GROUP 27 HERBICIDE

MOTIF®

HERBICIDE

For Control of Annual Broadleaf Weeds in Corn (field, seed, sweet, yellow pop), Asparagus, Citrus Fruit, Pome Fruit, Stone Fruit, Tree Nuts, Cranberries, Flax, Oats, Okra, Pearl Millet, Rhubarb, Sorghum (grain and sweet), Soybeans, and Sugarcane

ACTIVE INGREDIENT:	
Mesotrione: (CAS No. 104206-82-8)	40.0%
OTHER INGREDIENTS:	60.0%
TOTAL:	100.0%

Contains 4 lbs of active ingredient mesotrione per gallon.

EPA Reg. No. 70506-331

KEEP OUT OF REACH OF CHILDREN

CAUTION

FIRST AID	
If on skin or clothing	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
If in eyes	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
If inhaled	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.
If swallowed	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to by the poison control center or doctor. • Do not give anything to an unconscious person.
Have the product container or label with you when calling a poison control center or doctor or going for treatment. You may also contact Rocky Mountain Poison and Drug Safety at 1-866-673-6671 for emergency medical treatment information.	

IN CASE OF EMERGENCY: Spill, leak, fire, exposure, or accident, call CHEMTREC 1-800-424-9300.

HERBICIDE

NET CONTENTS: _____ GALLONS

UPL

UPL NA Inc. • 630 Freedom Business Center, Suite 402 • King of Prussia, PA 19406 U.S.A. • 1-800-438-6071

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION

Harmful if absorbed through skin. Avoid contact with skin, eyes, or clothing.

Personal Protective Equipment (PPE)

Applicators and other handlers must wear:

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

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.

ENGINEERING CONTROL STATEMENTS

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

USER SAFETY RECOMMENDATIONS

Users should:

- Wash hands 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 disposing of equipment washwater or rinsate.

SURFACE WATER ADVISORY

This product may contaminate water through drift of spray in wind. This product has a high potential for runoff for several weeks after application. Poorly draining soils and soils with shallow water tables are more prone to produce runoff that contains this product. A level, well maintained vegetative buffer strip between areas to which this product is applied and surface water features such as ponds, streams, and springs will reduce the potential for contamination of water from runoff. Runoff of this product will be reduced by avoiding applications when rainfall is forecasted to occur within 48 hours. Sound erosion control practices will reduce this product's contribution to surface water contamination.

PHYSICAL AND CHEMICAL HAZARDS

Do not mix or allow to come into contact with oxidizing agents. Hazardous chemical reactions may occur.

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, such as plants, soil, or water, is:

- Coveralls
- Shoes plus socks
- Chemical-resistant gloves

PRODUCT INFORMATION

MOTIF® Herbicide is a systemic pre-emergence and post-emergence herbicide for the selective contact and residual control of broadleaf weeds in field corn, seed corn, yellow popcorn, sweet corn, and other listed crops. When used pre-emergence, weeds take up the product through the soil during emergence. Dry conditions following application may reduce the pre-emergence activity of MOTIF. If an activating rain (0.25 inch) is not received within 7-10 days after a pre-emergence application, where appropriate, rotary hoeing is suggested to activate the herbicide. When used post-emergence, susceptible weeds take up the herbicide through the treated foliage and cease growth soon after application. Complete death of the weeds may take up to 2 weeks. The product is absorbed through the soil and/or by the foliage of emerged weeds.

MOTIF is not effective for the control of most grass weeds. Pre-emergence grass herbicides or post-emergence grass herbicides can be tank mixed with MOTIF to provide broad spectrum weed control in corn (see appropriate section of label for this information). MOTIF can be applied post-emergence following a pre-emergence grass herbicide application. MOTIF can also be used in combination with a burndown herbicide, prior to planting, to provide added burndown and residual weed control in field corn, seed corn, yellow popcorn, and sweet corn.

RESISTANCE MANAGEMENT

MOTIF is a **Group 27 Herbicide** (contains the active ingredient mesotrione).

Naturally occurring biotypes of certain broadleaf weed species with resistance to triazines, glyphosate, PPO, HPPD and ALS inhibiting herbicides are known to exist. The presence of biotypes resistant to triazines, glyphosate, PPO or ALS inhibiting herbicides do not affect the performance of MOTIF.

To aid in the prevention of weeds developing resistance to MOTIF **in corn**, always use full labeled rates. If applying MOTIF post-emergence after a mesotrione-containing pre-emergence herbicide, always add atrazine as a tank mix partner. If a herbicide must be applied during a growing season in addition to MOTIF, use a product with a mode of action other than HPPD inhibitor (**Group 27 Herbicide**) be used. MOTIF must be applied at full label rates to help prevent selection for, or population shifts toward, marginally tolerant weed species and/or species biotypes.

INTEGRATED PEST (WEED) MANAGEMENT

Integrate MOTIF into an overall weed and pest management strategy whenever the use of a herbicide is required. Follow practices known to reduce weed development (tillage, crop competition) and herbicide use (weed scouting, proper application timing, banding) wherever possible. Consult local agricultural and weed authorities for additional IPM strategies established for your area.

USE RESTRICTIONS

Do not apply this product through any type of irrigation system unless specified otherwise under the specific crop section on the label.

Do not apply this product with suspension fertilizers as the carrier.

Do not apply MOTIF post-emergence in a tank mix with emulsifiable concentrate (EC) grass herbicides, unless specifically addressed under one of the tank mix sections of this label, or injury may occur.

Do not apply MOTIF by air unless specified otherwise under the specific crop section on the label.

USE PRECAUTIONS

When weeds are stressed and not actively growing due to environmental conditions (such as drought, heat, lack of fertility, flooding, or prolonged cool temperatures), control can be reduced or delayed. Weed escapes or regrowth may occur when application is made under prolonged stress conditions. For best weed control will apply MOTIF following label directions when weeds are actively growing.

MOTIF may be applied with pyrethroid type insecticides such as bifenthrin (e.g. BIFENTURE®), lambda cyhalothrin (e.g. UPL NA LAMBDA-CY®), and permethrin (e.g. PERM-UP®).

SPRAY DRIFT DIRECTIONS

Avoid drift onto adjacent crops and other non-target areas.

RESTRICTIONS: For aerial application use only nozzles producing coarse-ultra coarse droplets. Do not use nozzles producing fine-medium size droplets.

Do not apply when weather conditions may cause drift to non-target areas. Drift may result in injury to adjacent crops and vegetation. To avoid spray drift, do not apply when wind speed is greater than 10 mph or during periods of temperature inversions. Use of larger droplet sizes will also reduce spray drift.

AVOIDING SPRAY DRIFT AT AND FROM THE APPLICATION SITE IS THE RESPONSIBILITY OF THE APPLICATOR.

The interaction of equipment and weather related factors determine the potential for spray drift. The applicator is responsible for considering all these factors when making a decision.

INFORMATION ON DROPLET SIZE

An effective way to reduce spray drift potential is to apply large droplets. The part of a drift management strategy is to apply the largest droplets that provide sufficient coverage and control. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly or under unfavorable environmental conditions. Refer to the **AERIAL APPLICATION** section for specific instructions regarding droplet size.

CONTROLLING DROPLET SIZE

- Volume - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- Pressure - Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher rate nozzles instead of increasing pressure.
- Number of Nozzles - Use the minimum number of nozzles that provide uniform coverage.

SENSITIVE AREAS

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

ADDITIONAL SPRAY DRIFT DIRECTIONS FOR AERIAL APPLICATIONS

The distance of the outer-most nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.

Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees. Where states have more stringent regulations, they must be observed.

Spray must be released at the lowest height consistent with effective weed control and flight safety.

For best results, ensure that each specific aerial application vehicle used is calibrated and quantifiably pattern tested for aerial application of MOTIF initially and every year thereafter.

RESTRICTION: For aerial application use only nozzles producing coarse-ultra coarse droplets. Do not use nozzles producing fine-medium size droplets.

For some use patterns, reducing the effective boom length to less than 3/4 of the wingspan or rotor length may further reduce drift without reducing swath width.

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

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

Drift potential is lowest between wind speeds of 2-10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Avoid application below 2 mph due to variable wind direction and high inversion potential. **Note:** Local terrain can influence wind patterns. Applicators must ensure that they are familiar with local wind patterns and how they affect drift.

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

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

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

APPLICATION INFORMATION

PRE-EMERGENCE GROUND APPLICATION

Apply MOTIF pre-emergence with a spray volume of 10-60 gallons/A using water or liquid fertilizer (excluding suspension fertilizers) as the carrier.

Spray nozzles must be uniformly spaced, the same size and type, and must provide accurate and uniform application. Use spray nozzles that provide medium to coarse droplet size to provide good coverage and avoid drift. Use

a pump that can maintain a pressure of at least 35-40 psi at the nozzles and provide proper agitation within the tank to keep the product dispersed. Lower pressures may be used with extended range or drift reduction nozzles.

Always ensure that agitation is maintained until spraying is completed, even if stopped for brief periods of time. If the agitation is stopped for more than 5 minutes, re-suspend the spray solution by running on full agitation prior to spraying.

