and follow all label instructions on timing, precautions, and warnings for any companion products before using these tank mixtures. 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.

## WHEAT, BARLEY, OATS AND TRITICALE

### APPLICATION TIMING

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

For spring oats, make applications after the crop is in the 3-leaf stage, but before jointing. **DO NOT** use on "Ogle", "Porter" or "Premier" seed varieties as crop injury may occur.

Since EXPRESS herbicide has very little or no soil activity, it controls only those weeds that have germinated; therefore, apply EXPRESS herbicide when all or most of the weeds have germinated. Annual broadleaf weeds must be past the cotyledon stage, actively growing, and less than 4" tall or wide.

#### Restriction:

- **DO NOT** apply to wheat, barley, oats or triticale underseeded with another crop.
- **DO NOT** apply EXPRESS herbicide to wheat, barley, oats or 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.
- Grazing, Feeding, and Harvesting
  - Allow at least 7 days between application and grazing of treated forage.
  - Allow at least 7 days between application and feeding of forage (green chop) from treated areas to livestock.
  - Allow at least 30 days between application and feeding of hay from treated areas to livestock.
  - Allow at least 45 days between application and harvesting of grain. Harvested straw may be used for bedding and/or feed.

### CEREALS USE RATE

Use EXPRESS herbicide at 0.5 oz/A (0.0156 lb ai/A) (except oats) for heavy infestation of those weeds listed under the "WEEDS CONTROLLED" section of this label or when application timing and environmental conditions are marginal (see "BIOLOGICAL ACTIVITY").

Use EXPRESS herbicide at 0.25 (0.0078 lb ai/A) to 0.375 oz/A (0.0117 lb ai/A) (except oats) for light infestation of the weeds listed under the "WEEDS CONTROLLED" section of this label. Conditions at application shall be optimum for effective treatment of these weeds.

Two applications of EXPRESS herbicide may be made on this crop provided the total amount does not exceed 0.5 oz/A (0.0156 lb ai/A) per year.

**For oats**, apply 0.2 oz/A (0.0063 lb ai/A) of EXPRESS herbicide for control of light populations of the weeds listed in Weeds Controlled table. In oats, EXPRESS herbicide must be tank mixed with another registered herbicide. **DO NOT** make more than one application of EXPRESS herbicide on oats per year.

#### Restrictions:

| Active Ingredient in EXPRESS herbicide: Tribenuron-methyl |                    |                                                |                                        |                                  |                          |                                         |                                   |                            |
|-----------------------------------------------------------|--------------------|------------------------------------------------|----------------------------------------|----------------------------------|--------------------------|-----------------------------------------|-----------------------------------|----------------------------|
| Crop/ Use                                                 | Application Timing | Maximum Oz/A of Product per Single Application | Maximum AI lb/A per Single Application | Maximum Oz/A of Product per Year | Maximum AI lb/A per Year | Maximum Number of Applications per Year | Minimum Treatment Interval (Days) | Pre-Harvest Interval, Days |
| Wheat, Barley, Triticale                                  | Postemergence      | 0.5                                            | 0.0156                                 | 0.5                              | 0.0156                   | 2                                       | 14                                | 45 (for grain)             |
| Oats                                                      | Postemergence      | 0.2                                            | 0.0063                                 | 0.2                              | 0.0063                   | 1                                       | Not Applicable                    | 45 (for grain)             |

## TANK MIXTURES FOR CEREALS

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.

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

EXPRESS herbicide may be tank mixed with 2,4-D and MCP (preferably ester formulations) herbicides for use on wheat, barley, oats and triticale. In tank mixes containing 2,4-D or MCP, add 1 to 2 pt of nonionic surfactant per 100 gallons of spray solution; in tank mixes containing the active ingredients 2,4-D or MCP, add 1 pt of nonionic surfactant per 100 gallons of spray solution.

When using higher rates, use of additional nonionic surfactant may not be needed, unless specified otherwise in the 2,4-D or MCP label, or local guidance.

### **With 2,4-D or MCP (amine or ester) and Dicamba**

EXPRESS herbicide may be applied in a 3-way tank mix with formulations of dicamba including-Clarity® herbicide, and 2,4-D or MCP.

Make applications at 0.25 oz/A (0.0078 lb ai/A) - 0.5 oz/A (0.0156 lb ai/A) of EXPRESS herbicide + Clarity herbicide + 2,4-D or MCP (ester or amine) at label rates. Use higher rates when weed infestation is heavy. Add 1-2 pt of nonionic surfactant per 100 gallons of spray solution to the 3-way mixture, where necessary, as deemed by local guidance. Use of additional nonionic surfactant may not be needed with the higher phenoxy rates and ester phenoxy formulations. Consult the specific 2,4-D or MCP and dicamba labels, or local guidance for more information.

Apply this 3-way combination 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.

**DO NOT** apply this 3-way mixture at high rates more than once a year, or more than twice per year at the low rates.

### **With Bromoxynil containing products**

EXPRESS herbicide may be tank mixed with bromoxynil containing herbicides registered for use on wheat, barley or triticale. For best results, add bromoxynil containing herbicides to the tank at label rates. Tank mixes of EXPRESS herbicide plus bromoxynil may result in reduced control of Canada thistle.

### **With fluroxypyr containing products**

EXPRESS herbicide may be tank mixed with fluroxypyr containing herbicides for improved control of Kochia (2-4" tall) and other broadleaf weeds. For best results, add fluroxypyr containing herbicides at label rates. 2,4-D and MCP herbicides (preferably ester formulations) may be tank mixed with EXPRESS herbicide plus fluroxypyr.

### **With Other Broadleaf Control Products**

EXPRESS herbicide can be tank mixed with other broadleaf herbicides registered on cereals including HARMONY® SG Herbicide (with TotalSol® soluble granules), ALLY® XP herbicide, WideMatch® herbicide, Aim® EC herbicide, Stinger® herbicide, or Curtail® herbicide.

Tank mixes of EXPRESS herbicide plus metribuzin may result in reduced control of wild garlic.

Tank mixes of EXPRESS herbicide plus Clarity herbicide-may result in reduced control of some broadleaf weeds.

### **With Pinoxaden**

EXPRESS herbicide can be tank mixed with Axial® XL herbicide for improved control of wild oats and other grasses.

### **With Clodinafop-propargyl**

EXPRESS herbicide can be tank mixed with Discover® NG herbicide-for improved control of weeds in spring wheat.

### **With Flucarbazone-sodium**

EXPRESS herbicide can be tank mixed with Everest® 3.0 herbicide for improved control of weeds in spring wheat.

### **With Mesosulfuron-methyl**

EXPRESS herbicide can be tank mixed with Osprey® herbicide for improved control of weeds in Fall-sown or winter wheat.

### **With Pyroxulam**

EXPRESS herbicide can be tank mixed with PowerFlex® HL herbicide-GR1 Herbicide, or GR2 Herbicide for improved control of weeds in winter wheat and triticale.

EXPRESS herbicide can be tank mixed with Simplicity™ CA herbicide for improved control of weeds in spring and winter wheat including durum and triticale.

EXPRESS herbicide can be tank mixed with TeamMate™ herbicide (for improved control of weeds in spring and winter

wheat including durum and triticale.

#### **With Other Grass Control Products**

EXPRESS herbicide can be tank mixed with other grass control herbicides registered on cereals.

#### **With Fungicides**

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

#### **With Insecticides**

EXPRESS herbicide may be tank mixed or used sequentially with insecticides registered for use on cereal crops. However, under certain conditions (drought stress, or if the crop is in the 2-4 leaf stage), tank mixes or sequential applications of EXPRESS herbicide with organophosphate 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.

#### **Restriction:**

- **DO NOT** apply EXPRESS 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 EXPRESS herbicide plus Malathion because crop injury may result.

#### **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 EXPRESS herbicide in fertilizer solution. EXPRESS herbicide must first be slurried 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 EXPRESS 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 pt - 1 qt per 100 gal of spray solution (0.06 -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 MCP is included with EXPRESS herbicide and fertilizer mixture, ester formulations tend to be more compatible (see manufacturer's label). Additional surfactant may not be needed when using EXPRESS herbicide in tank mix with 2,4-D ester or MCP 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.

#### **Restriction:**

- **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.

### **BURNDOWN - POST HARVEST, FALLOW, PRE-PLANT**

#### **APPLICATION TIMING**

EXPRESS herbicide may be used as a burndown treatment when the majority of weeds have emerged and are actively growing. EXPRESS herbicide may be applied to crop stubble, as a fallow treatment, or as a pre-plant burndown prior to planting any crop. See "CROP ROTATION" for the minimum interval allowed between the burndown application and when a crop may be planted.

#### **BURNDOWN USE RATE**

Apply 0.25 oz/A (0.0078 lb ai/A) to 0.5 oz/A (0.0156 lb ai/A) of EXPRESS herbicide as a burndown treatment prior to planting any crop (except cotton), or shortly after planting wheat (including durum), barley or triticale (prior to emergence). Use the 0.5 oz/A (0.0156 lb ai/A) rate when weed infestation is heavy or predominantly consists of those weeds listed under the "Weeds Partially Controlled" section of this label, or when application timing and environmental conditions are marginal.

See "CROP ROTATION" for the minimum interval allowed between the burndown application and when a crop may be planted.

Sequential treatments of EXPRESS herbicide may also be made provided the total amount of EXPRESS herbicide applied during one post harvest/fallow/pre-plant time period does not exceed 0.5 oz/A (0.0156 lb ai/A).

Apply EXPRESS herbicide in combination with other suitable registered burndown herbicides (See the "TANK MIXTURES" section of this label for additional information).

**For cotton**, apply 0.25 oz/A (0.0078 lb ai/A) of EXPRESS herbicide as a burndown treatment any time up to 14 days prior to planting. Seedling disease, nematodes, cold weather, deep planting (more than 2"), excessive moisture, high salt concentration, and/or drought may weaken cotton seedlings and increase the possibility of crop injury. Cotton resumes normal growth once favorable growing conditions return.

#### Restrictions:

| Active Ingredient in EXPRESS herbicide: Tribenuron-methyl |                                    |                                                |                                        |                                  |                          |                                         |                                   |                            |
|-----------------------------------------------------------|------------------------------------|------------------------------------------------|----------------------------------------|----------------------------------|--------------------------|-----------------------------------------|-----------------------------------|----------------------------|
| Crop/ Use                                                 | Application Timing                 | Maximum Oz/A of Product per Single Application | Maximum AI lb/A per Single Application | Maximum Oz/A of Product per Year | Maximum AI lb/A per Year | Maximum Number of Applications per Year | Minimum Treatment Interval (Days) | Pre-Harvest Interval, Days |
| Fallow, Burndown, Post-Harvest                            | -----                              | 0.5                                            | 0.0156                                 | 0.5                              | 0.0156                   | 2                                       | 14                                | --                         |
| Burndown Prior to Cotton Seedling                         | -----                              | 0.25                                           | 0.0078                                 | 0.25                             | 0.0078                   | 2                                       | 14                                | --                         |
| Soybeans                                                  | pre-plant & burndown, Post-harvest | 1                                              | 0.0313                                 | 1                                | 0.0313                   | 1                                       | Not Applicable                    | --                         |
| Field Corn                                                | Pre-plant & burndown, Post-Harvest | 1                                              | 0.0313                                 | 1                                | 0.0313                   | 1                                       | Not applicable                    | --                         |

#### TANK MIXTURES IN BURNDOWN APPLICATIONS

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.

EXPRESS herbicide may be tank mixed with one or more herbicides that are registered for use at the appropriate burndown timing, including glyphosate, 2,4-D, and dicamba. Read and follow all label instructions on timing, precautions, and warnings for any companion products before using these tank mixtures.

#### EXPRESSSUN® SUNFLOWERS

EXPRESS herbicide is intended for application only to sunflowers with the ExpressSun® trait. Apply only on sunflowers labeled ExpressSun® and warranted by the seed supplier to not be sensitive to direct application of EXPRESS herbicide. **DO NOT** apply EXPRESS herbicide to sunflowers that are not labeled ExpressSun®.

#### APPLICATION TIMING

Apply EXPRESS herbicide to ExpressSun® sunflowers any time from the 2-leaf stage of growth up to but not including the bud formation stage.

Temporary crop yellowing may be observed shortly after application of EXPRESS herbicide, especially when applied to crops growing under environmentally stressful conditions.

