

### UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, D.C. 20460

OFFICE OF PREVENTION, PESTICIDES AND TOXIC SUBSTANCES

Mr. Ross Gilbert Agent for Alligare, LLC C/O Pyxis Regulatory Consulting, Inc 4110 136<sup>th</sup> N.W Gig Harbor, WA 98332

MAR 8 2010

Subject: Label Notification(s) for Pesticide Registration Notice 2007-4

Dear Registrant:

The Agency is in receipt of your Application(s) for Pesticide Notification under Pesticide Registration Notice (PRN) 2007-4 dated February 11, 2010 for:

#### EPA Registration 81927-19 Alligare Panoramic 2 SL

The Registration Division (RD) has conducted a review of this request for applicability under PRN 2007-4 and finds that the label change(s) requested falls within the scope of PRN-2007-4. The label has been date-stamped "Notification" and will be placed in our records.

Please be reminded that 40 CFR Part 156.140(a)(4) requires that a batch code, lot number, or other code identifying the batch of the pesticide distributed and sold be placed on nonrefillable containers. The code may appear either on the label (and can be added by non-notification/PR Notice 98-10) or durably marked on the container itself.

If you have any questions, please contact me directly at 703-305-6249 or Banza Djapao of my staff at 703-305-7269.

Sincerely,

Linda Arrington Notifications & Minor Formulations Team Leader Registration Division (7505P) Office of Pesticide Programs

Please read instructions on I	reverse before compi.	ปกต form.		Form App	roved	. MB No. 2	070-0060	. Approval expires 2-28-95
<b>⊕EPA</b>	Environmenta	Inited States  I Protectio ngton, DC 2046	-		<b>✓</b>	Registrate Amendm Other		OPP Identifier Number
		Application	n for Pestic	de - Sect	tion	l		No.
1. Company/Product Numbe 81927-19	7		l l	Product Mana	ager			posed Classification
4. Company/Product (Name) Alligare, LLC / Alligare Panor			PM#	2	25			
5. Name and Address of App Alligare, LLC c/o Pyxis Regulatory Consu 4110 136th St. NW Gig Harbor, WA 98332		de)	(b)(i), r to:	my product i	s sim	ilar or identi	cal in cor	FIFRA Section 3(c)(3) mposition and labeling
Check if this	is a new eddress		Produ	uct Name_		· · · · · · · · · · · · · · · · · · ·		
			Section -	li				
Amendment - Explain Resubmission in resp  Notification - Explain	onse to Agency letter	dated		Final printed Agency lette "Me Too" A	er dat Applica	ation.	IOTIFI	<b>CATION</b> 3 - 2010
				l	-			
Explanation: Use addition Notification of label change peregulations at 40 CFR 156.10 Formula for this product. I unamended label is not consiste and I may be subject to enforce	er PR Notice 2007-4. T , 156.140, 156.144, 156 derstand that it is a violant int with the requirement	his notification is 3.146, and 156.1 ation of 18 U.S.0 s of 40 CFR 156	s consistent with th 56. No other char C. Sec. 1001 to will 5.10, 156.140, 156.	nges have beer Ifully make any 144, 156.146,	n mad / false	e to the labelin statement to E	g or the C PA. I furt	onfidential Statement of her understand that if the
		<del></del>	Section -	111				<u> </u>
1. Material This Product Will	Be Packaged In:							
Child-Resistant Packaging	Unit Packaging		Water Soluble F	ackaging		2. Type of C	ontainer	
Yes √ No	Yes √ No		Yes ✓ No			7	Metal Plastic Glass	
* Certification must be submitted	If "Yes" Unit Packaging wgt.	No. per container	If "Yes" Package wgt	No. per container	•		Paper Other (S	pecify)
3. Location of Net Contents	I Information ontainer	4. Size(s) Reta	il Container 15, 30, 250 gals	bulk	5. Lo	Cation of Label On Label On Labeling		
6. Manner in Which Label is		Lithogra Paper g Stencile		Other				
			Section - I	V				
1. Contact Point (Complete	items directly below f	or identification	of individual to b	e contacted,	if nec	essary, to pro	cess this	application.)
Name Ross Gilbert			Title Agent			1	Felephone (253) 85	No. (Include Area Code) 53-7369
I certify that the stater I acknowledge that an both under applicable I	y knowlinglly false or		all attachments th					6. Date Application Succeived (Stamped)
2. Signature	iett.		, Title Agent			c c	6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6 6	
4. Typed Name Ross Gilbert		5	. Date	110			( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( ( (	(

## Certification with Respect to Label Integrity

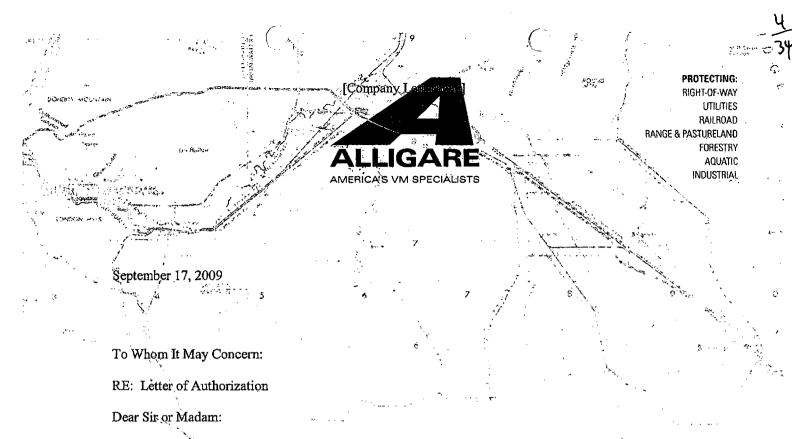
version: 9/11/02

I certify that the information (including, but not limited to, text, tables, and graphics) contained in the electronic file identified below by file name and submitted with this certification is the same information as that on the paper copies of these documents included with this submission.

PROPOSED LABEL		
EPA Registration #	Date Submitted to EPA	Electronic file name
81927-19	February 11, 2010	081927-00019.20100211.PRN 2007-4 lbl notification.pdf

I certify that the statements that I have made on this form are true, accurate, and complete. I acknowledge that any knowingly false or misleading statements may be punishable by fine or imprisonment or both under applicable law.

pliker	Julio.
Signature	Date
Ross Gilbert	
Name (typed)	
Agent	
Title	



Please let this letter serve to confirm that Janelle Kay and Michael Kellogg of Pyxis Regulatory Consulting, Inc. are authorized to act as agent for Alligare, LLC (EPA Company Number 81927), before the U.S. Environmental Protection Agency, California Department of Pesticide Regulation Pesticide Registration Branch and other state governmental agencies in all matters regarding our pesticide registrations pursuant to the Federal Insecticide, Fungicide and Rodenticide Act ("FIFRA"), 7 U.S.C. § 136 et seq. and state law.

If you have any questions, please do not hesitate to contact me.

Sincerely

Teff Welsh President Alligare LLC.

cc: Pyxis Regulatory Consulting, Inc.

4110 136<sup>th</sup> St. NW Gig Harbor, WA 98332

Phone: 253-853-7369 Fax: 253-853-5516 www.PyxisRC.com

February 11, 2010

#### **COURIER DELIVERY**

Jim Tompkins (PM 25)
Document Processing Desk (NOTIF)
Office of Pesticide Programs (7504P)
U.S. Environmental Protection Agency
Room S-4900, One Potomac Yard
2777 S. Crystal Drive
Arlington, VA 22202

RE: Alligare, LLC – Alligare Panoramic 2SL Herbicide (EPA Reg. No. 81927-19)
Revision to Container Disposal Instructions per PRN 2007-4

Dear Mr. Tompkins,

On behalf of Alligare, LLC please find the enclosed label notification revising the container disposal instructions per PRN 2007-4.

In support of this notification submission, we submit the following documents:

- 1. Completed Application for Registration (EPA Form 8570-1).
- 2. One (1) copy of the Alligare Panoramic 2SL Herbicide labeling with changes tracked.
- 3. One (1) copy of the Alligare Panoramic 2SL Herbicide labeling with changes incorporated.
- 4. Certificate with respect to label integrity.
- 5. One (1) copy of the Alligare Panoramic 2SL Herbicide labeling on CD.
- 6. Letter of Authorization.

Please feel free to contact me by phone (253) 853-7369 or by email at Ross@PyxisRC.com if you have any questions or need any additional information.

Sincerely,

Ross Gilbert

Enclosures

cc: K. Barham; Alligare, LLC



# Alligare PANORAMIC 2SL

#### **HERBICIDE**

For use on Conservation Reserve Program (CRP) land, paved surfaces, and pasture and rangeland.

ACTIVE INGREDIENT:	% BY WT.
Ammonium salt of imazapic (+/2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1 H imidazol-2-yl]-	
5-methyl-3-pyridinecarboxylicacid*)	23.3%
OTHER INGREDIENTS:	
	AL 100.0%

Equivalent to 21.9%(+/-)-2-[4,5-dihydro-4-methyl-4-(1-methylethyl)-5-oxo-1 *H*-imidazol-2-yl]-5-methyl-3-pyridinecarboxylicacid
1 gallon contains 2.0 pounds of active ingredient as the free acid

NOTIFICATION

## KEEP OUT OF REACH OF CHILDREN CAUTION

	CACHON
	FIRST AID
IF IN EYES:	<ul> <li>Hold eye open and rinse slowly and gently with water for 15 to 20 minutes.</li> <li>Remove contact lenses, if present, after the first 5 minutes, then continue rinsing eye.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
IF INHALED:	<ul> <li>Move person to fresh air.</li> <li>If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably mouth-to-mouth if possible.</li> <li>Call a poison control center or doctor for further treatment advice.</li> </ul>
IF ON SKIN OR CLOTHING:	<ul> <li>Take off contaminated clothing.</li> <li>Rinse skin immediately with plenty of water for 15 to 20 minutes.</li> <li>Call a poison control center or doctor for treatment advice.</li> </ul>
IF SWALLOWED:	
	TIOT LINE NOMBER

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact 1-800-424-9300 for emergency medical treatment information.

## PRECAUTIONARY STATEMENTS HAZARDS TO HUMANS AND DOMESTIC ANIMALS CAUTION

Causes moderate eye irritation. Avoid breathing spray mist. Avoid contact with skin, eyes, or clothing. Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, or using tobacco.

#### PERSONAL PROTECTIVE EQUIPMENT (PPE)

#### Applicators and other handlers must wear:

- Long-sleeved shirt and long pants
- Chemical-resistant gloves made of any waterproof material
- Shoes plus socks

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

EPA Reg. No. 81927-19 EPA Est. No. MÄNUFACTÜRED FOR: Alligare, LLC 18 N. Eth Street Opelika, AL 36801

. . . .

MAR 8 - 2010

#### NET CONTENTS: GALLONS

#### **USER SAFETY RECOMMENDATIONS**

#### **Users should:**

- Wash thoroughly with soap and water after handling and before eating, drinking, chewing gum, using tobacco, or using the toilet.
- Remove clothing immediately if pesticide gets inside. Then wash thoroughly and put on clean clothing.
- Wash outside of gloves then remove after handling this product. As soon as possible, wash thoroughly and change into clean clothing.

#### **ENVIRONMENTAL HAZARDS**

Do not apply directly to water, or to areas where surface water is present, or to intertidal areas below the mean high water mark.

Do not contaminate water when cleaning equipment or disposing of equipment washwaters or rinsate.

This chemical demonstrates the properties and characteristics associated with chemicals detected in ground water. The use of this chemical in areas where soils are permeable, particularly where the water table is shallow, may result in ground water contamination.

#### **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
- 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.

Noncrop weed control is not within the scope of the Worker Protection Standard. See the definition on this label of noncrop sites.

Do not enter treated areas without protective clothing until sprays have dried.

#### SPRAY DRIFT MANAGEMENT

**Spray Drift:** 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.

Spray drift from applying this product may result in damage to sensitive plants adjacent to the treatment area. Only apply this product when the potential for drift to these and other adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for the threatened or endangered species, non-target crops) is minimal. Do not apply when the following conditions exist that increase the likelihood of spray drift from intended targets; high or gusty winds, high temperatures, low humidity, temperature inversions.

To minimize spray drift, the applicator should be familiar with and take into account the following drift reduction advisory information. Additional information may be available from state enforcement agencies or the Cooperative Extension on the application of this product.

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

- 1. The distance of the outer most nozzles on the boom must not exceed 3/4 the length of the wingspan or rotor.
- 2. Nozzles must always point backward parallel with the air stream and never be pointed downwards more than 45 degrees.

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

#### Importance of Droplet Size

The best drift management strategy and most effective to reduce drift potential are to apply large 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** section of this label).

#### **Controlling Droplet Size**

- Volume-Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.
- Pressure- Use the lower spray pressures recommended for the nozzle. Higher pressure reduces droplet size
  and does not improve canopy penetration. When higher flow rates are needed, use higher flow rate nozzles
  instead of increasing pressure.
- Number of Nozzles-Use the minimum number of nozzles that provide uniform coverage.
- Nozzle Orientation-Orienting nozzles so that the spray is released parallel to the airsteam 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. Do not use nozzles producing a mist droplet spray.
- Boom Length-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.

#### **Application Height**

Making applications at the lowest possible height that is safe and practical 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 down wind edges of the field, the applicator must compensate for this displacement by adjusting the path of the application equipment upwind. Swath adjustment distances should increase with increasing drift potential (higher wind, smaller droplets, etc.).