POST-EMERGENCE GROUND APPLICATION

Apply in a spray volume of 10-30 gallons/A using water as a carrier.

Spray nozzles must be uniformly spaced, the same size and type, and must provide accurate and uniform application. Use spray nozzles that provide medium to coarse droplet size to provide good coverage and avoid drift. Good weed coverage is essential for optimum weed control. Boom height for broadcast over-the-top applications must be based on the height of the crop, and should be within 15 inches of the crop canopy.

Use a pump that can maintain a pressure of at least 35-40 psi at the nozzles and provide proper agitation within the tank to keep the product dispersed. Lower pressures may be used with extended range or drift reduction nozzles. When weed foliage is dense, use a minimum of 20 gallons.

Use flat fan nozzles of 80° or 110° for best post-emergence coverage. Do not use floodjet nozzles or controlled droplet application equipment for post-emergence applications.

Nozzles may be angled forward 45° to enhance penetration of the crop and provide better coverage. Ensure that all in-line strainer and nozzle screens in the sprayer are 50-mesh or coarser.

Always ensure that agitation is maintained until spraying is completed, even if stopped for brief periods of time. If the agitation is stopped for more than 5 minutes, re-suspend the spray solution by running on full agitation prior to spraying.

AERIAL APPLICATION

RESTRICTIONS

- **MOTIF may be applied by air ONLY to corn and sugarcane.**

For aerial application use only nozzles producing coarse-ultra coarse droplets. Do not use nozzles producing fine-medium size droplets.

Applications must be made in a minimum of 2 gallons of water per acre.

For corn, apply MOTIF by air for pre-emergence or post-emergence weed control only in the following states: Alabama, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Georgia, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Nebraska, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin and Wyoming.

For sugarcane, apply MOTIF by air for pre-emergence or post-emergence weed control only in the following states: Florida, Louisiana and Texas.

SPRAY ADDITIVES

POST-EMERGENCE ADJUVANTS

When an adjuvant is to be used with this product, the use of an adjuvant that meets the standards of the Chemical Producers and Distributors Association (CPDA) adjuvant certification program is recommended.

The following adjuvant recommendations are intended primarily for MOTIF use in corn. Refer to the use directions section of each crop section for specific adjuvant recommendations.

POST-EMERGENCE APPLICATIONS TO FIELD CORN AND SEED CORN

For post-emergence applications made after the crop has emerged, add crop oil concentrate (COC) to the spray solution at the rate of 1.0 gallon/100 gallons of water (1.0% v/v). The use of a nonionic surfactant (NIS) at 1 quart/100 gallons of water (0.25% v/v) instead of COC is allowed, but the weed control achieved with COC is consistently better than NIS. **Severe crop injury may occur if methylated seed oil (MSO) adjuvants or MSO blend adjuvants are used with MOTIF for post-emergence applications. Do not use MSO adjuvants for post-emergence use unless directed for a specific tank mix under the MOTIF TANK MIXTURES FOR CORN section of this label, or unless permitted by a supplemental MOTIF label.** In addition to COC, always add spray grade UAN (e.g. 28-0-0) to the spray solution at a rate of 2.5% (v/v) or AMS at 8.5 lbs/100 gallons of spray solution, except if precluded elsewhere on this label or by a supplemental MOTIF label.

POST-EMERGENCE APPLICATIONS TO SWEET CORN AND YELLOW POPCORN

To avoid potentially or severe crop injury, do not add UAN or AMS when making post-emergence applications of MOTIF to yellow popcorn or sweet corn.

For post-emergence applications to yellow popcorn and sweet corn, use a nonionic surfactant (NIS) instead of a crop oil concentrate (COC), to minimize the risk of crop injury. A COC may be used, and will increase the level of weed control achieved, especially under dry growing conditions, but the risk of crop injury is increased significantly under lush growing conditions. For optimum control, add atrazine wherever rotational or local atrazine restrictions allow.

PRE-EMERGENCE ADJUVANTS

For MOTIF preplant or pre-emergence applications, and where weeds are present, the use of any adjuvant for agricultural use is permitted. In these situations, MSO type adjuvants are typically better than COC type adjuvants, which are typically better than NIS type adjuvants for enhancing weed control. UAN or AMS can be added and typically provides better weed control than not adding one of these. If MOTIF is being tank mixed with another registered herbicide in this situation, refer to the tank mix partner label for adjuvant precautions and restrictions.

SPRAY EQUIPMENT

CLEANING EQUIPMENT AFTER MOTIF APPLICATION

Special attention must be given to cleaning equipment before spraying a crop other than corn. Mix only as much spray solution as needed.

1. Flush tank, hoses, boom, and nozzles with clean water.
2. Prepare a cleaning solution of 1 gallon of household ammonia per 25 gallons of water. Many commercial spray tank cleaners may be used.
3. Use a pressure washer to clean the inside of the spray tank with this solution. Take care to wash all parts of the tank, including the inside top surface. If a pressure washer is not available, completely fill the sprayer with the cleaning solution to ensure contact of the cleaning solution with all internal surfaces of the tank and plumbing. Start agitation in the sprayer and thoroughly recirculate the cleaning solution for at least 15 minutes. All visible deposits must be removed from the spraying system.
4. Flush hoses, spray lines, and nozzles for at least 1 minute with the cleaning solution.
5. Dispose of rinsate from steps 1-3 in an appropriate manner.
6. Repeat steps 2-5.
7. Remove nozzles, screens, and strainers and clean separately in the ammonia solution after completing the above procedures.
8. Rinse the complete spraying system with clean water.

MIXING PROCEDURES

Refer to the **CROP USE DIRECTIONS** sections of this label for tank mixes. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions, 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 refer to labels of other pesticide products for mixing directions and precautions which may differ from those outlined here. Mix only with products which are labeled for the same crops and whose labels do not prohibit mixing with mesotrione-containing products. Always follow the most restrictive label limitations and precautions. Do not apply more than labeled rates. Do not tank mix MOTIF with any other insecticide, fungicide, fertilizer solution, or adjuvant not specified on the label without testing compatibility, as poor mixing may result. Test the compatibility of any tank mix combination on a small scale (such as a jar test) before actual tank mixing.

Only use sprayers in good running condition with good agitation. Ensure that the sprayer has been cleaned according to instructions on the label of the product used most recently. For post-emergence applications, use only clean water for the spray solution. Ensure that all in-line strainer and nozzle screens in the sprayer are 50-mesh or coarser. Do not use screens finer than 50-mesh.

Follow the mixing instructions for adding MOTIF to the spray tank:

1. Liquid fertilizer (excluding suspension fertilizers) may be used as the carrier for pre-emergence applications.
2. Begin to fill sprayer tank or premix tank with clean water and engage agitator. Agitation must be continued throughout the entire mixing and spraying procedure.
3. When the sprayer or premix tank is half full of water, add AMS and agitate until completely dispersed.
4. Next add MOTIF slowly and agitate until completely dissolved. Wait at least 1 minute after the last of the MOTIF has been added to the tank to allow for complete dispersion. A longer agitation period may be required to disperse MOTIF when using cold water from sources such as deep drilled wells.
5. If tank mixing, add the tank mix product next.
6. Finally, add adjuvant and UAN, if needed, and then continue to fill tank to desired level with water.

WEEDS CONTROLLED

MOTIF applied as directed in this label will control or partially control the weeds listed in **Tables 1** and **2**.

Partial control can either mean erratic control (good to poor) or consistent control at a level below that generally considered acceptable for commercial weed control.

For best post-emergence results, apply MOTIF to actively growing weeds. Dry weather following pre-emergence application of MOTIF may reduce residual weed control effectiveness. If irrigation is available, apply 1/2 to 1 inch of water after pre-emergence application. If irrigation is not available, make a uniform shallow cultivation as soon as weeds emerge.

MOTIF applied alone or in mixture with atrazine will not provide consistent or effective control of weeds identified as resistant to post-emergence HPPD inhibiting herbicides.

Refer to the crop sections on this label for specific rates and use directions.

