

#### U.S. ENVIRONMENTAL PROTECTION AGENCY

Office of Pesticide Programs
Registration Division (7505P)
1200 Pennsylvania Ave., N.W.
Washington, D.C. 20460

NOTICE OF PESTICIDE:

X Registration

Reregistration

(under FIFRA, as amended)

81927-61	
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EPA Reg. Number:

**Date of Issuance:** 

8/28/17

Term of Issuance:
Conditional

Name of Pesticide Product: Alligare FMEP4 EC

Name and Address of Registrant (include ZIP Code):

Michael Kellogg Pyxis Regulatory Consulting, Inc. Alligare, LLC 4110 136<sup>th</sup> Street CT NW Gig Harbor, WA 98332

**Note:** Changes in labeling differing in substance from that accepted in connection with this registration must be submitted to and accepted by the Registration Division prior to use of the label in commerce. In any correspondence on this product always refer to the above EPA registration number.

On the basis of information furnished by the registrant, the above named pesticide is hereby registered under the Federal Insecticide, Fungicide and Rodenticide Act.

Registration is in no way to be construed as an endorsement or recommendation of this product by the Agency. In order to protect health and the environment, the Administrator, on his motion, may at any time suspend or cancel the registration of a pesticide in accordance with the Act. The acceptance of any name in connection with the registration of a product under this Act is not to be construed as giving the registrant a right to exclusive use of the name or to its use if it has been covered by others.

This product is conditionally registered in accordance with FIFRA section 3(c)(7)(A). You must comply with the following conditions:

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

Signature of Approving Official:	Date:
Tastryn V. Wontaguo	8/28/17
Kathryn V. Montague, Product Manager 23	
Herbicide Branch, Registration Division (7505P)	

EPA Form 8570-6

- 2. You are required to comply with the data requirements described in the DCI or EDSP Order identified below:
  - a. Fluroxypyr 1-methylheptyl ester GDCI-128968-1498

You must comply with all of the data requirements within the established deadlines. If you have questions about the Generic DCI or EDSP Order listed above, you may contact the Chemical Review Manager in the Pesticide Reevaluation Division: <a href="http://iaspub.epa.gov/apex/pesticides/f?p=chemicalsearch:1">http://iaspub.epa.gov/apex/pesticides/f?p=chemicalsearch:1</a>

- 3. Make the following label changes before you release the product for shipment:
  - Revise the EPA Registration Number to read, "EPA Reg. No. 81927-61."
- 4. Submit one copy of the final printed label for the record before you release the product for shipment.

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.

If you fail to satisfy these data requirements, EPA will consider appropriate regulatory action including, among other things, cancellation under FIFRA section 6(e). Your release for shipment of the product constitutes acceptance of these conditions. A stamped copy of the label is enclosed for your records. Please also note that the record for this product currently contains the following CSFs:

Basic CSF dated 12/22/2016

If you have any questions, please contact Helen Hull-Sanders by phone at 703-347-0243, or via email at hull-sanders.helen@epa.gov.

Enclosure

08/28/2017

Under the Federal Insecticide, Fungicide and Rodenticide Act as amended, for the pesticide registered under EPA Reg. No. 81927-61

[Note to reviewer: [Text] in brackets denotes optional text].

[Note to reviewer: {Text} in braces denotes where in the final label text will appear].

**{BOOKLET FRONT PANEL LANGUAGE}** 

GROUP 4 HERBICIDE

# Alligare FMEP4 EC

This product provides control of broadleaf annual and perennial weeds, and certain woody plants and vines on labeled non-crop sites, conifer and tree plantations, rangeland and permanent grass pastures, established turfgrass, labeled crop sites, fallow cropland, Conservation Reserve Program (CRP) acres including grazed areas on all of these sites.

Do not apply to St. Augustine grass in the state of Florida. Not for Sale, Distribution, or Use in Nassau and Suffolk Counties, New York.

ACTIVE INGREDIENT:	By Wt.	
fluroxypyr 1-methylheptyl ester: ((4-amino-3,5-dichloro-6-flouro-2-pyridinyl)oxy)	-	
acetic acid, 1-methylheptyl ester	45.50%	
OTHER INGREDIENTS:	54.50%	
TOTAL:		
Acid Equivalent: fluroxypyr: ((4-amino-3,5-dichloro-6-flouro-2-pyridinyl)oxy)acetic lb/gal.	acid - 31.59% -	-2.8

# 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 the label, find someone to explain it to you in detail.)

FIRST AID		
	<ul> <li>Hold eye open and rinse slowly and gently with water for 15 – 20 minutes.</li> </ul>	
If in eyes:	Remove contact lenses, if present, after the first 5 minutes, the continue rinsing	
	eye.	
	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. Y	ou may also contact 1-800-424-9300 for emergency medical treatment information.	

See inside label booklet for additional Precautionary Statements and Directions for Use.

**EPA Reg. No.** 81927-xx

**EPA Est. No.** 

**Manufactured for:** Alligare, LLC

13 N. 8<sup>th</sup> Street Opelika, AL 36801

**Net Contents:** 

# **{LANGUAGE INSIDE BOOKLET}**

# PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Causes moderate eye irritation. Avoid contact with eyes or clothing.

# PERSONAL PROTECTIVE EQUIPMENT (PPE)

# Applicators and other handlers must wear:

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

Discard clothing and other absorbent materials that have been drenched or heavily contaminated with this product's concentrate. Do not reuse them. 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 CONTROLS**

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 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**

This product is toxic to fish. Drift or runoff from treated areas may be hazardous to aquatic organisms and non-target plants. Do not apply directly to water, to areas where surface water is present or to intertidal areas below the mean high water mark. Do not contaminate water when cleaning equipment or disposing of equipment washwaters.

Attention: This product contains a chemical known to the State of California to cause birth defects or other reproductive harm.

# PHYSICAL OR CHEMICAL HAZARDS

Do not mix or allow contact with oxidizing agents. Hazardous chemical reaction may occur.

# **DIRECTIONS FOR USE**

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

Do not apply this product in a way that will contact workers or other persons, either directly or through drift. Only protected handlers may be in the area during application. For any requirements specific to your state or tribe, consult the agency responsible for pesticide regulation.

#### AGRICULTURAL USE REQUIREMENTS

Use this product only in accordance with its labeling and with the Worker Protection Standard, 40 CFR part 170. This standard contains requirements for the protection of agricultural workers on farms, forests, nurseries, and greenhouses, and handlers of agricultural pesticides. It contains requirements for training, decontamination, notification, and emergency assistance. It also contains specific

instructions and exceptions pertaining to the statements on this label about personal protective equipment (PPE), and restricted entry interval. The requirements in this box only apply to uses of this product that are covered by the Worker Protection Standard.

Do not enter or allow worker entry into treated areas during the restricted entry interval (REI) of 24 hours.

PPE required for early entry to treated areas that is permitted under the Worker Protection Standard and that involves contact with anything that has been treated, such as plants, soil, or water, is:

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

#### NON-AGRICULTURAL USE REQUIREMENTS

The requirements in this box apply to uses of this product that are NOT within the scope of the Worker Protection Standard for Agricultural Pesticides (40 CFR Part 170). The WPS applies when this product is used to produce agricultural plants on farms, forests, nurseries, or greenhouses.

**Entry Restrictions for Non-WPS Uses:** Do not allow people (other than applicator) or pets on treatment area during application. Do not enter into treated area until sprays have dried.

#### STORAGE AND DISPOSAL

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

**PESTICIDE STORAGE:** Store above 10°F or warm and agitate before use to ensure any crystallization that may have occurred redissolves.

**PESTICIDE DISPOSAL:** Pesticide wastes are toxic. Improper disposal of excess pesticide, spray mixture, or rinsate is a violation of Federal Law. If these wastes cannot be disposed of by use according to label instructions, contact your State Pesticide or Environmental Control Agency, or the Hazardous Waste representative at the nearest EPA Regional Office for guidance.

# **CONTAINER HANDLING:**

#### [NONREFILLABLE CONTAINERS:]

Nonrefillable container. Do not reuse or refill this container. Offer for recycling, if available. Triple rinse container (or equivalent) promptly after emptying.

(Nonrefillable container ≤ 5 gallons): Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ 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 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.