#### Wind

Drift potential is lowest between wind speeds of 3-10 mph. However, many factors including droplet size and equipment type, determine drift potential at any given speed. Applications should be avoided below 3 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 occur during a temperature inversion because drift potential is high. Temperature inversions restrict vertical air mixing, which causes small, suspended droplets to remain in a concentrated cloud. This cloud can move in unpredictable directions due to the light variable winds common during inversions. Temperature inversions are characterized by increasing temperatures with altitude and are common on nights with limited cloud cover and light to no wind. They begin to form as the sun sets and often continue into the morning. Their presence can be indicated by ground fog; however, if fog is not present, inversions can also be identified by the movement of smoke from a ground source or an aircraft smoke generator. Smoke that layers and moves laterally in a connected cloud (under low wind conditions) indicates an inversion, while smoke that moves upwards and rapidly dissipates indicates good vertical air mixing.

#### Sensitive Areas

The pesticide should only be applied when the potential for drift to adjacent sensitive areas (e.g. residential areas, bodies of water, known habitat for threatened or endangered species, nontarget crops) is minimal (e.g. when wind is blowing away from the sensitive areas). Leafy vegetables and cotton, among other crops, are sensitive to Alligare Panoramic 2SL herbicide.

#### Wind Erosion

Avoid treating powdery dry or light sandy soils when conditions are favorable for wind erosion. Under these conditions, the soil surfaces should first be settled by rainfall or irrigation.

#### **Aerial Applications**

When aerial applications are permitted, aerial 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.

## GENERAL INFORMATION NONCROP AND CONSERVATION RESERVE PROGRAM (CRP) USES

For weed control and/or turf height suppression, mix Alligare Panoramic 2SL herbicide with water and an adjuvant and spray it on noncropland areas including those that may be grazed or cut for hay, on Federal Conservation Reserve Program (CRP) land, rangeland (see "Instructions for Rangeland Use" elsewhere in the label), and pastures.

#### Alligare Panoramic 2SL herbicide may be applied to the following noncropland use sites:

- rights-of-way (railroad, utility, pipeline and highway)
- railroad crossings
- utility plant sites
- petroleum tank farms
- pumping installations
- non-agricultural fence rows
- storage areas
- non-irrigation ditch banks
- prairie sites
- airports
- turf areas (on industrial, golf courses, recreation and non-residential sites)

Alligare Panoramic 2SL herbicide may be used for weed control in order to release certain legumes, wildflowers, crown vetch, native prairiegrass, wheatgrass, "wildtype" common Kentucky bluegrass, smooth bromegrass, bahiagrass, bermudagrass and other grasses.

For weed control during the establishment of native prairiegrass and other grasses, use Alligare Panoramic 2SL herbicide as described in the "Revegetation with Prairiegrasses and other Forage Grasses" part of the label.

Alligare Panoramic 2SL herbicide kills plants because the herbicide inhibits the activity of the enzyme acetohydroxy acid synthase (AHAS or ALS). Plant leaves, stems and roots readily absorb Alligare Panoramic 2SL herbicide and translocate it throughout the plant where it accumulates in the meristematic tissue. Treated plants stop growing soon afterwards. Chlorosis appears first in the newest leaves, and tissue death spreads from these points. It may require several days to several weeks for susceptible weeds to die. Knowing about the activity on the AHAS or ALS enzyme is important because some naturally occurring weed biotypes of labeled weeds may not be controlled by Alligare Panoramic 2SL herbicide or other herbicides with the same inhibiting

mode of action. If resistant weed biotypes are present in the field then Alligare Panoramic 2SL herbicide and other herbicides with the same mode of action should be tank-mixed or applied sequentially with a registered herbicide with a different mode of action.

Soil moisture is critical for optimum Alligare Panoramic 2SL herbicide weed control. With adequate soil moisture, Alligare Panoramic 2SL herbicide will provide residual control of susceptible germinating weeds. Control of established weeds is dependent on the weed species and depth of the root system. Alligare Panoramic 2SL herbicide is rainfast within one hour after application.

Alligare Panoramic 2SL herbicide can be applied preemergence or postemergence to control annual and perennial grasses, broadleaf weeds and vine species and provide control of labeled weeds which germinate in the treated area. Direct application of Alligare Panoramic 2SL herbicide to the foliage of certain brush species and ornamentals could lead to injury.

The best weed control is achieved when Alligare Panoramic 2SL herbicide is applied as a postemergence application, especially on perennial species. Since Alligare Panoramic 2SL herbicide must be taken up by the plant and translocated to the meristematic tissue before it becomes effective, weeds should be actively growing at the time of postemergence applications. All spray solutions should include an adjuvant (see "Spray Adjuvants for Postemergence Applications" section of this label). Applications may be made as broadcast treatments with ground spray equipment or as spot treatments with backpack sprayers.

Even though Alligare Panoramic 2SL herbicide may be applied in the dormant or growing season, the weeds need to be actively growing for maximum control.

Alligare Panoramic 2SL herbicide can cause injury to desirable grass species if the application is made to grasses that are under stress due to disease, insect damage and/or other causes. Some yellowing of desirable grasses may occur after an application of Alligare Panoramic 2SL herbicide made during the growing season. This is dependent upon weather conditions and is usually short lived (2 to 4 weeks). Newly seeded or sprigged grass stands should not be treated with Alligare Panoramic 2SL herbicide unless approved on this label (see "Revegetation with Prairiegrass and other Forage Grasses" section of this label) or authorized by Alligare, LLC in a supplemental label.

#### **Important Precautions:**

- 1. Do not apply Alligare Panoramic 2SL herbicide to residential lawns.
- 2. Desirable trees and ornamental plants can be injured if rinseate from spray equipment used to apply Alligare Panoramic 2SL herbicide is allowed to wash or move into contact with plant roots.
- 3. Do not apply Alligare Panoramic 2SL herbicide to the inside of irrigation ditches.
- Alligare Panoramic 2SL herbicide may be applied to non-irrigation ditches and low lying areas as long as the water has drained.

Precautions and Restrictions to follow when making applications of Alligare Panoramic 2SL herbicide for weed control, native grass establishment, and turf growth, suppression on pastures, rangeland, and noncrop areas:

- Do not use Alligare Panoramic 2SL herbicide on food or feed crops except as specified on this or supplemental labeling provided by Alligare, LLC.
- Do not cut treated area for hay within seven days after application.
- Do not use organophosphate insecticides on newly seeded areas treated with Alligare Panoramic 2SL herbicide unless severe injury or loss of stand can be tolerated.
- Do not apply this product through any type of irrigation system.
- Do not exceed 12 ounces of Alligare Panoramic 2SL herbicide per acre in one year.
- When tank mixing with other products, read and carefully follow all applicable use directions, precautions, restrictions, and limitations on the respective product labels. In interpreting the labels of tank mixed products, the most restrictive label limitations must apply.
- When making new plantings of prairiegrass or wildflowers, carryover from persistent herbicides such as sulfonyl-urea, imidazolinone, triazine, substituted urea, dinitroanaline, and other herbicides applied the previous year may result in compounded injury or death of desirable vegetation when treated with Alligare Panoramic 2SL herbicide.

<u>11</u> 34

- When making applications around desirable trees or ornamental plants, small areas should be tested to determine the tolerance of a particular species to soil and/or foliar applications of Alligare Panoramic 2SL herbicide. See section entitled "Tolerance of Trees and Brush to Alligare Panoramic 2SL Herbicide."
- DO NOT apply Alligare Panoramic 2SL herbicide through any type of irrigation system.

#### **APPLICATION INSTRUCTIONS**

**Ground Application:** Make a broadcast application of Alligare Panoramic 2SL herbicide in a minimum of 2 gallons of spray per acre using ground application equipment. Calibrate the sprayer to deliver the recommended spray volume and pressure at the spray boom height to ensure proper coverage of foliage and/or soil surface. The actual minimum spray volume per acre is determined by the spray equipment used. Adequate spray coverage of weed foliage postemergence or soil surface preemergence is important for maximum weed control. A complete and even distribution of spray is necessary. Avoid overlaps when spraying. When applications are made using less than 10 gallons of spray mixture per acre, special application equipment designed to make low volume applications should be used. A spray pressure of 20 to 40 psi is recommended.

**DO NOT** apply Alligare Panoramic 2SL herbicide through any type of irrigation system.

Aerial Application: Use 2 or more gallons of spray mix per acre. The actual minimum spray volume per acre is determined by the spray equipment used. Use adequate spray volume to provide accurate and uniform distribution of spray particles over the treated area and to avoid spray drift. Refer to the section entitled "Spray Drift Management" for additional precautions and restrictions. When making aerial applications, be especially careful to eliminate spray drift. Fixed wing aircraft and helicopters may be used to apply Alligare Panoramic 2SL herbicide. Ensure appropriate buffer zones are maintained when using fixed wing aircraft.

Spot Treatment Application: In preparing the spray solution, mix thoroughly in water 0.25 to 1.5% (0.3 to 1.9 oz./gal. water) Alligare Panoramic 2SL herbicide plus an adjuvant (see "Spray Adjuvants for Postemergence Applications" section of this label). A methylated seed oil at 1% v/v is the recommended spray adjuvant except when treating seedling prairiegrasses and wildflowers. When making spot applications, spray coverage should be sufficient to moisten the leaves but not to the point of runoff. Make sure the mixing container is opaque to sunlight or otherwise treated to shield for UV light. Alligare Panoramic 2SL herbicide breaks down when mixed with water and exposed to sunlight. Mixtures of Alligare Panoramic 2SL herbicide should be used within two days of being prepared to prevent breakdown of the active ingredient and maintain maximum effectiveness. See section on desired species and do not exceed the specified application rate per acre. Also see the sections entitled "Weeds Controlled" and "Special Weed Control."

All Applications: Do not apply during windy or dusty conditions unless applications are being made with a drift control agent and/or an enclosed shielded spray system. Do not apply if rainfall is threatening. Rainfall within 1 hour of an Alligare Panoramic 2SL herbicide application may reduce weed control. Uniformly apply specified rate and include a spray adjuvant (see "Spray Adjuvants for Postemergence Applications" section of this label). A foam reducing agent may be added at the recommended rate if needed. Aerial applications to target species growing under the canopy of trees and brush may not receive sufficient coverage for effective control. For fall applications, delaying aerial application until trees and brush have dropped their leaves can improve coverage. See "Special Weed Control" and Tolerance of Trees and Brush to Alligare Panoramic 2SL Herbicide" sections of this label for additional details. Avoid overlapping sprays.

Immediately and thoroughly clean all spray equipment, as prolonged exposure of this product to uncoated steel (except stainless steel) surfaces may cause corrosion and failure of the exposed part.

#### MIXING INSTRUCTIONS

**Mixing with Water:** Fill the spray tank at least one-half full of clean water. With the pump and agitator running, add the specified amount of Alligare Panoramic 2SL herbicide using a calibrated measuring device. Fill the tank with the remaining water adding the surfactant near the end of the filling process. Add an antifoaming product if it is needed. Maintain agitation while spraying.

Mixing with Other Herbicide(s): Alligare Panoramic 2SL herbicide may be tank-mixed with other herbicide(s) if the use is not prohibited by the label of the other herbicide(s). Read each label carefully and follow all label instructions regarding use rates, application methods, timing, restrictions, precautions, and weeds controlled. The most restrictive label is the one that must be followed. Do not tank-mix Alligare Panoramic 2SL herbicide with any product that does not permit tank-mixing. Do not exceed label rates. Fill the spray tank at least one-half full of

clean water. With the pump and agitator running, add the specified amount of Alligare Panoramic 2SL herbicide using a calibrated measuring device. Add the tank-mix herbicide, fill the tank with the remaining water adding the nonionic surfactant, organosilicate adjuvant or crop oil concentrate near the end of the filling process. Add an antifoaming product if it is needed. Maintain agitation while spraying. When mixing Alligare Panoramic 2SL herbicide with other tank-mix partners, always follow the following mixing sequence: add wettable powders, dispersible granules, or other dry formulations first, emulsifiable concentrates next, then Alligare Panoramic 2SL herbicide next, and spray adjuvants next.

#### SPRAY ADJUVANTS FOR POSTEMERGENCE APPLICATIONS

To achieve control of weeds when Alligare Panoramic 2SL herbicide is applied postemergence, a spray adjuvant must be added. Adjuvants vary in their contents and by selecting the correct adjuvant phytotoxicity to desirable vegetation can be reduced or eliminated. Low phytotoxic adjuvants are recommended. Adjuvants containing high amounts of alcohols, paraffin based petroleum oils and other compounds which can increase phytotoxicity should be avoided.

Methylated Seed Oils or Vegetable Oil Concentrate: The preferred spray adjuvant for use with Alligare Panoramic 2SL herbicide is a methylated vegetable-based seed oil concentrate containing 5 to 20% surfactant and the remainder methylated seed oil (MSO). The rate of MSO should be 1½ to 2 pints per acre. Best results are achieved when MSOs are applied with Alligare Panoramic 2SL herbicide in total spray volumes of 30 gallons per acre or less. The advantage of using the MSO decreases as the spray volume increases to higher volumes. If spray volumes above 30 gallons per acre are used, the MSO should be mixed with Alligare Panoramic 2SL herbicide at a rate of 1% of the total spray volume. As an alternative, a non-ionic surfactant, as described below could be used when Alligare Panoramic 2SL herbicide is applied at spray volumes above 30 gallons per acre. MSOs have been shown to aid in the deposition and uptake of Alligare Panoramic 2SL herbicide in hard-to-control perennials, in weeds with waxy leaf surfaces and in weeds under stressed conditions.

Do not use a MSO on newly emerged seedling prairiegrass or wildflowers as injury could occur.

**Nonionic Surfactants (NIS):** Use a NIS at 0.25% v/v (i.e. 1 quart/100 gallons) or higher in the spray solution. For best results, a NIS containing 60% surfactant in the formulated product and having a hydrophilic to lipophilic balance ratio (HLB) between 12 and 17 should be used. Do not use alcohols, fatty acids, oils, ethylene glycol, or diethylene glycol to meet these requirements.

In bermudagrass pastures and hay meadows best results will be achieved if a NIS is used with Alligare Panoramic 2SL herbicide.

