100-1343 08-07-2009 Jacket 1/21

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

OFFICE OF
PREVENTION, PESTICIDES
AND TOXIC SUBSTANCES

Monty Dixon
Syngenta Crop Protection, Inc.
P.O. Box 18300
Greensboro, NC 27419

AUG 7 2009

Dear Mr. Dixon:

Subject: Label Amendment (dated June 10, 2009)
Pulsar Herbicide
EPA Reg. No. 100-1343

The label, referred to above, submitted in connection with the application under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, is acceptable provided that you make the following change:

1. Make all the changes to the label as specified in the Jun 29, 2009 Agency registration letter.

The amended label supersedes the previously accepted labels. A Stamped copy of the revised label is enclosed for your records. Please submit a copy of your final printed label before you release the products for shipment.

Sincerely yours,

Joanne I. Miller
Product manager (23)
Herbicide Branch
Registration Division (7505P)

Enclosure

GROUP 4 HERBICIDES

Pulsar™ Herbicide

Postemergence herbicide for control of broadleaf weeds in wheat and barley.

Active Ingredient:	
Diglycolamine® salt of 3,6-dichloro-*o*-anisic acid*[1]	12.0%
Fluroxypyr: 1-methylheptyl ester: ((4-amino-3,5-dichloro-6-fluro-2-pyridinyl)oxy) acetic acid, 1-methylheptyl ester**[2]	15.3%
Other ingredients:	72.7%
Total:	100.00%

*CAS No. 104040-79-1
**CAS No. 81406-37-3

[1]Contains 8.12% Dicamba: 3,6-dichloro-o-anisic acid expressed as acid equivalents equivalent to 0.7275 pounds acid equivalent per US gallon.
[2]Contains 10.6% Fluroxypyr: ((4-amino-3,5-dichloro-6-fluoro-2-pyridinyl)oxy)acetic acid expressed as acid equivalents equivalent to pounds acid equivalent per US gallon.

Contains petroleum distillates.

KEEP OUT OF REACH OF CHILDREN.

CAUTION

See additional precautionary statements and directions for use inside booklet.

EPA Reg. No. 100-XXXX

EPA Est.

2.5 gallons
30 gallons
250 gallons
_____ gallons
Net Contents

ACCEPTED
with COMMENTS
In EPA Letter Dated:
AUG 7 2009
Under the Federal Insecticide, Fungicide, and Rodenticide Act, as amended, for the pesticide registered under EPA Reg. No.
100-1343

FIRST AID	
If in eyes	• Hold eye open and rinse slowly and gently with water for 15-20 minutes. • Remove contact lenses, if present after the first 5 minutes, then continue rinsing eye. • Call a poison control center or doctor for treatment advice.
If on skin or clothing	• Take off contaminated clothing. • Rinse skin immediately with plenty of water for 15-20 minutes. • Call a poison control center or doctor for treatment advice.
If swallowed	• Call a poison control center or doctor immediately for treatment advice. • Have person sip a glass of water if able to swallow. • Do not induce vomiting unless told to do so by a poison control center or doctor. • Do not give anything by mouth to an unconscious person.
If inhaled	• Move person to fresh air. • If person is not breathing, call 911 or an ambulance, then give artificial respiration, preferably by mouth-to-mouth, if possible. • Call a poison control center or doctor for further treatment advice.
Have the product container or label with you when calling a poison control center or doctor or going for treatment.	
NOTE TO PHYSICIAN Contains petroleum distillates - vomiting may cause aspiration pneumonia.	
HOTLINE NUMBER For 24 Hour Medical Emergency Assistance (Human or Animal) or Chemical Emergency Assistance (Spill, Leak, Fire, or Accident) Call **1-800-888-8372**	

PRECAUTIONARY STATEMENTS

Hazards to Humans and Domestic Animals

CAUTION

Causes moderate eye irritation. Avoid contact with eyes or clothing. Avoid contact with skin. 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
- Shoes plus socks
- Chemical-resistant gloves made of any waterproof material

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

Engineering Control Statements

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

User Safety Recommendations

Users should:

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

Environmental Hazards

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

Ground Water Advisory

Dicamba has been identified in ground water sampling under vulnerable conditions. There is the possibility that the dicamba in Pulsar Herbicide may leach through soil to ground water, especially where soils are coarse and ground water is near the surface.

Consult with the pesticide state lead agency or local agricultural agencies for information regarding soil permeability and aquifer vulnerability in your area.