(Nonrefillable > 5 gallons): Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ 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 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.

# [REFILLABLE CONTAINERS:]

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 refiller.

To clean the 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. Return to point of sale or offer for recycling if available, or dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

#### **WEED RESISTANCE**

Any weed population may contain plants that are naturally resistant to fluroxypyr, the active ingredient in this product, and to other herbicides with the same mode of action. ATTENTION: These resistant weed biotypes will not be controlled by this product. Consult advisors such as your agricultural extension service for agronomic management practices to minimize the occurrence of fluroxypyr resistance and considerations for supplemental control measures.

# **Weed Management**

To minimize the occurrence of fluroxypyr resistant biotypes, observe the following general weed management practices:

- Scout application site before and after herbicide applications.
- Start with a clean application site, using either a burndown herbicide application or tillage.
- Control weeds early when they are relatively small.
- Add other herbicides (e.g. a selective and/or a residual herbicide) and cultural practices (e.g. tillage or crop rotation) where appropriate.
- Utilize the specified label rate for the most difficult to control weed in your filed. Avoid tank mixtures with other herbicides that reduce this product's efficacy (through antagonism), or tank mixture directions that encourage application rates of this product below the label directions.
- Control weed escapes and prevent weeds from setting seeds.
- Clean equipment before moving from field to field to minimize the spread of weed seed or plant parts.
- Report any incidence of repeated non-performance of this product on a particular weed to your local retailer or county extension agent.

#### Management of Fluroxypyr Resistant Biotypes

Since the occurrence of fluroxypyr resistant weeds cannot be determined until after product use and scientific confirmation, manufacturer is not responsible for any losses that may result from the failure of this product to control fluroxypyr resistant weed biotypes.

The following good agronomic practices are recommended to reduce the spread of confirmed fluroxypyr resistant biotypes:

- If a naturally occurring resistant biotype is present in your application site, this product should be tank-mixed or applied sequentially with an appropriately labeled herbicide with a different mode of action to achieve control.
- Cultural and mechanical control practices (e.g., crop rotation or tillage) may also be used as appropriate.
- Scout treated application site after herbicide applications and control escaping weeds including resistant biotypes before they set seed.
- Thoroughly clean equipment before leaving fields known to contain resistant biotypes.

#### **Product Information**

This product provides control of broadleaf annual and perennial weeds, and certain woody plants and vines on

• Airports, barrow ditches, communication transmission lines, electrical power and utility rights-of-way, fencerows, gravel pits, industrial sites, irrigation ditch banks, dry irrigation ditches or canals,

military lands, mining and drilling areas, non-irrigation ditch banks, oil pads, parking lots, petroleum tank farms, pipelines, railroads, roadsides, storage areas, storm water retention areas, substations, unimproved rough turfgrasses, vacant lots and other non-crop residential areas;

- Natural areas (open space) for example, campgrounds, parks, prairie management, trails and trailheads, recreation areas, wildlife openings and wildlife habitat and management areas;
- Conifer and tree plantations;
- Rangeland and permanent grass pastures;
- Established turfgrass, including sod farms, residential lawns, golf courses, recreational, commercial and public turf areas;
- On-Farm non-cropland;
- CRP acres;
- Fallow cropland;
- Grasses grown for seed, forage, or hay;
- Small grains (wheat, barley, oats, triticale);
- Grain sorghum (Milo);
- Field corn;
- Sweet corn;
- Including grazed areas on all of these sites

#### **USE PRECAUTIONS**

- Management of Kochia Biotypes: Research has suggested that many biotypes of kochia can occur within a single population. While kochia biotypes can vary in their susceptibility to this product, all will be suppressed or controlled at 12 fl. oz. per acre provided application timing and growing conditions are optimal. Application of this product at rates of less than 6 fl. oz. per acre can result in a shift to more tolerant biotypes within a population.
- Avoid applications where proximity of susceptible plants or other desirable plants is likely to result in exposure to spray or spray drift.
- Minimize overspray to open water when treating target vegetation non-flowing, quiescent or transient water. Note: Consult local public water control authorities before applying this product around public water; permits may be required to treat such areas.

# **USE RESTRICTIONS**

- Do not contaminate irrigation ditches or water used for domestic purposes.
- **Maximum Application Rate:** Do not apply more than 23 fl. oz. per acre of this product per year. Split applications of Alligare FMEP4 EC may be made during a single year provided the total amount of product applied does not exceed the maximum labeled rate of 23 fl. oz. per acre.
- **Grazing restrictions:** There are no grazing restrictions for livestock, including lactating or non-lactating dairy animals.
- **Harvest restrictions:** Do not apply within 7 days of harvesting grass for hay or silage from treated areas.
- **Slaughter restrictions:** Meat animals must be withdrawn from treated forage at least 2 days before slaughter.
- Chemigation: Do not apply this product through any type of irrigation system.
- **In Arizona:** The state of Arizona has not approved this product for use on plants grown for agricultural/commercial production; such as on designated grazing areas.
- Do not store or handle other agricultural chemicals with the same containers used for this
  product. Do not apply other agricultural chemicals or pesticides with equipment used to apply this
  product unless equipment has been thoroughly cleaned (see Clean-Out Procedures for Spray
  Equipment).
- Non-irrigation Ditch Banks and Seasonally Dry Wetland Sites: It is permissible to treat non-irrigation ditch banks, seasonally dry wetlands (such as flood plains, deltas, marshes, swamps, or bogs), and transitional areas between upland and lowland sites. Do not apply directly to water and take precautions to minimize spray drift to water. For control of woody plants and broadleaf

weeds in these sites, follow use directions and application methods on this label for the specific site being treated.

- Dry Irrigation Canals/Ditches: Do not apply Alligare FMEP4 EC to the inner banks of dry irrigation canals/ditches unless a 120-day restriction on use of irrigation water can be observed or residue levels of fluroxypyr (active ingredient in Alligare FMEP4 EC) are determined by laboratory analysis, or other appropriate means of analysis, to be 1 ppb or less. Do not apply on ditches or canals currently being used to transport irrigation water or that will be used for irrigation within 4 months following treatment.
- Do not apply to St. Augustine grass in the state of Florida.

### Avoiding Drift Run-off to Surface Water or Adjacent Land

Apply this product strictly in accordance with the run-off precautions on this label in order to minimize offsite exposure and potential effects on aquatic organisms and non-target plants.

Under certain conditions, this product may have a potential to run-off to surface water or adjacent land. Use vegetation filter strips or treatment setbacks along rivers, creeks, streams, wetlands, etc. or on the downhill side of treated areas where run-off could occur to minimize water runoff.

#### **Avoiding Injurious Spray Drift**

Spray drift produced during application is the responsibility of the applicator and care should be taken to minimize off-target movement of spray during application. A drift control agent suitable for agricultural use may be used with this product to aid in reducing spray drift but the first choice should be a coarser spray category nozzle set-up. If used, follow applicable use directions and precautions on the manufacturer's label.

Do not apply where drift may be a problem due to proximity to susceptible crops or other non-target broadleaf plants. Do not apply or otherwise permit this product or sprays containing this product to contact crops or other desirable broadleaf plants, including alfalfa, beans, cotton, grapes, melons, peas, potatoes, safflower, soybeans, sugar beets, sunflower, tobacco, tomatoes, and other vegetable crops, flowers, fruit trees, ornamentals, shade trees or other susceptible broadleaf plants. Do not permit spray mist or drift containing this product to contact susceptible plants because even very small quantities of the spray, that may not be visible, can cause severe injury during either active or dormant periods. Do not use in or around greenhouses.

**Ground Application:** To minimize spray drift, apply this product in a total spray volume of 5 gallons or more per acre using spray equipment designed to produce coarse or larger droplets per ASAE S-572 standard. Refer to the spray equipment manufacturer's recommendations for detailed information on nozzle types, arrangement, spacing and operating height and pressure. Operate equipment at spray pressures no greater than is necessary to produce a uniform spray pattern. Operate the spray boom no higher than is necessary to produce a uniformly overlapping pattern between spray nozzles. Do not apply with hollow cone-type insecticide nozzles or other nozzles that produce a fine-droplet spray.

**Aerial Application in Rights-of-Way (Helicopter Only):** In rights-of-way areas, do not apply this product with fixed-wing aircraft.