Depending upon rainfall or other environmental conditions, annual weeds may have a second flush of germinating seedlings. To maximize control of such weeds, it may be necessary to apply EXPRESS herbicide again, 14 or more days after the prior application.

Application to ExpressSun® sunflowers that are, or have been, stressed by severe weather conditions, frost, abnormally hot or cold or wet or dry conditions, low fertility, drought, water saturated soil, disease and/or insect damage prior to application may result in crop injury. If the above stress conditions are expected to occur within 3 days after application of EXPRESS herbicide to ExpressSun® sunflowers, crop injury may also occur.

#### Restriction:

- **DO NOT** apply EXPRESS herbicide within 70 days of sunflower harvest.
- **DO NOT** apply EXPRESS herbicide to ExpressSun® sunflower fields in which germination is uneven (i.e., some plants are outside the specified leaf stage for application), as crop injury may result.
- The combined rate of the postemergence applications cannot exceed 1.0 oz/A (0.0313 lb ai/A) of EXPRESS herbicide per year.
- **DO NOT** apply EXPRESS 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 EXPRESS herbicide plus Malathion because crop injury may result

#### EXPRESSSUN® SUNFLOWER USE RATE

Apply EXPRESS herbicide at a rate of 0.25 oz/A (0.0078 lb ai/A) to 0.5 oz/A (0.0156 lb ai/A). Use the 0.5 oz/A (0.0156 lb ai/A) rate when weed infestation is heavy or predominantly consists of those weeds listed under the "Weeds Partially Controlled" section of this label, or when application timing and environmental conditions are marginal.

**Restriction:** **DO NOT** apply more than 1.0 oz/A (0.0313 lb ai/A) of EXPRESS herbicide postemergence per year.

#### CULTIVATION

A timely cultivation may be necessary to control suppressed weeds, weeds that were beyond the maximum size at application, and/or weeds that emerge after an application of EXPRESS herbicide.

- Cultivation up to 7 days before the postemergence application of EXPRESS herbicide may decrease weed control by pruning weed roots, placing the weeds under stress, and/or covering the weeds with soil and preventing coverage by EXPRESS herbicide.
- Optimum timing for cultivation is 7 – 14 days after a postemergence application of EXPRESS herbicide.

#### Restrictions:

- **DO NOT** cultivate for 7 days after application to allow EXPRESS herbicide to fully control treated weeds.
- **DO NOT** use other products that contain tribenuron-methyl.

| Active Ingredient in EXPRESS herbicide: Tribenuron-methyl |                    |                                                |                                        |                                  |                          |                                         |                                   |                            |
|-----------------------------------------------------------|--------------------|------------------------------------------------|----------------------------------------|----------------------------------|--------------------------|-----------------------------------------|-----------------------------------|----------------------------|
| Crop/ Use                                                 | Application Timing | Maximum Oz/A of Product per Single Application | Maximum AI lb/A per Single Application | Maximum Oz/A of Product per Year | Maximum AI lb/A per Year | Maximum Number of Applications per Year | Minimum Treatment Interval (Days) | Pre-Harvest Interval, Days |
| ExpressSun® Sunflowers                                    | Postemergence      | 0.5                                            | 0.0156                                 | 1                                | 0.0313                   | 2                                       | 14                                | 70                         |

#### TANK MIXTURES FOR EXPRESSSUN® SUNFLOWERS

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.

For the control of annual grasses, apply a grass herbicide including ASSURE® II herbicide (refer to the ASSURE® II product labeling for use rates, weed size, adjuvant selection, precautions, and restrictions). For maximum performance, apply ASSURE® II Herbicide at least one day before, or seven days after, the application of EXPRESS herbicide.

#### GRASS GROWN FOR SEED (in the states of ID, MN, OR, UT, WA)

EXPRESS herbicide may be used for selective postemergence control or suppression of certain broadleaf weeds in seedling and established stands of bentgrass, bluegrass, timothy, annual ryegrass, orchardgrass, tall fescue, and fine fescue grown for seed.

EXPRESS herbicide may be used on seedling and established perennial ryegrass providing user accepts all risk of possible crop injury and/or reduced seed yield.

EXPRESS herbicide may cause temporary yellowing and stunting of grass. Certain varieties of grass may be sensitive to EXPRESS herbicide. When using EXPRESS herbicide for the first time on a particular variety, limit use to a small area.

Apply EXPRESS herbicide in combination with other suitable registered herbicides (See the "TANK MIXTURES" section of this label for additional information). Always use a nonionic surfactant of at least 80% active ingredient at the rate of 0.25% v/v (1 qt per 100 gal of spray solution).

#### Restrictions:

- **DO NOT** apply more than 0.5 oz/A (0.0156 lb ai/A) of EXPRESS herbicide per year.
- **DO NOT** apply EXPRESS herbicide in a tank mix with organophosphate insecticides as severe crop injury may occur.

- **DO NOT** apply to grass that is under stress from severe weather conditions, drought, low fertility, water saturated soil, disease or insect damage, as crop injury may result. Under certain conditions including prolonged cool weather (daily high temperature less than 50° F) or wide fluctuations in day/night temperatures just prior to or soon after treatment, temporary yellowing and/or crop stunting may occur.

| Active Ingredient in EXPRESS herbicide: Tribenuron-methyl                                                                                                                                                                                                                   |                    |                                                |                                        |                                  |                          |                                         |                                   |                            |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|------------------------------------------------|----------------------------------------|----------------------------------|--------------------------|-----------------------------------------|-----------------------------------|----------------------------|
| Crop/ Use                                                                                                                                                                                                                                                                   | Application Timing | Maximum Oz/A of Product per Single Application | Maximum AI lb/A per Single Application | Maximum Oz/A of Product per Year | Maximum AI lb/A per Year | Maximum Number of Applications per Year | Minimum Treatment Interval (Days) | Pre-Harvest Interval, Days |
| Grass Grown for Seed:<br><ul style="list-style-type: none"> <li>Seedling stands of annual ryegrass, orchardgrass, fine fescue &amp; tall fescue</li> <li>Seedling stands of bentgrass</li> <li>Seedling stands of perennial ryegrass</li> </ul>                             | Postemergence      | 0.25                                           | 0.0078                                 | 0.25                             | 0.0078                   | 1                                       | Not Applicable                    | Not Applicable             |
| Grass Grown for Seed:<br><ul style="list-style-type: none"> <li>Seedling stands of bluegrass</li> <li>Established stands of bentgrass, bluegrass, annual ryegrass, orchardgrass, fine fescue &amp; tall fescue</li> <li>Established stands of perennial ryegrass</li> </ul> | Postemergence      | 0.5                                            | 0.0156                                 | 0.5                              | 0.0156                   | 1                                       | Not Applicable                    | Not Applicable             |
| For Weed Control in Non-Food/Non-Feed Grass Grown for Seed Production Only in the State of Minnesota<br>Seedling stands of timothy                                                                                                                                          | Postemergence      | 0.25                                           | 0.0078                                 | 0.25                             | 0.0078                   | 1                                       | Not Applicable                    | Not Applicable             |
| For Weed Control in Non-Food/Non-Feed Grass Grown for Seed Production Only in the State of Minnesota<br>Established stands of timothy                                                                                                                                       | Postemergence      | 0.375                                          | 0.0117                                 | 0.375                            | 0.0117                   | 1                                       | Not Applicable                    | Not Applicable             |
| For Weed Control in Non-Food/Non-Feed Grass Grown for Seed Production Only in the State of Minnesota<br>Seedling stands of bluegrass                                                                                                                                        | Postemergence      | 0.375                                          | 0.0117                                 | 0.375                            | 0.0117                   | 1                                       | Not Applicable                    | Not Applicable             |
| For Weed Control in Non-Food/Non-Feed Grass Grown for Seed Production Only in the State of Minnesota<br>Established stands of bluegrass                                                                                                                                     | Postemergence      | 0.5                                            | 0.0156                                 | 0.5                              | 0.0156                   | 1                                       | Not Applicable                    | Not Applicable             |
| For Weed Control in Non-Food/Non-Feed Grass Grown for Seed Production Only in the State of Minnesota<br>Seedling stands of perennial ryegrass                                                                                                                               | Postemergence      | 0.15                                           | 0.0047                                 | 0.15                             | 0.0047                   | 1                                       | Not Applicable                    | Not Applicable             |
| For Weed Control in Non-Food/Non-Feed Grass Grown for Seed Production Only in the State of Minnesota<br>Established stands of perennial ryegrass                                                                                                                            | Postemergence      | 0.375                                          | 0.0117                                 | 0.375                            | 0.0117                   | 1                                       | Not Applicable                    | Not Applicable             |

## TANK MIXTURES FOR GRASS GROWN FOR SEED

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.

Always use EXPRESS herbicide in a tank mix with another broadleaf herbicide including 2,4-D, MCP or dicamba as these herbicides safen the effects of EXPRESS herbicide on grasses while improving weed control performance on most broadleaf weeds. Testing has shown that 2,4-D and dicamba are more effective in a tank mix with EXPRESS herbicide than MCP.

EXPRESS herbicide can be applied with liquid fertilizers. Liquid fertilizers (20%, 28%, 32% N at a minimum of 4 gal/100 gal of spray solution) enhance the performance of EXPRESS herbicide and may improve crop safety. Always use a surfactant and another broadleaf herbicide when using liquid fertilizer with EXPRESS herbicide.

## BENTGRASS, BLUEGRASS, ANNUAL RYEGRASS, ORCHARDGRASS, FINE FESCUE AND TALL FESCUE

**Seedling Stands:** For use on annual ryegrass, orchard grass, tall fescue and fine fescue, apply at 0.25 oz/A (0.0078 lb ai/A) after stand is in 4-leaf stage. For use on bentgrass, apply at 0.25 oz/A (0.0078 lb ai/A) after stolens are 3 to 5 inches across. For use on bluegrass, apply at 0.25 oz/A (0.0078 lb ai/A) to 0.5 oz/A (0.0156 lb ai/A) after stand is in the 4-leaf stage.

**Established Stands:** For stands that have been established for at least one growing season (fall or spring), apply EXPRESS herbicide at 0.25 oz/A (0.0078 lb ai/A) to 0.5 oz/A (0.0156 lb ai/A). Use the higher rate for larger weeds and hard to control weeds like wild carrot. Apply prior to jointing.

## PERENNIAL RYEGRASS

Perennial ryegrass is more sensitive to EXPRESS herbicide than other grass species. Crop injury in the form of stunting and possible reduced seed yield may occur. To minimize the risk of crop injury, use the 0.25 oz/A (0.0078 lb ai/A) rate and always use either 2,4-D or dicamba and liquid nitrogen with EXPRESS herbicide.

**Seedling Stands:** Apply EXPRESS herbicide at 0.25 oz/A (0.0078 lb ai/A) in a tank mix with another suitable broadleaf herbicide after grass is in the 5- to 6-leaf stage.

**Established Stands:** For stands that have been established for one growing season (fall or spring) apply EXPRESS herbicide at 0.25 oz/A (0.0078 lb ai/A) to 0.5 oz/A (0.0156 lb ai/A) in a tank mix with another suitable broadleaf herbicide. Apply prior to jointing.

**Note:** Use the 0.5 oz/A (0.0156 lb ai/A) rate of EXPRESS herbicide only for the control or suppression of problem weeds like wild carrot where the benefit of weed control may offset by possible crop injury including possible yield reduction.

## FOR WEED CONTROL IN NON-FOOD/NON-FEED GRASS GROWN FOR SEED PRODUCTION IN THE STATE OF MINNESOTA

### BLUEGRASS AND TIMOTHY

**Seedling stands:** For best results apply EXPRESS herbicide in a tank mix with another suitable broadleaf herbicide. For use on timothy, apply at 0.25 oz/A (0.0078 lb ai/A) after stand is in the 4-5 leaf stage. Always use in a tank mix with 2,4-D at 0.5 lb ai/A (1 pint of 4 lb/gal product). For use on bluegrass, apply at 0.15 to 0.375 oz/A (0.0047 to 0.0117 lb ai/A) after stand is in the 4 leaf stage.

**Established stands:** For stands that have been established for at least one growing season (fall or spring), apply EXPRESS herbicide at 0.15 to 0.5 oz/A (0.0047 - 0.0156 lb ai/A) in a tank mix with another suitable broadleaf herbicide. Apply prior to jointing. For application on timothy, limit maximum use rate to 0.375 oz/A (0.0117 lb ai/A) of EXPRESS herbicide and always use in a tank mix with 2,4 D at 0.5 lb ai/A (1 pint of 4 lb/gal product).