Physical or Chemical Hazards

Do not use or store near heat or open flame.

CONDITIONS OF SALE AND LIMITATION OF WARRANTY AND LIABILITY

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

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

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

To the extent permitted by applicable law, in no event shall SYNGENTA be liable for any incidental, consequential or special damages resulting from the use or handling of this product. **TO THE EXTENT PERMITTED BY APPLICABLE LAW, THE EXCLUSIVE REMEDY OF THE USER OR BUYER, AND THE EXCLUSIVE LIABILITY OF SYNGENTA AND SELLER FOR ANY AND ALL CLAIMS, LOSSES, INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY, CONTRACT, NEGLIGENCE, TORT, STRICT LIABILITY OR OTHERWISE) RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT, SHALL BE THE RETURN OF THE PURCHASE PRICE OF THE PRODUCT OR, AT THE ELECTION OF SYNGENTA OR SELLER, THE REPLACEMENT OF THE PRODUCT.**

SYNGENTA and Seller offer this product, and Buyer and User accept it, subject to the foregoing Conditions of Sale and Limitation of Warranty and Liability, which may not be modified except by written agreement signed by a duly authorized representative of SYNGENTA.

DIRECTIONS FOR USE

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

Pulsar Herbicide should be used only in accordance with directions on this label or in separately published Syngenta supplemental labeling directions for this product.

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 labelling 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:

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

FAILURE TO FOLLOW THE DIRECTIONS FOR USE AND PRECAUTIONS ON THIS LABEL MAY RESULT IN CROP INJURY AND/OR POOR WEED CONTROL.

GENERAL INFORMATION

Pulsar Herbicide is a postemergence, systemic herbicide for the control of broadleaf weeds in all varieties of spring wheat (including durum), winter wheat, and barley.

The active ingredients in Pulsar Herbicide are readily absorbed by leaves and stems and translocate systemically in target weeds, accumulating in areas of active growth. Pulsar Herbicide controls weeds by interfering with the plant's growth hormones (auxins) causing the disruption of normal plant growth patterns. Symptoms include twisting and curling of stems (epinasty), swollen nodes and leaf cupping followed by chlorosis (yellowing), growth inhibition and eventual plant death. Level and rate of control depend on weed species, growing conditions, crop competition, and coverage. Thorough spray coverage of target weeds is essential for consistent control.

General Precautions

- Do not apply on or near desirable trees or plants or in locations where chemical may be washed into contact with their roots.
- Do not apply adjacent to sensitive crops when the temperature on the day of application is expected to exceed 85°F as drift is more likely to occur.
- Do not spray if conditions of thermal inversion exist, or if wind direction and speed may cause spray to drift onto adjacent nontarget areas. Drift minimization is the responsibility of the applicator. Consult with local and State agricultural authorities for information on avoiding or minimizing spray drift.
- Avoid overlapping spray swath as crop injury may occur.
- Do not apply when wind velocity exceeds 15 mph.
- To avoid subsequent injury to other crops, thoroughly clean application equipment immediately after spraying. Ensure that all traces of the product are removed. See section on cleaning spray equipment.
- Do not use if wheat or barley is underseeded with a legume.

Management of Resistant Weeds

Pulsar Herbicide contains Group 4 (synthetic auxins) herbicides. Some naturally occurring weed populations have been identified as resistant to Group 4 herbicides. Selection of resistant biotypes, through repeated use of these herbicides in the same field, may result in control failures. A resistant biotype may be present if poor performance cannot be attributed to adverse weather conditions or improper application

methods. If resistance is suspected, contact your local Syngenta representative for assistance.

The following practices will delay selection for resistant populations of weeds:

- Apply postemergence herbicides to small, actively growing weeds.
- Ensure that good spray coverage is achieved with proper spray volumes and calibrated equipment.
- Use the full label rate of product.
- Avoid tank mixes that may cause antagonism and reduced weed control.
- Where possible, avoid the repeated use of herbicides with the same mode of action (i.e., same group number) in successive seasons either in cereal crops or rotational crops.
- Use a diverse crop/fallow rotation to extend the range of available herbicides and agronomic practices.
- Use cultivation, fertilizer regimens, seeding rates and row widths that enhance crop competitiveness.
- Prevent weed escapes from producing seed either in the crop or during fallow periods.

Crop Rotation Intervals

The following crops may be planted at the specified interval following application of Pulsar Herbicide.