Aerial Application in Rangeland, Permanent Grass Pastures, and Conifer and Tree Plantations: Both fixed wing and helicopter equipment may be used to apply this product on rangeland, permanent green pastures and conifer and tree plantations, but fixed wing aircraft require additional drift mitigation measures.

To minimize spray drift, apply Alligare FMEP4 EC in a total spray volume of 3 gallons or more per acre. Drift potential is lowest between wind speeds of 2 to 10 mph. However, many factors, including droplet size and equipment type, determine drift potential at any given speed. Avoid applying below 2 mph due to variable wind direction and high potential for temperature inversion. Spray drift from aerial application can be minimized by applying a coarse spray at spray boom pressure no greater than 30 psi; by using straight-stream nozzles directed straight back, and by using a spray boom that does not exceed 75% of wing span or 90% of rotor diameter. For fixed wing aircraft, do not exceed 140 mph during the application. Do not apply more than 10 feet above the vegetation canopy 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.

Do not apply under conditions of a low level air temperature inversion. A temperature inversion is characterized by little or no wind and air temperature that is lower near the ground than at higher levels. The behavior of smoke generated by an aircraft-mounted device or continuous smoke column released at or near site of application will indicate the direction and velocity of air movement. A temperature inversion is indicated by layering of smoke at some level above the ground and little or no lateral movement.

# **Spray Drift Management**

Avoiding spray drift at the application site is the responsibility of the applicator. The interaction of many equipment-and-weather-related factors determine the potential for spray drift. The applicator and the grower are responsible for considering all these factors when making decisions.

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications.

- 1. The distance of the outer most operating nozzles on the boom must not exceed 75% of the wing span or 90% of the rotary diameter.
- 2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

Where states have more stringent regulations, they must be observed.

The applicator should be familiar with and take into account the information covered in the following Aerial Drift Reduction Advisory. This information is advisory in nature and does not supersede mandatory label requirements.

# **Aerial Drift Reduction Advisory**

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

#### **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 flow rate nozzles instead of increasing pressure.
- Number of Nozzles Use the minimum number of nozzles that provide uniform coverage.
- **Nozzle Orientation** Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.
- **Nozzle Type –** Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.
- **Boom Length –** For some use patterns, reducing the effective boom length to less than 75% of the wingspan or 90% of rotor length may further reduce drift without reducing swath width.
- **Application Height** Applications should not be made at a height greater than 10 feet above the top of the largest plants unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

**Swath Adjustment:** When applications are made with a 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. Swath adjustment distance should increase, with increasing drift potential (higher wind, smaller drops, etc.).

Wind: Drift potential is lowest between wind speeds of 2-10 mph. However, many factors, including droplet size and equipment type determine drift potential at any given speed. Application should be

avoided below 2 mph due to variable wind direction and high inversion potential. Note: Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

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

**Temperature Inversions:** Applications should not be made during a local, low level 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 little 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 concentrated cloud (under low wind conditions) indicates an inversion, while smoke that moves upwards and rapidly dissipates indicates good vertical air mixing.

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

#### MIXING DIRECTIONS

#### Alligare FMEP4 EC - Alone

- 1. Fill the spray tank with  $\frac{1}{2}$  to  $\frac{3}{4}$  of the total amount of water.
- 2. Start agitation.
- 3. Add the required amount of Alligare FMEP4 EC.
- 4. Continue agitation while filling the spray tank to the required volume.
- 5. To ensure a uniform spray mixture, continuous agitation is required during application. If product is allowed to settle, thoroughly agitate to re-suspend the mixture before spraying. Apply mixture immediately after it is prepared.

#### Alligare FMEP4 EC - Tank Mix

If a broader spectrum of weed control is needed, Alligare FMEP4 EC may be tank mixed with labeled rates of other herbicides provided (1) the tank mix product is labeled for the timing and method of application for the use site to be treated; and (2) tank mixing is not prohibited by the label of the tank mix product.

It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

# **Tank Mixing Precautions:**

- Read carefully and follow all applicable use directions, precautions, and limitations on the respective product labels.
- Do not exceed specified application rates for respective products or maximum allowable application rates for any active ingredient in the tank mix.
- Do not tank mix with products containing boron or mix in equipment previously used to apply a product mixture containing boron unless the tank and spray equipment have been adequately cleaned. (See Equipment Clean-Out Procedures.)
- Always perform a (jar) test to ensure the compatibility of products to be used in tank mixture.

**Tank Mix Compatibility Testing:** Conduct a jar test prior to tank mixing to ensure compatibility of Alligare FMEP4 EC and other pesticides. Use a clear glass quart jar with lid and mix the tank mix ingredients in their relative proportions. Invert the jar containing the mixture several times and observe the mixture for approximately ½ hour. If the mixture balls up, forms flakes, sludges, jells, oily films or layers, or other precipitates, it is not compatible and the tank mix combination should not be used.

Vigorous, continuous agitation during mixing, filling and throughout application is required for all tank mixes. Sparger pipe agitators generally provide the most effective agitation in spray tanks. To prevent foaming in the spray tank, avoid stirring or splashing air into the spray mixture.

Undiluted Alligare FMEP4 EC and 2,4-D amine concentrates are not compatible and cannot be mixed together in the same supply tank when using injection equipment. Combinations of Alligare FMEP4 EC and 2,4-D ester are compatible for this purpose.

# **Mixing Order for Tank Mixes**

- 1. Fill the spray tank to 1/4 to 1/3 of the total spray volume required with water.
- 2. Start agitation.
- 3. Add different formulation types in the following order: (1) dry flowables; (2) wettable powders; (3) aqueous suspensions, flowables or liquids. Maintain agitation and fill spray tank to 3/4 of the total spray volume. Allow time for complete mixing and dispersion after each addition.
- 4. Add Alligare FMEP4 EC and other emulsifiable concentrates and any solutions.
- 5. Finish filling the spray tank. Maintain continuous agitation during mixing and throughout application. If product is allowed to settle, thoroughly agitate to resuspend the mixture before spraying. Apply mixture immediately after it is prepared.

If application or agitation must be stopped before the spray tank is empty, the materials may settle to the bottom. Settled materials must be re-suspended before spraying is resumed. A sparger agitator is particularly useful for this purpose. Settled material may be more difficult to re-suspend than when originally mixed.

# **Clean-Out Procedures for Spray Equipment**

To avoid injury to or exposure of non-target crops, thoroughly clean and drain spray equipment used to apply this product after use. Clean equipment as soon as possible after application. Spray equipment should be cleaned by the following procedure:

- 1. Drain any remaining spray mixture from the application equipment.
- 2. Hose down the interior surfaces of the tank while filling the tank 1/2 full with water.
- 3. Flush tank, hoses, boom, and nozzles with clean water for 10 minutes. Fill the tank with water and recirculate for 15 minutes. Spray part of the mixture through the hoses, boom, and nozzles and drain the tank.
- 4. Remove all spray nozzles and screens and clean separately.
- 5. If spray equipment will be used for pesticide application to crops other than those labeled for this product, repeat steps 1 and 2 and thoroughly wash the outside of spray tank and the boom.

**Note:** Rinsate may be disposed of on-site according to label use directions or at an approved waste disposal facility.

# **Application Directions**

# **Application Timing**

Apply to actively growing weeds. Extreme growing conditions such as drought or near freezing temperatures prior to, at and following time of application may reduce weed control. **Only susceptible weeds that are emerged at the time of application will be controlled.** If foliage is wet at the time of application, control may be decreased. Applications of Alligare FMEP4 EC are rain-fast within 1 hour after application.

# **Effect of Temperature on Herbicidal Activity**

Herbicidal activity of Alligare FMEP4 EC is influenced by weather conditions. Optimum activity requires active plant growth. The temperature range for optimum herbicidal activity is 55°F to 85°F. Reduced activity will occur when temperature is below 45°F. Frost before application (3 days) or shortly after (3 days) may reduce weed control.

# **Application Rates**

Generally, application rates at the lower end of the specified rate range will be satisfactory for young, succulent growth of sensitive weed species. For less sensitive species, perennials, brush and under conditions where control is more difficult (plant stress conditions such as drought or extreme

temperatures, dense weed stands and/or larger weeds) the higher rates within the rate range will be needed. Weeds growing in the absence of competition from other vegetation generally require higher rates to obtain satisfactory control or suppression.