### PERENNIAL RYEGRASS

Perennial ryegrass is more sensitive to EXPRESS herbicide than other grass species. Crop injury in the form of stunting and possible reduced seed yield may occur. To minimize the risk of crop injury, use the 0.15 oz/A rate (0.0047 lb ai/A) and always use either 2,4-D or dicamba (including Clarity® herbicide) and liquid nitrogen with EXPRESS herbicide.

**Seedling stands:** Apply EXPRESS herbicide at 0.15 oz/A (0.0047 lb ai/A) in a tank mix with another suitable broadleaf herbicide after grass is in the 5 to 6 leaf stage.

**Established stands:** For stands that have been established for one growing season (fall or spring), apply EXPRESS herbicide at 0.15 to 0.375 oz/A (0.0047 to 0.0117 lb ai/A) in a tank mix with another suitable broadleaf herbicide. Apply prior to jointing.

## WEED CONTROL INFORMATION

### WEEDS CONTROLLED

EXPRESS herbicide effectively controls the following weeds when used according to label directions:

|                                                                             |                                                                          |
|-----------------------------------------------------------------------------|--------------------------------------------------------------------------|
| Black mustard                                                               | Marestail***†                                                            |
| Blue/Purple mustard                                                         | Marshelder†                                                              |
| Bushy wallflower/Treacle mustard†                                           | Mayweed chamomile/Stinking chamomile/dog fennel (Anthemis cotula L.)***† |
| Canada thistle**                                                            | Miners lettuce                                                           |
| Coast fiddleneck                                                            | Narrowleaf hawksbeard** ***                                              |
| Common Chickweed†                                                           | Nightflowering catchfly                                                  |
| Common Groundsel                                                            | Pineappleweed                                                            |
| Common Lambsquarters†                                                       | Poison hemlock***                                                        |
| Common Purslane                                                             | Prickly lettuce***†                                                      |
| Corn, Gromwell**                                                            | Puncturevine                                                             |
| Corn spurry                                                                 | Purslane speedwell (@ 0.5 oz/A, 0.0156 lb ai/A)***                       |
| Cowcockle                                                                   | Redroot pigweed†                                                         |
| Cressleaf groundsel *** (butterweed)                                        | Russian thistle***†                                                      |
| Curly Dock**                                                                | Shepherd's-purse                                                         |
| Dandelion                                                                   | Slimleaf lambsquarters                                                   |
| Deadnettle††                                                                | Small-flower buttercup (@ 0.5 oz/A, 0.0156 lb ai/A)***                   |
| Early whitlowgrass                                                          | Smallseed falseflax†                                                     |
| False chamomile/Wild chamomile/Scentless chamomile (Matricaria maritima L.) | Tansymustard                                                             |
| Field pennycress                                                            | Tarweed fiddleneck                                                       |
| Flixweed†                                                                   | Tumble pigweed (@ 0.5 oz/A, 0.0156 lb ai/A)                              |
| Hairy buttercup                                                             | Tumble/Jim Hill mustard**                                                |
| Kochia***†                                                                  | White cockle (@ 0.5 oz/A, 0.0156 lb ai/A)                                |
| London Rocket                                                               | Wild mustard†                                                            |

### WEEDS PARTIALLY CONTROLLED\*

EXPRESS herbicide partially controls the following weeds when used according to label directions:

|                                  |                        |
|----------------------------------|------------------------|
| Annual sowthistle                | Pennsylvania smartweed |
| Burning Nettle**                 | Prostrate knotweed     |
| Common cocklebur†                | Redmaids               |
| Common sunflower (volunteer)***† | Redstem filaree ***    |
| Common vetch**                   | Wild buckwheat         |
| Eastern black nightshade†        | Wild carrot            |
| Hairy nightshade                 | Wild garlic            |
| Hairy vetch**                    | Wild radish**          |
| Henbit                           |                        |

\* Partially controlled weeds exhibit a visual reduction in numbers as well as a significant loss of vigor. For better results, use 0.375 (0.0117 lb ai/A) to 0.5 oz/A (0.0156 lb ai/A) of EXPRESS herbicide and include a tank mix partner including 2,4-D, MCP, bromoxynil or dicamba. See the "TANK MIXTURES" section of this label.

\*\* See the Specific Weed Instructions section of this label for more information.

\*\*\*2,4-D LVE addition required.

† Naturally occurring resistant biotypes are known to occur.

†† 0.5 oz/A (0.0156 lb ai/A) EXPRESS herbicide only

## SPECIFIC WEED INSTRUCTIONS

**Burning Nettle:** For best results, apply 0.5 oz/A (0.0156 lb ai/A) of EXPRESS herbicide in a tank mix with Aim EC herbicide, Shark® EW herbicide, or ET® herbicide to small actively growing weeds less than 4" tall.

**Canada thistle:** For best results, apply 0.5 oz/A (0.0156 lb ai/A) of EXPRESS herbicide when all thistles are 4" to 8" with 2" to 6" of new growth. Make the application in the spring.

**Corn Gromwell :** For best results, apply 0.5 oz/A (0.0156 lb ai/A) of EXPRESS herbicide in combination with 2,4-D or MCP (refer to the Tank Mixtures section of this label).

**Curly Dock:** For best results, apply 0.375 oz/A (0.0117 lb ai/A) to 0.5 oz/A (0.0156 lb ai/A) of EXPRESS herbicide in combination with 2,4-D or MCP (refer to the Tank Mixtures section of this label).

**Kochia:** For best results, apply EXPRESS herbicide in a tank mix with Starane® Ultra herbicide Starane Ultra herbicide + Salvo® herbicide, Starane Ultra herbicide + Sword® herbicide, Clarity herbicide, and 2,4-D or MCP (ester or amine), or bromoxynil containing products.

Apply EXPRESS herbicide in the spring when kochia is less than 2" tall and is actively growing (refer to the Tank Mixtures section of this label for additional details on rates and restrictions).

**Mayweed chamomile/Stinking Chamomile/dog fennel:** For best results, apply 0.375 oz/A (0.0117 lb ai/A) to 0.5 oz/A (0.0156 lb ai/A) of EXPRESS herbicide.

**Narrowleaf hawksbeard:** During the post harvest, fallow, and/or pre-plant burndown period, EXPRESS herbicide may be used in a tank mix with ABUNDIT® Edge herbicide-(at labeled rates) for postemergence control of narrowleaf hawksbeard.

For wheat, EXPRESS herbicide may be used in a tank mix with 2,4-D for postemergence control of narrowleaf hawksbeard. Apply this tank mix only in the spring when the wheat is fully tillered and before the jointing stage.

**Russian thistle, Prickly lettuce:** For best results, use EXPRESS herbicide in a tank mix with Clarity herbicide and 2,4-D or MCP (ester or amine), or bromoxynil containing products.

Apply EXPRESS herbicide in the spring when Russian thistle, and prickly lettuce are less than 2" tall or 2" across and are actively growing (refer to the Tank Mixtures section of this label for additional details on rates and restrictions).

**Tumble/Jim Hill mustard:** For best results, apply 0.5 oz/A (0.0156 lb ai/A) of EXPRESS herbicide in combination with 2,4-D or MCP (refer to the Tank Mixtures section of this label).

**Vetch (common and hairy):** For best results, apply 0.375 oz/A (0.0117 lb ai/A) to 0.5 oz/A (0.0156 lb ai/A) of EXPRESS herbicide when vetch is less than 6" in length. For severe infestations of vetch, or when vetch is greater than 6" in length, apply EXPRESS herbicide in combination with 2,4-D or MCP (refer to the Tank Mixtures section of this label).

**Wild radish:** For best results, apply 0.25 oz/A (0.0078 lb ai/A) - 0.5 oz/A (0.0156 lb ai/A) EXPRESS herbicide plus MCP plus 0.25% v/v nonionic surfactant (1 qt per 100 gal of spray solution) to wild radish rosettes less than 6 " diameter. Make the application either in the fall or spring. Applications made later than 30 days after weed emergence will result in partial control. Make applications in the fall before plants harden-off.

**Volunteer ExpressSun® Sunflowers:** For best results, use EXPRESS herbicide in a tank mix with Starane Ultra herbicide, Starane Ultra herbicide + Salvo® herbicide, Starane Ultra herbicide + Sword herbicide or Clarity herbicide-and 2,4-D or MCP (ester or amine), or bromoxynil containing products.

## SPRAY ADJUVANTS - ALL CROPS OR USES

Include a spray adjuvant with applications of EXPRESS herbicide. In addition, an ammonium nitrogen fertilizer may be used.

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 EXPRESS herbicide, select adjuvants authorized for use with both products. Products must contain only EPA-exempt ingredients.

## NONIONIC SURFACTANT (NIS)

- Apply 0.06 to 0.50% v/v (0.5 pt to 4 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) or 2% under arid conditions. 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. Consult separate FMC technical bulletins for detailed information before using adjuvant types not specified on this label.

## CROP ROTATION

Labeled crops may be planted at specified time intervals following application of labeled rates of EXPRESS herbicide. Use the time intervals listed below to determine the required time interval before planting.

### Time Interval Before Planting\* (days after treatment with EXPRESS herbicide)

| Crop                                                                        | Days |
|-----------------------------------------------------------------------------|------|
| Barley, Rice, Triticale, ExpressSun® sunflowers and Wheat (including durum) | 0    |
| Oats and Soybeans (at EXPRESS herbicide rate of 0.25 oz/A) (0.0078 lb ai/A) | 1**  |
| Soybeans                                                                    | 7**  |
| Cotton, Field Corn, and Grain/forage, Sorghum                               | 14** |
| Sugarbeets, Winter Rape, and Canola                                         | 60   |
| Any other crop                                                              | 45   |

\* Refer to individual product labels to determine rotational crop restrictions when tank mixtures are used.

\*\*Where EXPRESS herbicide is used on light textured soils (including sands and loamy sands) or on high pH soils (>7.9), extend time to planting by 7 additional days.

## MIXING INSTRUCTIONS

### PRODUCT MEASUREMENT

EXPRESS herbicide can be measured using the EXPRESS herbicide volumetric measuring cylinder provided by FMC. The degree of accuracy of this cylinder varies by  $\pm 7.5\%$ . For more precise measurement, use scales calibrated in ounces.

### MIXING

1. Fill the tank 1/4 to 1/3 full of water.
2. While agitating, add the required amount of EXPRESS herbicide.
3. Continue agitation until the EXPRESS herbicide is fully dispersed, at least 5 minutes.
4. Once the EXPRESS herbicide is fully dispersed, maintain agitation and continue filling tank with water. Thoroughly mix EXPRESS herbicide with water before adding any other material.
5. As the tank is filling, add tank mix partners (if desired) then add the required volume of spray adjuvant. Always add spray adjuvant last. Antifoaming agents may be used. **DO NOT** use with spray additives that alter the pH of the spray solution below pH 6.0 as rapid product degradation can occur. Spray solutions of pH 7.0 and higher allow for optimum stability of EXPRESS herbicide.
6. If the mixture is not continuously agitated, settling will occur. If settling occurs, thoroughly re-agitate before using.
7. Apply EXPRESS herbicide spray mixture within 24 hours of mixing to avoid product degradation.
8. If EXPRESS herbicide and a tank mix partner are to be applied in multiple loads, pre-slurry the EXPRESS herbicide in clean water prior to adding to the tank. This will prevent the tank mix partner from interfering with the dissolution of the EXPRESS herbicide.

### SPRAY EQUIPMENT

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.

For additional information on spray drift refer to Spray Drift Management section of label.

Continuous agitation is not required to keep EXPRESS herbicide in suspension but may be required to keep tank mix partners in solution or suspension. Refer to tank mix partner labels for additional information.

### BEFORE SPRAYING EXPRESS HERBICIDE

The spray equipment must be clean before EXPRESS 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 EXPRESS herbicide section of this label.

### AT THE END OF THE DAY

When multiple loads of EXPRESS herbicide are applied, it is specified 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 EXPRESS HERBICIDE AND BEFORE SPRAYING CROPS OTHER THAN WHEAT, BARLEY, OATS, AND TRITICALE**

To avoid subsequent injury to desirable crops, thoroughly clean all mixing and spray equipment immediately following applications of EXPRESS 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 by-pass lines, for at least two minutes. Flush the boom well and empty the sprayer. Completely drain the sump.
3. Repeat step 2.
4. Remove the nozzles and screens and clean separately in a bucket containing water. 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 required to facilitate the removal of any caked deposits.
2. When EXPRESS herbicide is tank mixed with other pesticides, examine all cleanout procedures for each product and follow the most rigorous procedure.
3. Follow any pre-cleanout guidelines on other product labels.