Crop	Rotational Interval
Field corn	0 day
Barley, grasses, oats, wheat	22 days
Sorghum, sweet corn	4 months
Alfalfa, canola, chickpea, cotton, dry bean, flax, lentil, pea, popcorn, potato, safflower, seed corn, soybean, sugar beet, sunflower	9 months
Other crops not listed	12 months

APPLICATION PROCEDURES

Timing of Application

Crop	Application Timing
Barley, fall seeded	Prior to barley jointing stage
Barley, spring seeded*	Before barley exceeds the 4-leaf stage
Wheat, fall seeded**	Prior to wheat jointing stage
Wheat, spring seeded**	Before wheat exceeds the 6-leaf stage

*Spring-seeded barley varieties that are seeded during the winter months or later, follow the application timing given for spring-seeded barley.
**Early developing wheat varieties such as TAM 107, Madison and Wakefield must receive application between early tillering and prior to the jointing stage.

Precaution: Do not apply to a crop that is stressed by conditions such as frost, low fertility, drought, flooding, disease damage, or insect damage as crop injury may result.

For optimum results, apply Pulsar Herbicide to actively growing weeds. An early application will maximize crop yields by reducing weed competition. Weed control following application of Pulsar alone or in combination with other herbicides can be reduced or delayed under conditions of stress such as drought, heat, insufficient fertility, flooding, and prolonged cool temperatures. Optimum weed control will be obtained if application of Pulsar Herbicide is delayed until the conditions of stress have ended and weeds are once again actively growing. Weeds emerging after Pulsar Herbicide application will not be controlled.

Rainfastness

Rain or irrigation occurring within 4 hours after application may reduce the efficacy of Pulsar Herbicide.

GROUND AND AERIAL APPLICATION PROCEDURES

For best accuracy, calibrate the sprayer before use.

Ground Applications

Water Volume - Use a minimum of 8 gallons of water per acre.

Spray Nozzles - 80° or 110° flat fan nozzles are recommended for optimum spray coverage. Nozzles must be uniformly spaced along the boom to provide accurate and uniform coverage. Point the nozzles forward in the direction of travel at an angle of 45°

for optimum coverage of weeds. Follow the nozzle manufacturer's recommendations for pressure and screens. Do not use flood or hollow cone type nozzles.

Screens - Use a screen or strainer with 16-mesh or coarser on the suction side of the pump. Do not place a screen in the recirculation line unless using a roller or piston pump. Use 50-mesh or coarser screens between the pump and boom and at the nozzles.

Pressure - 35-40 psi at the nozzles. Lower pressure may be used with extended range or low pressure nozzles.

Pump - Must have capacity to maintain pressure (35-40 psi) and to maintain the product suspension through tank agitation. A centrifugal pump is recommended with an agitation rate of 20 gals./minute/100 gal. tank size. Agitation must be maintained during mixing and spraying.

Good weed coverage with the spray mixture is essential for optimum weed control results. Observe sprayer nozzles frequently during the spraying operation to ensure that the spray pattern is uniform. Avoid large spray overlaps which result in excessive rates in the overlap areas. Also, avoid application under conditions when uniform coverage cannot be obtained or when excessive spray drift may occur. To reduce spray drift, do not apply under windy conditions. Allow adequate distance between target area and desirable vegetation to prevent drift to nontarget areas. Boom height for broadcast over-the-top application should be based upon the free-standing height of the crop, not height above the soil surface, and should be at least 12 inches above the crop.

Aerial Applications

Apply Pulsar Herbicide in water using a minimum spray volume of 3 gals./A. Avoid application under conditions where uniform coverage cannot be obtained or where excessive spray drift may occur. Make applications at a maximum height of 10 ft. above the crop with low-drift nozzles at a maximum pressure of 40 psi and wind speed not exceeding 10 mph to help assure accurate application within the target area.

Drift Management

Avoiding spray drift at the application site is the responsibility of the applicator and the grower. The interaction of many equipment- and weather-related factors determines the potential for spray drift. The applicator and grower must consider the interaction of equipment and related factors to ensure that the potential for drift to sensitive non-target plants is minimal.

The following drift management requirements must be followed to avoid off-target drift movement from aerial applications to agricultural field crops. These requirements do not apply to forestry applications, public health uses, or to applications using dry formulations.

1. The distance of the outermost nozzles on the boom must not exceed ¾ the length of the wingspan or rotor.

2. Nozzles must always point backward parallel with the air stream and never be pointed downward more than 45 degrees.

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

The applicator should be familiar with and take into account the information covered in the **Aerial Drift Reduction Advisory Information**.