TABLE 1. WEEDS CONTROLLED WITH POST-EMERGENCE APPLICATIONS OF MOTIF

Weed Common Name	Weed Scientific Name	MOTIF 3 fl oz/A	MOTIF 2.5-3.0 fl oz/A + Atrazine[1]
		Apply to Weeds < 5 Inches Tall[2]	
Amaranth, palmer	*Amaranthus palmeri*	PC[3]	C[3]
Amaranth, powell	*Amaranthus powellii*	C	C
Amaranth, spiny	*Amaranthus spinosus*	C	C
Atriplex	*Chenopodium orach*	C	C
Broadleaf signalgrass	*Urochloa platyphylla*	C[3]	C[3]
Buckwheat, wild	*Polygonum convolvulus*	PC	PC
Buffalobur	*Solanum rostratum*	C	C
Burcucumber	*Sicyos angulatus*	PC	C[3]
Carpetweed	*Mollugo verticillata*	C	C
Carrot, wild	*Daucus carota*	PC	C
Chickweed, common	*Stellaria media*	C	C
Cocklebur, common	*Xanthium strumarium*	C	C
Crabgrass, large	*Digitaria sanguinalis*	C[3]	C[3]
Dandelion	*Taraxacum officinale*	NC	PC
Dock, curly	*Rumex crispus*	PC	PC
Galinsoga	*Galinsoga parviflora*	C	C
Hemp	*Cannabis sativa*	C	C
Horsenettle	*Solanum carolinense*	PC	C
Horseweed (marestail)	*Conyza canadensis*	PC	C
Jimsonweed	*Datura stramonium*	C	C
Knotweed, prostrate	*Polygonum aviculare*	PC	PC
Kochia	*Kochia scoparia*	PC[3]	C[3]
Lambsquarters, common	*Chenopodium album*	C	C

(continued)

TABLE 1. WEEDS CONTROLLED WITH POST-EMERGENCE APPLICATIONS OF MOTIF *(continued)*

Weed Common Name	Weed Scientific Name	MOTIF 3 fl oz/A	MOTIF 2.5-3.0 fl oz/A + Atrazine[1]
		Apply to Weeds < 5 Inches Tall[2]	
Mallow, Venice	*Hibiscus trionum*	NC	C
Morningglory, entireleaf	*Ipomoea hederacea*	PC	C
Morningglory, ivyleaf	*Ipomoea hederacea*	PC	C
Morningglory, pitted	*Ipomoea lacunosa*	PC	C
Mustard, wild	*Brassica kaber*	C	C
Nightshade, black	*Solanum nigrum*	C	C
Nightshade, Eastern black	*Solanum ptycanthum*	C	C
Nightshade, hairy	*Solanum sarrachoides*	C	C
Nutsedge, yellow	*Cyperus esculentus*	PC	PC
Pigweed, redroot	*Amaranthus retroflexus*	C	C
Pigweed, smooth	*Amaranthus hybridus*	C	C
Pigweed, tumble	*Amaranthus albus*	C	C
Pokeweed, common	*Phytolacca americana*	PC	PC
Potatoes, volunteer	*Solanum* spp.	C	C
Pusley, Florida	*Richardia scabra*	C[3]	C[3]
Ragweed, common	*Ambrosia artemisiifolia*	PC	C
Ragweed, giant	*Ambrosia trifida*	C[3]	C
Sesbania, hemp	*Sesbania exaltata*	C	C
Sida, prickly (teaweed)	*Sida spinosa*	NC	C[3]
Smartweed, ladysthumb	*Polygonum persicaria*	C[3]	C
Smartweed, pale	*Polygonum lapathifolium*	C[3]	C
Smartweed, Pennsylvania	*Polygonum pensylvanicum*	C[3]	C
Sunflower, common	*Helianthus annuus*	C	C
Thistle, Canada	*Cirsium arvense*	NC	PC
Velvetleaf	*Abutilon theophrasti*	C	C
Waterhemp, common	*Amaranthus rudis*	C[3]	C
Waterhemp, tall	*Amaranthus tuberculatus*	C[3]	C

[1] MOTIF tank mixture with atrazine is approved only for use on corn and sugarcane.

[2] In certain situations weeds can be controlled at larger than listed sizes, however to protect crop yield, manage weed resistance and provide consistent control, treat weeds before they exceed 5 inches in height.

[3] Apply before weed exceeds 3 inches in height.

C = Control PC = Partial Control NC = Not Controlled

TABLE 2. WEEDS CONTROLLED WITH PRE-EMERGENCE APPLICATIONS OF MOTIF

Common Name	Scientific Name	MOTIF Applied Alone	MOTIF + Atrazine[1]
Amaranth, palmer	*Amaranthus palmeri*	C	C
Amaranth, powell	*Amaranthus powellii*	C	C
Amaranth, spiny	*Amaranthus spinosus*	C	C
Broadleaf signalgrass	*Urochloa platyphylla*	PC	PC
Buffalobur	*Solanum rostratum*	C	C
Burclover, California	*Medicago polymorpha*	C	–
Carpetweed	*Mollugo verticillata*	C	C
Carrot, wild	*Daucus carota*	C	–
Chickweed, common	*Stellaria media*	C	C
Chickweed, mouse-ear	*Cerastium vulgatum*	C	–
Cocklebur, common	*Xanthium strumarium*	PC	C
Crabgrass, large	*Digitaria sanguinalis*	PC	PC

(continued)

TABLE 2. WEEDS CONTROLLED WITH PRE-EMERGENCE APPLICATIONS OF MOTIF *(continued)*

Common Name	Scientific Name	MOTIF Applied Alone	MOTIF + Atrazine[1]
Dandelion, common (seedling)	*Taraxacum officinale*	C	–
Deadnettle, purple	*Lamium purpureum*	C	–
Dock, curly	*Rumex crispus*	C	–
Evening Primrose, cutleaf	*Oenothera laciniata*	C	–
Fiddleneck, coast	*Amsinckia intermedia*	C	–
Filaree, redstem	*Erodium cicutarium*	C	–
Filaree, whitestem	*Erodium moschatum*	C	–
Fleabane, hairy	*Conyza bonariensis*	C	
Galinsoga	*Galinsoga parviflora*	C	C
Geranium, Carolina	*Geranium carolinianum*	C	–
Groundcherry, smooth	*Physalis subglabrata*	C	–
Groundsel, common	*Senecio vulgaris*	C	–
Henbit	*Lamium amplexicaule*	C	–
Horsenettle	*Solanum carolinense*	P	–
Horseweed/marestail	*Conyza canadensis*	C	–
Jimsonweed	*Datura stramonium*	C	C
Kochia	*Kochia scoparia*	P	C
Lambsquarters, common	*Chenopodium album*	C	C
Lettuce, prickly	*Lactuca serriola*	C	–
Mallow, common	*Malva neglecta*	C	–
Mayweed, chamomile	*Anthemis cotula*	C	–
Morningglory, entireleaf	*Ipomoea hederacea*	P	C
Morningglory, ivyleaf	*Ipomoea hederacea*	P	C
Morningglory, pitted	*Ipomoea lacunosa*	P	C
Nettle, burning	*Urtica urens*	C	–
Nightshade, eastern black	*Solanum ptycanthum*	C	C
Nightshade, hairy	*Solanum sarrachoides*	C	C
Pansy	*Viola tricolor*	C	–
Pigweed, redroot	*Amaranthus retroflexus*	C	C
Pigweed, smooth	*Amaranthus hybridus*	C	C
Pigweed, tumble	*Amaranthus albus*	C	C
Pineappleweed	*Matricaria matricarioides*	C	–
Puncturevine, common	*Tribulus terrestris*	C	–
Purslane, common	*Portulaca oleracea*	C	–
Pusley, common	*Richardia scabra*	P	–
Ragweed, common	*Ambrosia artemisiifolia*	C	C
Ragweed, giant	*Ambrosia trifida*	P	C
Redmaids	*Calandria caulescens*	C	–
Rocket, London	*Sisymbrium irio*	C	–
Shepherdspurse	*Capsella bursa-pastoris*	C	–
Smartweed, ladysthumb	*Polygonum persicaria*	C	C
Smartweed, pale	*Polygonum lapathifolium*	C	C
Smartweed, Pennsylvania	*Polygonum pensylvanicum*	C	C
Sowthistle, annual	*Sonchus oleraceus*	C	–
Spanishneedles	*Bidens bipinnata*	C	–
Sunflower, common	*Helianthus annuus*	P	C
Swinecress	*Coronopus didymus*	C	–

(continued)

TABLE 2. WEEDS CONTROLLED WITH PRE-EMERGENCE APPLICATIONS OF MOTIF *(continued)*

Common Name	Scientific Name	MOTIF Applied Alone	MOTIF + Atrazine[1]
Tasselflower, red	*Emilia sonchifolia*	C	–
Velvetleaf	*Abutilon theophrasti*	C	C
Waterhemp, common	*Amaranthus rudis*	C	C
Vetch, common	*Vicia sativa*	C	–
Vetch, purple	*Vicia benghalensis*	P	–
Waterhemp, tall	*Amaranthus tuberculatus*	C	C
Willowherb, panicle	*Epilobium brachycarpum*	C	–

[1] MOTIF tank mixture with atrazine is approved only for use on corn, grain sorghum and sugarcane. Refer to the crop sections on this label for specific use directions.

C = Control P = Partial Control

ROTATIONAL CROPS

When MOTIF is applied as directed on this label, follow the crop rotation intervals in **Table 3**. If MOTIF is tank mixed with other products, the most restrictive product's crop rotation intervals must be followed.

TABLE 3. TIME INTERVAL BETWEEN MOTIF APPLICATION AND REPLANTING OR PLANTING OF ROTATIONAL CROP

Crop		Replant/Rotational Interval
Asparagus Corn (all types) Cranberry Flax Kentucky bluegrass grown for seed Millet, pearl Oats Rhubarb	Ryegrass (perennial and annual) grown for seed Sorghum (grain and sweet) Sugarcane Tall fescue grown for seed	No Restriction
Small grain cereals including wheat, barley and rye		4 Months
Alfalfa Blueberry Canola Cotton Currant Lingonberry Okra Peanuts	Peas* Potato Rice Snap beans* Soybeans Sunflowers Tobacco	10 Months
Cucurbits Dry beans All other rotational crops not listed in this table	Red clover Sugar beets	18 Months

* Plant Peas and Snap Beans only if the criteria below have been met. If all criteria are not met, a minimum 18 month interval must be observed following MOTIF application.