### **Spray Coverage**

Use sufficient spray volume to provide through coverage and a uniform spray pattern. Do not broadcast apply in less than 3 gallons per acre by air or 5 gallons per acre by ground equipment. Inadequate spray volume and coverage may result in decreased weed control. As vegetative canopy and weed density increase, increase spray volume to obtain equivalent weed control. Refer to manufacturer's directions for information on relationships between spray volume, and nozzle size and arrangement.

#### **Spot Treatments**

Spot treatments may be applied with a calibrated boom or hand sprayer according to directions provided below.

**Hand-Held Sprayers:** Hand-held or backpack sprayers may be used for spot applications of Alligare FMEP4 EC if care is taken to apply the spray uniformly and at a rate equivalent to a broadcast application. Application rates in the table are based on an area of 1,000 sq. ft. Mix the amount of Alligare FMEP4 EC (fl. oz. or ml) listed in the table with 1 gallon or more of water and apply to an area of 1,000 sq. ft. To calculate the amount of product required for larger areas, multiply the table value (fl. oz. or ml) by the area treated in "thousands" of square feet, e.g., if the area to be treated is 3,500 sq. ft., multiply the table value by 3.5 (Calculation:  $3,500 \div 1,000 = 3.5$ ). An area of 1000 sq. ft. is approximately 10.5 x 10.5 yards in size.

# **NON-CROP USE**

- Airports, barrow ditches, communication transmission lines, electrical power and utility rights-ofway, fencerows, gravel pits, industrial sites, irrigation ditch banks, dry irrigation ditches or canals, military lands, mining and drilling areas, non-irrigation ditch banks, oil pads, parking lots, petroleum tank farms, pipelines, railroads, roadsides, storage areas, storm water retention areas, substations, unimproved rough turfgrasses, vacant lots and other non-crop residential areas; and
- Natural areas (open space) for example, campgrounds, parks, prairie management, trails and trailheads, recreation areas, wildlife openings and wildlife habitat and management areas;
- Conifer and tree plantations, and
- Rangeland and permanent grass pastures,
- Established turfgrass, including sod farms, residential lawns, golf courses, recreational, commercial and public turf areas
- Including grazed areas on all of these sites

Amount of Alligare FMEP4 EC to Equal Specified Broadcast Rate (Mix with 1 Gallon or More of Water and Apply to 1,000 sq. ft.)				
6 fl. oz./acre	9 fl. oz./acre	12 fl. oz./acre	17 fl. oz./acre	23 fl. oz./acre
0.14 fl. oz.	0.21 fl. oz.	0.28 fl. oz.	0.4 fl. oz.	0.59 fl. oz.
(4.1 ml)	(6.2 ml)	(8.3 ml)	(11.7 ml)	(17.5 ml)

1 fl. oz. = 29.6 (30) ml

# Weeds Controlled or Suppressed

(Numbers in parentheses (-) refer to footnotes):

Weeds Controlled			Weeds Suppressed (3)
6-12 fl. oz./acre	12 fl. oz./acre	23 fl. oz./acre	23 fl. oz./acre
bedstraw (cleavers)	chickweed	blackberry	buckhorn plantain
common purslane	cocklebur	catsear	Carolina geranium
hairy buttercup	coffeeweed, common	giant ragweed	common mallow
hemp dogbane	ragweed	goldenrod	common mullein
kochia (1); (2), (4)	curly dock	henbane	cudweed
marshelder (2)	cutleaf primrose	hop clover	field bindweed
sericea lespedeza (2)	dandelion	horsenettle	field horsetail

Weeds Controlled			Weeds Suppressed (3)
6-12 fl. oz./acre	12 fl. oz./acre	23 fl. oz./acre	23 fl. oz./acre
tropic croton	dogfennel grape horseweed/marestail morningglory prickly lettuce puncturevine stinging nettle sunflower vetch velvetleaf venice mallow western ragweed white clover	ironweed lantana musk thistle prickly pear cactus wild carrot	field pennycress knotweed leafy spurge mustard narrowleaf plantain nightshade species spiny amaranth wild buckwheat yellow thistle
	white cockle		

<sup>&</sup>lt;sup>1</sup>Includes ALS and some other herbicide-tolerant or resistant biotypes.

# Uses

- Airports, barrow ditches, communication transmission lines, electrical power and utility rights-ofway, fencerows, gravel pits, industrial sites, irrigation ditch banks, dry irrigation ditches or canals, military lands, mining and drilling areas, non-irrigation ditch banks, oil pads, parking lots, petroleum tank farms, pipelines, railroads, roadsides, storage areas, storm water retention areas, substations, unimproved rough turfgrasses, vacant lots and other non-crop residential areas; and
- Natural areas (open space) for example, campgrounds, parks, prairie management, trails and trailheads, recreations areas, wildlife openings and wildlife habitat and management areas;

Includes rights-of-way, industrial sites seasonally dry wetlands, non-irrigation ditch banks, and irrigation banks. Use on irrigation banks includes application of Alligare FMEP4 EC on the tops and outer banks of the canals and ditches. Use of Alligare FMEP4 EC on the inner portion of dry irrigation canals or ditches can be done as long as water is not used for irrigation for 120 days or residue levels of Alligare FMEP4 EC are determined by laboratory analysis, or other appropriate means of analysis, to be 1 ppb or less. See use precautions above for more information.

Apply at the broadcast rate of 6 to 23 fl. oz. per acre when weeds are small and/or actively growing. Split applications of Alligare FMEP4 EC may be made during a single year, provided the total amount of Alligare FMEP4 EC applied does not exceed the maximum-labeled rate of 23 fl. oz. per acre. See listing of Weeds Controlled or Suppressed and use directions under the Conifer and Tree Plantations section.

Apply spot treatments at rates and spray volumes equivalent to broadcast application. See Spot Treatments in the Application Directions section.

# **Conifer and Tree Plantations**

**Herbaceous Weed Control:** Apply this product at the broadcast rate of 6 to 23 fl. oz. per acre when weeds are small and/or actively growing. See listing of Weeds Controlled or Suppressed.

**Brush Control:** Alligare FMEP4 EC may be tank-mixed with Alligare Triclopyr 4, Alligare Triclopyr 3, Alligare Picloram 22K, Alligare Picloram+D, glyphosate products or other registered herbicides for these sites at timings specified on the respective labels and at the indicated rates to increase control of

<sup>&</sup>lt;sup>2</sup>Use the higher rate in the range to control these weeds.

<sup>&</sup>lt;sup>3</sup>Suppression is expressed as a reduction in weed competition (reduction in population or vigor) as compared to untreated areas. The degree of weed control and duration of effect may vary with weed size, density, application rate, coverage, and growing conditions before, during and after treatment.

<sup>&</sup>lt;sup>4</sup>For best results, add a methylated or ethylated seed oil surfactant (i.e. MSO or ESO) at the rate of 1-2 quarts per acre for control of kochia. For kochia infestations with larger plants as more advanced growth stages, increasing the rate of Alligare FMEP4 EC to 13–17 or 23 fl. oz. or addition of the label specified rate per acre of 2,4-D ester along with the 1-2 quarts of seed oil surfactant per acre will improve control.

undesirable pine species, manzanita, squaw carpet, shingle oak, red maple, red oak and other woody species.

**Directed Sprays Application for Conifer Release:** To release conifers from competing brush and weeds such as manzanita and squaw carpet, mix 2 to 4 qts. of this product in enough water to make 100 gallons of spray mixture (0.5 to 1% v/v). This spray mixture should be directed onto foliage of competitive brush using calibrated sprayers any time after the hardwoods and brush have reached full leaf size including fall applications. Care should be taken to direct spray solutions away from contact with conifer foliage, particularly foliage of desirable conifers.