**Silicone-Based Surfactants:** Use caution if a silicone-based surfactant is used. Although a silicone-based surfactant may allow greater spreading on the leaf surface when compared to a conventional NIS, it may dry too quickly and limit the herbicide's uptake into the plant, or at higher spray volumes it may result in greater spray "run-off" from the plant. Review the specific rate instructions on the manufacturer's label.

**Fertilizer/Surfactant Blends:** Use of a nitrogen-based fertilizer in combination with the recommended rate of a NIS or MSO has been shown to improve the uptake of Alligare Panoramic 2SL herbicide in plants with waxy leaf surfaces. A rate of 2 to 3 pints per acre of fertilizers such as 28% N, 32% N, 10-34-0, or ammonium sulfate in combination with the recommended rates of NIS or MSO will aid in the burndown control with Alligare Panoramic 2SL herbicide. Injury to desired plant species and newly emerged seedling prairiegrass and wildflowers may also be increased with the use of a fertilizer in combination with Alligare Panoramic 2SL herbicide. Weed control will likely be poor if Alligare Panoramic 2SL herbicide is applied in combination with a fertilizer without a NIS or MSO. No additional spray adjuvant is required if the fertilizer is the spray carrier for Alligare Panoramic 2SL herbicide.

#### **TANK MIXES**

For added control of late season annual grasses and certain broadleaf weeds in noncrop areas, tank-mix Alligare Panoramic 2SL herbicide with Pendulum® herbicide. Alligare Panoramic 2SL herbicide can be mixed with other herbicides for additional control in noncrop areas including Accord™, Roundup™ Pro, glyphosate, Arsenal® or Vegetation Manager® Imazapyr 2SL herbicide, Sahara® DG or Mohave™ 70 EG herbicide, diuron, Campaign™, Finale™, Garlon™ 3A or Vegetation Manager Triclopyr 3SL, MSMA, Vanquish™, Oust™ (or SFM 75), Escort ™ (or Metsulfuron Methyl DF), Tordon™ (or Picloram 22K), or other labeled products. The compatibility of any other herbicides not listed with Alligare Panoramic 2SL herbicide should be tested in a jar test. Mixing Alligare

 Panoramic 2SL herbicide with 2,4-D or other phenoxy-type herbicides could lead to reduced control of perennial grass weeds.

Do not tank mix Alligare Panoramic 2SL herbicide with organophosphate insecticides or use in the same year when using Alligare Panoramic 2SL herbicide on newly planted areas. Tank-mix instructions for Alligare Panoramic 2SL herbicide use on bermudagrass pastures is found in the "Directions for Use in Bermudagrass Pastures and Hay Meadows" part of this label. When tank-mixing, always consult manufacturer's labeling for rates and weeds controlled. Always follow the more restrictive label when using Alligare Panoramic 2SL herbicide with a tank-mix partner.

#### FOR WEED CONTROL IN PASTURE AND RANGELAND

To control weeds in pasture and rangeland, a broadcast treatment of Alligare Panoramic 2SL herbicide at 2 to 12 ounces per acre should be applied. For spot treatments, use Alligare Panoramic 2SL herbicide at 0.25% to 1% solution with 1.0% methylated seed oil. Specific use directions are found below.

Rangeland Use Instructions: Apply Alligare Panoramic 2SL herbicide to rangeland for the control of undesirable (non-native, invasive, and noxious) plant species in order to (1) aid in the establishment of desirable rangeland plant species; (2) aid in establishment of desirable rangeland vegetation after a fire; (3) aid in the reduction of vegetation that would fuel a wildfire; (4) aid in the release of existing desirable rangeland vegetation from the competitive pressure of undesirable plant species; and (5) aid in habitat improvement for wildlife.

Protection of threatened and endangered plants is important when applying Alligare Panoramic 2SL herbicide to rangeland. Therefore, federal agencies must follow NEPA regulations to ensure protection of threatened or endangered plants, state agencies must work with the Fish and Wildlife Service or the Service's designated state conservation agency to ensure protection of threatened or endangered plants, and other organizations or individuals must operate under Habitat Conservation Plan if threatened or endangered plants are known to be present on the land to be treated.

See the appropriate sections of this label for specific use directions for the vegetation management objective desired.

Do not apply Alligare Panoramic 2SL herbicide to rangeland until specific weeds appear. A single application of Alligare Panoramic 2SL herbicide may be used to control annual weeds such as cheatgrass, downy brome and medusahead rye as long as it is used in conjunction with available IPM practices. For rangeland applications to control cheatgrass, medusahead, annual mustards, etc., apply Alligare Panoramic 2SL herbicide preemergence or early postemergence prior to planting. For best results for cheatgrass control, make a late summer or fall application of Alligare Panoramic 2SL herbicide before cheatgrass emerges and prior to planting desirable species. Alligare Panoramic 2SL herbicide may be used in this same manner as a site preparation before planting sagebrush seedlings. If making an application of Alligare Panoramic 2SL herbicide in the spring when planting a tolerant grass species, use a rate of 2 to 4 ounces per acre. Rates above 4 ounces per acre may result in thinning or loss of stand, especially in seedling sideoats, blue grama or buffalograss. Perennial weeds like leafy spurge, Dalmation toadflax, and Russian knapweed can be controlled in most cases with a single broadcast application of Alligare Panoramic 2SL herbicide. Spot treatments with Alligare Panoramic 2SL herbicide may be necessary to control any weeds not controlled by the broadcast application. Long term weed control in rangeland is best achieved when Alligare Panoramic 2SL herbicide is used in conjunction with land management practices that promote growth and sustainability of desired plant species.

#### DIRECTIONS FOR USE IN BERMUDAGRASS PASTURES AND HAY MEADOWS

For control of winter and summer annual and perennial grasses in bermudagrass pastures and hay meadows, use a postemergence application of Alligare Panoramic 2SL herbicide at 4 to 12 ounces per acre. Specific rate and timing instructions are provided below. Use of Alligare Panoramic 2SL herbicide is acceptable on common and coastal varieties of bermudagrass including, but not restricted to Tifton 44, 78, and 85, Alicia and Russell. It is possible that bermudagrass growth may be suppressed for 30 to 45 days depending on growth conditions after application. Be aware that Jiggs bermudagrass is more sensitive to Alligare Panoramic 2SL herbicide than other bermudagrass types. If these growth responses are not acceptable, do not use Alligare Panoramic 2SL herbicide on bermudagrass.

Complete spray coverage is necessary to achieve the desired level of weed control. Be sure to use a sprayer that is calibrated to deliver the recommended spray volume and pressure at the spray boom height to ensure complete coverage. Decreased weed control could result if boomless or flood type nozzles are used.

**Use Restrictions:** (1) Do not apply to drought stressed bermudagrass; (2) Do not apply during transitions from dormancy to full green-up; (3) Do not apply to newly aerated fields for 30 days after aerations; (4) Do not use for the establishment of sprigged or seeded bermudagrass; (5) Do not use on World Feeder varieties of bermudagrass.

Spring Applications and Bermudagrass Tolerance: Bermudagrass growth can be suppressed if Alligare Panoramic 2SL herbicide is applied before the bermudagrass has reached 100% green-up. If Alligare Panoramic 2SL herbicide is applied when the bermudagrass is in the transition from winter dormancy to 100% green-up, green-up and growth will be delayed. Carefully inspect the new bermudagrass growth in the field to be sure all stolons have begun to grow. Application of Alligare Panoramic 2SL herbicide to a field that appears green, but where some to many stolons have not begun to grow, will still cause significant reductions in bermudgrass growth and development. It is important to delay application of Alligare Panoramic 2SL herbicide until 100% green-up has been achieved.

**General rate instructions:** Make a postemergent application of Alligare Panoramic 2SL herbicide at 4-6 ounces per acre to control most annual and some perennial weeds in bermudagrass pastures and hay meadows. Use the lower rate against target weeds that are small and the higher rate against target weeds that are older, larger or have been cut multiple times. Specific rate instructions are given in the table below.

Postemergence Control of Summer Annual and Perennial Grass Weeds: When bermudagrass has reached complete green-up and target weeds are at the growth stage desired, apply Alligare Panoramic 2SL herbicide according to the rates and growth stages in the table below. Bermudagrass green-up and subsequent growth will be delayed if Alligare Panoramic 2SL herbicide is applied too early during the transition between dormancy and full green-up. Some bermudagrass yellowing and stolon internode shortening may occur with specified rates of Alligare Panoramic 2SL herbicide. Bermudagrass recovery will be shortened if Alligare Panoramic 2SL herbicide is applied with a nitrogen fertilizer (32-0-0 or 28-0-0) used as the spray carrier.

After complete bermudagrass green-up, apply Alligare Panoramic 2SL herbicide postemergence at 4 to 6 ounces per acre for control of summer annual grasses (2 to 4 leaf stage). Use higher rates of 6 to 8 ounces per acre when target weeds are at or above the boot stage. A surfactant should always be used with Alligare Panoramic 2SL herbicide except when the spray carrier is liquid fertilizer. Some preemergence control of some annual grasses will be obtained when Alligare Panoramic 2SL herbicide is applied postemergence to target weeds.

Summer perennial grasses are controlled when Alligare Panoramic 2SL herbicide is applied after complete bermudagrass green-up at the rate of 6 to 12 ounces per acre. If higher rates are necessary to control target weeds, make a fall application of Alligare Panoramic 2SL herbicide before a killing frost occurs. If a fall application is planned and the bermudagrass is cut for hay, be sure the target weeds have adequate regrowth before making an application of Alligare Panoramic 2SL herbicide. A surfactant should always be used with Alligare Panoramic 2SL herbicide except when the spray carrier is liquid fertilizer.

Alligare Panoramic 2SI, herbicide Rates for Postemergent Summer Annual Grass Control

Common Name	Species	Weed Height (inches) <sup>2</sup>	Rate per Acre (fluid ounces)	
Large crabgrass	Digitaria sanguinalis	≤4	4	
		>4	6	
Southern crabgrass	Digitaria ciliaris	≤4	4	
•		>4	6	
Smooth crabgrass	Digitaria ischaemum	≤4	4	
_		>4	6	
Giant foxtail	Setaria faberi		6	
Green foxtail	Setaria viridis	≤4	4	
		>4	6	
Yellow foxtail	Setaria glauca	≤4	4	
		>4	6	
Texas panicum	Panicum texanum		6	
Fall panicum	Panicum dichotomiflorum		6	
Broadleaf signalgrass	Bracharia platyphylla	≤4	4	
3 5		>4	6	

Common Name	Species	Weed Height (inches) <sup>2</sup>	Rate per Acre (fluid ounces)
Annual jewgrass	Microstegium vimineum	≤4	4
, 0		>4	6
Barnyardgrass	Echinochloa crus-galli	≤4	4
,		>4	6
Sandbur	Cenchrus spp.	≤4	4
	1	>4	6

<sup>&</sup>lt;sup>1</sup> Be sure bermudagrass has completely greened up as an application of Alligare Panoramic 2SL herbicide could delay green-up and subsequent growth if application is made too early before full green-up. If delayed green-up will be an issue, do not apply Alligare Panoramic 2SL herbicide.

Alligare Panoramic 2SL herbicide Rates for Postemergent Summer Perennial Grass Control<sup>1</sup>

Common Name	Species	Weed Height (inches) <sup>2</sup>	Rate per Acre (fluid ounces)
Johnsongrass	Sorghum halepense	18-24	8
· ·		>24	12
Vaseygrass	Paspalum urvillei	4-8	6-8
Nutsedge	Cyperus spp.	≤4	4
•		>4	6
Bahiagrass	Paspalum notatum	4-8	6-8
Dallisgrass <sup>3</sup>	Paspalum dilatatum	4-8	8-12
Smutgrass <sup>3</sup>	Sporobolus indicus	4-8	8-12

<sup>&</sup>lt;sup>1</sup> Be sure bermudagrass has completely greened up as an application of Alligare Panoramic 2SL herbicide could delay green-up and subsequent growth if application is made too early before full green-up. If delayed green-up will be an issue, do not apply Alligare Panoramic 2SL herbicide.

Postemergent Control of Winter Annual and Perennial Grass Weeds: When bermudagrass is dormant, make a postemergent application of Alligare Panoramic 2SL herbicide at a rate of 6 to 12 ounces per acre. Be sure there is no green tissue at the root crown or on stolons because an application of Alligare Panoramic 2SL herbicide to green tissue may delay bermudagrass green-up and subsequent growth. In the deep south where mild winters often occur, bermudagrass may not go completely dormant. Consequently, avoid making an application of Alligare Panoramic 2SL herbicide if delayed green-up will be an issue. Control of larger winter annual and cool season perennial grasses will be improved if Alligare Panoramic 2SL herbicide is applied with 16 to 24 ounces per acre of Roundup Ultra™ or glyphosate equivalent. A surfactant should always be used with Alligare Panoramic 2SL herbicide except when the spray carrier is liquid fertilizer.

Alligare Panoramic 2SL herbicide Rates for Postemergent Winter Annual and Cool Season Perennial Grass Control

Common Name	Species	Weed Height (inches)	Rate per Acre (fluid ounces)
Annual Ryegrass'	Lolium multiflorum	≤6	6
, •		>6	10
Tall Fescue	Festuca arundinacea		12
Wild Oats	Avena fatua	≤6	6
		>6	10
Little Barley	Hordeum pusillium	≤6	4
•	· ·	>6	6

<sup>&</sup>lt;sup>2</sup> Use the higher rate when the summer annual grasses are older, larger or have been subjected to multiple cuttings.

will be an issue, do not apply Alligare Panoramic 2SL herbicide.

<sup>2</sup> Use the higher rate when the summer annual grasses are older, larger or have been subjected to multiple cuttings.