Aerial Drift Reduction Advisory Information

Information on Droplet Size

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

Controlling Droplet Size

- **Volume** - Use high flow rate nozzles to apply the highest practical spray volume. Nozzles with higher rated flows produce larger droplets.

- **Pressure** - Do not exceed the nozzle manufacturer's recommended pressures. For many nozzle types, lower pressure produces larger droplets. When higher flow rates are needed, use higher flow rate nozzles instead of increasing pressure.

- **Number of Nozzles** - Use the minimum number of nozzles that provide uniform coverage.

- **Nozzle Orientation** - Orienting nozzles so that the spray is released parallel to the airstream produces larger droplets than other orientations and is the recommended practice. Significant deflection from horizontal will reduce droplet size and increase drift potential.

- **Nozzle Type** - Use a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. Consider using low-drift nozzles. Solid stream nozzles oriented straight back produce the largest droplets and the lowest drift.

Boom Length

For some use patterns, reducing the effective boom length to less than ¾ of the wingspan or rotor length may further reduce drift without reducing swath width.

Application Height

Applications should not be made at a height greater than 10 ft. above the top of the largest plants, unless a greater height is required for aircraft safety. Making applications at the lowest height that is safe reduces exposure of droplets to evaporation and wind.

Swath Adjustment

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

Wind

Drift potential is lowest between wind speeds of 2-10 mph. However, many factors, including droplet size and equipment type, determine drift potential at any given speed. Application should be avoided below 2 mph due to variable wind direction and high inversion potential. **Note:** Local terrain can influence wind patterns. Every applicator should be familiar with local wind patterns and how they affect spray drift.

Temperature and Humidity

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

Temperature Inversions

Applications should not 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 concentrated cloud (under low wind conditions) indicates an

inversion, while smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

Sensitive Areas

This pesticide may only be applied when the potential for drift to adjacent sensitive areas, e.g., residential areas, bodies of water, non-target plants is minimal, (i.e., when the wind is blowing away from the sensitive area.)

Avoid all direct or indirect contact (such as spray drift) of Pulsar Herbicide with crops other than those specified for treatment on this label since injury may occur.

Chemigation

Do not apply this product through any type of irrigation system.

SPRAY ADJUVANTS

Nonionic surfactant (NIS) may be added to the spray mixture. Use NIS containing at least 80% active ingredient at 0.125-0.25% v/v (1-2 pints/100 gallons) of finished spray volume. Use of NIS can improve control under less than optimum environmental conditions such as dry growing conditions, low relative humidity or cool temperatures. **Note:** When Pulsar Herbicide is tank mixed with herbicides that have a built-in adjuvant, no additional NIS is recommended.

USE RATE

Apply Pulsar Herbicide at 8.3-12.5 oz./A.

WEEDS CONTROLLED

Pulsar Herbicide can be applied alone or tank mixed with MCPA ester for broad-spectrum control of broadleaf weeds. Refer to Table 1 for a list of weeds controlled by Pulsar Herbicide applied alone or tank mixed with MCPA ester.

Table 1. Weeds controlled by Pulsar Herbicide applied alone or tank mixed with MCPA Ester*

Broadleaf Weed	Pulsar at 8.3-12.5** oz/A + MCPA ester at 8.6 oz/A	Pulsar at 12.5 oz/A	Weed Size or Growth Stage for Optimum Control
Bedstraw, catchweed (*Galium aparine*)	C	C	1 to 4-inch height
Bindweed, field (*Convolvulus arvensis*)	S	S	1 to 4-leaf stage
Buckwheat, wild (*Polygonum convolvulus*)	C	C	1 to 4-leaf stage
Canola, volunteer (*Brassica napus*)	C	-	Up to pre-bolt stage
Flax, volunteer (*Linum usitatissimum*)	C	C	1 to 4-inch height
Flixweed (*Descurainia sophia*)	C	-	Up to pre-bolt stage
Ladysthumb (*Polygonum persicaria*)	C	C	1 to 4-inch height
Lambsquarters, common (*Chenopodium album*)	C	C	1 to 4-inch height
Lettuce, prickly (*Latuca serriola*)	C	-	1 to 4-leaf stage
London rocket (*Sisymbrium irio*)	C	-	Up to pre-bolt stage
Kochia (*Kochia scoparia*)	C	C	Beyond button stage but less than 6-inch height
Mustard, ball (*Neslia paniculata*)	C	-	Up to pre-bolt stage
Mustard, tansy (*Descurainia pinnata*)	C	-	Up to pre-bolt stage
Mustard, tumble (*Sisymbrium altissimum*)	C	-	Up to pre-bolt stage
Mustard, wild (*Sinapis arvensis*)	C	-	Up to pre-bolt stage
Pennycress, field (*Thlaspi arvense*)	C	-	Up to pre-bolt stage
Pigweed, redroot (*Amaranthus retroflexus*)	C	C	1 to 4-inch height
Radish, wild (*Raphanus raphanistrum*)	C	-	1 to 4-inch height
Shepherdspurse (*Capsella bursa-pastoris*)	C	-	Up to pre-bolt stage
Thistle, Canada (*Cirsium arvense*)	S	S	Rosette to pre-bolt stage
Thistle, Russian (*Salsola tragus*)	C	C	1 to 4-inch height