#### Restrictions:

- Do not apply Alligare FMEP4 EC to conifer and tree plantations as an over-the-top broadcast treatment during active terminal growth (from initiation of budbreak/growth flush until seasonal terminal growth has hardened off and over-wintering buds have formed). Directed spray applications may be made to conifer and tree plantations during periods of active growth, but care should be taken to avoid spray contact with actively growing foliage.
- Do not apply Alligare FMEP4 EC in tank mix combination to conifer and tree plantations unless
  the tank mix product is labeled for weed or brush control in conifers by the application method
  being employed. It is the pesticide user's responsibility to ensure that all products in the listed
  mixtures are registered for the intended use. Users must follow the most restrictive directions for
  use and precautionary statements of each product in the tank mixture.
- Maximum application rate: Do not apply more than 23 fl. oz. of this product per acre per year.

#### **Tank Mixes**

# **Western Woody Brush**

Mix Alligare FMEP4 EC at 16-23 fl. oz. with the label specified rate of a glyphosate isopropylamine salt tank mix partner for control of blackberry.

Mix Alligare FMEP4 EC at 16-23 fl. oz. with the label specified rate of a triclopyr, butoxyethyl ester tank mix partner for control of blackberry and manzanita.

#### **All Areas**

Mix Alligare FMEP4 EC at 17-23 fl. oz. with the label specified rate of a triclopyr, butoxyethyl ester or triclopyr, trimethylamine salt tank mix partner for control of bay species, black cherry, dogwood, water oak or willow oak.

Mix Alligare FMEP4 EC at 17-23 fl. oz. with the label specified rates of a triclopyr, trimethylamine salt and picloram, triisopropanolamine salt + 2,4-D triisopropanolamine salt tank mix partners, or, the specified label rates of triclopyr, trimethylamine salt and picloram postassium salt partners for control of pine species, red maple, red oak, shingle oak, Virginia pine, water oak.

For control of dogwood, gallberry, pines and wax myrtle, mix Alligare FMEP4 EC at 17-23 fl. oz. with the label specified rate of a glyphosate isopropylamine salt tank mix partner

# **Rangeland and Permanent Grass Pastures**

Broadcast apply Alligare FMEP4 EC as a single treatment or as sequential postemergence treatment using ground or aerial application equipment. Apply as a broadcast treatment when weeds are actively growing, but prior to bud stage of weed growth. Alligare FMEP4 EC may be applied in tank mix combination with other foliar-applied herbicides labeled for use on rangeland and permanent grass pastures to control additional weeds and woody plants. Read and follow applicable use directions, precautions and limitations on each product label.

# **Spot Treatment for Control of Prickly Pear or Other Species**

Apply in a total spray volume of 20 to 100 gallons per acre. To prevent misapplication, spot treatments should be applied with hand sprayers according to directions provided below. Do not exceed maximum application rates for Alligare FMEP4 EC for a given treatment site per acre. On rangeland and permanent grass pastures, spot treatments may be applied at 0.5% v/v, however do not apply more than 23 fl. oz. of

this product per acre per year. Repeat treatments may be applied as necessary, but total use must not exceed the maximum amount specified.

**Tank Mix:** For control of additional weeds and woody plants listed below, Alligare FMEP4 EC may be tank mixed with products containing the triisopropanolamine salt of aminopyralid; aminopyralid potassium salt plus metsulfuron; triclopyr, butoxyethyl ester; or picloram, potassium salt or other herbicides registered for use on rangeland or grass pastures. Refer to the product labels for a list of weeds/brush controlled and specific rates.

It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

#### Additional Weeds/Brush Controlled

Bindweed, field	Dogfennel	Mullein	Sneezeweed, bitter
Blackberry	Goldenrod	Mustards	Spotted, diffuse and Russian or
Broomweed, annual	Horsenettle	Persimmon	other knapweeds
Butter cup, hairy	Horseweed/marestail	Plantain	Sumac
Canada thistle	Ironweed	Plum, wild	Sunflower
Cocklebur	Kochia	Prickly pear cactus	Thistle, musk
Croton	Lantana	Ragweeds	Tropical soda apple
Dandelion	Lespedeza, sericea	Rose, Cherokee	Vetch
Dock, curly	Locust	Rose, Macartney	Wax myrtle
Dogbane, hemp	Marshelder	Rose, multiflora	Whitetop
			Yellow starthistle

#### Restrictions:

- **Grazing and harvest restrictions:** There are no grazing restrictions for livestock, including lactating or non-lactating dairy animals for pasture and rangeland uses. Withdraw meat animals from treated forage at least 2 days before slaughter. Do not harvest grass for hay or silage from treated areas within 7 days of application.
- **Plantback restriction:** Only forage grasses, wheat, barley, oats, field corn, sweet corn and grain sorghum may be planted in treated fields within 120 days following application of Alligare FMEP4 EC.
- Alligare FMEP4 EC may injure or kill legumes. Do not apply if the injury to legumes cannot be tolerated. Legumes may be less sensitive to herbicide injury after plant growth is mature and seed has set.
- Maximum Application Rate: Do not apply more than 23 fl. oz. of Alligare FMEP4 EC per acre
  per year.

# **Established Turfgrass**

Alligare FMEP4 EC provides postemergence control of annual and perennial broadleaf weeds in established turfgrass, including sod farms, residential lawns, golf courses, recreational, commercial and public turf areas.

#### **Precautions**

- Apply only to turfgrass species that are well established. Mow newly-seeded turfgrass two or three times before applying this product.
- To minimize the potential for unacceptable turfgrass injury, do not make additional applications within 4 weeks of a previous application unless injury can be tolerated.

#### Restrictions

- Do not use this product on golf course putting greens or tees.
- Do not allow sprays of this product to contact exposed suckers or exposed roots of shallow rooted trees and shrubs or injury may occur.
- Do not reseed turfgrass for three weeks after application.
- Do not apply this product to warm season turfgrass while they are transitioning from winter dormancy to active growth in late winter or early spring as spring green-up can be significantly delayed. Warm season turfgrass species (except St. Augustine grass) may be treated with up to 11 fl. oz. of this product per acre during winter if warm season turfgrass is completely dormant when making applications to control winter annual broadleaf weeds.
- Maximum application rate: Do not apply more than 23 fl. oz. of this product per acre per year.

Users who wish to use this product on a turfgrass species not identified on this label may determine the suitability for such use by treating a small area at a listed rate. Prior to treatment or larger areas, observe the treated area for any sign of herbicidal injury during 30 days of typical growing conditions. The user assumes the responsibility for any plant damage or other liability resulting from use of this product on turfgrass species not identified on this label.

# Use Alligare FMEP4 EC on the following established turfgrass species:

Common Name	Scientific Name
Established Cool Season Turfgrass	
bentgrass <sup>1</sup>	Agrostis spp.
bluegrass, Kentucky	Poa pratensis
fescue, chewing	Festuca rubra var. commutata
fescue, creeping red	Festuca rubra
fescue, sheep	Festuca ovina
fescue, tall	Schedonorus arundinaceus
ryegrass, perennial	Lolium perenne
Established Warm Season Turfgrass <sup>2</sup>	
bahiagrass	Paspalum notatum var. saurae parodi
bermudagrass <sup>1</sup>	Cynodon dactylon
centipedegrass	Eremochloa ophiuroides
St. Augustine grass <sup>3</sup>	Stenotaphrum secundatum
zoysiagrass	Zoysia japonica
zoysiagrass	Zoysia tenuifolia
fescue, tall (growing in warm season areas)	Schedonorus arundinaceus

<sup>1</sup>Use this product on these species only at the 6 fl. oz. per acre rate and only if some injury can be tolerated.

<sup>2</sup>Use no more than 11 fl. oz. per acre on warm season turfgrass species unless some injury can be tolerated. Do not apply this product to warm season turfgrass while it is transitioning from winter dormancy to active growth in late winter or early spring as spring green-up can be significantly delayed. Warm season turfgrass species (except St. Augustine grass) may be treated with up to 11 fl. oz. per acre during winter if warm season turfgrass is completely dormant when making applications to control winter annual broadleaf weeds.

<sup>3</sup>Do not apply this product to St. Augustine grass in the state of Florida. In states other than Florida, do not apply more than 6 fl. oz. of this product per acre to St. Augustine grass and do not make applications to St. Augustine grass between April 1 and October 31.