- At least 20" of rainfall plus irrigation has been received between application and planting of the rotational crop.
- Soil pH is 6.0 or greater.
- Application of MOTIF at 3 fl oz/A or less was applied no later than June 30th the year preceding rotational crop planting.
- No other HPPD herbicides (including, but not limited to, products containing isoxaflutole, mesotrione, tembotrione, or topramezone) were applied the year prior to planting peas and snap beans.

RESTRICTION

- Do not plant peas or snap beans on sand, sandy loam or loamy sand soils in Minnesota or Wisconsin.

CROP USE DIRECTIONS

CORN (FIELD, SEED, SWEET, AND YELLOW POP)

Apply MOTIF by ground for pre-emergence or post-emergence weed control.

Aerial application for pre-emergence or post-emergence weed control is permitted only in the following states: Alabama, Arizona, Arkansas, California, Colorado, Connecticut, Delaware, Florida, Georgia, Hawaii, Idaho, Illinois, Indiana, Iowa, Kansas, Kentucky, Louisiana, Maine, Maryland, Massachusetts, Michigan, Minnesota, Mississippi, Missouri, Montana, Nebraska, Nevada, New Hampshire, New Jersey, New Mexico, New York, North Carolina, North Dakota, Ohio, Oklahoma, Oregon, Pennsylvania, Rhode Island, South Carolina, South Dakota, Tennessee, Texas, Utah, Vermont, Virginia, Washington, West Virginia, Wisconsin and Wyoming.

Refer to seed company information for use on field corn inbred lines. Special adjuvant restrictions must be followed for post-emergence applications of MOTIF in yellow popcorn or sweet corn (see the **SPRAY ADDITIVES** section of this label).

Post-emergence applications (after crop emergence) of MOTIF may cause crop bleaching in some yellow popcorn and sweet corn hybrids. Crop bleaching is typically transitory and has no effect on final yield or quality. However, herbicide sensitivity in yellow popcorn and sweet corn varies widely, and all yellow popcorn and sweet corn hybrids have not been tested. Contact your popcorn or sweet corn company, Fieldman, or University Specialist about hybrids before making a post-emergence application of MOTIF to yellow popcorn or sweet corn. Do not include nitrogen based adjuvants (UAN or AMS) when making post-emergence applications of MOTIF to yellow popcorn or sweet corn.

Temporary crop response (transient bleaching) from post-emergence applications to field corn may occur under extreme weather conditions or when the crop is suffering from stress. Field corn quickly outgrows these effects and develops normally.

PRECAUTIONS

- Severe corn injury resulting in yield loss may occur if MOTIF is applied post-emergence to corn that was treated with terbufos (e.g. Counter®) or chlorpyrifos (e.g. Lorsban®).
- Severe corn injury resulting in yield loss may occur if MOTIF is applied foliar post-emergence to corn in a tank mix with any organophosphate or carbamate insecticide.
- Severe corn injury resulting in yield loss may occur if any organophosphate or carbamate insecticide is applied foliar post-emergence within 7 days before or 7 days after MOTIF application.

RESTRICTIONS

- Do not apply MOTIF to white popcorn or ornamental (Indian) corn.
- Do not cultivate corn within 7 days before or after a MOTIF application as weed control from the MOTIF application may be reduced.
- Do not apply more than a total of 7.7 fl oz/A (0.24 lb ai) of MOTIF per year.
- Do not make more than 2 applications of MOTIF per year.
- Do not apply more than 3.0 fl oz/A (0.094 lb ai) in a single post-emergence application.
- Do not make the second application of MOTIF within 14 days of the first application.
- Do not feed or harvest forage, grain, or stover within 45 days after application.

Apply MOTIF for the control of broadleaf and grass weeds listed in **Tables 1** and **2**. Corn may be treated up to 30 inches tall or up to the 8-leaf stage of corn growth.

MOTIF USED ALONE

POST-EMERGENCE

Apply MOTIF at 3.0 fl oz/A per application. Always add an appropriate adjuvant to the spray tank (see the **SPRAY ADDITIVES** section of this label).

For best results, apply MOTIF to actively growing weeds. For a list of weeds controlled see **Table 1**. Susceptible weeds which emerge soon after application of MOTIF may be controlled after they absorb the herbicide from the soil. MOTIF will not control most grass weeds.

Two post-emergence applications of MOTIF may be made with the following restrictions.

- Only one post-emergence application may be made if MOTIF has been applied pre-emergence. Do not make more than two applications per year. Do not apply more than a total of 7.7 fl oz/A (0.24 lb ai) of MOTIF per year.
- Do not make the second application within 14 days of the first application.
- For best weed and residual control, do not apply MOTIF at rates less than 3.0 fl oz/A (0.094 lb ai) post-emergence.
- Do not apply more than a total of 6.0 fl oz/A (0.19 lb ai) for the two post-emergence applications.
- If MOTIF is applied post-emergence to ground that received a pre-emergence application of a mesotrione-containing herbicide, atrazine must be tank mixed with MOTIF.
- If atrazine is mixed with MOTIF, do not apply to corn that is more than 12 inches high.
- Corn may be treated up to 30 inches tall or up to the 8-leaf stage of corn growth. Do not harvest forage, grain, or stover within 45 days after application.

PRE-EMERGENCE

For broadleaf weed control, apply MOTIF alone at 6.0-7.7 fl oz/A (0.188-0.24 lb ai) by ground sprayers in a spray volume of 10-30 gallons of water (up to 80 gallons if applied with liquid fertilizers) per acre. See **Table 2** for weeds controlled. MOTIF may be tank mixed with pre-emergence grass herbicides for grass control. Refer to the **TANK MIX** section for a list of partners.

MOTIF APPLIED IN TANK MIXTURES FOR CORN

MOTIF may be tank mixed with other registered herbicides for improved spectrum of weed control in burndown, pre-emergence or post-emergence applications. These tank mixtures can also serve as a method to include a different mode of action herbicide to help control or manage the development of resistant weed biotypes.

It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions, 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.

BURNDOWN TANK MIXTURES IN CORN

Apply MOTIF in a tank mixture with other registered herbicides for burndown plus residual weed control.

For improved broadleaf weed control with limited residual control prior to planting corn and before corn emergence, apply MOTIF at 3.0 fl oz/A in tank mixes with paraquat (e.g. Gramoxone® brands), glyphosate (e.g. Roundup® brands, Touchdown® brands), dicamba brands (e.g. Banvel®) and/or 2,4-D. For greater residual control, use 6.0-7.7 fl oz/A of MOTIF (see **Table 2**) with the above products. Use the adjuvant system specified by the burndown herbicide. Refer to individual product labels for precautionary statements, restrictions, rates, approved uses, and a list of weeds controlled; always follow the most restrictive labeling for products used in mixtures.

PRE-EMERGENCE TANK MIXTURES IN CORN

Apply MOTIF at a rate of 5.3-7.7 fl oz/A in tank mixture with other registered herbicides (**Table 4**) for pre-emergence residual weed control. Refer to **Table 2** for a list of weeds controlled by MOTIF and MOTIF plus atrazine applied pre-emergence.

TABLE 4. MOTIF TANK MIXTURES FOR PRE-EMERGENCE APPLICATION IN CORN

Refer to individual product labels for precautionary statements, restrictions, rates, approved uses, and a list of weeds controlled.

Active Ingredient	**Representative Brands (list is not all-inclusive)**
Atrazine	AAtrex®
Acetochlor	Degree®, Harness®, Surpass®, TopNotch®
Dimethenamid	Outlook®
Pendimethalin	SATELLITE®, Prowl®
S-metolachlor	Dual II Magnum®, Cinch®, Cinch® ATZ, Cinch® ATZ Lite
Acetochlor + atrazine	Degree Xtra®, Fultime® Harness Xtra® 5.6L, Keystone®, Keystone® LA
Atrazine + S-metolachlor	Bicep Lite II Magnum®, Bicep II Magnum®
Atrazine + glyphosate + metolachlor	Expert®
Dimethenamid + atrazine	Guardsman Max®

POST-EMERGENCE TANK MIXTURES IN CORN

The tank mixtures with MOTIF identified in **Table 5** may be applied post-emergence to corn. Unless specified otherwise on this label or a supplemental label, do not apply MOTIF at less than 3.0 fl oz/A. Application of MOTIF at rates less than 3.0 fl oz (0.094 lb ai/A) post-emergence may result in a loss of residual control.

Always add an appropriate adjuvant to the spray tank (see the **SPRAY ADDITIVES** section of this label). Refer to individual product labels for precautionary statements, restrictions, rates, approved uses, and a list of weeds controlled. Not all of the tank mix pesticides listed are registered for field corn, yellow popcorn, or sweet corn.