## **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 5 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 suitable for EXPRESS herbicide applications, as weed control performance may be reduced.
- Use screens that are 50-mesh or larger.

For application in California refer to the "CALIFORNIA APPLICATION REQUIREMENTS" section of this label for specific ground application requirements.

## AERIAL APPLICATION

For aerial application, select nozzles and pressure that provide optimum spray distribution and maximum coverage at 2 to 5 GPA.

Use at least 2 GPA. In Idaho, Oregon and Utah use at least 3 GPA.

**DO NOT** apply EXPRESS herbicide by air in the state of New York.

See the **Spray Drift Management** section of this label.

For application in California refer to the "CALIFORNIA APPLICATION REQUIREMENTS FOR PROTECTION OF SENSITIVE CROPS" section of this label for specific aerial application requirements.

## CHEMIGATION

EXPRESS herbicide may be applied through sprinkler irrigation systems in the State of Idaho for use in fall-seeded wheat, spring seeded barley and spring seeded wheat. Use 0.375 oz/A (0.0117 lb ai/A) to 0.5 oz/A (0.0156 lb ai/A) of EXPRESS herbicide in combination with bromoxynil containing herbicides. Apply to wheat and barley after the 3-leaf stage but before the flag leaf is visible. Make only one chemigation application of this tank mixture per year. For best results, apply to broadleaf weeds up to the 4-leaf stage, or 2 inches in height or 1 inch in diameter, whichever comes first.

Apply this tank mix through sprinkler irrigation systems including center pivot, lateral move, side (wheel) roll, solid set or hand move irrigation systems only. **DO NOT** apply these herbicides through any other type of irrigation system.

Crop injury, lack of effectiveness, or illegal pesticide residues in the crop can result from non-uniform distribution of treated water. If you have questions about calibration, contact State Extension Service specialists, equipment manufacturers or other experts. **DO NOT** connect an irrigation system (including greenhouse systems) used for EXPRESS herbicide application to any public water system. A person knowledgeable of the chemigation system and responsible for its operation, or under the supervision of the responsible person, shall shut the system down and make necessary adjustments should the need arise.

The sprinkler chemigation system must contain a functional check valve, vacuum relief valve, and low-pressure drain appropriately located on the irrigation pipeline to prevent water source contamination from back flow. The pesticide injection pipeline must contain a functional, automatic, quick-closing check valve to prevent the flow of fluid back toward the injection pump. The pesticide injection pipeline must also contain a functional, normally closed, solenoid-operated valve located on the intake side of the injection pump and connected to the system interlock to prevent fluid from being withdrawn from the supply tank when the irrigation system is either automatically or manually shut down. The system must contain functional interlocking controls to automatically shut off the pesticide injection pump when the water pump motor stops. The irrigation line or water pump must include a functional pressure switch, which will stop the water pump motor when the water pressure decreases to the point where pesticide distribution is adversely affected. Systems must use a metering pump, including a positive displacement injection pump (e. g., diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and capable of being fitted with a system interlock. **DO NOT** apply when wind speed favors drift beyond the area intended for treatment.

## CHEMIGATION REQUIREMENTS

1. In center pivot and continuous lateral move systems, apply EXPRESS herbicide + bromoxynil containing herbicides continuously for the duration of the water application. In solid set systems, apply the tank mix during the last 30 to 45 minutes of the irrigation.
2. Set the sprinkler system to deliver approximately 0.5 inch or less of water/A for best product performance.
3. Fill the supply tank with half of the water amount desired, add the EXPRESS herbicide and agitate it well. Add the bromoxynil containing herbicide and then add the remaining water amount with agitation. Bromoxynil containing herbicides require a dilution with at least 4 parts water to 1 part bromoxynil containing herbicide.
4. Agitation is required in the pesticide supply tank when applying this tank mix.
5. Inject the EXPRESS herbicide + bromoxynil containing herbicides solution at least 8 feet ahead of a right angle turn of irrigation pipe to insure adequate mixing. Allow sufficient time for the herbicide mixture to be flushed through the lines before turning off irrigation water.
6. Follow both EXPRESS herbicide and bromoxynil containing herbicides label instructions for spray tank cleanout both before and after application. Flush lines with clean water following application.
7. **DO NOT** apply when wind speed favors drift beyond the area intended for treatment. Avoiding spray drift is the responsibility of the applicator.

## **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.

## **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 aurally 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.

## **WIND**

Drift potential generally increases with wind speed. **AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS.** Applicators need to be familiar with local wind patterns and terrain that could affect 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).

## **CALIFORNIA APPLICATION REQUIREMENTS FOR PROTECTION OF TOMATO, CUCUMBER, SUGARBEET, OTHER BROADLEAF CROPS, AND TREE & VINE CROPS**

**Review the required "MANDATORY SPRAY DRIFT" section for all states before applying in California, the below requirements are in addition, duplicative or more restrictive when applying near listed crops in California.** The following drift management requirements must be followed to minimize the potential for exposure of sensitive crops. Determine the prevailing wind speed and direction before application.

### **SPRAY QUALITY**

Apply with nozzles that give a coarse droplet size spectrum (volume median diameter (VMD) of 350-400 microns) and minimize droplets that are less than 200 microns.

### **For aerial application:**

- **Nozzle orientation:** Nozzles must be oriented so the spray is directed toward the back of the aircraft.
- **Spray volume:** Apply a spray volume between 5 and 10 GPA
- **Wind speed: DO NOT** apply when wind speeds exceed 10 miles per hour at the application site. **AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS.**
- **Aircraft equipment:** The boom length must not exceed 65% of the wingspan for airplanes or 75% of the rotor blade diameter for helicopters.
- **Application height: 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. Applications must be made at the lowest application height that provides uniform coverage and must be consistent with safe operation of the aircraft.

### **For ground application,**

- **Wind speed: DO NOT** apply when wind speeds exceed 10 miles per hour at the application site. **AVOID APPLICATIONS DURING GUSTY WIND CONDITIONS.**
- **Boom height:** Apply with the nozzle height recommended by the manufacturer, but no more than 3 feet above ground or crop canopy. The buffer zones may be reduced when application is made with a low boom (20 inches) above the top of the crop canopy. The boom should remain level with the crop and have minimal bounce.

## California Buffer Zones

The following buffer zones between the treated area and sensitive crops (specified in the table below) are required when these below listed crops are downwind of the application site:

| Sensitive Crop                                                                 | Ground Application<br>Low boom | Ground<br>High Boom | Aerial<br>Application |
|--------------------------------------------------------------------------------|--------------------------------|---------------------|-----------------------|
| Tomato, cucumber, sugarbeet                                                    | 350 ft                         | 500 ft              | 1,300 ft              |
| Other broadleaf crops                                                          | 50 ft                          | 50 ft               | 500 ft                |
| Tree and vine crops                                                            | 50 ft                          | 50 ft               | 500 ft                |
| Dormant tree and vine                                                          | No buffer zone required        |                     |                       |
| Tree and vine crops <b>DO NOT</b> require buffer zones when crops are dormant. |                                |                     |                       |

## GRAZING, FEEDING, AND HARVESTING

Allow at least 7 days between application and grazing of treated forage. In addition, allow at least 7 days between application and feeding of forage (green chop) from treated areas to livestock. Allow at least 30 days between application and feeding of hay from treated areas to livestock. Allow at least 45 days between application and harvesting of grain.

Harvested straw may be used for bedding and/or feed.

## IDENTIFICATION INFORMATION FOR PRODUCTS REFERENCED IN THIS LABEL

| Product Name                                        | Active Ingredient(s)                        | EPA<br>Registration Number |
|-----------------------------------------------------|---------------------------------------------|----------------------------|
| ABUNDIT® Extra                                      | Glyphosate                                  | 71368-20                   |
| AIM® EC Herbicide                                   | Carfentrazone-ethyl                         | 279-3241                   |
| ALLY® XP herbicide                                  | Metsulfuron-methyl                          | 279-9575                   |
| ASSURE® II herbicide                                | Quizalofop p-ethyl                          | 352-541                    |
| Axial® XL herbicide                                 | Pinoxaden                                   | 100-1256                   |
| Clarity® herbicide                                  | Dicamba                                     | 7969-137                   |
| Curtail® Herbicide                                  | Clopyralid                                  | 62719-48                   |
| Discover® NG Herbicide                              | Clodinafop-Propargyl                        | 100-1173                   |
| ET® herbicide                                       | pyraflufen-ethyl                            | 71711-7                    |
| Everest® 3.0 Herbicide                              | Flucarbazone-Sodium                         | 66330-429                  |
| GR1 Herbicide                                       | Pyroxsulam                                  | 279-9623                   |
| GR2 Herbicide                                       | Pyroxsulam                                  | 279-9631                   |
| HARMONY® Extra SG (with TotalSol® Soluble Granules) | Thifensulfuron methyl,<br>Tribenuron methyl | 279-9602                   |
| Osprey® herbicide                                   | Mesosulfuron-methyl,                        | 264-802                    |
| PowerFlex® HL herbicide                             | Pyroxsulam                                  | 62719-643                  |
| Shark® EW herbicide                                 | Carfentrazone- ethyl                        | 279-3242                   |
| Simplicity™ CA herbicide                            | Pyroxsulam                                  | 62719-568                  |
| Stinger® Herbicide                                  | Clopyralid                                  | 62719-73                   |
| Starane® Ultra herbicide                            | fluroxypyr                                  | 62719-577                  |
| Salvo® herbicide                                    | 2,4-D                                       | 34704-609                  |
| Sword® herbicide                                    | MCPA                                        | 228-267-34704              |
| TeamMate™ herbicide                                 | Pyroxsulam                                  | 62719-686                  |
| Widematch® Herbicide                                | Clopyralid + Fluroxypyr                     | 62719-512                  |

## PESTICIDE STORAGE AND DISPOSAL

**Pesticide Storage:** Store the product in original container only. **DO NOT** contaminate water, other pesticides, fertilizer, food, or feed in storage. Store in a cool, dry place.

**Product Disposal:** **DO NOT** contaminate water, food, or feed by disposal. Wastes 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 Plastic and Metal Containers (Capacity Equal to or Less Than 50 Pounds):** 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 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 Plastic and Metal Containers (Capacity Greater Than 50 Pounds):** 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 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 incineration. 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 Paper or Plastic Bags, Fiber Sacks including Flexible Intermediate Bulk Containers (FIBC) or Fiber Drums With Liners:** Nonrefillable container. **DO NOT** reuse or refill this container. Completely empty paper or plastic bag, fiber sack or drum liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application or manufacturing equipment. Then offer for recycling if available or dispose of empty paper or plastic bag, fiber sack or fiber drum and liner in a sanitary landfill, or by incineration. **DO NOT** burn, unless allowed by state and local ordinances.

**Refillable Fiber Drums With Liners:** Refillable container (fiber drum only). Refilling Fiber Drum: Refill this fiber drum with EXPRESS herbicide containing tribenuron methyl only. **DO NOT** reuse this fiber drum for any other purpose. Cleaning before refilling is the responsibility of the refiller. Completely empty liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application or manufacturing equipment. Disposing of Fiber Drum and/or Liner: **DO NOT** reuse this fiber drum for any other purpose other than refilling (see preceding). Cleaning the container (liner and/or fiber drum) before final disposal is the responsibility of the person disposing of the container. Offer the liner for recycling if available or dispose of liner in a sanitary landfill, or by incineration. **DO NOT** burn, unless allowed by state and local ordinances. If drum is contaminated and cannot be reused, dispose of it in the manner required for its liner. To clean the fiber drum before final disposal, completely empty the fiber drum by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application or manufacturing equipment. Then offer the fiber drum for recycling if available or dispose of in a sanitary landfill, or by incineration. **DO NOT** burn, unless allowed by state and local ordinances.

**All Other Refillable Containers:** Refillable container. Refilling Container: Refill this container with EXPRESS herbicide containing tribenuron methyl 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 including cracks, punctures, abrasions, worn out threads and closure devices. If damage is found, **DO NOT** use the 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.

**Outer Foil Pouches of Water Soluble Packets (WSP):** Nonrefillable container. **DO NOT** reuse or refill this container. Offer for recycling if available or, dispose of the empty outer foil pouch in the trash as long as WSP is unbroken. If the outer pouch contacts the formulated product in any way, the pouch must be triple rinsed with clean water. Add the rinsate to the spray tank and dispose of the outer pouch as described previously.