# Weeds Controlled or Suppressed and Application Rates

See the Handheld Sprayer information and chart above

	Application Rate <sup>1</sup>	
Weeds Controlled	(fl. oz./acre)	(fl. oz./1000 sq. ft.)
bedstraw, catchweed	6-8	0.14 – 0.19
deadnettle, purple		(4.1 – 5.5 ml)

	Application Rate <sup>1</sup>		
Weeds Controlled	(fl. oz./acre)	(fl. oz./1000 sq. ft.)	
purslane, common			
bindweed, field	8 – 11	0.19 – 0.25	
burnweed, American		(5.5 – 7.6 ml)	
burweed, lawn			
buttonweed, Virginia			
catsear, common			
chickweed			
cinquefoil, oldfield			
clover, white			
ivy, ground			
lespedeza, common			
medic, black			
sida, southern			
speedwell, slender			
strawberry, wild			
velvetleaf			
woodsorrel, common			
woodsorrel, yellow			
clover, hop	23	0.59	
dandelion, common		(17.5 ml)	
henbit			
knotweed, prostrate			
matchweed			
plantain, broadleaf			
plantain, buckhorn			
spurge, spotted	0.00	0.40 0.50	
dollarweed (suppression only)	8 – 23	0.19 – 0.59	
veronica species (suppression		(5.5 – 17.5 ml)	
only)			

¹Generally, application rates at the lower end of the rate range will be satisfactory for young, succulent growth of sensitive weed species. For less sensitive species, perennials, and other conditions where control is more difficult (plant stress conditions, such as drought or extreme temperatures, dense weed stands and/or larger weeds), the higher rates within the rate range will be needed. Weeds growing in the absence of competition from other vegetation generally will require higher rates to obtain satisfactory control or suppression.

# **CROP USE AND ON FARM NON-CROPLAND USE**

- On-Farm non-cropland
- CRP acres
- Fallow cropland
- Grasses grown for seed, forage, and hay
- Small grains (wheat, barley, oats, triticale)
- Grain sorghum (Milo)
- Field corn
- Sweet corn

Amount of Alligare FMEP4 EC to Equal Specified Broadcast Rate (Mix with 1 Gallon or More of Water and Apply to 1,000 sq. ft.)		
0.4 pt/acre	0.55 pt/acre	0.7 pt/acre
0.15 fl oz	0.20 fl oz	0.26 fl oz
(4.4 ml)	(5.9 ml)	(7.7 ml)

1 fl oz = 29.6 (30) ml

# **Weeds Controlled or Suppressed**

(Numbers in parentheses (-) refer to footnotes below):

Weeds Controlled	Weeds Suppressed (2)
bedstraw (cleavers)	Bindweed, field
chickweed	Buckwheat, wild
clover, white	Canola, volunteer
cocklebur	Devilsclaw
coffeeweed	Field horsetail
flax, volunteer	Horseweed (marestail)
grape species	Knotweed
hemp dogbane	Mallow, common
kochia <sup>(1)</sup>	Marestail
mallow, Venice	Marshelder
morningglory	Mustard
prickly lettuce	Nightshade species
puncturevine	Pennycress, field
purslane, common	Potato, volunteer
ragweed, common	Russian thistle
ragweed, giant	
sunflower	
velvetleaf	

<sup>&</sup>lt;sup>1</sup>Includes herbicide-tolerant or resistant biotypes.

# **Application Sites**

# **On-Farm Non-Cropland**

Apply as a single broadcast treatment or spot treatment to control susceptible broadleaf weeds in on-farm non-cropland areas such as fencerows, building perimeters, around irrigation equipment and on-farm private roadways. Apply at the rate of 0.4 to 0.7 pints per acre when weeds are small and actively growing, but before weeds are 8 inches tall or vining. Spot treatments should be applied at rates and spray volumes equivalent to broadcast application. See instructions for "Spot Application" in "Application Directions" section. See "Weeds Controlled or Suppressed" section for a complete listing of weeds controlled or suppressed.

<sup>&</sup>lt;sup>2</sup>Suppression is expressed as a reduction in weed competition (reduction in population or vigor) as compared to untreated areas. The degree of weed control and duration of effect may vary with weed size, density, application rate, coverage, and growing conditions before, during and after treatment.

# **CRP Acres**

Do not use on CRP acres that are underseeded with desirable legumes, clovers, or other sensitive broadleaf plants.

Alligare FMEP4 EC may be applied to Conservation Reserve Program (CRP) acres. For best results, apply as a single broadcast treatment by ground or aerial equipment to control susceptible broadleaf weeds. Apply at the rate of 0.4 to 0.7 pints per acre when weeds are small and actively growing, but before weeds are 8 inches tall or vining. Spot treatments should be applied at rates and spray volumes equivalent to broadcast application. See instructions for Spot Application in Application Directions section. See Weeds Controlled or Suppressed section for a complete listing of weeds controlled or suppressed.

**Restriction:** Grazing or having of treated CRP acres is prohibited.

# **Fallow Cropland**

Apply as a single broadcast treatment by ground or aerial equipment to control susceptible broadleaf weeds. Apply when weeds are actively growing, but before kochia is 8 inches tall and before wild buckwheat is vining. Alligare FMEP4 EC may be applied alone or in tank mix combination with other herbicides (See tank mixing precautions in "Mixing Instructions" section).

## **Broadcast Application Rates:**

Weed Size or Species <sup>1</sup>	Application Rate (pint/acre)
Susceptible broadleaf weed seedlings less than 8	0.4 - 0.7
inches tall or vining	
Volunteer potatoes	

<sup>&</sup>lt;sup>1</sup>See Weeds Controlled or Suppressed section for a complete listing of weeds controlled or suppressed.

Control may be reduced of weeds are under stress from drought or extreme temperatures. Use lower rates to control light to moderate infestations and under good growth conditions. Use higher rates for moderate to heavy infestations and to compensate for less than ideal growth conditions.

# **Grasses Grown for Seed, Forage, and Hay**

Alligare FMEP4 EC may be applied for broadleaf weed control in the following grasses grown for seed, forage, or hay: bermudagrass, bluegrass (perennial and annual), bromegrass, fescue, hay grazer, orchardgrass, ryegrass (perennial and annual), redtop cane, sorghum, sorghum-Sudan, Sudan, sudex, and timothy. Alligare FMEP4 EC may be applied for broadleaf weed control in the following grasses grown for hay or forage only: sorghum and triticale.

Apply Alligare FMEP4 EC as a broadcast postemergence treatment using ground equipment or by air. A second application may be made a minimum of 14 days after the first. Alligare FMEP4 EC may be applied in tank mix combination at labeled rates with other herbicides registered for these uses. All applicable use directions, precautions, and limitations on the labels of the tank mix products must be followed. When tank mixing, the most restrictive limitations on each label must apply.

**Application Timing:** Apply to established grasses in the spring when weeds are actively growing and before weeds are 8 inches tall. Only weeds emerged at the time of treatment will be controlled. New plantings of grass crops may be treated from the 2 true leaf stage of growth prior to early boot stage. Do not apply during boot, flowering, or seed development stage of growth if grass crop is to be harvested for seed.

Broadcast Application Rates: (Numbers in parentheses (-) refer to footnotes following table.)

	Application Rate
Weed Size or Species <sup>(1)</sup>	(pint/acre)
Susceptible broadleaf weed seedlings less than 4 inches tall (2)	0.3
Susceptible broadleaf weed seedlings less than 8 inches tall or vining	0.4

<sup>&</sup>lt;sup>1</sup>Refer to the Weeds Controlled or Suppressed section in the label booklet for Alligare FMEP4 EC for a complete listing of weeds controlled or suppressed.

<sup>2</sup>The 0.3 pint/acre rate will generally provide satisfactory control of kochia seedlings less than 4 inches tall (including ALS resistant biotypes). However, when conditions for control are less favorable, such as under drought or cool temperatures, the 0.4 pint/acre rate will provide more consistent control of kochia seedlings 1 to 4 inches tall. The 0.4 pint/acre rate should be used for optimal control of dicamba tolerant kochia populations (see Management of Kochia Biotypes in the Product Information section of this label for Alligare FMEP4 EC.)

#### **Restrictions:**

- Do not apply more than 0.7 pint per acre of Alligare FMEP4 EC per growing season.
- Grazing Restrictions: There are no grazing restrictions for lactating or non-lactating dairy animals.
- Harvest Restrictions: Do not harvest grass for hay or silage from treated areas within 7 days of application.
- **Slaughter Restrictions:** Meat animals must be withdrawn from treated forage at least 2 days before slaughter.