<sup>&</sup>lt;sup>3</sup> Suppression

<sup>1</sup>Because AHAS and ALS resistant annual ryegrass occurs throughout the southeast, tank mix 16 to 24 ounces per acre of Roundup Ultra or glyphosate equivalent with Alligare Panoramic 2SL herbicide when making applications to control annual ryegrass.

**Spray Adjuvants:** To promote the growth and recovery of bermudagrass, add 10 to 20 gallons per acre of liquid fertilizer (32-0-0 or 28-0-0) as the spray carrier with Alligare Panoramic 2SL herbicide. Do not add additional spray adjuvant when liquid fertilizer is used as the spray carrier. For additional spray adjuvant recommendations, go to the "Spray Adjuvants for Postemergence Applications" part of this label. Do not use crop oil concentrates (COC) as a spray adjuvant with Alligare Panoramic 2SL herbicide.

Tank Mixtures: Alligare Panoramic 2SL herbicide may be tank mixed with a number of broadleaf herbicides for broadleaf weed control. Alligare Panoramic 2SL herbicide may be tank mixed with Weedmaster®, Grazon™, Vegetation Manager Triclopyr 4E (or Remedy™), Redeem™, Metsulfuron Methyl DF (or Ally™), 2-4,D, and Roundup Ultra or glyphosate equivalent. Applications with tank mixes of 2,4-D that exceed one pound active ingredient per acre and applications with tank mixes of triclopyr amine, such as Vegetation Manager Triclopyr 3SL, that exceed 1½ pounds active ingredient per acre may reduce efficacy on target grass weed species.

#### FOR USE ON FEDERAL CONSERVATION RESERVE PROGRAM (CRP) LAND

Use Alligare Panoramic 2SL herbicide at rates up to 12 ounces per acre per year for control of weeds on Federal Conservation Reserve Program (CRP) land. Specific instructions for each intended use can be found elsewhere in this label.

Minimum plant-back intervals vary with the rates of Alligare Panoramic 2SL herbicide used. See the minimum plant-back intervals provided below.

**Rotational Crop Restrictions:** The following rotational crops may be planted after applying Alligare Panoramic 2SL herbicide. Planting rotational crops earlier than the specified interval may result in crop injury.

Alligare Panoramic 2SL Use Rate (ounce/A)	Minimum Pi	lant Back Interval	L Herbicide		
≤4	12	12	18	26	40
5-8	12	14	22	30	44
9-12	12	18	24	36	48
Rotational Crops	Bahiagrass CLEARFIELD® corn hybrids Peanuts Rye Wheat	Snapbeans Southern peas Soybeans Tobacco	Barley Cotton <sup>1</sup> Grain sorghum Oats	Field corn <sup>2</sup> All crops not otherwise listed or included for use on this label <sup>2</sup>	Canola <sup>2</sup> Potatoes <sup>2</sup> Red table beets <sup>2</sup> Sugar beets <sup>2</sup>

<sup>1</sup>For Arizona, New Mexico, Oklahoma, and Texas only: In these states, cotton may be planted 18 to 24 months after Alligare Panoramic 2SL herbicide application unless drought conditions develop in the year of application. If less than 15 inches of rainfall or irrigation are received from the time of Alligare Panoramic 2SL herbicide application and November 1 of the same year, do not rotate to cotton at 18 to 24 months after application. If such drought conditions develop, wait to plant cotton until 26, 30, and 40 months after Alligare Panoramic 2SL herbicide application at the rates provided in the above table.

<sup>2</sup> A field bioassay of the intended rotational crop must be completed for these selected crops and for all other crops not otherwise listed or included on this label after the minimum plant back interval has elapsed. The field bioassay consists of planting a test strip across the previously treated field and grow to maturity. Be sure the test strip is planted in low areas as well as high spots and on different soil types and soil pH levels across the field. The intended rotational crop may be planted the following year if there is no crop injury in the test strip.

It is impossible to eliminate all risks associated with the use of Alligare Panoramic 2SL herbicide, therefore, plant-back crop injury is always possible even when label rates and use directions are followed. If crop injury is a concern after using Alligare Panoramic 2SL herbicide, then a field bioassay with the desired crop is recommended prior to planting.

### FOR FOLIAR AND SEEDHEAD SUPPRESSION OF BAHIAGRASS, COOL SEASON GRASSES, AND SUPPRESSION OF SOME ANNUAL WEEDS

Bahiagrass: In unimproved areas, apply Alligare Panoramic 2SL herbicide at 2 to 6 ounces per acre to suppress growth and seedhead development in bahiagrass. For best results, apply Alligare Panoramic 2SL herbicide after green-up. Use the lower rate of 2 ounces per acre in North and South Carolina because higher rates may result in turf thinning. Temporary turf discoloration may occur depending on the rate of Alligare Panoramic 2SL herbicide used as well as other factors such as surfactant type and environmental conditions. Severe injury may occur if Alligare Panoramic 2SL herbicide is applied to turf under any type of stress. If applied before mowing, remember that new growth will be suppressed so adjust the mower height to leave adequate existing foliage. If applied after mowing, adjust the mower to leave existing foliage or wait for re-growth before making the application. Do not use a methylated seed oil adjuvant with Alligare Panoramic 2SL herbicide.

ALLIGARE PANORAMIC 2SL HERBICIDE	PHYTOTOXICITY	LENGTH OF SUPPRESSION
2 ounce	None to low	Partial to season long
3 to 6 ounce	Low to moderate	Season long

Use 8 ounces of Alligare Panoramic 2SL herbicide for control of winter annual weeds. Make the application when weeds are actively growing but while the bahiagrass is still dormant. A subsequent application of Alligare Panoramic 2SL herbicide at 3 to 4 ounces per acre may be made in the spring after bahiagrass green-up for the suppression of seedheads and foliage.

Cool Season Grasses: KY31 Tall Fescue and "Wildtype Common" Kentucky Bluegrass: For foliar and seedhead suppression of these cool season grasses, apply Alligare Panoramic 2SL herbicide at 2 to 4 ounces per acre. Do not use a methylated seed oil adjuvant with Alligare Panoramic 2SL herbicide on these grasses. Use of an adjuvant with the lower rate will enhance performance; however use of a surfactant with the higher rate (4 ounces) could cause excessive injury or mortality of tall fescue. Application of Alligare Panoramic 2SL herbicide to turf types of tall fescue and Kentucky bluegrass could result in severe injury or stand loss.

Wheatgrass: Alligare Panoramic 2SL herbicide may be applied for foliar and seedhead suppression of crested wheatgrass and intermediate wheatgrass. Use 6 to 10 ounces per acre for crested wheatgrass and 6 to 12 ounces per acre for intermediate wheatgrass. Although other wheatgrass species may be suppressed, it is best to determine effectiveness by first applying Alligare Panoramic 2SL herbicide to a limited area. Use of 2,4-D or products containing 2,4-D in a tank-mix with Alligare Panoramic 2SL herbicide may decrease the desired effectiveness. The potential of turf injury may be reduced when Alligare Panoramic 2SL herbicide is tank mixed with Garlon (Triclopyr 3SL or Triclopyr 4EC), Tordon (Picloram 22K), Transline™, and Vanquish. Severe injury may occur if Alligare Panoramic 2SL herbicide is applied to turf under stress.

## FOR THE CONTROL OF UNDERSIRABLE WEEDS IN BERMUDAGRASS NOT BEING GROWN FOR FORAGE OR HAY

Alligare Panoramic 2SL herbicide will control summer and winter annual weeds as well as some perennial weeds in bermudagrass turf found along roadsides, utility rights-of-way, railroad crossings, at airports, in non-irrigation ditches. Tolerance to Alligare Panoramic 2SL herbicide varies with different bermudagrass types. Therefore, some foliar, stolon and seedhead suppression may occur depending on turf type, application timing and herbicide rate. When applying Alligare Panoramic 2SL herbicide to bermudagrass turf it is important to (1) make application only after full bermudagrass green-up otherwise a delay in green-up may occur; (2) add a surfactant; (3) do not apply to bermudagrass under stress; (4) allow time for bermudagrass foliage re-growth after mowing before making an application because some internode suppression (from simultaneously mow/spray operations) may prevent bermudagrass from quickly recovering from mowing.

**Winter Annual Weed Control:** Make application prior to winter weed germination or while winter weeds are actively growing. Use Alligare Panoramic 2SL herbicide at 4 to 12 ounces per acre. A delay in bermudagrass green-up may occur if Alligare Panoramic 2SL herbicide is applied too early in the spring.

**Summer Annual Weeds**: For best results, make application preemergence or early postemergence before weeds have reached a height of 6 inches. Use Alligare Panoramic 2SL herbicide at 4 to 12 ounces per acre. Control of larger weeds may be possible depending on growing conditions, species susceptibility, adjuvant selection and tank-mix partner.

**Perennial Weeds**: Use Alligare Panoramic 2SL herbicide at 8 to 12 ounces per acre postemergence after weeds are large enough for herbicide uptake. For control of a specific weed species, see the "Special Weed Control" part of this label. Increased control of perennial weeds may achieved by tank mixing Alligare Panoramic 2SL herbicide with Accord or Roundup Pro.

**Bahiagrass Control:** Make a postemergence application of Alligare Panoramic 2SL herbicide at 8 to 12 ounces per acre. For control of a specific weed species, see the "Special Weed Control" part of the label. Increased control of perennial weeds may be achieved by tank mixing Alligare Panoramic 2SL herbicide with Accord or Roundup Pro at 12 to 16 ounces per acre.

## ALLIGARE PANORAMIC 2SL HERBICIDE RATES AND TIMINGS FOR SPECIFIC BERMUDAGRASS TYPES WITH REGARD TO WEED CONTROL AND TURF TOLERANCE

**Common Bermudagrass**: Common bermudagrass is very tolerant to Alligare Panoramic 2SL herbicide. The weed control spectrum may be improved with tank-mixes of Alligare Panoramic 2SL herbicide with Roundup Pro, Accord, or glyphosate, however these tank-mixes may also increase turf phytotoxicity by causing stolon internode shortening and seedhead suppression for the first 8 weeks after application.

**Established Coastal Bermudagrass:** The use of 2 to 12 ounces per acre of Alligare Panoramic 2SL herbicide on coastal bermudagrass will control labeled weeds and provide foliar and seedhead suppression. Do not use Alligare Panoramic 2SL herbicide on World Feeder varieties of bermudagrass. Activity of Alligare Panoramic 2SL herbicide increases as the rate increases. Beware that applying a tank-mix combination of Alligare Panoramic 2SL herbicide and Roundup Pro, Accord, or glyphosate on coastal bermudagrass may result in death or excessive injury.

**Turf Type Bermudagrass**: Tolerance to Alligare Panoramic 2SL herbicide varies in turf type bermudagrass varieties. At rates of 2 to 6 ounces per acre, Alligare Panoramic 2SL herbicide will provide some annual weed control and foliar and seedhead suppression. Application of Alligare Panoramic 2SL herbicide at rates above 6 ounces per acre could result in excessive injury or death.

#### FOR THE CONTROL OF UNDESIRABLE WEEDS IN UNIMPROVED CENTIPEDE GRASS

To control annual broadleaf and grass weeds in unimproved centipede grass, apply Alligare Panoramic 2SL herbicide at 4 to 8 ounces per acre with a surfactant. Make the application after the centipede grass has reached full green-up and do not apply to grass that is under stress. Be sure to allow time for centipede grass foliage regrowth after mowing before making an application because some internode suppression (from simultaneously mow/spray operations) may prevent the centipede grass from quickly recovering from mowing.

## FOR CONTROL OF UNDERSIRABLE WEEDS IN SMOOTH BROMEGRASS, "WILDTYPE" COMMON KENTUCKY BLUEGRASS AND WHEATGRASSES

Smooth Bromegrass and "Wildtype" Common Kentucky Bluegrass: For control of labeled grass and broadleaf weeds (see "Weeds Controlled" and "Special Weed Control" sections of this label below) as well as growth suppression, apply Alligare Panoramic 2SL at 4 to 8 ounces per acre in the spring after these grasses have reached 100% green-up. A delay in green-up may occur if application is made before full green-up. Higher rates of 8 to 12 ounces per acre may be applied in the spring, however excessive growth suppression may result. A fall application of Alligare Panoramic 2SL herbicide at 8 to 12 ounces per acre may be made to control perennial weeds (see "Special Weed Control" section of this label below). Treatment of smooth bromegrass with Alligare Panoramic 2SL herbicide may result in foliar height and seedhead suppression.

**Wheatgrass:** For control of labeled grass and broadleaf weeds apply Alligare Panoramic 2SL herbicide at 4 to 12 ounces per acre. Foliar height and seedheads may be suppressed when wheatgrass is treated with Alligare Panoramic 2SL herbicide.

#### FOR CONTROL OF UNDESIRABLE WEEDS IN CROWN VETCH

**Newly Seeded Crown Vetch:** To aid in stand establishment and reduce weed competition, apply Alligare Panoramic 2SL herbicide at 4 ounces per acre to newly seeded beds.

**Established Crown Vetch in Noncropland Areas:** For control of labeled grass and broadleaf weeds (see the "Weeds Controlled and "Special Weed Control" sections of this label below for specific rates), apply Alligare Panoramic 2SL herbicide at 8 to 12 ounces per acre to established crown vetch beds. Depending on time of

application, some internode shortening and minor tip chlorosis may occur after application of Alligare Panoramic 2SL herbicide.

To avoid potential injury, apply Alligare Panoramic 2SL herbicide during winter dormancy or in the early spring. If applied after May, Alligare Panoramic 2SL herbicide may cause increased injury or defoliation of crown vetch. Injury will be increased if a surfactant such as a crop oil concentrate or d-Limonene based product is used. If applied during the fall when crown vetch is actively growing, Alligare Panoramic 2SL herbicide may cause severe injury or stand loss.