*C = control; S = suppression which means significant activity, but not always at a level considered acceptable for commercial weed control.

**Use the higher end of the rate range when weed populations are dense and/or when weeds are at the maximum application timing.

BROADLEAF AND GRASS HERBICIDE TANK-MIX RECOMMENDATIONS

Pulsar Herbicide may be tank mixed with the following herbicides to broaden the weed control spectrum. Refer to the label of the tank-mix partner for registered crops, additional weeds controlled and directions for use. Observe all precautions and restrictions on the labels of products used in tank mixtures. Use in accordance with the most restrictive of label limitations and precautions. This product cannot be mixed with any other product whose label prohibits such a mixture.

Note: The many formulations of tank-mix partners have varying mixing characteristics. Before Pulsar Herbicide is used in tank mixture with other products, the mixture should first be tested in small containers for physical compatibility. For directions on how to conduct a compatibility test, refer to the **Tank-Mix Compatibility Test** section.

Broadleaf Herbicide Tank-Mix Partners

2,4-D	Finesse®
Affinity™ BroadSpec	Finesse® Grass & Broadleaf (wheat only)
Affinity™ TankMix	Glean®
Aim®	Harmony®
Ally®	Harmony® Extra
Ally® Extra	Huskie™
Amber®	MCPA
Banvel®	Orion™
Bronate Advanced™[1]	Peak®
Buctril®[2]	Sencor®
Clarity®	STARANE®
CleanWave™ (wheat only)	STARANE® NXT
Curtail®	Stinger®
Curtail® M	WideMatch™
Express®	

[1]Other equivalent products containing the active ingredients bromoxynil/MCPA esters may be used.
[2]Other equivalent products containing the active ingredient bromoxynil may be used.

Grass Herbicide Tank-Mix Partners

Beyond® (Clearfield® wheat varieties only)	Olympus™ (wheat only)
Discover® NG (wheat only)	Puma®
Everest® (wheat only)	

Note: Tank mixtures of grass herbicides plus Pulsar Herbicide plus mixtures of multiple broadleaf herbicide partners may reduce the level of grass control.

TANK-MIX APPLICATION WITH TILT® FUNGICIDE

Pulsar Herbicide may be tank mixed with Tilt Fungicide for broadleaf weed control and early season disease suppression. Apply Pulsar Herbicide at 8.3-12.5 oz./A in a tank mix with Tilt Fungicide at 2 oz./A. Add Tilt Fungicide to the tank first, followed by Pulsar Herbicide. Refer to the Tilt Fungicide label for specific use directions, application rates, restrictions, and a list of diseases suppressed and/or controlled.

TANK-MIX APPLICATION WITH QUILT® FUNGICIDE

Pulsar Herbicide may be tank mixed with Quilt Fungicide for broadleaf weed control and early season disease suppression. Apply Pulsar Herbicide at 8.3-12.5 oz./A in a tank mix with Quilt Fungicide at 7 oz./A. Add Quilt Fungicide to the tank first, followed by Pulsar Herbicide. Refer to the Quilt Fungicide label for specific use directions, application rates, restrictions, and a list of diseases suppressed and/or controlled. **Note:** under certain environmental conditions, tank mixes of Quilt Fungicide plus herbicides may cause crop injury.

TANK-MIX APPLICATION WITH WARRIOR II WITH ZEON TECHNOLOGY®

Pulsar Herbicide may be tank mixed with Warrior II with Zeon Technology for broadleaf weed control and insect control. Apply Pulsar Herbicide at 8.3-12.5 oz./A in a tank mix with Warrior II with Zeon Technology at recommended use rates. Add Pulsar Herbicide to the tank then add Warrior II with Zeon Technology last. Refer to the Warrior II with Zeon Technology label for specific use directions, application rates, restrictions, and a list of insects controlled.