# Wheat - Barley - Oates - Triticale

Apply as a broadcast postemergence treatment to actively growing wheat, barley, oats, or triticale from the 2 leaf crop growth stage up to and including flag leaf emergence (Zadoks scale 39) for control of broadleaf weeds. Apply when weeds are actively growing, but before weeds are 8 inches tall or vining. For control of volunteer potatoes, apply before potato plants are 8 inches tall. Only weeds emerged at the time of treatment will be controlled. Extreme growing conditions such as drought or near freezing temperatures prior to, at, and following time of application may reduce weed control and increase the risk of crop injury at all stages of growth. Do not use if cereal crop is underseeded with a legume.

**Spot Application:** Spot applications may be made, however, to prevent over-application spot treatments should be applied at rates and spray volumes equivalent to broadcast application. See instructions for Spot Application in Application Directions section.

## **Broadcast Application Rates:**

(Numbers in parentheses (-) refer to footnotes following table.)

Weed Size or Species (1)	Application Rate (pint/acre)
weed Size of Species "	(pilluacie)
Susceptible broadleaf weed seedling less than 4	0.3
inches tall (2)	
Susceptible broadleaf weed seedlings less than 8	0.4
inches tall or vining	
Volunteer Potatoes	0.7

<sup>1</sup>See "Weeds Controlled or Suppressed" section for a complete listing of weeds controlled or suppressed.

<sup>2</sup>The 0.3 pint/acre rate will generally provide satisfactory control of kochia seedlings less than 4 inches tall (including ALS resistant biotypes). However, when conditions for control are less than favorable, such as under drought or cool temperatures, the 0.4 pint/acre rate will provide more consistent control of kochia seedlings 1 to 4 inches tall. Control of small kochia with reduced rates will be more consistent if kochia is at least 1 inch tall. The 0.4 pint/acre rate should be used for optimal control of dicamba tolerant kochia populations (see "Management of Kochia Biotypes" in the Product Information section of this label).

#### **Restrictions:**

- Do not allow livestock to graze treated areas to harvest treated forage within 7 days of application.
- Do not apply more than 0.7 pint per acre of Alligare FMEP4 EC per growing season.
- **Preharvest Interval:** Do not apply closer than 14 days before cutting of hay or 40 days before harvesting of grain and straw.

# **Grain Sorghum (Milo)**

Apply Alligare FMEP4 EC as a broadcast treatment using ground equipment or by air. See the Product Information section for details on application timing, effect of temperature on herbicidal activity, application rates, spray coverage and instructions for spot application.

Alligare FMEP4 EC may be applied in tank mix combination with labeled rates of other herbicides such as atrazine. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

# **Weeds Controlled or Suppressed**

(Numbers in parentheses (-) refer to footnotes below.)

Key Weeds Controlled (1)	Key Weeds Suppressed (3)	Application Rate (pint/acre)
cocklebur	devilsclaw	0.4
common ragweed	field bindweed	
giant ragweed	field pennycress	
hemp dogbane	marestail (horseweed)	
hedge bindweed	mustard	
kochia <sup>(2)</sup>	nightshade species	
morningglory	Russian thistle	
puncturevine	wild buckwheat	
sunflower		
velvetleaf		
Venice mallow		

<sup>&</sup>lt;sup>1</sup>See Weeds Controlled or Suppressed section of this label for a complete listing.

#### **Application Timing**

- **Pre-emergence:** For no-till or burndown applications, apply to emerged weeds after planting, but prior to grain sorghum emergence.
- **Post emergence:** Alligare FMEP4 EC may be broadcast applied from the 3-leaf growth stage of grain sorghum through the 7-leaf stage. Use drop nozzles and directed spray from the 8-leaf stage to boot stage. Drop nozzles should direct the spray toward the soil surface to avoid contact with grain sorghum foliage and reduce the potential for crop injury. Do not apply after boot stage.
- For both pre-emergence and postemergence applications, apply when weeds are actively growing, but before weeds are 8 inches tall and before wild buckwheat is vining. Only weeds that have emerged at the time of application will be controlled.
- To control heavy weed populations, a pre-emergence application may be followed by a post emergent application. Do not exceed two applications per season.

# **Restrictions:**

- Do not make more than two applications or apply more than 0.7 pint per acre per crop season.
- Pre-Harvest Interval: Do not allow livestock to graze or harvest forage within 40 days of application.
- Do not apply within 70 days of harvesting grain or stover.

**Tank Mixing:** Alligare FMEP4 EC may be applied alone or in tank mix combination with other herbicides registered for post emergence application in grain sorghum unless tank mixing is specifically prohibited by the label of the tank mix product. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture. Do not apply in combination with Ally herbicide.

<sup>&</sup>lt;sup>2</sup>Includes herbicide tolerant or resistant biotypes.

<sup>&</sup>lt;sup>3</sup>Suppression is expressed as a reduction in weed competition (reduced population or vigor) as compared to untreated areas. The degree of weed control and duration of effect may vary with weed size, density, application rate, coverage, and growing conditions before, during and after treatment.

**Adjuvants:** Generally, this product does not require the use of an adjuvant to achieve satisfactory weed control when applied alone. Adjuvants may be used when required by a tank mix partner. Follow all applicable directions on the label for the tank mix partner. Use of a high quality adjuvant may improve weed control under hot, dry conditions.

#### Field Corn

Apply Alligare FMEP4 EC as a broadcast post emergence treatment using ground equipment or by air. Alligare FMEP4 EC may also be applied as a pre-plant treatment for control of emerged volunteer potato or for burndown of emerged weeds (refer to "Special Directions for Control of Volunteer Potato" below). Refer to the Product Information section of this label for detailed information on application timing, effect of temperature on herbicidal activity, application rates, spray coverage and instructions for spot application. Alligare FMEP4 EC may be applied in tank mix combination with labeled rates of other registered herbicides. Read and follow all label directions, including applicable use directions, precautions, and limitations on each product label.

# **Weeds Controlled or Suppressed**

(Numbers in parentheses (-) refer to footnotes below.)

Key Weeds Controlled (1)	Key Weeds Suppressed (3)	Application Rate (pint/acre)
catchweed bedstraw (cleavers)	devilsclaw	0.4
chickweed	field bindweed	
cocklebur	field pennycress	
common purslane	marestail (horseweed)	
common ragweed	marshelder	
giant ragweed	mustard	
hedge bindweed	nightshade species	
hemp dogbane	Russian thistle	
jimsonweed	volunteer potato(4)	
kochia <sup>(2)</sup>	wild buckwheat	
morningglory		
puncturevine		
sunflower		
velvetleaf		
Venice mallow		

<sup>&</sup>lt;sup>1</sup>See Weeds Controlled or Suppressed section of this label for a complete listing.

# **Application Timing**

Apply as a broadcast or band treatment to field corn up to, and including, 5 fully exposed leaf collars (V5 growth stage). Do not broadcast apply to field corn with 6 fully exposed leaf collars (V6 growth stage). Applications to field corn beyond the V5 growth stage should be made as a directed spray using drop nozzles (see crop safety precaution below). Apply when broadleaf weeds are actively growing, but before weeds are 8 inches tall. If wild buckwheat is present, apply before vining stage of growth. Only weeds emerged at the time of application will be controlled or suppressed.

• **Pre-plant Burndown:** For no-till or burndown applications to control emerged weeds, apply alone or in tank mix combination with a labeled herbicide prior to planting.

## **Special Directions for Control or Suppression of Volunteer Potato:**

• **Preplant Application (Suppression):** Apply 0.4 pint per acre prior to planting corn when the majority of volunteer potato plants are 4 to 8 inches tall. For best results, leave soil undisturbed and plant field corn two weeks following application.

<sup>&</sup>lt;sup>2</sup>Includes herbicide tolerant or resistant biotypes.

<sup>&</sup>lt;sup>3</sup>Suppression is expressed as a reduction in weed competition (reduced population or vigor) as compared to untreated areas. The degree of weed control and duration of effect may vary with weed size, density, application rate, coverage, and growing conditions before, during and after treatment.

<sup>&</sup>lt;sup>4</sup>See Special Directions for Control or Suppression of Volunteer Potato below.