**DO NOT** transport if this container is damaged or leaking. 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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**D-4304 120519 xx-xx-xx**

## **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.**

# Supplemental Labeling



## FOR WEED CONTROL IN NON-FOOD/NON-FEED GRASS GROWN FOR SEED PRODUCTION IN THE STATE OF MINNESOTA

EPA Reg. No. 279-9594

This supplemental label expires on December 31, 2022 and must not be used or distributed after this date.

### DIRECTIONS FOR USE

**IT IS A VIOLATION OF FEDERAL LAW TO USE THIS PRODUCT IN A MANNER INCONSISTENT WITH ITS LABELING. ALL APPLICABLE DIRECTIONS, RESTRICTIONS AND PRECAUTIONS ON THE EPA REGISTERED LABEL ARE TO BE FOLLOWED.**

This Supplemental labeling must be in the possession of the user at the time of pesticide application. Read the label affixed to the container for EXPRESS® herbicide (with TotalSol® soluble granules) (referred to below as EXPRESS herbicide) before applying. Carefully follow all precautionary statements and application use directions.

#### PRODUCT INFORMATION

EXPRESS herbicide is advised for selective postemergence control/suppression of certain broadleaf weeds in seedling and established stands of bluegrass and timothy grown for seed. EXPRESS herbicide may be used on seedling and established perennial ryegrass, providing user accepts all risk of possible crop injury and/or reduced seed yield. See "Use Rates" portion of this label. EXPRESS herbicide may cause temporary yellowing and stunting of grass. Best results are obtained when EXPRESS herbicide is applied to young, actively growing weeds. The degree of control and duration of effect are dependent on the rate used, sensitivity and size of target weeds, and environmental conditions at the time of and following application. **NOTE:** Certain varieties of grass may be sensitive to EXPRESS herbicide. When using EXPRESS herbicide for the first time on a particular variety, limit use to one 15 oz container.



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**ACCEPTED**

**12/05/2019**

Under the Federal Insecticide, Fungicide  
and Rodenticide Act as amended, for the  
pesticide registered under  
EPA Reg. No. **279-9594**

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## USE RATES AND TANK MIXES WITH OTHER HERBICIDES

### **BLUEGRASS AND TIMOTHY**

**Seedling stands:** For best results apply EXPRESS herbicide in a tank mix with another suitable broadleaf herbicide. For use on timothy, apply at 0.25 oz/A (0.0078 lb ai/A) after stand is in the 4-5 leaf stage. Always use in a tank mix with 2,4-D at 0.5 lb ai/A (1 pint of 4lb/gal product). For use on bluegrass, apply at 0.15 to 0.375 oz/A (0.0047 to 0.0117 lb ai/A) after stand is in the 4 leaf stage.

**Established stands:** For stands that have been established for at least one growing season (fall or spring), apply EXPRESS herbicide at 0.15 to 0.5 oz/A (0.0047 - 0.0156 lb ai/A) in a tank mix with another suitable broadleaf herbicide. Apply prior to jointing. For application on timothy, limit maximum use rate to 0.375 oz/A (0.0117 lb ai/A) of EXPRESS herbicide and always use in a tank mix with 2,4 D at 0.5 lb ai/A (1 pint of 4 lb/gal product).

### **PERENNIAL RYEGRASS**

Perennial ryegrass is more sensitive to EXPRESS herbicide than other grass species. Crop injury in the form of stunting and possible reduced seed yield may occur. To minimize the risk of crop injury, use the 0.15 oz/A rate and always use either 2,4-D or dicamba (including Clarity® herbicide (EPA Reg No. 7969-137) and liquid nitrogen with EXPRESS herbicide.

**Seedling stands:** Apply EXPRESS herbicide at 0.15 oz/A (0.0047 lb ai/A) in a tank mix with another suitable broadleaf herbicide after grass is in the 5 to 6 leaf stage.

**Established stands:** For stands that have been established for one growing season (fall or spring), apply EXPRESS herbicide at 0.15 to 0.375 oz/A (0.0047 to 0.0117 lb ai/A) in a tank mix with another suitable broadleaf herbicide. Apply prior to jointing.

### **TANK MIXTURES**

Always use EXPRESS herbicide in a tank mix with another broadleaf herbicide including 2,4-D, dicamba (ie. Clarity herbicide (EPA Reg No. 7969-137)), or MCPA as these herbicides safen the effects of EXPRESS herbicide on grasses while improving weed control performance on most broadleaf weeds. Testing has shown that 2,4-D, or dicamba (including Clarity herbicide (EPA Reg No. 7969-137)) provide the best overall weed control in a tank mix with EXPRESS herbicide. However, 2,4-D at 0.5 lb ai/A provides the best crop safening effects. The addition of liquid fertilizer is also advised. See “Liquid Fertilizer” portion of the label. Use a minimum of 0.25 to 0.5 lb ai/A of 2,4-D or MCPA (8 to 16 fl oz of 4 lb/gal product). Use a minimum of 0.063 to 0.25 lb ai/A of dicamba (2 to 8 fl oz of 4 lb/gal product (ie. Clarity herbicide (EPA Reg No. 7969-137))).

**Liquid Fertilizer:** EXPRESS herbicide can be applied with liquid fertilizers. Always dissolve EXPRESS herbicide before adding EXPRESS herbicide to liquid fertilizer solutions. Liquid fertilizers (20%, 28%, 32%, N at a minimum of 4 gallons/100 gallons of spray solution) enhance the performance of EXPRESS herbicide and improve crop safety. Always use a surfactant and another broadleaf herbicide when using liquid fertilizer with EXPRESS herbicide.



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The following weeds are controlled or suppressed in addition to the weeds listed on the EPA Section 3 Federal Product label:

**WEEDS CONTROLLED**

White cockle  
Nightflowering catchfly

**WEEDS PARTIALLY CONTROLLED OR SUPRESSED\***

Canada thistle

\*Partial Control or Suppression: A visual reduction in weed competition (reduced stand and/or vigor) compared to an untreated area.

**Surfactant**

Always use a nonionic surfactant of at least 80% active ingredient at the rate of 0.25% volume/volume (1 quart per 100 gallons of spray solution.)



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## RESTRICTIONS

- **DO NOT** apply to Bermudagrass.
- **DO NOT** apply more than 0.5 oz/A (0.0156 lb ai/A) of EXPRESS herbicide per acre per year.
- **DO NOT** graze or cut for hay, or feed associated by-products to livestock, after application.
- **DO NOT** apply EXPRESS herbicide in a tank mix with organophosphate insecticides as severe crop injury may occur.
- **DO NOT** apply to grass that is under stress from severe weather conditions, drought, low fertility, water saturated soil, disease, or insect damage, as crop injury may result. Under certain conditions such as prolonged cool weather (daily high temperature less than 50°F) or wide fluctuations in day/night temperatures just prior to or soon after treatment, temporary yellowing and/or crop stunting may occur.
- Make last application of EXPRESS herbicide at least 60 days prior to harvest of grass seed.

| Active Ingredient in EXPRESS herbicide: Tribenuron-methyl                                                                                        |                    |                                                |                                        |                                  |                          |                                         |                                   |                            |
|--------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|------------------------------------------------|----------------------------------------|----------------------------------|--------------------------|-----------------------------------------|-----------------------------------|----------------------------|
| Crop/ Use                                                                                                                                        | Application Timing | Maximum Oz/A of Product per Single Application | Maximum AI lb/A per Single Application | Maximum Oz/A of Product per Year | Maximum AI lb/A per Year | Maximum Number of Applications per Year | Minimum Treatment Interval (Days) | Pre-Harvest Interval, Days |
| For Weed Control in Non-Food/Non-Feed Grass Grown for Seed Production Only in the State of Minnesota<br>Seedling stands of timothy               | Postemergence      | 0.25                                           | 0.0078                                 | 0.25                             | 0.0078                   | 1                                       | Not Applicable                    | Not Applicable             |
| For Weed Control in Non-Food/Non-Feed Grass Grown for Seed Production Only in the State of Minnesota<br>Established stands of timothy            | Postemergence      | 0.375                                          | 0.0117                                 | 0.375                            | 0.0117                   | 1                                       | Not Applicable                    | Not Applicable             |
| For Weed Control in Non-Food/Non-Feed Grass Grown for Seed Production Only in the State of Minnesota<br>Seedling stands of bluegrass             | Postemergence      | 0.375                                          | 0.0117                                 | 0.375                            | 0.0117                   | 1                                       | Not Applicable                    | Not Applicable             |
| For Weed Control in Non-Food/Non-Feed Grass Grown for Seed Production Only in the State of Minnesota<br>Established stands of bluegrass          | Postemergence      | 0.5                                            | 0.0156                                 | 0.5                              | 0.0156                   | 1                                       | Not Applicable                    | Not Applicable             |
| For Weed Control in Non-Food/Non-Feed Grass Grown for Seed Production Only in the State of Minnesota<br>Seedling stands of perennial ryegrass    | Postemergence      | 0.15                                           | 0.0047                                 | 0.15                             | 0.0047                   | 1                                       | Not Applicable                    | Not Applicable             |
| For Weed Control in Non-Food/Non-Feed Grass Grown for Seed Production Only in the State of Minnesota<br>Established stands of perennial ryegrass | Postemergence      | 0.375                                          | 0.0117                                 | 0.375                            | 0.0117                   | 1                                       | Not Applicable                    | Not Applicable             |



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## PRECAUTIONS

- The use of methylated seed oil (MSO) or crop oil is not advised with EXPRESS herbicide on grass seed crops as these adjuvants may produce unsatisfactory crop injury.

**This bulletin contains new or supplemental instructions for use of this product which do not appear on the EPA-registered package label. Follow the instructions carefully.**

**Read the Limitation of Warranty and Liability on the Section 3 Federal product label before buying or using THIS product. If terms are not acceptable, return the unopened package at once to Seller for full refund of purchase price paid. Otherwise, use by Buyer or any other User constitutes acceptance of the terms of the Limitation of Warranty and Liability on the Section 3 Federal Product label.**

DR-4294 120519



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215-299-6000

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**DuPont™ Express® Herbicide (with TotalSol® soluble granules)**

Version 2.0

Revision Date 06/17/2015

Ref. 130000012165

This SDS adheres to the standards and regulatory requirements of the United States and may not meet the regulatory requirements in other countries.

**SECTION 1. PRODUCT AND COMPANY IDENTIFICATION**

Product name : DuPont™ Express® Herbicide (with TotalSol® soluble granules)  
Tradename/Synonym : DPX-L5300 50SG  
B11646119  
Tribenuron methyl 50SG  
DuPont™ Affinity 2 Herbicide  
Affinity 50 SG  
Granstar 50 SG  
Tribenuron methyl: Methyl 2-[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl)methylamino]carbonyl]amino]sulfonyl]benzoate

Restrictions on use : Do not use product for anything outside of the above specified uses

Manufacturer/Supplier : DuPont  
4417 Lancaster Pike  
Wilmington, DE 19805, USA

Product Information : 1-800-441-7515 (outside the U.S. 1-302-774-1000)  
Medical Emergency : 1-800-441-3637 (outside the U.S. 1-302-774-1139)  
Transport Emergency : CHEMTREC: +1-800-424-9300 (outside the U.S. +1-703-527-3887)

**SECTION 2. HAZARDS IDENTIFICATION**

**Product hazard category**  
Skin sensitisation

Sub-category 1B

**DuPont™ Express® Herbicide (with TotalSol® soluble granules)**

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**Label content**

Pictogram

:



Signal word

: Warning

Hazardous warnings

: May cause an allergic skin reaction.

Hazardous prevention  
measures

: Avoid breathing dust/ fume/ gas/ mist/ vapours/ spray.  
Contaminated work clothing should not be allowed out of the workplace.  
Wear protective gloves.  
IF ON SKIN: Wash with plenty of soap and water.  
If skin irritation or rash occurs: Get medical advice/ attention.  
Wash contaminated clothing before reuse.  
Dispose of contents/ container to an approved waste disposal plant.