TABLE 5. MOTIF TANK MIXTURES FOR POST-EMERGENCE APPLICATION IN CORN

Active Ingredient(s)	Representative Brands[1]	Directions
Atrazine	AAtrex® 4L AAtrex® Nine-0®	• Refer to **Table 1** on this label for application rates and weeds controlled.
Nicosulfuron	Accent® Accent® Q	• Use this mixture for additional grass control. Refer to product label for list of weeds controlled.
Bentazon	BROADLOOM® Basagran®	• Use this mixture for additional broadleaf weed control. Refer to product label for list of weeds controlled.
Rimsulfuron + thifensulfuron methyl	Basis® Basis Gold®	• Use this mixture for additional weed control. Refer to product label for list of weeds controlled.
Atrazine + S-metolachlor	Bicep II Magnum Bicep Lite II Magnum	• When using these tank mixtures, omit the nitrogen based adjuvant (UAN or AMS) from the mixture or apply as a post-directed spray to minimize contact with crop foliage. • To further reduce the risk of crop injury, the user may also leave out the crop oil concentrate (COC), or replace it with a nonionic surfactant (NIS). • In all cases, the control of emerged weeds may be reduced somewhat due to less than optimum adjuvant effect or weed coverage.
Atrazine, glyphosate, metolachlor	Expert	• For use only in glyphosate tolerant corn (e.g. Agrisure® GT, Roundup Ready®). • Application of this mixture to a corn hybrid that is not glyphosate tolerant will result in crop death. • Do not add urea ammonium nitrate (UAN) or methylated seed oil (MSO) type adjuvants to this tank mixture or crop injury may occur.
Bromoxynil + atrazine	Buctril® Moxy®	• Use this mixture for additional broadleaf weed control. • Add Buctril (2 lbs/gallon) or Moxy (2 lbs/gallon) at a rate up to 6 fl oz/A. • Add Buctril (4 lbs/gallon) at a rate up to 3 fl oz/A.
Glufosinate	INTERLINE® Liberty® Ignite® Ignite® 280 SL	• Use this tank mixture only on corn designated as LibertyLink® or warranted as being tolerant to glufosinate. • Application of this mixture to a corn hybrid that is not glufosinate tolerant will result in severe crop injury or death. • Do not use crop oil concentrate (COC) as an adjuvant for this mixture or severe crop injury may occur.
Glyphosate	Touchdown® Roundup® solo glyphosate products	• For use only in glyphosate tolerant corn (e.g. Agrisure GT, Roundup Ready). • Application of this mixture to a corn hybrid that is not glyphosate tolerant will result in crop death. • Add spray-grade ammonium sulfate (AMS) at a rate that delivers 8.5-17.0 lbs of AMS/ 100 gallons of water. • If the glyphosate product label calls for an adjuvant in addition to AMS, add a nonionic surfactant (NIS) at 0.25-0.5% v/v (1-2 quarts/100 gallons). • Do not add urea ammonium nitrate (UAN), crop oil concentrate (COC), or methylated seed oil (MSO) type adjuvants to this tank mixture or crop injury may occur.
Imazethapyr + imazapyr	Lightning®	• For use only on corn designated as Clearfield® corn or warranted by BASF as being tolerant to Lightning Herbicide. • Application of this mixture to a corn hybrid that is not Lightning tolerant will result in severe crop injury or death. • Do not use a Methylated Seed Oil (MSO), or an MSO blend with this mixture or severe crop injury may result.
Prosulfuron	Peak®	• Use this mixture for additional weed control. Refer to product label for list of weeds controlled.
Primisulfuron methyl + prosulfuron	Spirit®	• Use this mixture for additional weed control. Refer to product label for list of weeds controlled.
Nicosulfuron + rimsulfuron	Steadfast® Steadfast® ATZ Steadfast® Q	• Use this mixture for additional weed control. Refer to product label for list of weeds controlled.
Nicosulfuron + thifensulfuron methyl	Stout®	• Use this mixture for additional weed control. Refer to product label for list of weeds controlled.
Primisulfuron methyl + sodium salt of dicamba	Northstar®	• Use this mixture for additional weed control. Refer to product label for list of weeds controlled.

[1] Refer to individual product labels for precautionary statements, restrictions, rates, approved uses, and a list of weeds controlled.

ASPARAGUS

Apply MOTIF broadcast or banded at a rate of 3.0-7.7 fl oz/A to asparagus as a spring application prior to spear emergence, as a post-harvest application (after final harvest), or both.

Use the 3.0 fl oz/A rate for post-emergence control or partial control of the emerged weeds listed in **Table 1**. Use the 6.0-7.7 fl oz/A rate for pre-emergence control or partial control of the weeds listed in **Table 2**. For banded applications, the application must be made to account for band width, i.e. to deliver 3.0-7.7 fl oz per treated acre. For the best pre-emergence weed control with spring applications, MOTIF must be applied after fern mowing, disking or other tillage operation but prior to asparagus spear emergence.

Post-harvest applications must be made in a way that minimizes contact with any standing asparagus spears or ferns and maximizes contact with the weeds and/or soil, e.g. by using a directed or semi-directed type application, or crop injury may occur. With post-harvest applications, the use of an adjuvant will increase the risk of crop injury.

If weeds are emerged at the time of the MOTIF application, the addition of a crop oil concentrate (COC) type adjuvant at the rate of 1% v/v **or** a nonionic surfactant (NIS) at the rate of 0.25% v/v is recommended. In addition to COC or NIS, a spray grade UAN (e.g. 28-0-0) at the rate of 2.5% v/v **or** ammonium sulfate (AMS) at the rate of 8.5 lbs/100 gallons of spray solution may be added for improved burndown of emerged weeds. If weeds have not yet emerged, no adjuvant is recommended.

RESTRICTIONS

- Do not apply more than 7.7 fl oz/A of MOTIF per year through any combination of applications.
- Do not make more than two applications of MOTIF per year.

BLUEGRASS, RYEGRASS (ANNUAL AND PERENNIAL) AND TALL FESCUE GROWN FOR SEED

Apply MOTIF as a pre-emergence application to bare soil (new seeding) or as a post-emergence application to an emerged grass crop.

Pre-emergence Application: Apply MOTIF to a newly seeded crop as a broadcast, surface spray at a rate of 6.0 fl oz/A, prior to crop and weed emergence. Rainfall or irrigation as the newly seeded grass crop emerges from the soil may increase the risk of injury from MOTIF. Grass crop injury symptoms include temporary bleaching of newly emerged leaves, or in extreme conditions, stunting. For a list of pre-emergence weeds controlled or partially controlled see **Table 2**. In addition to the weeds listed in **Table 2**, MOTIF applied pre-emergence will control mannagrass.

Post-emergence Application: Apply MOTIF as a broadcast post-emergence spray to emerged bluegrass, perennial ryegrass or tall fescue grown for seed at a rate of 3.0-6.0 fl oz/A. Use the 3.0 fl oz/A rate for post-emergence control or partial control of the weeds listed in **Table 1**. In addition to the weeds listed in **Table 2**, MOTIF applied post-emergence will control mannagrass (up to 3 tillers).

Use the 6.0 fl oz/A rate for post-emergence weed control plus extended residual weed control (see **Table 2**). The addition of a crop oil concentrate type adjuvant at 1% v/v **or** a nonionic surfactant (NIS) type adjuvant at a rate of 0.25% v/v is recommended. Post-emergence applications of MOTIF may result in temporary bleaching of the grass crop.

In addition to COC or NIS, a spray grade UAN (e.g. 28-0-0) at the rate of 2.5% v/v **or** ammonium sulfate (AMS) at the rate of 8.5 lbs/100 gallons of spray solution may also be added for improved control of emerged weeds. The addition of UAN or AMS will improve consistency of post-emergence weed control but will also increase the risk of grass crop injury, especially at MOTIF rates greater than 3.0 fl oz/A. If grass crop injury is a concern, do not add UAN or AMS to the spray solution.

Tank mixing other pesticides with MOTIF post-emergence may increase the risk of crop injury. Avoid adding pesticides with emulsifiable concentrate (EC) type formulations to MOTIF for applications made post-emergence to the crop.

RESTRICTIONS

- Do not harvest the grass crop for seed or straw within 60 days following the application of MOTIF.
- Do not graze or feed forage from treated areas within 14 days following harvest of seed or straw and at least 74 days after application of MOTIF.
- Do not make more than two applications of MOTIF per year.
- Do not apply more than 6 fl oz/A in a single application and not more than 9 fl oz/A of MOTIF per year through any combination of applications.
- Applications of MOTIF to grasses grown for seed species not listed on this label may result in severe injury.

BUSH AND CANEBERRIES (CROP GROUP 13-07A and 13-07B)

Note: Not all cultivars and types of berries that are included within the Environmental Protection Agency's definition of bush and caneberries (Crop Subgroups 13-07A and 13-07B) have been tested and shown to have adequate crop safety to products containing mesotrione. Those that have been tested, and are believed to be reasonably fit, are listed below along with use directions for that crop. If MOTIF is used on bush or caneberries not listed below, severe crop injury may occur.

High bush blueberry, lingonberry, red currant, black raspberry, red raspberry, and blackberry: For a list of weeds controlled see **Tables 1** and **2**. Apply MOTIF as a pre-bloom post-directed spray in these crops. Apply to bush or caneberries at a rate up to 6 fl oz/A. A split application of 3 fl oz/A followed by 3 fl oz/A may be used, with a 14 day spray interval. The use of a crop oil concentrate (COC) type adjuvant at the rate of 1% v/v is recommended, but avoid using COC adjuvants that are injurious to bush or caneberry leaves. Do not apply MOTIF to bush or caneberries after bloom begins, or illegal residues may occur.