- **Sequential Applications (Control):** To control heavy populations of volunteer potato, a preplant application may be followed by a postemergence application of 0.4 pint per acre. Do not exceed two applications per season.
- **Postemergence Application (Suppression):** Apply 0.4 pint per acre when the majority of volunteer potato plants are 4 to 8 inches tall.

#### **Restrictions:**

- Do not make more than two applications or apply more than 0.7 pint per acre per crop season.
- **Preharvest Interval:** Do not allow livestock to graze or harvest forage from treated areas within 47 days of application. Do not apply less than 90 days before harvest of grain and stover.

**Crop Tolerance Precaution:** Crop injury (stem curvature, stunting, or brace root injury) may occur with some corn hybrids or lines when Alligare FMEP4 EC is applied as a broadcast treatment. Hybrids or lines that are susceptible to phenoxy injury may also be susceptible to injury from Alligare FMEP4 EC. Consult current seed corn company herbicide management guides for further information.

**Tank Mixing:** Alligare FMEP4 EC may be applied alone or in tank mix combination with other herbicides registered for post emergence application in field corn unless tank mixing with Alligare FMEP4 EC is specifically prohibited by the label of the tank mix product. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture. If an adjuvant is added to the spray mixture as a requirement of the tank mix partner, follow label directions for both the tank mix partner and the adjuvant product.

**Adjuvants:** Generally, this product does not require use of an adjuvant to achieve satisfactory weed control when applied alone. Adjuvants may be used when required by a tank mix partner. Follow all applicable directions on the label for the tank mix partner. Use of a high quality adjuvant may improve weed control in hot, dry conditions.

#### **Sweet Corn**

Apply Alligare FMEP4 EC as a broadcast postemergence treatment using ground equipment or by air. Alligare FMEP4 EC may also be applied as a pre-plant treatment for control of emerged volunteer potato or for burndown or emerged weeds (refer to "Special Directions for Control of Volunteer Potato" below). Refer to the Product Information section of this label for detailed information on application timing, effect of temperature on herbicidal activity, application rates, spray coverage and instructions on spot application. Alligare FMEP4 EC may be applied in tank mix combination with labeled rates of other registered herbicides. Read and follow all label directions, including applicable use directions, precautions, and limitations on each product label.

#### **Weeds Controlled or Suppressed**

(Numbers in parentheses (-) refer to footnotes below.)

Key Weeds Controlled (1)	Key Weeds Suppressed (3)	Application Rate (pint/acre)
catchweed bedstraw (cleavers)	devilsclaw	0.4
chickweed	field bindweed	
cocklebur	field pennycress	
common purslane	marestail (horseweed)	
common ragweed	marshelder	
giant ragweed	mustard	
hedge bindweed	nightshade species	
hemp dogbane	Russian thistle	
jimsonweed	volunteer potato <sup>(4)</sup>	
kochia <sup>(2)</sup>	wild buckwheat	
morningglory		
puncturevine		
sunflower		
velvetleaf		
Venice mallow		

<sup>1</sup>See Weeds Controlled or Suppressed section of this label for a complete listing.

<sup>2</sup>Includes herbicide tolerant or resistant biotypes.

<sup>3</sup>Suppression is expressed as a reduction in weed competition (reduced population or vigor) as compared to untreated areas. The degree of weed control and duration of effect may vary with weed size, density, application rate, coverage, and growing conditions before, during and after treatment.

<sup>4</sup>See Special Directions for Control or Suppression of Volunteer Potato below.

# **Application Timing**

Apply as a broadcast or band treatment to sweet corn up to, and including, 4 fully exposed leaf collars (V4 growth stage). Do not broadcast apply to sweet corn with 5 fully exposed leaf collars (V5 growth stage). Application to sweet corn beyond the V4 growth stage should be made as a directed spray using drop nozzles (see crop tolerance precaution below). Apply when broadleaf weeds are actively growing, but before weeds are 8 inches tall. If wild buckwheat is present, apply before vining stage of growth. Only weeds emerged at the time of application will be controlled or suppressed.

• **Pre-Plant Burndown:** For no-till or burndown applications to control emerged weeds, apply alone or in tank mix combination with a labeled herbicide prior to planting.

# **Special Directions for Control or Suppression of Volunteer Potato:**

- **Preplant Application (Suppression):** Apply 0.4 pint per acre prior to planting corn when the majority of volunteer potato plants are 4 to 8 inches tall. For best results, leave no soil undisturbed and plant sweet corn two weeks following application.
- **Sequential Applications (Control):** To control heavy populations of volunteer potato, a preplant application may be followed by a postemergence application of 0.4 pint per acre. Do not exceed two applications per season.
- **Postemergence Application (Suppression):** Apply 0.4 pint per acre when the majority of volunteer potato plants are 4 to 8 inches tall.

#### Restrictions:

- Do not allow livestock to graze treated areas within 31 days after application.
- Do not make more than two applications or apply more than 0.7 pint per acre per crop season.
- **Preharvest Interval:** Do not harvest from treated areas within 31 days of application. Do not apply less than 31 days before harvesting ears.

**Crop Tolerance Precaution:** Not all sweet corn hybrids have been screened for tolerance to Alligare FMEP4 EC. Crop injury (stem curvature, stunting, brace root injury) may occur with some hybrids or lines when Alligare FMEP4 EC is applied as a broadcast treatment. Take particular care to manage for environmental conditions such as unfavorable combinations of temperature and humidity. Hybrids or lines that are susceptible to phenoxy injury may also be susceptible to injury from Alligare FMEP4 EC. Consult current seed corn company herbicide management guides for further information.

**Tank Mixing:** Alligare FMEP4 EC may be applied alone or in tank mix combination with other herbicides registered for post emergence application in sweet corn unless tank mixing is specifically prohibited by the label of the tank mix product. It is the pesticide user's responsibility to ensure that all products in the listed mixtures are registered for the intended use. Users must follow the most restrictive directions for use and precautionary statements of each product in the tank mixture.

**Use of Spray Adjuvants in Tank Mixes:** Do not use a spray adjuvant when applying Alligare FMEP4 EC alone. Use of an adjuvant may increase effectiveness on weeds but may reduce selectivity to the crop, particularly under conditions of plant stress such as drought or cold temperatures. If an adjuvant is added to the spray mixture as a requirement of a tank mix partner, follow all manufacturer's instructions. Do not apply Alligare FMEP4 EC in combination with crop oil concentrates, petroleum-based oils, or methylated seed oils unless the risk of injury is acceptable.

#### CONDITION OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

To the extent consistent with applicable law, upon purchase or use of this product, purchaser and user agree to the following terms:

<u>Warranty:</u> Alligare, LLC (the Company) warrants that this product conforms to the chemical description on the label in all material respects and is reasonably fit for the purpose referred to in the directions for use, subject to the exceptions noted below, which are beyond the Company's control. To the extent consistent with applicable law, the Company makes no other representation or warranty, express or implied, concerning the product, including no implied warranty of merchantability or fitness for a particular purpose. To the extent consistent with applicable law, no such warranty shall be implied by law, and no agent or representative is authorized to make any such warranty on the Company's behalf.

<u>Terms of Sale:</u> The Company's directions for use of this product must be followed carefully. It is impossible to eliminate all risks inherently associated with use of this product. Crop injury, ineffectiveness or other unintended consequences may result because of such factors as weather conditions, presence of other materials, and the manner of use or application (including failure to adhere to label directions), all of which are beyond the Company's control. To the extent consistent with applicable law, all such risks are assumed by the user.

<u>Limitation of Liability:</u> To the extent consistent with applicable law, the exclusive remedy against the Company for any cause of action relating to the handling or use of this product is a claim for damages, and in no event shall damages or any other recovery of any kind exceed the price of the product which caused the alleged loss, damage, injury or other claim. To the extent consistent with applicable law, under no circumstances shall the Company be liable for any special, indirect, incidental or consequential damages of any kind, including loss of profits or income. Some states do not allow the exclusion or limitation of incidental or consequential damages.

The Company and the seller offer this product, and the purchaser and user accept this product, subject to the foregoing warranty, terms of sale and limitation of liability, which may be varied or modified only by an agreement in writing signed on behalf of the Company by an authorized representative.

[EPA approval date]