#### FOR USE IN REVEGETATION WITH PRAIRIEGRASSES AND OTHER FORAGE GRASSES

Alligare Panoramic 2SL herbicide controls many annual and perennial grass and broadleaf weeds when applied at 2 to 12 ounces per acre in newly established and existing stands of prairiegrasses (see below for details and tolerant species) grown in such areas as pasture, rangeland (see "Instructions For Rangeland Use" section of this label), Federal Conservation Reserve Program (CRP) land and noncropland areas such as roadsides, industrial sites, prairie restoration sites, drainage ditch banks and other similar locations. Note that some local ecotypes or varieties of prairiegrasses may be suppressed by Alligare Panoramic 2SL herbicide. Poor stands may also result from other factors such as poor soil, cool temperatures, poor seedling vigor, excessive moisture, dry weather after emergence and others. Herbicide residue, poor soils and other stress factors can also lead to poor seedling vigor, increased injury and possible mortality. Alligare, LLC cannot be held responsible for such unforeseen factors. If tolerance is not known, be sure to try Alligare Panoramic 2SL herbicide on a small area first. Alligare Panoramic 2SL herbicide reduces weed competition and allows grass seedlings to become established. Perennial noxious weeds in established grass stands may also be controlled with Alligare Panoramic 2SL herbicide if the application is made postemergence as a foliar treatment.

#### **Important Considerations:**

- 1. Always add an adjuvant with Alligare Panoramic 2SL herbicide.
- 2. Use of a methylated seed oil is only recommended on established grass stands.
- 3. A nonionic surfactant should be used on newly emerged seedling grasses.
- 4. Use of a liquid fertilizer as a carrier will reduce grass tolerance and should not be used on newly emerged seedling grasses.

**Stand Establishment:** Since newly emerged grasses can be sensitive to Alligare Panoramic 2SL herbicide and/or the adjuvant used, best results in establishing mixed grass stands are attained when the application is made at planting before grass seedlings emerge. If grasses have started to emerge, the application of Alligare Panoramic 2SL herbicide should be delayed until the grasses have reached the five-leaf stage. Use only a nonionic surfactant or silicone-based surfactant with Alligare Panoramic 2SL herbicide on seedling grasses. Do not use a methylated seed oil at this timing as some injury could result. Annual weeds are controlled by Alligare Panoramic 2SL herbicide applied either preemergence or early postemergence (See the "Weeds Controlled" section of this label for maximum height of weeds for control). Rates and timing are discussed in the section below. Some stand thinning may result from a postemergence application of Alligare Panoramic 2SL herbicide because seedling grasses have varying tolerance to spray adjuvants. If the seedling grasses have reached the five-leaf stage, they are generally more tolerant to different spray adjuvants. Herbicide-carry-over can be a problem if grasses are planted into a field that was row cropped the previous year (see "Directions for Use" section of this label).

Rates and Control: Alligare Panoramic 2SL herbicide will provide control and/or suppression of many annual grass and broadleaf weeds. Apply 2 to 6 ounces per acre for annual weed control in fields cropped the previous year and/or fields where grass/forb mixtures are planted. In dry climates of the northernmost U.S. and for late season plantings into clean seedbeds, use lower rates. Use Alligare Panoramic 2SL herbicide as low as 2 ounces per acre when soil pH is greater than 7, there is a low CEC, or in a course texture soil with low clay or organic matter content. Higher rates should be used when there is high organic matter, high rainfall, heavy weed infestation and heavy plant residue and a long growing season (southern portions of Illinois, Indiana, Missouri, and Ohio, etc.). When controlling giant ragweed, or providing control/suppression of perennial weeds, use Alligare Panoramic 2SL herbicide at 8 to 12 ounces per acre. These high rates may, however, result in stunting or stand thinning. The length and amount of suppression will be related to soil type, environmental conditions, weed pressure and chemical residue. Additional details are provided below for specific grass timings and tolerances.

**Established Stands**: Application of Alligare Panoramic 2SL herbicide as an early postemergence treatment to annual grasses and broadleaf weeds will provide the best results. See the "Special Weed Control" section of this label for instructions for control of perennial weeds. Some foliar and/or seedhead height suppression may result in established grass stands when the high rates of Alligare Panoramic 2SL herbicide are used. This is especially likely when there is few weeds, little rainfall, light soils and short growing seasons. Lower rates should be reserved for use on light weed infestations or when desirable wildflowers and legumes are mixed in the grass stands (the "Wildflower Establishment and Maintenance" section of this label provides rate tolerance information). Higher rates will broaden and lengthen the spectrum of weeds controlled.

**Buffalograss:** In newly sprigged buffalograss, apply Alligare Panoramic 2SL herbicide at 2 to 4 ounces per acre for control or suppression of labeled weeds and to aid in stand establishment. Make the application immediately after planting to new growth or seedlings. Severe injury or death may occur when Alligare Panoramic 2SL herbicide is applied to new growth and small seedlings. It is best to wait to apply Alligare Panoramic 2SL herbicide to newly emerged buffalograss until the grass has at least five true leaves. It is also important to use only a nonionic or silicone-based surfactant and not to use a methylated seed oil. In established stands, Alligare Panoramic 2SL herbicide should be applied at 2 to 8 ounces per acre. The higher rates may result in some turf discoloration and stunting. An application of Alligare Panoramic 2SL herbicide to dormant buffalograss will control winter annual weeds. Note that some buffalograss types may show different tolerance to Alligare Panoramic 2SL herbicide. Turf type buffalograss, for instance, may show a different tolerance to Alligare Panoramic 2SL herbicide than the wild type buffalograss. Some turf types may tolerate low rates of Alligare Panoramic 2SL herbicide applied at seeding. The seed dealer will provide details.

Sideoats and Blue Grama: Do not apply Alligare Panoramic 2SL herbicide to monoculture stands of sideoats and blue grama if stand thinning or stand loss can not be tolerated. Once new seedlings of sideoats and blue grama have emerged and reached the five-leaf stage, an application of Alligare Panoramic 2SL herbicide at 2 to 4 ounces per acre plus an adjuvant will aid in stand establishment. Stand thinning may occur if Alligare Panoramic 2SL herbicide is applied at 4 ounces per acre with methylated seed oil as the adjuvant. Satisfactory weed control in early summer plantings of sideoats and blue grama may result when lower rates of Alligare Panoramic 2SL herbicide are used, especially in the states of Wisconsin, Michigan, Minnesota, South Dakota, North Dakota, Kansas, Oklahoma, Texas, and Nebraska, and other states where growing degree days are short. Although sideoats and blue grama have shown tolerance to Alligare Panoramic 2SL herbicide at 2 to 4 ounces per acre when applied preemergence at planting, some stand thinning may occur. In established stands of sideoats and blue grama, Alligare Panoramic 2SL herbicide should be applied at 4 to 10 ounces per acre. Alligare Panoramic 2SL herbicide may be applied up to 12 ounces per acre, however depending on soil type, variety, environmental conditions, surfactant choice, etc., this may result in foliar and/or seedhead suppression, or in the injury of the sideoats or blue grama.

**Switchgrass** (*Panicum virgatum*): Alligare Panoramic 2SL herbicide is not recommended for the establishment of pure switchgrass stands as severe injury or death may result. It may, however, be applied at 2 to 4 ounces per acre if switchgrass is planted in a mixed stand with tolerant species. Even then, some stand thinning or loss of stand may result. If reclaiming a mature switchgrass stand from certain perennial weeds like tall fescue, leafy spurge and Johnsongrass, etc., use Alligare Panoramic 2SL herbicide at rates of 10 to 12 ounces per acre. Beware, however, that severe stunting and injury will occur. Do not apply Alligare Panoramic 2SL herbicide to switchgrass if severe injury cannot be tolerated.

**Eastern Gamagrass**: Apply Alligare Panoramic 2SL herbicide at 2 to 6 ounces per acre at planting prior to eastern gamagrass emergence only if some stand thinning or loss can be tolerated. Stand thinning and stunting will most likely result. Stand mortality could result if there are adverse conditions, poor soils or added stress to the eastern gamagrass. On established eastern gamagrass, Alligare Panoramic 2SL herbicide should be applied at 2 to 8 ounces per acre while the eastern gamagrass is dormant. Injury in the form of stunting will occur as the rate of Alligare Panoramic 2SL herbicide is increased. If applied during or after green-up, Alligare Panoramic 2SL herbicide may result in foliar and/or seedhead suppression and possible mortality of weak plants.

Big Bluestem, Little Bluestem and Indiangrass: To control labeled weeds in these grasses at planting, or any time thereafter (including emerged seedings and dormant or actively growing perennial stands), Alligare Panoramic 2SL herbicide may be applied at the rate of 2 to 12 ounces per acre. See "Weeds Controlled" section of this label for the desired rate. Lower rates should be used in Wisconsin, Michigan, Minnesota, South Dakota, North Dakota, Kansas, Oklahoma, Texas, and Nebraska and higher rates should be used in areas of where there is more rainfall and a longer growing season.

Tall Fescue Control: Tall fescue can be controlled in established stands of, or in seed bed preparations for, big bluestem, little bluestem and indiangrass when Alligare Panoramic 2SL herbicide is applied at 12 ounces per acre in combination with methylated seed oil at 2 pints per acre. Control may be aided with the addition of nitrogen fertilizer (see "Spray Adjuvants for Postemergence Applications" section of this label). Best results will be obtained if the tall fescue is actively growing. Application to tall fescue after it has reached the boot stage or summer dormancy will result in poor control. Tank-mix combinations with Alligare Panoramic 2SL herbicide could result in improved control of existing tall fescue as well as new germinating seedlings. Best results will result from a fall application of Alligare Panoramic 2SL herbicide at 6 to 12 ounces per acre plus 24 to 64 ounces per acre of Accord or Roundup Pro.

To control older, more mature fescue stands in the spring, use Alligare Panoramic 2SL herbicide at the higher end of the 6 to 12 ounces per acre rate range plus a tank-mix with Accord or Roundup Pro at 32 to 64 ounces per acre. If planting forbs, use the lower end of the 6 to 12 ounces per acre rate range of Alligare Panoramic 2SL herbicide plus a tank-mix with a glyphosate product. If Alligare Panoramic 2SL herbicide is used at 8 ounces per acre with a glyphosate product in the fall, only 4 ounces per acre of Alligare Panoramic 2SL herbicide should be applied in the spring at planting for annual weed and seedling fescue control. Where permitted, burning the fescue stand the following spring prior to green-up should help provide a better seedbed for planting and aid in control of seedling tall fescue. Several summer mowings of the fescue will weaken the root system and make the fescue more susceptible to herbicides. At least 10 inches of fescue re-growth is necessary following the last mowing before applying either the Alligare Panoramic 2SL herbicide or glyphosate products. Both require adequate foliage present for uptake and maximum control.

#### TOLERANT GRASS SPECIES<sup>1</sup>

Prairiegrass		Alligare Panoramic 2SL Herbicide Rate (ounce/acre) <sup>2</sup>		
Common Name	Species	New Seeding	Established	
Big Bluestem	Andropogon gerardii	2-12	2-12	
Little Bluestem	Schizachyrium scoparium	2-12	2-12	
Indiangrass	Sorghastrum nutans2-12	2-12	2-12	
Bushy Bluestem	Andropogon glomeratus	*	2-12	
King Ranch Bluestem	Bothriochloa ischaemum	***	2-12	
Silver Beard Bluestem	Bothriochloa saccharoides		2-12	
Broomsedge	Andropogon virginicus		2-12	
Fingergrass, Rhodes	Chloris spp.		2-12	
grass				
Needlegrass	Stipa spp.	P-9-	2-12	
Needleandthread	Stipa comata		2-12	
Kearny (Plains)Threeawn	Aristida longespica		2-12	
Prairie Threeawn	Aristida oligantha		2-12	
Prairie Sandreed	Calamovilfa longifolia		2-12	
Smooth Bromegrass	Bromus inermis		2-12	
Kentucky Bluegrass	Poa pratensis		2-12⁴	
Sandberg's Bluegrass	Poa sandbergii		2-12	
Wheatgrasses	Agropyron spp.		2-12	
Bottlebrush Squirreltail	Sitanion hystrix		2-12	
Russian Wild Ryegrass	Elymus junceus	2-6 <sup>2</sup>	2-12	
Sideoats Grama	Bouteloua curtipendula	2-8 <sup>3</sup>	2-8	
Blue Grama	Bouteloua gracilis	2-8 <sup>3</sup>	2-8	
Buffalograss	Buchloe dactyloides	2-4	2-8	
Eastern Gamagrass	Tripsacum dactyloides	2-63	2-8	

<sup>&</sup>lt;sup>1</sup> See individual grass sections for application timing.

<sup>2</sup> High rates may result in stunting and growth suppression.

<sup>&</sup>lt;sup>3</sup> Alligare Panoramic 2SL herbicide preemergence applications to newly seeded sideoats, blue grama and Eastern gamagrass may result in thinning or loss of stand.

<sup>&</sup>lt;sup>4</sup> Some bluegrass varieties are sensitive to Alligare Panoramic 2SL herbicide. Drought can delay recovery and may result in overgrazing of treated area.

\*Tolerance unknown.