**Other hazards**

The following percentage of the mixture consists of ingredient(s) with unknown acute toxicity: 41.77 %

**SECTION 3. COMPOSITION/INFORMATION ON INGREDIENTS**

| Component                         | CAS-No.     | Concentration |
|-----------------------------------|-------------|---------------|
| Tribenuron methyl                 | 101200-48-0 | 50 %          |
| Trisodium phosphate dodecahydrate | 10101-89-0  | 10 - 15 %     |

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|                   |          |           |
|-------------------|----------|-----------|
| Sodium carbonate  | 497-19-8 | 5 - 10 %  |
| Other Ingredients |          | 25 - 35 % |

The specific chemical identity and/or exact percentage (concentration) of composition has been withheld as a trade secret.

**SECTION 4. FIRST AID MEASURES**

- General advice : Have the product container or label with you when calling a poison control center or doctor, or going for treatment.  
For medical emergencies involving this product, call toll free 1-800-441-3637.  
See Label for Additional Precautions and Directions for Use.
- Inhalation : No specific intervention is indicated as the compound is not likely to be hazardous. Consult a physician if necessary.
- Skin contact : Take off all contaminated clothing immediately. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.
- Eye contact : No specific intervention is indicated as the compound is not likely to be hazardous. Consult a physician if necessary.
- Ingestion : No specific intervention is indicated as the compound is not likely to be hazardous. Consult a physician if necessary.
- Most important symptoms/effects, acute and delayed : No applicable data available.
- Protection of first-aiders : No applicable data available.
- Notes to physician : Treat symptomatically.

**SECTION 5. FIREFIGHTING MEASURES**

**DuPont™ Express® Herbicide (with TotalSol® soluble granules)**

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- Suitable extinguishing media : Water spray, Dry chemical, Foam, Carbon dioxide (CO<sub>2</sub>)
- Unsuitable extinguishing media : High volume water jet, (contamination risk)
- Specific hazards : Not a fire or explosion hazard. Under severe dusting conditions, this material may form explosive mixtures in air.
- Special protective equipment for firefighters : Wear full protective clothing and self-contained breathing apparatus.
- Further information : (on small fires) If area is heavily exposed to fire and if conditions permit, let fire burn itself out since water may increase the area contaminated. Cool containers/tanks with water spray.

**SECTION 6. ACCIDENTAL RELEASE MEASURES**

NOTE: Review FIRE FIGHTING MEASURES and HANDLING (PERSONNEL) sections before proceeding with clean-up. Use appropriate PERSONAL PROTECTIVE EQUIPMENT during clean-up.

- Safeguards (Personnel) : Evacuate personnel, thoroughly ventilate area, use self-contained breathing apparatus. Use personal protective equipment.
- Environmental precautions : Prevent material from entering sewers, waterways, or low areas.
- Spill Cleanup : Sweep up and shovel into suitable containers for disposal.
- Accidental Release Measures : Never return spills in original containers for re-use. Dispose of in accordance with local regulations.

**SECTION 7. HANDLING AND STORAGE**

- Handling (Personnel) : Wash hands thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet. Remove clothing/PPE immediately if material gets inside. Wash thoroughly and put on clean clothing. Wash the outside of gloves before removing. Remove personal protective equipment immediately after handling this product. As soon as possible, wash thoroughly and change into clean clothing.



**DuPont™ Express® Herbicide (with TotalSol® soluble granules)**

Version 2.0

Revision Date 06/17/2015

Ref. 130000012165

- Handling (Physical Aspects) : Keep away from heat and sources of ignition.
- Dust explosion class : No applicable data available.
- Storage : Store in original container. Do not contaminate water, other pesticides, fertilizer, food or feed in storage. Store in a cool, dry place. Keep out of the reach of children.
- Storage period : No applicable data available.
- Storage temperature : No applicable data available.

**SECTION 8. EXPOSURE CONTROLS/PERSONAL PROTECTION**

- Engineering controls : Use only with adequate ventilation.
- Personal protective equipment
- Respiratory protection : No personal respiratory protective equipment normally required.
- Skin and body protection : Applicators and other handlers must wear:  
Long sleeved shirt and long pants  
Shoes plus socks  
Chemical resistant gloves made of any waterproof material, such as polyethylene or polyvinyl chloride.  
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  
Shoes plus socks
- Protective measures : 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. Notify workers of the application by warning them orally or by posting warning signs at entrances to treated areas.
- Exposure Guidelines
- Exposure Limit Values

Tribenuron methyl

|       |          |           |            |
|-------|----------|-----------|------------|
| AEL * | (DUPONT) | 0.5 mg/m3 | 12 hr. TWA |
| AEL * | (DUPONT) | 1 mg/m3   | 8 hr. TWA  |

**DuPont™ Express® Herbicide (with TotalSol® soluble granules)**

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Trisodium phosphate dodecahydrate  
No applicable data available.

Sodium carbonate  
AEL \* (DUPONT) 5 mg/m3 8 & 12 hr. TWA Total dust.

Other Ingredients  
No applicable data available.

\* AEL is DuPont's Acceptable Exposure Limit. Where governmentally imposed occupational exposure limits which are lower than the AEL are in effect, such limits shall take precedence.

**SECTION 9. PHYSICAL AND CHEMICAL PROPERTIES**

Appearance  
Physical state : solid  
Form : solid, granular  
Color : light brown

Odor : mild

Odor threshold : No applicable data available.

pH : 8.4 - 9.4 at 10 g/l 20 °C (68 °F)  
(1% solution in water)

Melting point/range : No applicable data available.

Boiling point/boiling range : No applicable data available.

Flash point : Not applicable

Evaporation rate : No applicable data available.

Flammability (solid, gas) : Does not sustain combustion.

Upper explosion limit : No applicable data available.

Lower explosion limit : No applicable data available.

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|                                        |                                   |
|----------------------------------------|-----------------------------------|
| Vapour Pressure                        | : No applicable data available.   |
| Vapour density                         | : No applicable data available.   |
| Specific gravity (Relative density)    | : No applicable data available.   |
| Bulk density                           | : 640 kg/m <sup>3</sup><br>packed |
| Water solubility                       | : soluble                         |
| Solubility(ies)                        | : No applicable data available.   |
| Partition coefficient: n-octanol/water | : No applicable data available.   |
| Auto-ignition temperature              | : No applicable data available.   |
| Decomposition temperature              | : No applicable data available.   |
| Viscosity, kinematic                   | : No applicable data available.   |
| Viscosity, dynamic                     | : No applicable data available.   |
| Oxidizing Substance                    | : The product is not oxidizing.   |

**SECTION 10. STABILITY AND REACTIVITY**

|                                    |                                                         |
|------------------------------------|---------------------------------------------------------|
| Reactivity                         | : No applicable data available.                         |
| Chemical stability                 | : Stable at normal temperatures and storage conditions. |
| Possibility of hazardous reactions | : Polymerization will not occur.                        |
| Conditions to avoid                | : None reasonably foreseeable.                          |
| Incompatible materials             | : No materials to be especially mentioned.              |
| Hazardous decomposition products   | : No applicable data available.                         |

**DuPont™ Express® Herbicide (with TotalSol® soluble granules)**

Version 2.0

Revision Date 06/17/2015

Ref. 130000012165

**SECTION 11. TOXICOLOGICAL INFORMATION**

DuPont™ Express® Herbicide (with TotalSol® soluble granules)

Dermal LD50 : &gt; 5,000 mg/kg , Rat

Oral LD50 : &gt; 5,000 mg/kg , Rat

Skin irritation : No skin irritation, Rabbit

Eye irritation : No eye irritation, Rabbit

Sensitisation : The product is a skin sensitiser, sub-category 1B., Guinea pig

Tribenuron methyl

Inhalation 4 h LC50 : &gt; 6.0 mg/l , Rat

Repeated dose toxicity :

The following effects occurred at levels of exposure that significantly exceed those expected under labeled usage conditions.

Oral - feed

Mouse

- 90 d

NOAEL: 500 mg/kg

Reduced body weight gain

Oral

Rat

- 28 d

Reduced body weight gain

Carcinogenicity : Not classifiable as a human carcinogen.  
An increased incidence of tumours was observed in laboratory animals.  
Target(s):  
Mammary glands

Mutagenicity : Animal testing did not show any mutagenic effects.  
Tests on bacterial or mammalian cell cultures did not show mutagenic effects.

Reproductive toxicity : No toxicity to reproduction

**DuPont™ Express® Herbicide (with TotalSol® soluble granules)**

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## Sodium carbonate

|                        |   |                                                                                                                                                             |
|------------------------|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Inhalation 4 h LC50    | : | 1.15 mg/l , Rat<br>Target Organs: Respiratory Tract<br>Respiratory irritation                                                                               |
| Repeated dose toxicity | : | Inhalation<br>Rat<br>-<br>Respiratory tract irritation                                                                                                      |
| Mutagenicity           | : | Tests on bacterial or mammalian cell cultures did not show mutagenic effects.<br>Evidence suggests this substance does not cause genetic damage in animals. |
| Reproductive toxicity  | : | Animal testing showed no reproductive toxicity.                                                                                                             |
| Teratogenicity         | : | Animal testing showed no developmental toxicity.                                                                                                            |

## Carcinogenicity

The carcinogenicity classifications for this product and/or its ingredients have been determined according to HazCom 2012, Appendix A.6. The classifications may differ from those listed in the National Toxicology Program (NTP) Report on Carcinogens (latest edition) or those found to be a potential carcinogen in the International Agency for Research on Cancer (IARC) Monographs (latest edition).

None of the components present in this material at concentrations equal to or greater than 0.1% are listed by IARC, NTP, or OSHA, as a carcinogen.

**SECTION 12. ECOLOGICAL INFORMATION**

## Aquatic Toxicity

DuPont™ Express® Herbicide (with TotalSol® soluble granules)

|            |   |                                                           |
|------------|---|-----------------------------------------------------------|
| 96 h LC50  | : | Oncorhynchus mykiss (rainbow trout) > 120 mg/l            |
| 72 h ErC50 | : | Pseudokirchneriella subcapitata (microalgae) > 0.080 mg/l |
| 48 h EC50  | : | Daphnia (water flea) > 120 mg/l                           |

## Sodium carbonate

|     |   |                                                |
|-----|---|------------------------------------------------|
| 4 d | : | EC50 Daphnia magna (Water flea) 228 - 297 mg/l |
|-----|---|------------------------------------------------|

**DuPont™ Express® Herbicide (with TotalSol® soluble granules)**

Version 2.0

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Ref. 130000012165

## Environmental Fate

## Sodium carbonate

Biodegradability : The methods for determining biodegradability are not applicable to inorganic substances.

Bioaccumulation : Does not bioaccumulate.

Additional ecological information : Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters or rinsate.

**SECTION 13. DISPOSAL CONSIDERATIONS**

Waste disposal methods - Product : Do not contaminate water, food or feed by disposal. Wastes resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

Waste disposal methods - Container : Container Refilling and Disposal:  
Refer to the product label for instructions.  
Do not transport if this container is damaged or leaking.

In the event of a major spill, fire or other emergency, call 1-800-441-3637 day or night.

Contaminated packaging : No applicable data available.

**SECTION 14. TRANSPORT INFORMATION**

|        |                      |                                                                             |
|--------|----------------------|-----------------------------------------------------------------------------|
| IATA_C | UN number            | : 3077                                                                      |
|        | Proper shipping name | : Environmentally hazardous substance, solid, n.o.s.<br>(Tribenuron methyl) |
|        | Class                | : 9                                                                         |
|        | Packing group        | : III                                                                       |
|        | Labelling No.        | : 9MI                                                                       |
| IMDG   | UN number            | : 3077                                                                      |

**DuPont™ Express® Herbicide (with TotalSol® soluble granules)**

Version 2.0

Revision Date 06/17/2015

Ref. 130000012165

|                      |                                                                             |
|----------------------|-----------------------------------------------------------------------------|
| Proper shipping name | : ENVIRONMENTALLY HAZARDOUS SUBSTANCE,<br>SOLID, N.O.S. (Tribenuron methyl) |
| Class                | : 9                                                                         |
| Packing group        | : III                                                                       |
| Labelling No.        | : 9                                                                         |

Not regulated as a hazardous material by DOT.

Marine Pollutants assigned UN number 3077 and 3082 in single or combination packaging containing a net quantity per single or inner packaging of 5 L or less for liquids or having a net mass per single or inner packaging of 5 KG or less for solids may be transported as non-dangerous goods as provided in section 2.10.2.7 of IMDG code, IATA special provision A197, and ADR/RID special provision 375.