Low bush blueberries: Apply MOTIF only in the non-bearing year. This application may be a broadcast application. Apply at a rate up to 6 fl oz/A. A split application of 3 fl oz/A followed by 3 fl oz/A may be used, with a 14 day spray interval. The use of a crop oil concentrate (COC) type adjuvant at 1% v/v is recommended. Applications of MOTIF during dry weather conditions and/or temperatures above 85° can cause injury to Lowbush blueberries. Applications of MOTIF can cause yellowing or necrosis of leaves and under severe conditions, leaf drop may occur especially on "Sourtop" variety blueberries.

RESTRICTIONS

- Do not make more than two applications of MOTIF per year.
- Do not apply more than a total of 6 fl oz/A MOTIF per year through any combination of applications.

CITRUS FRUIT, POME FRUIT, STONE FRUIT AND TREE NUTS

Apply MOTIF for post-emergence and residual control of weeds listed in **Tables 1** and **2**.

Citrus fruit (Australian desert lime, Australian finger lime, Australian round lime, Brown River finger lime, calamondin, citron, citrus hybrids, grapefruit, Japanese summer grapefruit, kumquat, lemon, lime, Mediterranean mandarin, sour orange, sweet orange, pummelo, Russell River lime, Satsuma mandarin, sweet lime, Tachibana orange, Tahiti lime, tangelo, tangerine (Mandarin), tangor, trifoliate orange, uniq fruit, cultivars, varieties and/or hybrids of these)

Pome fruit (apple, azarole, crabapple, loquat, mayhaw, medlar, pear, Asian pear, quince, Chinese quince, Japanese quince, tejocote, cultivars, varieties and/or hybrids of these)

Stone fruit (apricot, Japanese apricot, capulin, black cherry, Nanking cherry, sweet cherry, tart cherry, Chinese jujube, nectarine, peach, plum, American

plum, beach plum, Canada plum, cherry plum, Chickasaw plum, Damson plum, Japanese plum, Klamath plum, prune plum, plumcot, sloe, cultivars, varieties and/or hybrids of these)

Tree nuts (African nut-tree, almond, beech nut, Brazil nut, Brazilian pine, bunya, bur oak, butternut, Cajou nut, candlenut, cashew, chestnut, chinquapin, coconut, Coquito nut, Dika nut, ginkgo, Guiana chestnut, hazelnut (filbert), heartnut, hickory nut, Japanese horse-chestnut, macadamia nut, Mongongo nut, monkey-pot, monkey puzzle nut, Okari nut, Pachira nut, peach palm nut, pecan, pequi, pili nut, pine nut, pistachio, Sapucaia nut, tropical almond, black walnut, English walnut, yellowhorn, cultivars, varieties and/or hybrids of these)

PRECAUTIONS

- To avoid crop injury, apply the spray to the grove or orchard floor and to the weeds, avoiding contact with crop foliage, stems or fruit. Contact of MOTIF with the crop may result in bleaching injury that is typically temporary. Use trunk guards to protect plants until adequate bark has developed.
- Specified rates are based on broadcast treatment. For band applications around trees in fruit or nut plantings, reduce the broadcast rate of MOTIF and carrier per acre in proportion to the area actually sprayed. (See **BANDED APPLICATIONS** section.)

RESTRICTIONS

- Apply only in pome fruit, stone fruit and nut trees that have been established for a minimum of 12 months. MOTIF can be applied in citrus trees or plantings that are less than 12 months old which are exhibiting normal growth and vigor.
- Do not apply in orchards that are stressed due to poor weather or other abiotic factors.
- Do not apply when nuts or fruits are on the ground at harvest.
- Do not apply more than a total of 12 fl oz/A (0.376 lb ai) of MOTIF per year or in a 12 month period through any combination of applications.
- Do not apply more than 6 fl oz/A (0.188 lb ai) for the first application.
- Do not make more than 3 applications of MOTIF per year or in a 12 month period.
- Allow at least 5 months between applications of MOTIF at 6 fl oz/A and at least 6 weeks between applications of 6 fl oz/A and subsequent applications of 3 fl oz/A. (Applications must follow one of the four programs listed in **Table 6** below.)
- Do not harvest pome fruit, stone fruit or tree nuts within 30 days after application.
- Do not harvest citrus fruit within 1 day after application.
- Do not use on soils with greater than 20% gravel.
- Do not apply through any type of irrigation system.
- Do not apply by air.

SPRAY ADDITIVES

For application to emerged weeds, the use of crop oil concentrate (COC) type adjuvant at 1% v/v or nonionic surfactant (NIS) at 0.25% v/v is recommended. Addition of ammonium sulfate or other nitrogen-based adjuvants will increase efficacy when used in combination with COC or NIS. For more information see **SPRAY ADDITIVES** section on this label.

BANDED APPLICATIONS

When applying a row or banded treatment of MOTIF, use the following formula to calculate the amount per acre:

$$\frac{\text{band width in inches}}{\text{row width in inches}} \times \text{broadcast rate per acre} = \text{Amount needed per acre of field}$$

TANK MIX INSTRUCTIONS

MOTIF may be mixed and applied in combination with most commonly used herbicides registered for use in the approved crops in order to expand the post-emergence weed control spectrum and to help control or manage the development of resistant weeds.

Refer to individual product labels for precautionary statements, restrictions, rates, approved uses and a list of weeds controlled. Always follow the most restrictive wording on products used in 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, 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.

Active Ingredient	**Representative Brands**
Bromacil	Hyvar®
Diuron	Karmex®
Glufosinate	LIFELINE®, Rely® 280
Glyphosate	Touchdown® Total, Touchdown® HiTech
Indaziflam	Alion®
Norflurazon	Solicam®
Oryzalin	SURFLAN®
Oxyfluorfen	GoalTender®
Paraquat	Gramoxone® SL 2.0
Pendimethalin	SATELLITE, Prowl
Rimsulfuron	Matrix®
Simazine	Princep®
Bromacil + diuron	Krovar®

WEED CONTROL (TABLE 1 AND 2)

MOTIF provides both post-emergence and pre-emergence control of susceptible weeds. For best results, make post-emergence applications before weeds are 5 inches tall (**Table 1**), or before germination of seed for pre-emergence control (**Table 2**). Rainfall or irrigation soon after application will improve pre-emergence activity.

USE DIRECTIONS

Apply as a directed or shielded spray. Avoid contact with trunk surfaces, fruit or crop foliage. Ensure that the soil is settled, firm and relatively free of debris at time of application. Also ensure that the soil is free of depressions around trees where rain or irrigation water can concentrate. Make the first application of MOTIF in late fall/early winter or spring and follow one of the programs noted in the **Table 6** for subsequent applications.

TABLE 6. APPLICATION PROGRAMS, RATES AND INTERVALS

Apply MOTIF in a spray volume of 10-40 gallons/A.

Program	Application Rate			Application Interval
	1st Application	2nd Application	3rd Application	
1	6 fl oz/A	6 fl oz/A	–	20 weeks
2	6 fl oz/A	3 fl oz/A	–	6 weeks
3	6 fl oz/A	3 fl oz/A	3 fl oz/A	6 weeks
4	3 fl oz/A	3 fl oz/A	3 fl oz/A	6 weeks

For optimum post-emergence weed control, apply MOTIF to actively growing weeds in tank mixture with burndown herbicides approved for use on these crops. Apply before weeds are 5 inches tall.

For effective residual weed control, MOTIF must be moved into the weed seed germination zone. For pre-emergence weed control, apply MOTIF before rainfall or irrigation. Subsequent application(s) of MOTIF can be made alone or in tank mixture, with the herbicides noted above, if weed emergence occurs.

CRANBERRIES

Apply MOTIF to bearing or non-bearing cranberry beds for control or suppression of bog St. John's wort *(Hypericum boreala)*, rushes *(Juncus canadensis, J. effuses, J. bufonius, J. tenuis)*, sedges spp. *(Carex* spp.*)*, yellow loosestrife *(Lysimachia terrestris)* and silverleaf *(Potentilla pacifica)* in addition to the weeds listed in **Tables 1** and **2**. Apply to cranberries at a rate up to 8 fl oz/A, no more than two applications per crop per year and not more than a total of 16 fl oz/A per year. If two applications are made, they must be made no closer than 14 days apart. The use of a crop oil concentrate (COC) type adjuvant at 1% v/v or nonionic surfactant (NIS) at 0.25% v/v is recommended, however COC adjuvants that are injurious to cranberry leaves must not be used.

In non-bearing cranberries, make the MOTIF application(s) after the bud break stage, but at least 45 days before flooding in fall or winter. In bearing cranberries, make the MOTIF application(s) after the bud break stage, but at least 45 days prior to flooding or harvest.

MOTIF may be applied through irrigation systems (chemigation) including center pivot or solid set.