Tolerance of Established Grasses to 8 to 12 ounces of Alligare Panoramic 2SL Herbicide applied in the Fall

Grass Species	Tolerant	Suppressed <sup>2</sup>	Not Tolerant	Tolerance Unknown
Bermudagrass	X			
Bluegrass Kentucky		X		
Bluegrass, Sandberg's	Х			
Bluestem, big	Х			
Bluestem, bushy	X			
Bluestem, King Ranch	X			<del></del>
Bluestem, little	X			
Bluestem, silver beard	X			
Bromegrass, meadow		X	X	
Bromegrass, smooth		X		
Broomsedge	Х			
Buffalograss	X	Х		
Cheatgrass			Х	
Creeping foxtail, Garrison			<del>                                     </del>	X
Downey brome			X	
Fescue, Idaho	X			
Fescue, Tall			X	
Gamagrass, eastern		Х		
Grama, blue	Х	X		
Grama, sideoats	X	X		
Indiangrass	X			
Medusahead			X	
Needleandthread	Υ			
Needlegrass, green	X			
Orchardgrass		X		
Prairie cordgrass		$\frac{\hat{x}}{\hat{x}}$		
Prairie dropseed		^		X
Prairie dropseed Prairie sandreed			<del>                                     </del>	
Prairie sandreed Prairie threeawn	X X			
	^			
Quackgrass		X	<del>  </del>	
Redtop		X	X	
Reed canarygrass		^		· •n
Rhodes	Х			
grass/Fingergrass	<del></del>		X	
Ryegrass, annual or Italian				
Ryegrass, perennial		X	X	
Squirreltail, bottlebrush	Χ			
Switchgrass		Χ	X	
Timothy			Х	
Wheatgrass, bluebunch	X	Х		
Wheatgrass, crested	Х	Х		
Wheatgrass, intermediate	X	Х		
Wheatgrass, pubescent	Χ	Χ		
Wheatgrass, Siberian	X			
Wheatgrass, slender	Χ	Χ		
Wheatgrass, streambank	X	Χ		
Wheatgrass, western	X	X		

Grass Species <sup>1</sup>	Tolerant	Suppressed <sup>2</sup>	Not Tolerant	Tolerance Unknown
Wild ryegrass, Basin	X			
Wild ryegrass, Canada		X		
Wild ryegrass, Russian	X			
Wild ryegrass, Virginia		X		

<sup>&</sup>lt;sup>1</sup> Species with an X in more than one column means tolerance will vary depending on variety, use rate, and environmental conditions.

#### WILDFLOWER ESTABLISHMENT AND MAINTENANCE

Tolerance among wildflowers to Alligare Panoramic 2SL herbicide varies considerably because there are so many different genotypes, ecotypes and varieties and susceptibilities depending on soil types and environmental conditions. Do not use Alligare Panoramic 2SL herbicide unless some stand thinning or mortality of wildflowers can be tolerated. The least amount of injury to tolerant species from a preemergence application of Alligare Panoramic 2SL herbicide will result from the low rate of 2 ounces per acre. Because the use of Alligare Panoramic 2SL herbicide applied postemergence can result in injury or death of some wildflower genotypes, it should only be used as a last resort when the wildflower stand is threatened by weed competition. Certain spray adjuvants used with Alligare Panoramic 2SL herbicide may also increase injury and stand loss in wildflowers. Most legumes listed in the tolerance table are tolerant to Alligare Panoramic 2SL herbicide at 4 ounces per acre, however some stand thinning can occur.

The instructions given in the tables below are for mixed grass/wildflower stands. Use on a monoculture stand could result in poor control and plant injury. A small area of the monoculture stand should be tested for injury before applying Alligare Panoramic 2SL herbicide to a larger area of a monoculture stand.

For prairiegrass/wildflower mixtures: If wildflower injury (stand thinning, height suppression, etc.) can be tolerated, apply Alligare Panoramic 2SL herbicide at the rate specified to achieve the weed control desired. Do not exceed the tolerance rate given in the table below. Preemergence applications of Alligare Panoramic 2SL herbicide can reduce or eliminate wildflower injury. To minimize injury to tolerant species, apply Alligare Panoramic 2SL herbicide at 2 to 4 ounces per acre. In low rainfall areas and areas where conditions are cool and dry, use the 2 ounce per acre rate of Alligare Panoramic 2SL herbicide. If a postemergence application of Alligare Panoramic 2SL herbicide is to be made to established prairiegrass/wildflower mixtures, the lowest rates allowed to achieve the weed control desired should be used (see "Weeds Controlled" section of this label). Postemergence application can result in stand thinning or death due to the great variation in seed sources, varieties, and genotypes of wildflowers. Test a small area to determine tolerance before making a full application to a large area. The rates listed below are for those species in which acceptable tolerance has been confirmed on the varieties/genotypes being treated.

Increased wildflower injury may result from an application of Alligare Panoramic 2SL herbicide in conjunction with an organophosphate insecticide.

## Seedling Wildflower and Legume Tolerance to Alligare Panoramic 2SL Herbicide (4 ounce per acre)<sup>1</sup> in Mixed Grass/Forb Stands

Common Name	Genus Species	PRE	POST
Alfalfa	Medicago sativa	No	Yes
Aster, New England	Aster novae angliae	No	Yes
Aster, Prairie	Aster tanacetifolia	No	Yes
Baby Blue Eyes	Nemophila menziestii	No	Yes
Beggar ticks	Bidens frondosa	No	Yes
Bird's eyes	Gila tricolor	No	Yes
Bishop's Flower	Anuni majus	No	Yes
Blackeyed Susan	Rudbeckia hirta	Yes	Yes
Blanketflower	Gaillardia aristata	No	Yes
Bundleflower, Illinois	Desmanthus illinoensis	Yes	Yes
Catchfly	Silene armeria	No	Yes
Chicory	Cichorium intybus	Yes	Yes

<sup>&</sup>lt;sup>2</sup> Suppression may be expressed as a reduction in number of seedheads, seedhead height suppression or foliage height reduction, however, full recovery of the grass can be expected.

Common Name	Genus Species	PRE	POST
Clover, Crimson	Trifolium incarnatum	Yes	Yes
Clover, White	Trifolium repens	No	Yes
Coneflower, Purple	Echinacea purpurea	Yes	Yes
Coneflower Upright Prairie	Ratibida columnifera	Yes	Yes
Coreopsis, Dwarf Red Plains	Coreopsis tinctoria var. Gay Feather	Yes	Yes
Coreopsis, Lance Leaved	Coreopsis lanceolata	Yes	Yes
Coreopsis, Plains	Coreopsis, tinctoria	Yes	Yes
Cornflower	Centaurea cyanus	No	Yes
Cosmos, Garden	Cosmos bipinnatus	Yes	Yes
Cosmos, Yellow	Cosmos sulphureus	Yes	Yes
Daisy, Ox-eye	Chrysanthemum leucanthemum	Yes	Yes
Daisy, Shasta	Chrysanthemum maximum	Yes	Yes
Five Spot	Nemophila maculata	No	Yes
Flax, Blue	Linum perenne	No	Yes
Hat, Mexican	Ratibida columnifera	Yes	Yes
Indian Blanket	Gaillardia pulchella	No	Yes
Indigo, Blue False	Baptisia ausralis	Yes	No
Johnny Jump-ups	Viola cornuta	Yes	Yes
Lemon Mint	Monarda citriodora	No	Yes
Lespedeza, Bicolor	Lespedeza spp.	Yes	Yes
Lespedeza, Korean	Lespedeza stipulacea	No	Yes
Lespedeza, Sericea	Lespedeza cuneata	No	Yes
Lupine, Perennial	Lupinu perennis	Yes	Yes
Partridgepea	Cassia fasciculata	Yes	Yes
Pea, Calico	Pisum viganasinensis	Yes	Yes
Pea, Flat	Lathyrus sylvestris	Yes	Yes
Pea, Perennial	Lathyrus latifolius	Yes	Yes
Phlox, Drummond	Phlox drummondii	Yes	No
Poppy, California	Eschscholtzia californica	Yes	No
Poppy, Corn	Papaver rhoeas	Yes	Yes
Poppy, Red Corn	Papaver spp.	Yes	Yes
Prairieclover, Purple	Dalea purpurea	Yes	Yes
Prairieclover, White	Dalea candidum	Yes	Yes
Tick-trefoil, Showy	Desmodium canadense	No	Yes
Trefoil, Birdsfoot	Lotus corniculatus	No	Yes
Vetch, Crown	Coronilla varia	Yes	
Vetch, Hairy	Vicia villosa	Yes	
Yarrow, Gold	Achillea filipendulina	No	Yes

<sup>&</sup>lt;sup>1</sup> For legumes, at least three true leaves should be present before a postemergence application.

Established Wildflower and Legume Tolerance to Alligare Panoramic 2SL Herbicide (maximum rate<sup>1</sup>, ounce per acre) in Mixed Grass/Forb Stands

Common Name	Genus Species	PRE	POST <sup>2</sup>
Flax, Blue	Linum perenne	0	6
Indian Blanket	Gaillardua pulchella	0	6
Blanketflower	Gaillardia aristata	0	8
Chickory	Cichorium intybus	4	6
Daisy, Shasta	Chrysanthemum maximum	4	8
Prairieclover, Purple	Dalea, purpurea	4	12
Coneflower, Upright Prairie	Ratibida columnifera	6	6
Hat, Mexican	Ratibida columnifera	6	6
Poorjoe	Diodia teres	8	
Lupine, Perennial⁴	Lupina perennis	8	12
Coneflower, Purple	Echinacea purpurea	8	8
Daisy, Ox-eye <sup>3</sup>	Chrysanthemum leucanthermum	8	8
Leadplant	Amorpha canescens	8	8

Common Name	Genus Species	PRE	POST <sup>2</sup>
Lespedeza, Bicolor	Lespedeza	8	8
Milkweed, Common	Asclepias syriaca	8	
Pea, Prairie Scurf	Psoralea esculenta	8	8
Yarrow, Gold <sup>3</sup>	Achillea filipendulina	8	8
Blackeyed Susan	Rudbeckia hirta	8	10
Johnny Jump-ups	Viola cornuta	8	12
Sweetclover	Melilotus sp.	12	8
Alfalfa	Medicago sativa	12	12
Bundleflower, Illinois	Desmanthus illinoensis	12	12
Lespedeza, Sericea	Lespedeza cuneata	12	12
Partridgepea	Cassia fasciculata	12	12
Sensitive vine	Mimosa strigillosa	12	12
Vetch, Crown	Coronilla varia	12	12
Violet, Wild	Viola spp.	12	12

<sup>1</sup>Height suppression or stand reduction may occur at maximum use rate. For legumes, some yellowing and stunting can occur at higher use rates.

Wildflower Establishment with Alligare Panoramic 2SL Herbicide 4 ounce per acre + PENDULUM Herbicide 2 pounds active ingredient per acre<sup>1</sup>

Common name	Genus Species	PRE <sup>2</sup>	POST <sup>3</sup>
Blackeyed Susan	Rudbeckia hirta	Yes	Yes
Blanketflower	Gaillardia aristata	No	Yes
Bundleflower, Illinois	Desmanthus illinoensis	>50% thinning	Yes
Clover, Crimson	Trifolium incarnatum	>50% thinning	Yes
Coneflower, Clasping	Dracopsis amplexicaulis	Yes	Yes
Coneflower, Upright Prairie	Ratibida columnifera	No	OK
Coneflower, Purple	Echinacea purpurea	Yes	Yes
Coreopsis, Dwarf Red Plains	Coreopsis tinctoria var. Gay Feather	OK stunting	OK stunting
Coreopsis, Plains	Coreopsis tinctoria	OK stunting	Yes
Coreopsis, Lance Leaved	Coreopsis lanceolata	25% thinning	Yes
Cornflower	Centaurea cyanus	No	OK 20% thinning
Cosmos, Garden	Cosmos bipinnatus	OK 10% thinning	OK stunting
Cosmos, Yellow	Cosmos sulphureus	Yes	Yes
Daisy, Ox-eye	Chrysanthemum leucanthemum	25% thinning	Yes
Daisy, Shasta	Chrysanthemum maximum	Marginal-OK-20% thinning	Yes
Lupine, Perennial	Lupinus perennis	Yes	≤50% thinning
Partridgepea	Cassia fasciculata	25% thinning	Yes
Poppy, California	Eschscholtzia californica	Yes	25% injury, stunting, thinning
Yarrow, Gold	Achillea filipendulina	OK thinning	OK

<sup>&</sup>lt;sup>1</sup> 2 lbs. active ingredient per acre = 2.4 quarts of Pendulum herbicide 3.3 EC or 3.3 lbs. of Pendulum herbicide WDG

<sup>&</sup>lt;sup>2</sup> Postemergence applications should be made early postemergence on the flowers to reduce injury and increase flower set.

<sup>&</sup>lt;sup>3</sup> Will not flower.

<sup>&</sup>lt;sup>4</sup>Most native rangeland lupines are tolerant to Alligare Panoramic 2SL herbicide at 12 ounces per acre postemergence.

<sup>&</sup>lt;sup>2</sup> Preemergence at planting

<sup>&</sup>lt;sup>3</sup> Postemergence to seedlings

Yes= no injury

No = results in no wildflower germination or unacceptable injury to seedling flowers.

OK = can be used if thinning and/or stunting can be tolerated or if establishment is threatened by weed competition.

Beware that the response of wildflowers to Alligare Panoramic 2SL herbicide could vary greatly because of the many species and varieities that exist. It is recommended that small areas be tested first to determine tolerance and whether potential injury is acceptable before treating larger areas.

If Alligare Panoramic 2SL herbicide is to be used on a wildflower species that is not listed in the table below, a small area should be tested with no more than 12 ounces per acre per year to determine the injury that may result. Evaluate the wildflowers 1 to 2 months later for possible injury. The user assumes all responsibility for any damage or other liability.

#### WILDLIFE HABITAT MANAGEMENT

Alligare Panoramic 2SL herbicide may be used to control exotic and other undesirable vegetation for purposes of wildlife habitat management and enhancement within terrestrial noncrop sites including riparian and tree areas. Applications can be made to control undesirable vegetation prior to the establishment of desirable species and to release desirable species that may be present in the soil, but suppressed by competitive vegetation. See specific sections of this label for weed control information.