**SECTION 15. REGULATORY INFORMATION**

Other regulations : This Safety Data Sheet is for a pesticide product registered by the US Environmental Protection Agency (USEPA) and is therefore also subject to certain labeling requirements under US pesticide law (FIFRA). These requirements differ from the classification criteria and hazard information required by OSHA for safety data sheets, and for workplace labels of non-pesticide chemicals. The following is the mandatory hazard information required by USEPA on the pesticide label:

**CAUTION!**

Prolonged or frequently repeated skin contact may cause allergic reactions in some individuals. Avoid contact with skin, eyes and clothing.

SARA 313 Regulated Chemical(s) : Tribenuron methyl

PA Right to Know Regulated Chemical(s) : Substances on the Pennsylvania Hazardous Substances List present at a concentration of 1% or more (0.01% for Special Hazardous Substances): Trisodium phosphate dodecahydrate

Title III hazard classification : Acute Health Hazard: Yes  
Chronic Health Hazard: No  
Fire: No  
Reactivity/Physical hazard: No  
Pressure: No

**DuPont™ Express® Herbicide (with TotalSol® soluble granules)**

Version 2.0

Revision Date 06/17/2015

Ref. 130000012165

EPA Reg. No. : 352-632

In the United States this product is regulated by the US Environmental Protection Agency (EPA) under the Federal Insecticide, Fungicide and Rodenticide Act (FIFRA). It is a violation of Federal law to use this product in a manner inconsistent with its labeling. Read and follow all label directions. This product is excluded from listing requirements under EPA/TSCA.

**SECTION 16. OTHER INFORMATION**

## NFPA

|                            |   |   |
|----------------------------|---|---|
| Health                     | : | 1 |
| Flammability               | : | 1 |
| Reactivity/Physical hazard | : | 0 |

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™ Trademark of E.I. du Pont de Nemours and Company.

Revision Date : 06/17/2015

Contact person : DuPont Crop Protection, Wilmington, DE, 19898, Phone: 1-888-638-7668

The information provided in this Safety Data Sheet is correct to the best of our knowledge, information and belief at the date of its publication. The information given is designed only as a guidance for safe handling, use, processing, storage, transportation, disposal and release and is not to be considered a warranty or quality specification. The information relates only to the specific material designated and may not be valid for such material used in combination with any other materials or in any process, unless specified in the text.

Significant change from previous version is denoted with a double bar.



JANET T. MILLS  
GOVERNOR

STATE OF MAINE  
DEPARTMENT OF AGRICULTURE, CONSERVATION AND FORESTRY  
BOARD OF PESTICIDES CONTROL  
28 STATE HOUSE STATION  
AUGUSTA, MAINE 04333

5

AMANDA E. BEAL  
COMMISSIONER

BOARD OF PESTICIDES CONTROL

March 8, 2019  
9:00 AM

Room 118 Marquardt Building  
32 Blossom Lane, Augusta, Maine

DRAFT MINUTES

Present: Bohlen, Granger, Jemison, Morrill, Waterman

1. Introductions of Board and Staff

- The Board, Assistant Attorney General Randlett, and Staff introduced themselves
- Staff Present: Bryer, Connors, Couture, Nelson, Patterson, Pietroski, Tomlinson

2. Public Hearing on Proposed Rule Amendments to Chapters 10, 26, 27, 31, 32, and 50 and Repeal of Chapter 36

The Board will hear testimony on the proposed amendments and repeal:

**Chapter 10**—Two amendments are proposed:

1. Amend the definition of “Aerial Applicator” to allow certification as a private applicator. Currently the rule requires applicators to hold a commercial license which prevents an individual from making applications on their own property. This is required by the new EPA C&T rules, and is in anticipation of potential applications by unmanned aircraft systems.

**Chapter 26**—One amendment is proposed:

1. Clarify the definition of “occupied buildings” to mean fully enclosed indoor spaces inside buildings and that roofed structures which are otherwise not enclosed are not buildings for the purpose of the rule.

**Chapter 27**—Three amendments are proposed:

1. Change wording to clarify that all pesticide applications, inside and outside, must be included in the pest management activity log.
2. Change wording to clarify that applications made to the exterior of buildings are included in the rule.
3. Add personal insect repellents to the list of products which do not require licensure.

MEGAN PATTERSON, DIRECTOR  
32 BLOSSOM LANE, MARQUARDT BUILDING



PHONE: (207) 287-2731  
WWW.THINKFIRSTSPRAYLAST.ORG

**Chapter 28**—One amendment is proposed:

1. Clarify that the telephone number required on signs must be a working number.

**Chapter 31**—Eleven amendments are proposed:

1. Add requirement for a government-issued photo id for all exams (required by EPA C&T).
2. Establish annual training requirements for noncertified applicators of restricted use pesticides (required by EPA C&T).
3. Establish minimum age for individuals certified as commercial or private applicators (required by EPA C&T).
4. Describe the credentials which will be issued to each applicator verifying certification (required by EPA C&T).
5. Remove section on transitioning to revised licensing and certification requirements since the time frame has passed.
6. Update the names of certain categories to align with current exams.
7. Remove requirement to collect social security number.
8. Change cost of master exams from \$50 for both to \$10 for Master Regulations exam and \$40 for Master Oral exam.
9. Remove exemption for those certifying in the Post Harvest Treatment category from having to take the core exam.
10. Remove requirements for applicators to receive continuing education credits in specific categories as the Board doesn't categorize courses this way.
11. Remove fee for replacement and upgraded licenses as the Board no longer charges for these due to improved software.

**Chapter 32**—Six amendments are proposed:

1. Amend competency standards to include those required by EPA C&T: label comprehension; responsibilities for supervisors of noncertified applicators; stewardship; ability to read and understand pesticide labeling.
2. Remove option to provide oral exam as EPA C&T no longer allows non-reader accommodations.
3. Add supplemental private categories which can be obtained in addition to certification for private licensure: aerial application; soil fumigation; non-soil fumigation (required by EPA C&T).
4. Establish minimum age for individuals certified as commercial or private applicators (required by EPA C&T).
5. Describe the credentials which will be issued to each applicator verifying certification (required by EPA C&T).
6. Add requirement for a government-issued photo id for all exams (required by EPA C&T amendments).

**Chapter 50**—One amendment is proposed:

1. Add requirements to dealer records of sales (required by EPA C&T amendments):
  - a. customer address
  - b. issuing authority, certification expiration date, and categories of certification in addition to the applicator's certification number

**Chapter 36**—Repeal of chapter is proposed. Associated requirements were previously repealed because they are no longer necessary with the current technology used in aircraft.

- There were no comments from the public.
  - **Morrill/Granger: Moved and seconded to close public hearing at 9:03am**
  - **In Favor: Unanimous**

3. Minutes of the January 16, 2019 Board Meeting

Presentation By: Megan Patterson, Director

Action Needed: Amend and/or Approve

- The Board requested minor edits be made.
  - **Granger/Waterman: Moved and seconded to accept minutes as amended**
  - **In Favor: Unanimous**

4. Overview of Mosquito-borne Diseases and Monitoring in Maine

The Maine Center for Disease Control and Prevention (Maine CDC) coordinates state activities around preventing vector-borne diseases. As part of its responsibilities, the CDC coordinates mosquito and disease monitoring in Maine. The presence of mosquito-borne diseases and the species of vector mosquitoes present in Maine have been on the rise in recent years. Maine CDC and BPC entered into a Memorandum of Understanding in 2013 to establish cooperation to conduct surveillance for mosquito-borne diseases to protect public health. Sara Robinson of the Maine CDC will provide an overview of the trends and the state's monitoring program and discuss the possibility of increased BPC financial support for the 2019 season.

Presentation By: Sara Robinson, Program Director

Action Needed: Discussion and Determination if the Board Wishes to Increase Funding to CDC for Environmental Monitoring of Mosquitoes

- Maine CDC has a Memorandum of Understanding with the Board to collaborate on mosquito monitoring.
- Robinson recounted Maine CDC's history of mosquito monitoring for the Board. The Maine CDC began monitoring in 2001 and Eastern Equine Encephalitis (EEE) was identified in 2008. In 2009, 15 horses died from EEE. Maine saw its first human case of West Nile Virus (WNV) in 2012. In 2015 a case of EEE and of WNV were found. The EEE case was fatal. In 2018 a horse became infected with WNV, and mosquito pools from Bangor tested positive as well, which is the furthest north it has been found.
- Robinson stated that in 2015, the Maine CDC launched a much larger monitoring response due to worries about Zika. Though *Aedes aegypti* mosquitoes have not been found in Maine, they have been identified overwintering in Massachusetts.
- The Maine CDC contracts with Maine Medical Center Research Institute (MMCRI) and have established mosquito colonies from mosquitoes collected in the wild. This is the first year they will begin routinely testing these mosquitoes for pesticide resistance.
- Robinson added that they would like to continue monitoring to better help predict what areas they may find mosquitoes in, and anytime a positive is discovered in an area they try to maintain a trap there.
- Robinson explained that Maine CDC complements any federal CDC funds they receive with funds from the BPC. She added that they expand to more testing sites when they have money. In 2017, the federal CDC gave them \$600,000 for monitoring Zika. Last year they received zero federal dollars for mosquito monitoring.

- Morrill asked about information pertaining to Jamestown Canyon Virus.
- Robinson stated it is a mosquito borne virus that four to five species of mosquitoes found in Maine can carry. There have been two cases in Maine and both patients developed encephalitis. The federal CDC is now routinely testing and they are averaging about 13 cases a year nationwide. Robinson added that Maine CDC believe they found it in two mosquito pools and they are awaiting verification.
- Morrill asked how much testing and/or trapping can be conducted with \$25,000.
- Robinson responded that it gets added to the pool with any monies from the federal CDC. Their trapping is contracted out to MMCRI and MMCRI contracts it out to Swamp Inc.
- Morrill asked how large the pool of money toward this was.
- Robinson stated that it is usually \$150,000 but the money is gone for this year so Maine CDC will cover the rest with general funds, which is not a sustainable long-term solution.
- Bohlen asked when the start date of the MOU was, when it will expire, and if there is a clear picture of what they are trying to accomplish and where they see this going.
- Robinson will look into the MOU and stated that they have light traps, gap traps, resting boxes to trap various species of mosquitoes. She added that they are trying to be thoughtful as they expand so that trapping capacity is flexible depending on funding.
- Morrill asked if there is any tick testing going on.
- Robinson responded that UMO's lab is launching tick testing this year. They are expecting there to be high interest in it and they are looking to charge \$15 to test for Lyme. Robinson added that there has also been talk of partnering with some other states to do some wider tick testing.
- Adams asked about the disease detection process and if medical providers in the state are educated.
- Robinson replied that they provide extensive education to providers instructing them to remain alert if they observe flu-like symptoms in the summer months.
- Patterson commented that the mosquito testing is also done to inform us on whether there is a need to pursue an aerial application. She added that the Board would assist in the event of an arboviral threat. The board has responsibilities to provide monitoring, provide lists of registered products, and to indicate exclusion areas.
- Granger asked about the fiscal obligations of the Board for aerial mosquito spray programs.
- Bohlen expressed that he really appreciated all the work but needed to look at the Board's overall budget before he could understand how it fits in and what would come out of it.
- Patterson stated that the current budget is likely able to support this request.
- Morrill stated he would like to see the budget along with what they have for specific asks.
- Bohlen added that he would like a more specific explanation of where the money is going.
- Robinson stated that MMCRI submits an annual report and offered to make that available for the Board.
- Bohlen stated he would like a sense on what the return on investment would be.
- Patterson commented that the Board has a responsibility to provide information on application exclusion zones. Further, in the event that control measures need to be implemented, the Department will be able to use the data collected from this monitoring

effort to assist in delineating a more refined treatment area. Patterson added that the Board also has a statutory obligation to provide Maine CDC with, at minimum, \$25,000 and that we have given them that in past years.

- Bohlen responded that he would like to know how long the Board has been giving the same amount.
- Robinson stated she will provide the Board with a summary and budget breakdown.
- Morrill added that he would like to see a list of what cannot be covered with that money.

5. Request from Integrated Pest Management Program for Funds for Mosquito Monitoring

The Integrated Pest Management Program is requesting funds to assist with on-going efforts for mosquito surveillance and identification, development of a GIS-based mosquito habitat mapping system, and continued outreach around vector-borne diseases.