CHEMIGATION - SPRINKLER IRRIGATION APPLICATION FOR CRANBERRY ONLY

Check the irrigation system to ensure uniform application of water to all areas. Thorough coverage of foliage is required for good control. Maintain good agitation in the pesticide supply tank prior to and during the entire application period. Apply by injecting the recommended rate of MOTIF Herbicide into the irrigation system using a metering device that will introduce a constant flow and by distributing the product to the target areas in 0.1-0.2 acre-inch of water. In general, use the least amount of water in this range required for proper distribution and coverage.

Once the application is completed, flush the entire irrigation and injection system with clean water before stopping the system. In addition to the above recommendations, if application is being made during a normal irrigation set of a stationary sprinkler, inject the labeled rate of MOTIF Herbicide for the area covered into the system only during the end of the irrigation set for sufficient time to provide adequate coverage and product distribution.

CHEMIGATION USE PRECAUTIONS - SPRINKLER IRRIGATION APPLICATION

Apply this product only through sprinkler irrigation systems including center pivot or solid set. Do not apply this product 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.

Contact State Extension Service Specialists, equipment manufacturers or other experts with any questions about calibration.

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 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 pressure decreases to the point where pesticide distribution is adversely affected.

Systems must use a metering pump, such as a positive displacement injection pump (e.g. diaphragm pump) effectively designed and constructed of materials that are compatible with pesticides and are capable of being fitted with a system interlock.

Any alternatives to the above required safety devices must conform to the list of EPA approved alternative devices.

RESTRICTIONS

- Do not make more than 2 applications of MOTIF per year.
- Do not apply more than a total of 16 fl oz/A MOTIF per year through any combination of applications.
- Do not apply directly to water or areas where surface water is present outside the bog system.
- Do not apply when wind speed favors drift beyond the area intended for treatment or non-uniform distribution of treated water.
- Do not connect an irrigation system (including greenhouse systems) used for pesticide application to a public water system. Public water system means a system for the provision to the public of piped water for human consumption if such system has at least 15 service connections or regularly serves an average of at least 25 individuals daily at least 60 days out of the year.
- Do not contaminate water when disposing of equipment washwater or rinsate.
- Do not apply within 10 feet of surface water outside the bog system.
- Do not spray to runoff.

FLAX

Apply MOTIF pre-emergence at a rate up to 6 fl oz/A. For a list of weeds controlled see **Tables 1** and **2**. If weeds are emerged at the time of application, the use of a crop oil concentrate (COC) type adjuvant at the rate of 1% v/v is recommended. In addition, a spray grade UAN (e.g. 28-0-0) at the rate of 2.5% (v/v) or AMS at the rate of 8.5 lbs/100 gallons of spray solution may be added to improve the burndown of existing weeds.

Application of MOTIF to emerged flax can result in severe crop injury.

RESTRICTIONS

- Do not make more than one application of MOTIF per crop or per year.
- Do not apply more than 6 fl oz/A MOTIF per crop per year.

OATS

Apply MOTIF pre-emergence or post-emergence (but not both).

For pre-emergence control or partial control of the weeds listed in **Table 2**, apply MOTIF broadcast at a rate of 6.0 fl oz/A prior to oat emergence. For best pre-emergence weed control, the MOTIF application must be made before weed emergence.

For post-emergence (after oat emergence) control or partial control of the weeds listed in **Table 1**, apply MOTIF at a rate of 3.0 fl oz/A. For best results, apply to emerged weeds that are less than 5" tall. Post-emergence applications of MOTIF may result in temporary injury of the oat crop, with symptoms such as leaf bleaching, leaf burn and in extreme conditions, stunting.

If emerged weeds are present at the time of the MOTIF application, the addition of a crop oil concentrate (COC) type adjuvant at a rate of 1% v/v **or** a nonionic surfactant (NIS) type adjuvant at a rate of 0.25% v/v is recommended. In addition to COC or NIS, a spray grade UAN (e.g. 28-0-0) at the rate of 2.5% v/v **or** ammonium sulfate (AMS) at the rate of 8.5 lbs/100 gallons of spray solution may be added for improved weed control. If emerged weeds are not present at the time of the MOTIF application, no additives are recommended. If oat injury is a concern, eliminating the use of UAN or AMS will reduce the risk for post-emergence crop injury. Additionally, the use of NIS instead of COC will also reduce the oat injury risk. However, weed control is also reduced if UAN or AMS is eliminated and when switching from COC to NIS.

Tank mixing other pesticides with MOTIF post-emergence may increase the risk of injury. Avoid adding pesticides with emulsifiable concentrate (EC) type formulations to MOTIF for applications made post-emergence to the crop.

RESTRICTIONS

- Do not graze or feed forage from treated areas within 30 days following an application of MOTIF.
- Do not harvest oats within 50 days following the application of MOTIF.
- Do not make more than one application of MOTIF per year.
- Do not apply more than 6 fl oz/A MOTIF per year.
- Do not apply MOTIF pre-emergence (prior to oat emergence) at more than 6.0 fl oz/A/year.
- Do not apply MOTIF post-emergence at more than 3.0 fl oz/A/year.
- If the oat crop treated with MOTIF is lost or destroyed, oats may be replanted immediately. If MOTIF was applied to the lost oat crop, no additional MOTIF can be applied to the replanted oat crop.

OKRA

Apply MOTIF as either a row-middle or as a hooded post-direct treatment (but not both).

Pre-emergence row-middle application: Apply MOTIF at a rate of 6.0 fl oz/A as a banded application to the row middles before weed emergence. For this banded application, leave one foot of untreated area over the okra row or 6" to each side of the planted row. For banded applications, the application must be made to account for band width, i.e. to deliver 6.0 fl oz per treated acre. Do not apply MOTIF directly over the planted okra row or severe crop injury may occur. Injury risk is greatest on coarse textured soils (sand, sandy loam or loamy sand).

Post-emergence hooded application: Apply MOTIF at a rate of 3.0 fl oz/A as a post-emergence directed application using a hooded sprayer for control or partial control of the weeds listed in **Table 1**. Okra must be at least 3" tall at the time of this application. It is recommended that a nonionic surfactant (NIS) type adjuvant at a rate of 0.25% v/v be added to the spray solution. For post-emergence hooded applications, the spray equipment must be set up to minimize the amount of MOTIF that contacts the okra foliage or crop injury will occur. For best post-emergence results, MOTIF must be applied to actively growing weeds.

RESTRICTIONS

- Do not harvest okra within 28 days following the application of MOTIF.
- Do not make more than one application of MOTIF per okra crop.
- Do not apply MOTIF as a row-middle application at more than 6.0 fl oz per treated acre per year.
- Do not apply MOTIF as a post-directed application at more than 3.0 fl oz per acre per year.
- Do not apply as a broadcast pre-emergence or broadcast post-emergence application to okra or severe injury will occur.
- If the okra crop treated with MOTIF is lost or destroyed, okra may be replanted only in the soil band that was not treated with MOTIF.

PEARL MILLET

MOTIF may be applied pre-emergence in pearl millet, i.e. after planting but before crop emergence, at a rate up to 6 fl oz/A. For a list of weeds controlled see **Table 2**. If weeds are emerged at the time of application, the use of a crop oil concentrate (COC) type adjuvant at the rate of 1% v/v is recommended. In addition, a spray grade UAN (e.g. 28-0-0) at the rate of 2.5% (v/v) or AMS at the rate of 8.5 lbs/100 gallons of spray solution may be added to improve the burndown of existing weeds. Applications of MOTIF to emerged pearl millet can result in severe crop injury.

RESTRICTIONS

- Do not make more than one application of MOTIF per crop or per crop year.
- Do not apply more than 6 fl oz/A per crop or per year.

RHUBARB

Apply MOTIF prior to crop emergence in established rhubarb.

Apply MOTIF at a rate of 6.0 fl oz/A to dormant rhubarb (before spring green-up) for control or partial control of the weeds listed in **Table 2**. If weeds are emerged at the time of application, it is recommended that a crop oil concentrate (COC) type adjuvant at 1% v/v **or** a nonionic surfactant (NIS) type adjuvant at a rate of 0.25% v/v be added to the spray solution. Applications of MOTIF to rhubarb that is not dormant may result in temporary bleaching symptoms. Rainfall or irrigation after the MOTIF application may increase the risk of injury to emerging rhubarb.

RESTRICTIONS

- Do not harvest rhubarb within 21 days following the application of MOTIF.
- Do not make more than one application of MOTIF per year.
- Do not apply more than 6.0 fl oz/A MOTIF per year.

SORGHUM (GRAIN AND SWEET)

Pre-emergence Application: Apply MOTIF pre-emergence or pre-plant non-incorporated up to 21 days before planting sorghum for control or partial control of the weeds listed in **Table 2**.

Apply pre-emergence at a rate of 6.0-6.4 fl oz/A as a broadcast non-incorporated application prior to sorghum emergence. Applying MOTIF less than 7 days before sorghum planting will increase the risk of crop injury, especially if irrigation or rainfall is received following the application. Injury symptoms include temporary bleaching of newly emerging sorghum leaves. Applying MOTIF more than 7 days (but not more than 21) prior to planting will reduce the risk of crop injury.

If MOTIF is applied prior to planting, minimize disturbance of the herbicide treated soil barrier during the planting process in order to lessen the potential for weed emergence.