#### SPECIAL WEED CONTROL

Always add an adjuvant to Alligare Panoramic 2SL herbicide (see "Spray Adjuvants For Postemergence Applications" section of this label). Best control of perennial weeds is achieved when Alligare Panoramic 2SL herbicide is mixed with a methylated seed oil. This is especially true when weeds have waxy leaves or with perennials and weeds under stress conditions. Use a methylated seed oil for best results against the weeds listed below because the use of a nonionic or silicone-based surfactant may result in less than acceptable control.

Johnsongrass and Itchgrass: When Johnsongrass and itchgrass have reached the whorl stage and 18 to 24 inches in height, apply Alligare Panoramic 2SL herbicide at 8 to 12 ounces per acre. If treating dense stands, or after these grasses have reached the culm elongation stage, control with Alligare Panoramic 2SL herbicide may be improved with the addition of Accord or Roundup Pro at the rate of 8 to 16 ounces per acre. The higher herbicide rates should be used as grass density increases. Sometimes, control of Johnsongrass and itchgrass at stages taller than described above are possible.

Dallisgrass, Bahiagrass, Vaseygrass, Paspalum spp., Smutgrass: Make a postemergence application of Alligare Panoramic 2SL herbicide at 10 to 12 ounces per acre after grass has reached full green-up for control of dallisgrass, bahiagrass and smutgrass. Activity against dallisgrass and smutgrass may range from suppression to control depending upon the growth stage and growing conditions at the time of application. To control vaseygrass, make a postemergence application of Alligare Panoramic 2SL herbicide at the rate of 4 to 6 ounces per acre after the grass has reached 100% green-up and is from 3 to 8 inches in height. Efficacy will be improved with the addition of Accord or Roundup Pro at the rate of 12 to 16 ounces per acre. Higher herbicide rates should be used as weed growth and density increases. A preemergence application of Alligare Panoramic 2SL herbicide plus Pendulum herbicide will provide increased control of these grasses germinating from seed.

Leafy Spurge: Maximum control of leafy spurge may be obtained when Alligare Panoramic 2SL herbicide is applied in late summer or fall at 8 to 12 ounces per acre in combination with a methylated seed oil at two pints per acre. The timing is generally August through October, but it can vary due to geography and altitude. Yearly applications will improve the residual control of leafy spurge. In some areas, cool season grasses may be injured by applications of Alligare Panoramic 2SL herbicide at 12 ounces per acre in spring or fall, or 4 ounces applied in the fall followed by 8 ounces per acre in the spring. Nitrogen fertilizer (see "Spray Adjuvants For Postemergence Applications" section of this label) at two pints per acre may increase the control of leafy spurge, however it may also cause injury to grasses and forbs. Use of Alligare Panoramic 2SL herbicide with a nonionic or silicone-based surfactant will not provide control of leafy spurge. The target timing for fall applications of Alligare Panoramic 2SL herbicide for control of leafy spurge in North and South Dakota is late August through September. Further south in Nebraska and lowa the target timing is mid-September through mid-October. This application should be made before a killing frost when there is good soil moisture present and the leafy spurge has not lost its milky sap flow. Check for milky sap flow by breaking the leafy spurge main stem and if milky sap flows from the break then Alligare Panoramic 2SL herbicide may still be applied.

**Tall Fescue Control:** Apply Alligare Panoramic 2SL herbicide at 12 ounces per acre plus methylated seed oil at 2 pints per acre to control tall fescue. Control will be aided by the addition of Accord, glyphosate, or Roundup Pro

and/or Nitrogen fertilizer (see "Spray Adjuvants For Postemergence Applications" section of this label). Only apply Alligare Panoramic 2SL herbicide when tall fescue is actively growing because application after tall fescue had reached summer dormancy will result in poor control.

Best control of existing tall fescue and germinating seedlings is obtained when Alligare Panoramic 2SL herbicide is applied in the fall at 8 to 12 ounces per acre plus Accord or Roundup Pro at 24 to 64 ounces per acre. To control mature fescue stands in the spring, use Alligare Panoramic 2SL herbicide at the higher end of the 6 to 12 ounces per acre rate range plus a tank-mix with Accord or Roundup Pro at 32 to 64 ounces per acre. If planting forbs, use the lower end of the 6 to 12 ounces per acre rate range of Alligare Panoramic 2SL herbicide plus a tank-mix with a glyphosate product. If Alligare Panoramic 2SL herbicide is used at 8 ounces per acre with a glyphosate product in the fall, only 4 ounces per acre of Alligare Panoramic 2SL herbicide should be applied in the spring at planting for annual weed and seedling fescue control. Where permitted, burning the fescue stand the following spring prior to green-up should help provide a better seedbed for planting and aid in control of seedling tall fescue. Several summer mowings of the fescue will weaken the root system and make the fescue more susceptible to herbicides in the fall. At least 10 inches of fescue re-growth is necessary following the last mowing before applying either the Alligare Panoramic 2SL herbicide or glyphosate products. Both require adequate foliage present for uptake and maximum control.

**Russian Knapweed:** To control Russian knapweed, a fall application of Alligare Panoramic 2SL herbicide at 12 ounces per acre plus 1 quart per acre of methylated seed oil should be made during Russian knapweed senescence. Reduced control will result if the application is made before the initiation of senescence. Although control improves as senescence progresses, Russian knapweed control may still be obtained with Alligare Panoramic 2SL herbicide if the application is made after full senescence.

**Dalmation Toadflax:** To control Dalmation Toadflax, a fall application of Alligare Panoramic 2SL herbicide at 12 ounces per acre plus 1 quart per acre of methylated seed oil should be made when the top quarter of the plant is necrotic, usually after a hard front (late October through November). Reduced control will result if the application is made before this timing. Good control can be achieved as long as some green stem and/or leaf tissue is remaining. Adding ammonium sulfate at 2 to 3 pints per acre may improve control.

Resistant Biotypes: Herbicides that have the ALS/AHAS enzyme inhibiting mode of action such as Alligare Panoramic 2SL herbicide, Oust and others may not control some weeds listed on this label if resistant biotypes are present. If ALS/AHAS resistant biotypes occur in the area to be sprayed, tank-mix Alligare Panoramic 2SL herbicide, or make sequential applications, with a registered herbicide with a different mode of action.

#### RESIDUAL BAREGROUND WEED CONTROL

For total vegetation control in sensitive areas and around desirable vegetation, use Alligare Panoramic 2SL herbicide at 12 ounces per acre in a tank-mix combination with labeled rates of Pendulum herbicide, Roundup Pro, Escort (or Vegetation Manager Metsulfuron Methyl DF), Karmex<sup>TM</sup>, 2,4-D, diuron, Vegetation Manager Prodiamine 65 WDG (or Endurance<sup>TM</sup>) or other labeled products to provide total vegetation control. Use 2 pints per acre of methylated seed oil as an adjuvant for maximum control.

To provide total weed control in bareground areas, apply Alligare Panoramic 2SL herbicide at 12 ounces per acre in a tank-mix with Vegetation Manager Imazapyr 2SL (or Arsenal herbicide), Mohave 70 EG (or Sahara DG herbicide), Bromacil 40/40 (or Krovar™), SFM 75 (or Oust), Picloram K (or Tordon), Vanquish, or other labeled products to provide total bareground weed control. Use 2 pints per acre of methylated seed oil as an adjuvant for maximum control.

**Spot treatments:** For weed control in bareground or total vegetation, Alligare Panoramic 2SL herbicide may be applied to small areas. In each gallon of water, mix Alligare Panoramic 2SL herbicide at 0.3 to 5.4 ounces with 0.25 to 5% v/v methylated seed oil adjuvant.

#### **USE UNDER PAVED SURFACES**

Establish the final grade to the soil and then apply Alligare Panoramic 2SL herbicide in sufficient water to obtain uniform wetting of the soil surface and shoulder area. The soil should not be moved after the application. Using clean water and constant agitation, mix Alligare Panoramic 2SL herbicide at the rate of 12 ounces per acre. If the soil is not moist before application, weed control can be improved through incorporation of Alligare Panoramic 2SL herbicide. Mechanical incorporation to a depth of two inches with a rototiller or disc is one method. Use of

rainfall and/or irrigation (one inch/Acre) is another good method to incorporate Alligare Panoramic 2SL herbicide. Treated soil should not be allowed to wash or move from the treated area.

#### TOLERANCE OF TREES AND BRUSH TO ALLIGARE PANORAMIC 2SL HERBICIDE

When Alligare Panoramic 2SL herbicide is applied in and around desirable tree and brush species, follow these general instructions:

- Alligare Panoramic 2SL herbicide may not be used on nursery, orchard, ornamental plantings, new plantings, seedling trees or fiber farms unless such use is provided in supplemental labeling from Alligare, LLC.
- 2. Apply Alligare Panoramic 2SL herbicide to a limited area to determine tolerance in the area.
- 3. Apply Alligare Panoramic 2SL herbicide at rates up to 12 ounces per acre to control weeds in roadsides, prairies, and areas used for wildlife cover, erosion control and windbreaks and in and around established trees or pasture or rangeland (see "Instructions for Rangeland Use" section of this label).
- 4. Severe injury or death may result if Alligare Panoramic 2SL herbicide is applied to tree and brush species that are under stress due to drought, insects or other factors that might make the plant more susceptible to injury.
- 5. Tip chlorosis and minor necrosis may be seen on some species.
- 6. Use application methods that decrease foliar contact as injury in the form of defoliation and terminal death may occur.
- 7. A list of tolerant tree and brush species to Alligare Panoramic 2SL herbicide when it is applied under the canopy and/or to the foliage are presented below.

If making a fall application of Alligare Panoramic 2SL herbicide, delay the application until after leaves have begun to senesce or drop to avoid potential foliar injury to tree and brush species. Fall applications can be made to conifer species as they are generally tolerant to Alligare Panoramic 2SL Herbicide. Be sure to apply Alligare Panoramic 2SL herbicide in and around tree and brush species at the recommended timing for the target weeds.

Brush and Tree Species Tolerant to Alligare Panoramic 2SL Herbicide at 12 ounces per acre<sup>1</sup>

Common Name	Species	Tolerance by App	lication Method <sup>2</sup>
		Directed Below Foliage	To Foliage
Apple	Malus sylvestris	Yes	NR
Ash, Blue	Fraxinus quadrangulata	Yes	NR
Ash, Green	Fraxinus pennsylvanica	No	No
Azalea	Rhododendron spp.	No	No
Basswood	Tilia hetrophylla	No	No
Boxelder	Acer negundo	Yes	Injury⁵
Buckeye, Ohio	Aesculus glabra	Yes	NR
Cedar-juniper, Western	Thuja plicata	Yes	Yes
Cherry, Black <sup>3</sup>	Prunus serotina	No	No
Cherry, Choke	Prunus virginiana	No	No
Cherry, Sweet <sup>3</sup>	Prunus avium	No	NR
Cottonwood	Populus deltoides	Yes	Injury <sup>5</sup>
Cottonwood, Narrow Leaf	Populus spp.	Yes	Injury <sup>5</sup>
Currant species	Ribes spp.	Injury <sup>5</sup>	No
Dogwood, Flowering	Cornus spp.	Yes	Yes
Dogwood, Grey	Cornus racemosa	Yes	Injury⁵
Dogwood, Red Twig	Cornus spp.	Yes	Yes
Douglas Fir	Pseudotsuga menziesii	Yes	Yes⁴
Elm, American	Ulmus Americana	Yes	Yes
Elm, Siberian	Ulmus pumila	Yes	No
Elm, Slippery	Ulmus rubra	Yes	Yes
Gooseberry	Ribes spp.	Injury <sup>5</sup>	Injury <sup>5</sup>
Hackberry	Celtis occidentalis	Yes	Yes
Hawthorn	Crataegus spp.	Yes	Injury <sup>5</sup>
Juniper, Chinese	Juniperus chinensis	Yes	Yes
Juniper, Western	Juniperus osteosperma	Yes	Yes
Lilac	Syringa spp.	No	No
Linden, American	Tilia americana	No	No

PERENNIAL<sup>3</sup>

Common Name	Species		ance by Application Method <sup>2</sup> by Foliage To Foliage	
	·	Directed Below Foliage		
Locust, Black	Robinia pseudoacacia	Yes	Yes	
Locust, Honey	Gleditsia triacanthos	Yes	Yes	
Maple, Red	Acer rubrum	Yes	Yes	
Maple, Sugar	Acer saccharum	Yes	Yes	
Mulberry, Red	Morus rubra	Yes	NR	
Mulberry, White	Morus alba	Yes	NR	
Oak, Black	Quercus velutina	Yes	NR	
Oak, Live	Quercus virginiana	Yes	Yes	
Oak, Southern Red	Quercus falcate	Yes	NR	
Oak, White	Quercus alba	Yes	NR	
Olive, Russian	Elaeagnus angustifolia	Yes	No	
Osage Orange	Maclura pomifera	Yes	NR	
Peach (var. Elberta) <sup>3</sup>	Prunus persica	Yes	NR	
Photinia, Red Tip	Photinia fraseri	Yes	Yes	
Pine, Lodgepole	Pinus Contorta	Yes	Injury⁴	
Pine, White <sup>4</sup>	Pinus strobes	Yes	Yes	
Pittosporum, Japanese	Pittosporum tobira	Yes	Yes	
Plum species	Prunus spp.	Yes	No	
Poplar, Yellow (Tulip)	Liriodendron tulipfera	Yes	NR	
Privet, Common	Ligustrum vulgare	Yes	Yes	
Rabbitbrush species	Chrysothamnus spp.	Yes	Yes	
Redbud	Cercis canadenis	Yes	Yes	
Redcedar, Eastern	Juniperus virginiana	Yes	Yes	
Rose, Multiflora	Rosa multiflora	Yes <sup>5</sup>	No	
Sage, Big	Artemisia tridentate	Yes	Yes	
Sage, Fringe	Artemisis frigida	Yes	Yes	
Sage, Silver	Artemisia cana	Yes	Yes	
Sagebrush, Big	Artemisia tridentate	Yes	Yes	
Sagebrush, Fringed	Artemisia frigida	Yes	Yes	
Saltcedar	Tamarix spp.	Yes	No	
Serviceberry	Amelanchier alnifolia	Yes	NR	
Snowberry, Western	Symphoricarpos occidentalis	Yes	Injury <sup>5</sup>	
Spruce species	Picea app.	Yes⁴	Yes⁴	
Sugarberry	Celtis laevigata	Yes	Yes	
Sycamore	Plantanus occidentalis	Yes	No	
Tree of Heaven	Ailanthus altissima	Yes	Yes	
Walnut, American Black	Juglans nigra	Yes	No	
Willow	Salix spp.	Yes	Injury⁵	

<sup>&</sup>lt;sup>1</sup> Not intended for nursery, orchard, ornamental plantings, new plantings, or seedling trees.