Presentation By: Kathy Murray, DACF IPM Specialist

Action Needed: Discussion and Determination if the Board Wishes to Fund this Request

- Murphy stated surveillance is developed as an early warning sign to protect public health. She added that the state lab testing the mosquitoes is in Augusta. Murray told the Board she has been focusing her surveillance in the central Maine area. Maine CDC assisted with the purchase of a dry ice maker. Maintenance cost are about \$50 per week to have CO<sub>2</sub> delivered.
- Murray provided a budget outline to the Board. Her request is for a little over \$6,000.
- Murray told the Board that they focus heavily on the species of mosquitoes that they know carry EEE virus--all ten sites have resting boxes. The two target species emerge at different times of the season, so they conducted sampling last year from the end of June to the end of October.
- Bohlen asked if there were any found to be EEE positive.
- Murray responded that none were found last year. They also identify all mosquitoes found in the traps whether they are sent to the lab or not.
  - **Morrill/Jemison: Moved and seconded to approve funding request.**
  - **In Favor: Unanimous**

6. Request for Special Local Need [24(c)] Registration for Express® Herbicide with TotalSol (FMC Corporation) for Spot Application and Bunchberry Control in Lowbush Blueberries

In September 2008, the Board first approved a Section 24(c) registration for DuPont Express® Herbicide with TotalSol (EPA Reg. No. 352-632). The 24(c) was renewed in 2010 and 2013, but the registration expired December 31, 2018. The EPA Section 3 registration was recently transferred to FMC Corporation which supports the request by the University of Maine Cooperative Extension for a new 24(c) registration. This 24(c) has been expanded to allow for spot applications to control labeled weeds during the prune year and applications in the fall after harvest and in the spring of the non-crop year to control bunchberry.

Presentation By: Mary Tomlinson, Pesticides Registrar and Water Quality Specialist

Action Needed: Approve/disapprove 24(c) registration request

- Tomlinson stated this is a repeat Special Local Need (SLN), but the registration was transferred to FMC invalidating the SLN. She added that there were some changes in the new label which increase the maximum application rate and added additional sites/plants.
- Yarborough stated he was aware it was expiring at end of 2018. Wyman approached him asking about harmonization of use for this product. They conducted an experiment at Wyman's. He added that the timing was a bit off and it can set the plants back some in the spring but there is evidence that the plants bounce back.
- Yarborough stated he will continue to look at some problematic weeds, like red sorrel, which is not listed on the label. He told the Board they are trying to align more with what they have been doing in Canada in the last 10 years.
- Jemison asked if the lab analyzes for this specific product because he wants to ensure testing is done for this fairly soluble product to see if it is getting into the water. He asked if anyone in Canada has looked for it in water.
- Yarborough responded that he was not aware of any testing in Canada
- Jemison stated his memory is that the Board approved it but stated they wanted to have water testing done so he is hesitant on this.
- Yarborough responded that he was unaware it was that mobile.
- Yarborough stated this is not like Velpar, which is applied every year. He added that if it is applied correctly it is not something that would have to be used annually.
- Morrill commented that in the initial coversheet it stated that this was tested for in 2011.
- Bryer stated that a study in Sweden showed it was mostly mineralized in the top 15 centimeters.
- Bohlen commented that there were several studies with similar outcomes that the active is metabolized relatively rapidly in loamy soils, but things may be very different with saturated soils or sandy soils.
- Jemison stated the test was done in Modesto with highly alkaline soils and we have acidic soils.
- Yarborough stated the wild blueberry soils are generally sandy loam with high organic matter. He added that with acidic soils bacteria levels drop and fungus levels rise.
- Morrill asked Darren Hammond of Wymans about the use of this product in Canada.
- Hammond responded that spring application gives better efficacy than in the fall. In the fall they are applying it as needed as a spot spray. He added that in Canada they have to wait until a little later in the spring and there would not be saturated soils at that time.
- Morrill asked how often growers are using the product in Canada.
- Hammond stated that once bunchberry is controlled there could be four to six cycles before it would need to be treated again. He added that there are not many pesticide options for control of bunchberry, and there is no other good option. Hammond stated that Velossa can be used but it is hit or miss and bunchberry returns in the off year. He continued that the only other option is an extremely hot product called Sandea and he would not recommend its use by someone unless they are a very experienced applicator.
- Hammond responded that having Express as an option will most likely result in lower use of hexazinone and lower the amount of material that could possibly contaminate groundwater.
- Morrill asked if water testing was currently being done in the wild blueberry areas.

- Tomlinson responded not specifically at this time. She added that they get tested every four to six years and sampling in blueberry production areas would occur next year.
- Morrill asked if this active ingredient could be added to the panel.
- Tomlinson will look into this.
- Adams asked if the Board could make water testing by UMCE a condition of approval.
- Randlett stated the Board could not impose conditions under FIFRA.
- Bohlen commented that to really test for this the BPC should pay for a study to test for it.
- Jemison suggested that possibly Lily Calderwood, Yarborough's replacement as Extension Blueberry Specialist, would be interested in doing the testing.
- Morrill asked if doing this testing was feasible.
- Yarborough answered yes, they could do it in the fields where they have test wells, or fields with houses nearby. He continued that it would be difficult knowing when to test not knowing the movement capacity of this active ingredient.
- Hammond responded that they have used this material since the initial SLN was approved.
- Adams asked about the timing on spring applications.
- Hammond stated it is really variable; last year was late May into June.
- Bryer commented that there is a passive sampler available with a well-fitting and it is good at detecting low concentrations.
- Morrill asked if that was technology the Board has available.
- Bryer responded that we have the passive sampler but do not have the well-fitting portion.
- Tomlinson will follow up with an extension specialist on the water testing.
  - **Morrill/Adams: Moved and seconded to approve SLN for two years contingent on having the active ingredient added to the panel of testing for next year.**
  - **In Favor: Unanimous**

## 7. Review of Proposed Surface Water Testing for 2019

7 M.R.S.A. § 607-A, Section 2-A, directs the Board to conduct water residue surveys, for both ground and surface water, to prepare profiles of the kinds and amounts of pesticides present. At the November 2018 Board meeting, Board staff proposed a continuation of past water monitoring efforts. The Board asked that staff provide the Board with the proposed cost, purpose of the testing, and set objectives.

Presentation By: Mary Tomlinson, Registrar and Water Quality Specialist and  
Pam Bryer, Toxicologist

Action Needed: Approve or disapprove funding for the proposed monitoring effort

- Tomlinson told the Board that there are two different projects in the proposal. The plan is to repeat what they did last September, but during the spring so spring/fall results could be reported on the second project and would have some overlap. The second project is being called 10 cities and the purpose is to examine surface water pollution in an urban area.

- Tomlinson stated they will look for the 10 largest cities by population and deploy the passive sampler downstream/river of these areas and collect grab sample there and upstream. Sediment samples would also be collected from those areas.
- Tomlinson told the Board they would be using UMaine for analysis of the sediment, particle size and organic matter. All water profile testing would be done by Montana Lab. She stated that the estimated costs would be \$56,000 and that includes the cost of the analysis, passive samplers and membranes.
- Bohlen stated that the United States Geological Service (USGS) has a series of publications looking at pesticide residues in urban waters. He suggested Tomlinson use that to make sure that Montana's panel includes products that are being detected. Bohlen added that we need to think about the watershed leading into where the sample is being taken and if it is from a commercial district or a residential district.
- Tomlinson stated that once sites are selected she will communicate with Bohlen.
- Morrill asked if glyphosate would be included in the test panel.
- Tomlinson responded that glyphosate was not detected in the fall sampling but it may be different in the spring. She added that there would be a separate cost as this would need to be done in a separate panel.
- Bryer commented that glyphosate is not found a lot but it is very important to the public.
- Tomlinson stated that in the past it was not tested for because of financial constraints.
- Morrill asked if the increased cost would be less than \$10,000.
- Tomlinson replied yes.
- Patterson explained to the Board that they could submit a budget order to cover these additional costs.
  - **Adams/Morrill: Motioned and seconded approve \$80,000 for water testing to specifically include glyphosate testing.**
  - **In Favor: Unanimous**

8. Request to Fund Development of Additional Functionality Within Existing MEPERLS Framework of Digital Inspection Flows and Digital Reports for Submission of Existing Annual Pesticide Use and Sales Reports

Board staff and constituents are now successfully working with the Maine Pesticide Enforcement, Registration and Licensing System (MEPERLS). Staff propose that there are opportunities to use the system to provide further benefit to constituents and further improve the efficiency of the Board's work. One suggestion is to incorporate required reporting within the system, allowing dealers and applicators to report sales/use using an online fillable form linked to the product registration data. This would force the data to be entered consistently and allow accurate reporting. These forms are currently submitted on paper or through email as static digital documents. A second improvement would be to replace the current digital, but static, fillable PDFs used for the inspection process with interactive flows within MEPERLS resulting in a fully searchable enforcement dataset.

Presentation By: Megan Patterson, Director

Action Needed: Approve or disapprove funding for the proposed development effort

- Patterson told the Board that MEPERLS encompasses all the components of the business and it is where we host, for both internal and external users, enforcement, registration, licensing info, exam scores, certification information, etc.
- Patterson stated that the first ask was to enter inspections in the form of flows through the system allowing for improved ease of conducting inspections via tablet and conducting enforcement assessments.
- Patterson explained to the Board that the second idea was to allow for commercial applicator and dealer annual end of year reporting to be made in MEPERLS. This would give use more agile use of information which the public has been very interested in. She added that it may also make it easier for applicators to enter their application information by prepopulating fields.
- Patterson told the Board that preliminary estimates are between \$60-90,000.
- Morrill stated he is concerned with the costs of the Pega system largely because when this project was pitched five years ago the whole project was supposed to be \$200,000 and now we are at well over a million.
- Patterson stated that there was initial work that was not viable but it still had to be paid for. She further explained to the Board that this would be an additional functionality, not something we initially intended to spend money on.
- Morrill commented that providing a cost range did not work the first time and it probably would not work this time. He added that he was all for the idea but wants to see a fixed cost for doing this.
- Patterson explained that there has been a lot of change in the personnel we work with. We have a lot of confidence in the individuals we are working with now.
- Morrill asked that staff provide a 'not to exceed' price. The Board agreed.
- Patterson will provide that and the budget at the next Board meeting.

## 9. Correspondence

### a. Letter from Linda Titus, Ag Matters

- Patterson explained to the board that this pertains to recordkeeping requirements for the Food Safety Modernization Act and disinfectant that they must keep records of. Disinfectants are being used before the product leaves the farm, which requires that the use be recorded. According to how our rules are written it appears they do need to maintain records.
- Linda Titus stated she was initially asking for clarification for a grower because there appears to be an inequity between rules. A restaurant can do the same type of application and not have to report it. Growers are asking if this information needs to be recorded in the pesticide logbook. There are growers that are not aware of this. She added that not all farmers fall under the produce safety rule and if they do not then they do not need to record the treatment of water. Titus stated she wants to make sure she is giving growers correct information.
- Patterson stated that there is no licensing requirement for this record-keeping.
- Titus asked the Board for clarification because growers have questions, and additionally, what are the regulations for those using single pass water.
- Bohlen commented that the discussion about whether this is appropriate brings to mind all the other instances in which people use sanitizer but are not required to maintain records.

- Morrill stated he remembered there was a lot of time spent on this and they had solid reasons for adding each of those items to the list. He added that it is his feeling we should educate about this rather than revisiting the list.
- Titus stated she spoke at the AgTrade show trying to educate people on this. She added that it took a while to get an answer and if it takes me a while then you can be sure growers don't have a clue.

10. Other Items of Interest

- a. Montana Universal Pesticide Analysis (Water) June 2018
- b. LD 643 An Act To Provide Funding to Municipalities Severely Affected by Pest Infestations
- c. LD 785 Resolve, Directing the Board of Pesticides Control To Educate the Public on the Proper Use of Pesticides and To Promote Integrated Pest Management
- d. LD 796 An Act To Reestablish the Department of Agriculture, Food and Rural Resources and the Department of Conservation
- e. LD 889 An Act To Require the Labeling of Foods Made with Nanotechnology
- f. LD 908 An Act To Require Schools to Submit Pest Management Activity Logs and Inspection Results to the Board of Pesticides Control for the Purpose of Providing Information to the Public

11. Schedule of Future Meetings

April 19, 2019, and May 24, 2019 are proposed meeting dates.

- The Board set June 28, 2019 as an additional proposed meeting date.
- There was discussion about possibly August 9 or 30<sup>th</sup> as well. Bohlen suggested a forestry or urban use themed trip. Staff will look into when Ron Lemin may be available

12. Adjourn

- **Adams/Bohlen: Motioned and seconded to adjourn at 11:17am**
- **In Favor: Unanimous**