If emerged weeds are present at the time of the pre-emergence application, it is recommended that a nonionic surfactant (NIS) type adjuvant at a rate of 0.25% v/v **or** a crop oil concentrate (COC) type adjuvant at a rate of 1% v/v be added to the spray solution. In addition to COC or NIS, a spray grade UAN at a rate of 2.5% v/v **or** ammonium sulfate (AMS) at a rate of 8.5 lbs/100 gallons of spray solution can be added to the spray solution.

PRE-EMERGENCE APPLICATION RESTRICTIONS

- Do not apply more than 6.4 fl oz/A of MOTIF per year.
- Do not make more than one application of MOTIF per year.
- Do not apply MOTIF to emerged sorghum or severe crop injury may occur.
- Do not use MOTIF in the production of forage sorghum, sudangrass, sorghum-sudangrass hybrids, or dual purpose sorghum.
- Do not apply MOTIF to sorghum that is grown on coarse textured soils (e.g. sandy loam, loamy sand, sand).
- In the State of Texas, do not apply MOTIF to sorghum grown south of Interstate 20 (I-20) or east of Highway 277.

Post-Directed: Apply MOTIF post-directed to grain sorghum for control or partial control of the weeds listed in **Table 1**. For best results, apply MOTIF to actively growing weeds.

Apply at a rate of 3 fl oz/A as a post-directed application when the grain sorghum is at least 8 inches tall, by directing the spray between the crop rows and towards the base of the grain sorghum plant. Direct application of MOTIF onto grain sorghum foliage can result in crop injury including temporary bleaching. If crop injury does occur, newly emerging leaves following application are typically unaffected.

It is recommended that a nonionic surfactant (NIS) type adjuvant at a rate of 0.25% v/v **or** a crop oil concentrate (COC) type adjuvant at a rate of 1% v/v be added to the spray solution. In addition to COC or NIS, a spray grade Urea Ammonium Nitrate (UAN) at a rate of 2.5% v/v **or** ammonium sulfate (AMS) at a rate of 8.5 lbs/100 gallons of spray solution can be added to the spray solution.

MOTIF may be tank mixed with other herbicides registered for grain sorghum for improved spectrum of weed control. Additionally, these tank mixtures can be used to include a herbicide with a different mode of action to help control or manage the development of resistant weed biotypes. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions, 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.

POST-DIRECTED APPLICATION RESTRICTIONS

- Do not make more than one post-directed application of MOTIF per year.
- Do not apply more than 3.0 fl oz/A of MOTIF post-directed and not more than 6.4 fl oz/A of MOTIF per grain sorghum crop year.
- Do not apply MOTIF broadcast over-the-top to emerged sorghum or severe crop injury may occur.
- Do not harvest grain sorghum for forage for 30 days following application.
- Do not harvest for grain or stover for 60 days following application.
- Do not apply MOTIF after the sorghum seed head has begun to emerge.
- Do not use MOTIF in the production of forage sorghum, sudangrass, or sorghum-sudangrass hybrids.

SOYBEANS – Mesotrione tolerant varieties ONLY

MOTIF can only be applied pre-emergence and only to soybeans that are identified as mesotrione tolerant. Applications to soybeans that are not mesotrione tolerant will result in significant crop injury. For a list of mesotrione tolerant soybean varieties, contact your Seed provider.

Pre-emergence Application: For pre-emergence control of the weeds listed in **Table 2**, apply MOTIF prior to soybean emergence at a rate of 6.0 fl oz/A. Use the higher rate for longer residual control. This product may be tank mixed with other registered soybean herbicides such as Dual Magnum®, Dual II Magnum, and Prefix®. Refer to the tank mix partner label and follow all precautions and restrictions.

If weeds are emerged at the time of application, add either a non-ionic surfactant (NIS) at 1 qt/100 gallons (0.25% v/v) or a crop oil concentrate (COC) at 1 gallon/100 gallons (1% v/v). In addition to NIS or COC, it is also recommended to add either ammonium sulfate (AMS) at 8.5-17 lbs/100 gallon (or equivalent).

Restrictions

- Do not apply more than 6.0 fl oz/A per soybean crop per year.
- Do not make more than one application of MOTIF per year.
- Do not apply MOTIF to emerged soybeans.
- Do not graze or feed soybean forage or hay to livestock.

SUGARCANE

Apply MOTIF by ground for pre-emergence, post-emergence over-the-top or post-emergence directed weed control.

MOTIF may also be applied aerially for pre-emergence or post-emergence weed control in Florida, Louisiana and Texas only.

Pre-emergence Applications: Apply MOTIF for pre-emergence weed control at 6.0-7.7 fl oz/A after the planting of plant-cane or after harvest of ratoon-cane. For a list of weeds controlled pre-emergence, refer to **Table 2**. If some weeds are already emerged at the time of application, add a crop oil concentrate (COC) type adjuvant at a rate of 1% v/v **or** a nonionic surfactant (NIS) type adjuvant at a rate of 0.25% v/v to the spray solution. In addition to COC or NIS, a spray grade UAN at a rate of 2.5% v/v **or** ammonium sulfate (AMS) at a rate of 8.5 lbs/100 gallons of spray solution can be added to the spray solution. For improved pre-emergence weed control, AAtrex or Evik® can be tank mixed with MOTIF. Refer to the tank mix partner label for specific rates and use directions.

Post-emergence Applications: Apply MOTIF post-emergence at 3.0 fl oz/A for control of the weeds listed in **Table 1**. Post-emergence applications may be made as a post-over-the-top or as a post-directed spray to the base of the sugarcane. If a pre-emergence application was made earlier in the season, only one post-emergence application can be made. If no pre-emergence application was made earlier in the season, both a post-over-the-top and a post-directed application can be made. For best results, MOTIF must be applied to actively growing weeds.

For post-emergence applications, it is recommended that a crop oil concentrate (COC) type adjuvant at a rate of 1% v/v **or** a nonionic surfactant (NIS) type adjuvant be added to the spray solution. In addition to COC or NIS, the use of a spray grade UAN (e.g. 28-0-0) at 2.5% v/v **or** ammonium sulfate (AMS) at a rate of 8.5 lbs/100 gallons of spray solution can be added for improved control of weeds.

For additional post-emergence weed control, MOTIF can be tank mixed with atrazine, ASULOX® and/or Envoke®. Refer to the tank mix product labels for specific rates and use directions. It is the pesticide user's responsibility to ensure that all products are registered for the intended use. Read and follow the applicable restrictions, 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.

RESTRICTIONS

- Do not apply more than 7.7 fl oz/A of MOTIF as a pre-emergence application.
- Do not apply more than 3.0 fl oz/A of MOTIF in a post-emergence application.
- Do not make more than two applications of MOTIF per year. If a pre-emergence application of MOTIF is made, only one post-emergence application is allowed.
- Do not make two MOTIF applications less than 14 days apart.
- Do not apply more than 10.7 fl oz/A of MOTIF per year.
- Do not harvest sugarcane within 114 days following a post-over-the-top application of MOTIF (114 day PHI).
- Do not harvest sugarcane within 100 days following a post-directed application of MOTIF (100 day PHI).

STORAGE AND DISPOSAL

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

Pesticide Storage

Keep container tightly closed when not in use. Do not store near seed, fertilizers, or foodstuffs. Can be stored at temperatures as low as -20°F. Keep away from heat and flame.

Pesticide Disposal

Open dumping is prohibited. Waste resulting from the use of this product may be disposed of on site or at an approved waste disposal facility.

Container Handling [Less Than or Equal to 5 Gallons]

Non-refillable 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 mix tank and drain for 10 seconds after the flow begins to drip. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or 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 offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

Container Handling [Greater Than 5 Gallons]

Refillable container. Refill this container with pesticide only. Do not reuse this container for any other purpose. Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the person refilling. To clean container before final disposal, empty the remaining contents from this container into application equipment or mix tank. Fill the container about 10 percent full with water. Agitate vigorously or recirculate water with the pump for 2 minutes. Pour or pump rinsate into application equipment or rinsate collection system. Repeat this rinsing procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

Container Handling [Greater Than 5 Gallons]

Non-refillable 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 ties. 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 offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or by other procedures approved by state and local authorities.

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, presence of other materials or other influencing factors in the use of the product, which are beyond the control of UPL NA Inc. or Seller. To the extent permitted by applicable law, Buyer and User agree to hold UPL NA Inc. and Seller harmless for any claims relating to such factors.

UPL NA Inc. warrants that this product conforms to the chemical description on the label and is reasonably fit for the purposes stated in the Directions for Use, subject to the inherent risks referred to above, when used in accordance with directions under normal use conditions. To the extent permitted by applicable law: (1) this warranty does not extend to the use of the product contrary to label instructions, or under conditions not reasonably foreseeable to or beyond the control of Seller or UPL NA Inc., and, (2) Buyer and User assume the risk of any such use. TO THE EXTENT PERMITTED BY APPLICABLE LAW, UPL NA INC. MAKES NO WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE NOR ANY OTHER EXPRESS OR IMPLIED WARRANTY EXCEPT AS WARRANTED BY THIS LABEL.

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