<sup>2</sup> Yes = Tolerant

#### **WEEDS CONTROLLED**

(With 4 to 6 ounces per acre Alligare Panoramic 2SL herbicide) **Species** PRE1 POST<sup>2</sup> ANNUAL/ **Common Name** BIENNIAL/

No = Not tolerant, severe injury or death

NR = Not recommended due to insufficient tolerance data
Not for use on ornamental or fruit bearing trees

<sup>&</sup>lt;sup>4</sup> Applications made just before or during candling may cause candle injury or death

<sup>&</sup>lt;sup>5</sup> Possible defoliation and/or death. Some species may exhibit tip chlorosis and minor necrosis. If spray contacts foliage, then defoliation and terminal death may occur. Injury can be reduced or eliminated if applied in fall after color change or leaf drop.

Common Name	Species	PRE <sup>1</sup>	POST <sup>2</sup>	ANNUAL/ BIENNIAL/ PERENNIAL <sup>3</sup>
BROADLEAVES				
Bedstraw, Catchweed	Galium aparine	С	4	WA
Beggarweed, Florida	Desmodium tortuosum	С	2	SA
Buffalobur	Solanum rostratum		C	SA
Buttercup, Bur	Ranunculus testiculatus	С	С	WA
Cocklebur, Common	Xanthium strumarium	S	6	SA
Lambsquarters, Common	Chenopodium album	C	2	SA
Halogeton	Halogeton glomeratus	C	<del>-</del>	SA
Morningglory,	, raiogoto, giornolado	<del> </del>	<del>                                     </del>	
Entireleaf	Ipomoea hederacea	s	3	SA
lvyleaf	Ipomoea hederacea	S	3	SA
Tall	Ipomoea purpurea	S	3	SA
Mustard, Wild	Brassica kaber	c	C	WA
Pigweed	Amaranthus spp.	C	6	SA
Queen Anne's Lace	Daucus carota	<del></del>	4	B
Radish, Wild	Raphanus raphanistrum	S	4	WA
Yellow Rocket	Barbarea vulgaris	C	4	WA
Sicklepod	Senna obtusifolia	<del>  c</del>	4	SA
Sida, Prickly	Sida spinosa	C	2	SA
Smartweed,	Sida Spiriosa			34
Ladysthumb	   Polygonum persicaria	С	С	SA
Pennsylvania	Polygonum pensylvanicum	C	Č	SA
Swamp	Polygonum coccineum	C	C	SA
Starbur, Bristly	Acanthospermum hispidum	C	2	SA
Velvetleaf		C	6	SA
GRASS WEEDS	Abutilon theophrasti		1 0	I SA
Brome, Downy	Bromus tectorum	С	2	WA
Cheat	Bromus secalinus	<del>  c</del>	2	WA
	Bromus secamus	<del>                                     </del>		VVA
Crabgrass,	Digitaria canquinalia	С		SA
Large (Hairy) Smooth	Digitaria sanguinalis Digitaria ischaemum	C	4 4	SA SA
Foxtail,	Digitaria iscriaemuni	<del>                                     </del>	+ 4	3A
Giant	Setaria faberi	С	6	SA
Green	Setaria viridis	C	4	SA
Yellow		C	4	SA
	Setaria glauca	C	C	WA
Goatgrass, Jointed	Aegilops cylindrica	S	2	SA
Goosegrass	Elusine indica	C	12	
Johnsongrass (seedling)	Sorghum halepense	C		SA
Medusahead	Taeniatherum caput-medusae		2	WA
Panicum, Fall	Panicum dichotomiflorum	S	6	SA
Sandbur	Cenchrus spp.	S	C	A/P
Shattercane	Sorghum bicolor	C	12	SA
Signalgrass, Broadleaf	Brachiaria platyphylla	C	С	SA
Stiltgrass, Japanese	Microstegiium vimineum	С	4	A
Vaseygrass	Paspalum urvillei		8	Р
SEDGES			<del></del>	
Nutsedge,	· ·			
Yellow	Cyperus esculentus	S	4S	Р
Purple	Cyperus rotundus	S	48	Р
Sedge	Juncus spp.	S	4S	A/P

<sup>&</sup>lt;sup>1</sup> C=control, S=suppression in northern US only

<sup>2</sup> Maximum plant height in inches at time of application

<sup>3</sup> Growth habit: A=annual, SA=summer annual, WA=winter annual, B=biennial, P=perennial

WEEDS CONTROLLED

Common Name	o 12 ounces per acre Alligare Panor Species	PRE <sup>1</sup>	POST	BIENNIAL/
BROADLEAVES				PERENNIAL <sup>3</sup>
	Anoda cristata	С	6	SA
Anoda, Spurred Baby's Breath <sup>5</sup>	Gysophila paniculata		C	P
	Galium aparine		<del>  c</del>	WA
Bedstraw, Catchweed			+ <del>c</del>	WA
Bedstraw, Marsh	Galium spp.  Desmodium tortuosum		6	ŞA
Beggarweed, Florida			C	P
Bindweed, Field	Convolvulus arvensis		C	SA
Buffalobur Burclover	Solanum rostratum		4	SA
	Medicago spp. Stellaria media	C	6	SA
Chickweed, Common			6	SA
Cocklebur, Common	Xanthium strumarium		C	WA WA
Cornsalad, Common	Valerianella locusta		2	
Crownbeard, Golden	Verbisina encelioides	С	C	SA
Dandelion	Taraxacum officinale			Р
Dock, Curly	Rumex crispus	C	6	В
Fiddleneck	Amsinckia spp.		C	SA
Flax, Spurge	Thymelaea passerina	С	С	A
Fleabane, Annual	Erigeron annuus		С	A
Geranium, Carolina	Geranium carolinianum		С	WA/B
Geranium, Cranesbill	Geranium maculatum	С	С	WA/B
Ground Cherry	Physalis heterophylla		С	Р
Hemlock, Poison	Conium maculatum	C	6	В
Henbit	Lamium amplexicaule	С	3	WA/B
Hoary Cress	Cardaria spp.		С	Р
Houndstongue, Bristly	Cynoglossum officinale	С	С	В
Indigo, Hairy	Indigofera hirsute	C	2	Р
Jimsonweed	Datura stramonium	С	6	SA
Knapweed, Russian <sup>6</sup>	Centaurea repens		C*	Р
Knotweed, Prostrate	Polygonum aviculare	С	С	SA
Kochia*	Kochia scoparia	С	3	SA
Lambsquarters, Common	Chenopodium album	С	3	SA
Morningglory,				
Cypressvine	Ipomoea quamoclit	C	6	SA
Entireleaf	Ipomoea hederacea	C	6	SA
Ivyleaf	Ipomoea hederacea	C	6	SA
Pitted	Ipomoea lacunose	C	6	SA
Smallflower	Jacquemontia tamnifolia	C	6	SA
Tall	Ipomoea purpurea		6	SA
Mustard, Wild	Brassica kaber	C	С	WA
Onion, Wild	Allium canadense	С	С	P
Pepperweed, Perennial	Lepidum latifolium		С	Р
Pigweed <sup>4</sup>	Amaranthus spp.	С	6	SA
Plantain, Narrowleaf	Plantago lanceolata	С	С	В
Poinsettia, Wild	Euphorbia heterophylla	С	6	SA
Puncture Vine	Tribulus terrestris		С	SA
Purslane, Common	Portulaca oleracea	С	4	SA
Pusley, Florida	Richardia scabra	Ç	4	SA
Queen Anne's Lace	Daucus carota	С	С	В
Ragweed,				
Common	Ambrosia artemisiifolia	C	3	SA
Giant	Ambrosia trifida	S	6	SA
Western	Ambrosia psilostachya		C	A/P

Common Name	Species	PRE <sup>1</sup>	POST <sup>z</sup>	ANNUAL/ BIENNIAL/ PERENNIAL <sup>3</sup>
Rocket, Yellow	Barbarea vulgaris	С	С	WA
Senna, Coffee	Cassia occidentalis	С	4	SA
Sicklepod	Senna obtusifolia	С	6	SA
Sida, Prickly	Sida spinosa	C	6	SA
Smartweed,				
Ladysthumb	Polygonum persicaria	С	С	SA
Pennsylvania	Polygonum pensylvanicum	C	C	SA
Swamp	Polygonum coccineum	C	C	SA
Spurge,			<del>                                     </del>	
Leafy	Euphorbia esula		Fall*	Р
Spotted	Euphorbia maculata	С	4	SA
Toothed	Euphorbia dentate	C	4	SA
Starbur, Bristly	Acanthospermum hispidum		6	SA
Sunflower	Helianthus annuus		18	SA
Tansymustard	Descurainia pinnata	C	C	WA
Teasel, Common	Dipsacus fullonum	<del></del>	C	В
Thistle,	Dipadda ranonam		+	
Bull	Cirsium vulgare	s	С	WA/B
Musk	Carduus nutans		Š	B
Platt	Cirsium canescens	S	C	P
Russian*	Solsola iberica	C	3	A
Toadflax, Dalmatian	Linaria dalmatica		C*	P
Velvetleaf	Abutilon theophrasti	C	C	A
Vervain, Blue	Verbena hastata	<del>                                     </del>	S	WA
		<del></del>	C	P
Vervain, Prostrate	Verbena bracteata		<del>  c</del>	
Whitetop	Cardaria spp.			Р
Willowherb	Epilobium spp.		С	Р
Woodsorrel, Yellow	Oxalis stricta	С	С	Р
GRASS			1 0+	T
Bahiagrass	Paspalum notatum	S	C*	Р
Barley, Little	Hordeum pusillum	С	4	WA
Barley, Squirrel Tail	Hordeum jubatum		С	Р
Barnyardgrass	Echinochloa crus-galli	С	6	SA
Cheat	Bromus secalinus	С	С	WA
Crabgrass	Digitaria spp.	С	6	SA
Crowfootgrass	Dactyloctenum aegyptium	С	С	SA
Dallisgrass	Paspalum dilatatum	S	C*	Р
Downy Brome	Bromus tectorum	C	С	WA
Dropseed, Tall	Sporobolus cryptandrus	S	С	A/P
Fescue, Tall	Festuca arundinacea	С	C*	Р
Foxtail,				
Giant	Setaria faberi	С	С	SA
Green	Setaria viridis	С	С	SA
Knotroot	Setaria geniculata	S	6	SA
Purple Robust	Setaria viridis	CCSSC	6 S 4	SA
Yellow	Setaria glauca	С	4	SA
Garlic, Wild	Allium vineale	С	С	Р
Goosegrass	Elusine indica	C	38	SA
Itchgrass	Rottboellia cochinchinensis		C*	SA
Johnsongrass,		-	<del>                                     </del>	<u> </u>
Seedling	Sorghum halepense	С	С	SA
				P
Rhizome	Soranum naienense			F
Rhizome Medusahead	Sorghum halepense Taeniatherum captu-medusae		C*	WA.

Common Name	Species	PRE <sup>1</sup>	POST <sup>2</sup>	ANNUAL/ BIENNIAL/ PERENNIAL <sup>3</sup>
Fall	Panicum dichotomylflorum	C	С	SA
Texas	Panicum texanum	C	С	SA
Ryegrass, Annual (Italian)	Lolium multiflorum	C	С	WA
Ryegrass, Perennial	Lolium perenne		С	P
Sandbur	Cenchrus spp.	S	С	A/P
Shattercane	Sorghum bicolor	С	С	SA
Signalgrass, Broadleaf	Brachiaria platyphylla	С	С	SA
Smutgrass	Sporobolus indicus		С	Р
Stiltgrass, Japanese	Microstegiium vimineum	С	С	Α
Stinkgrass, Annual	Eragrostis cilianensis	С	2	SA
Torpedograss	Panicum repens		С	Р
Vaseygrass	Paspalum urvillei		С	Р
Wild Oats	Avena fatua		С	WA
SEDGES/RUSHES				
Nutsedge,				
Yellow	Cyperus esculentus	C	С	P
Purple	Cyperus rotundus	С	C	Р
Rush	Juncus spp.	S	4	A/P

<sup>&</sup>lt;sup>1</sup> C=control, S=suppression in northern US only

<sup>2</sup> Maximum plant height in inches at time of application

<sup>4</sup> Some species are tolerant and resistant biotypes are possible

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#### STORAGE AND DISPOSAL

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

PESTICIDE STORAGE: KEEP FROM FREEZING. Do not store below 20°F.

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

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

Nonrefillable container. Do not reuse or refill this container. 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 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

(Nonrefillable > 5 gallons): Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

<sup>&</sup>lt;sup>3</sup> Growth habit: A=annual, SA=summer annual, WA=winter annual, B=biennial, P=perennial

<sup>&</sup>lt;sup>5</sup> For annual control. The addition of 1-2 pints of 2,4-D will aid in burndown

<sup>&</sup>lt;sup>6</sup> For best control apply in the fall

<sup>\*</sup>See "Special Weed Control" section of this label

#### 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. 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, and any such claims are hereby waived. 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.

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