MIXTURES WITH LIQUID NITROGEN FERTILIZERS

Pulsar Herbicide may be mixed in a spray solution containing up to 50% liquid nitrogen fertilizer. Add Pulsar Herbicide to the water first. Mix thoroughly, then add the liquid nitrogen fertilizer in an amount no greater than 50% of the final volume. **Note:** under certain environmental conditions, mixtures of liquid nitrogen fertilizers as a partial carrier may cause crop burn.

When using Pulsar Herbicide with approved herbicide tank-mix partners, consult the label of the partner product and follow any additional instructions or restrictions on that label which relate to mixture with liquid nitrogen fertilizers.

MIXING PROCEDURES

Prior to using Pulsar Herbicide, ensure that the spray tank, lines and screens and filters are thoroughly clean.

Mixing Instructions

1. Fill the spray tank with ½ to ⅔ the required amount of water and begin agitation.
2. Add dry pesticide formulations (WP, DF, etc.).
3. Add liquid pesticide formulations (EC, SC, SL, etc.).
4. Add Pulsar Herbicide.
5. Add nonionic surfactant (if used).
6. Add the remaining water and maintain agitation throughout the spray operation.
7. **The tank mixture should be sprayed out as soon as it is prepared.**

Be sure to allow each tank-mix component to fully disperse before adding the next.

Tank-Mix Compatibility Test

A jar test is recommended prior to tank mixing to ensure compatibility of Pulsar Herbicide with mixture partners. Add proportion amounts of tank mixture components in a clear quart jar one at a time in the recommended mixing order. Gently shake or invert capped jar and let stand for 15-30 minutes. If the mixture clumps, forms flakes, oily films or layers or other precipitates, it is not compatible and the tank mixture should not be used.

PROCEDURE FOR CLEANING SPRAY EQUIPMENT

Thoroughly clean application equipment immediately after spraying. To avoid subsequent injury to other crops, immediately after spraying and before spraying other crops, thoroughly remove all traces of Pulsar Herbicide from mixing and spraying equipment. The following recommendations are provided:

1. Drain and flush tank walls, boom and all hoses for ten minutes with a clean water/strong detergent or commercial sprayer cleaner mixture. Rinse with clean water. **Do not** clean the sprayer near desirable vegetation, wells or other water sources.

2. Remove all nozzles and screens and wash separately.

3. If other tank-mix partners were used, always refer to the tank-mix partner label for additional cleanup procedures.

4. Dispose of all rinsate according to local, state and federal regulations.

All traces of Pulsar Herbicide must be removed before equipment can be used on crops other than wheat or barley.

RESTRICTIONS

- Make only one application per crop season.
- Do not allow livestock to graze treated areas or harvest treated forage within 7 days of application.
- Do not apply closer than 14 days before cutting of hay or 40 days before harvesting of grain or straw.

STORAGE AND DISPOSAL

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

Pesticide Storage

Store in original container only. Store in a cool, dry and well-ventilated place. Protect from excessive heat. Keep container closed when not in use. Do not store near food or feed.

Pesticide Disposal

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

For minor spills, leaks, etc., follow all precautions indicated on this label and clean up immediately. Take special care to avoid contamination of equipment and facilities during cleanup procedures and disposal of wastes. In the event of a major spill, fire, or other emergency, call 1-800-888-8372, day or night.

Container Disposal

Non-refillable container. Do not reuse or refill this container. Offer for recycling if available.

Residue Removal [capacities equal to or less than 5 gallons]

Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: empty the remaining contents into application equipment or a mix tank and drain for 10 seconds after the flow begins to drip. Fill the container ¼ full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times.

For Bulk and Minibulk Containers:

Residue Removal [capacities greater than 5 gallons]

Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container ¼ full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times.

Container Disposal

Refillable container. Refill this container with Pulsar Herbicide only. Do not reuse this container for any other purpose.

Residue Removal

Cleaning the container before final disposal is the responsibility of the person disposing of the container. Cleaning before refilling is the responsibility of the refiller.

After filling and before transporting, check for leaks. Do not refill or transport damaged or leaking container.

CONTAINER IS NOT SAFE FOR FOOD, FEED, OR DRINKING WATER.

Formulated with STARANE® Herbicide from Dow AgroSciences LLC.

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