



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY
AND POLLUTION PREVENTION

July 16, 2015

Annette M. Bloomberg
Regulatory Product Manager
Bayer CropScience
P.O. Box 12014
2 TW Alexander Dr.
Research Triangle Park, NC 27709

Subject: Notification per PRN 98-10 – label changes associated with transfer of company.
#352 to #432
Product Name: PASTORA HERBICIDE
EPA Registration Number: 432-1567
Application Date: 5/11/2015
Decision Number: 505342

Dear Ms. Bloomberg:

The Agency is in receipt of your Application for Pesticide Notification under Pesticide Registration Notice (PRN) 98-10 for the above referenced product. The Registration Division (RD) has conducted a review of this request for its applicability under PRN 98-10 and finds that the action requested falls within the scope of PRN 98-10.

The label submitted with the application has been stamped “Notification” and will be placed in our records.

If you have any questions, you may contact Angela Hollis at 703-347-0216 or via email at hollis.angela@epa.gov.

Sincerely,

A handwritten signature in cursive script that reads "Heather A. Garvie".

Heather A. Garvie, Product Manager 24
Fungicide Herbicide Branch (7505P)
Office of Pesticide Programs

DuPont PASTORA®

HERBICIDE

NOTIFICATION

432-1567

The applicant has certified that no changes, other than those reported to the Agency have been made to the labeling. The Agency acknowledges this notification by letter dated:

07-16-2015

DUPONT-BAYER CROPSCIENCE LP™ PASTORA® HIGHLIGHTS

- For use in bermudagrass pastures and hay meadows, Alamo switchgrass and non-crop areas
- For selective postemergence broadleaf and grass weed control
- Apply to small, actively growing weeds any time of the year except when the ground is frozen
- Apply 1.0 to 1.5 ounces product per acre
- Always include a spray adjuvant unless otherwise directed on this label
- May be applied by ground or by air
- There are no grazing or haying restrictions for PASTORA®
- Consult label for complete instructions—always read and follow label Directions for Use

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DuPont™

PASTORA®

HERBICIDE

Dry Flowable

For Use on Established Bermudagrass Pastures and Hay Meadows, Bermudagrass Turf (Unimproved Only)

Active Ingredient	By Weight
Nicosulfuron	
2-[[[(4,6-dimethoxypyrimidin-2-yl)aminocarbonyl]aminosulfonyl]-N,N-dimethyl-3-pyridinecarboxamide	56.2%
Metsulfuron Methyl	
Methyl 2-[[[(4-methoxy-6-methyl-1,3,5-triazin-2yl)amino]carbonyl]amino]sulfonyl]benzoate	15.0%
Other Ingredients	28.8%
TOTAL	100.0%

EPA Reg. No. ~~352-849~~ 432-1567

EPA Est. No. _____

Nonrefillable Container Net: _____

Refillable Container Net: _____

Editorial Note – [Bracketed text] is optional

KEEP OUT OF REACH OF CHILDREN CAUTION

Si usted no entiende la etiqueta, busque a alguien para que se la explique a usted en detalle. (If you do not understand this label, find someone to explain it to you in detail.)

FIRST AID

IF IN EYES: Hold eye open and rinse slowly and gently with water for 15-20 minutes. Remove contact lenses, if present, after the first five 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 the poison control center or doctor. Do not give anything by mouth to an unconscious person.

Have the product container or label with you when calling a poison control center or doctor, or going for treatment. You may also contact ~~1-800-334-7577~~ ~~1-800-441-3637~~ for emergency medical treatment information.

PRECAUTIONARY STATEMENTS

HAZARDS TO HUMANS AND DOMESTIC ANIMALS

CAUTION. Causes eye irritation. Harmful if absorbed through skin. Avoid contact with skin, eyes or clothing. Avoid breathing dust or spray mist.

PERSONAL PROTECTIVE EQUIPMENT (PPE)

Applicators and other handlers must wear:

Long-sleeved shirt and long pants.

Shoes plus socks.

Chemical resistant gloves Category A (such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber), all ≥ 14 mils.

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

ENGINEERING CONTROL STATEMENT: When handlers use closed systems, enclosed cabs, or aircraft in a manner that meets the requirements listed in 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.

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 when disposing of equipment washwaters or rinsate. Do not apply where/when conditions could favor runoff.

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.

DuPont™ PASTORA® HERBICIDE must be used only in accordance with instructions on this label or in separate DuPont™ BAYER CROPSCIENCE LP publications. DuPont™ BAYER CROPSCIENCE LP will not be responsible for losses or damages resulting from the use of this product in any manner not specified by DuPont™ BAYER CROPSCIENCE LP.

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

PRODUCT INFORMATION

PASTORA® HERBICIDE herbicide is registered for use on bermudagrass pastures and hay meadows, and for use in non-crop areas. Check with your state extension or Department of Agriculture before use, to be certain PASTORA® HERBICIDE is registered in your state. Do not use PASTORA® HERBICIDE in the following counties of Colorado: Alamosa, Conejos, Costilla, Rio Grande, and Saquache.

PASTORA® HERBICIDE is a dry-flowable granule that controls or suppresses broadleaf and grass weeds. PASTORA® HERBICIDE is mixed in water and applied as a uniform broadcast spray. A spray adjuvant must be used in the spray mix unless otherwise specified on this label. PASTORA® HERBICIDE is noncorrosive, nonflammable, nonvolatile, and does not freeze.

PASTORA® HERBICIDE controls broadleaf weeds by preemergence and postemergence activity and grass weeds by postemergence activity. For best results, apply PASTORA® HERBICIDE to young, actively growing weeds. Weeds hardened off by cold weather or drought stress may not be controlled. The use rate depends upon the weed spectrum and size of weeds at application. The degree and duration of control may depend on the following factors:

- weed spectrum and infestation intensity
- weed size and maturity at application
- environmental conditions during and following treatment
- application rate and coverage

It is permissible to treat intermittently flooded low lying sites, seasonally dry flood plains and transitional areas between upland and lowland sites when no water is present. It is also permissible to treat marshes, swamps and bogs after water has receded as well as seasonally dry flood deltas. DO NOT make applications to natural or man-made bodies of water such as lakes, reservoirs, ponds, streams and canals.

BIOLOGICAL ACTIVITY AND ENVIRONMENTAL CONDITIONS

PASTORA® HERBICIDE is absorbed through the foliage and roots of weeds, rapidly inhibiting their growth. Leaves of susceptible plants appear chlorotic from 1 to 3 weeks after application and the growing point subsequently dies. The final effects on annual weeds are evident about 4 to 6 weeks after application. The ultimate effects on perennial weeds occur in the growing season following application.

One to two inches of rainfall or sprinkler irrigation (enough to wet the top 2-3 inches of soil profile) may be needed to move PASTORA® HERBICIDE into the weed root zone before the next flush of broadleaf weeds emerge. The amount of moisture required for sufficient activation increases with crop or weed residue and for finer textured soils. Without sufficient rainfall or sprinkler irrigation to move PASTORA® HERBICIDE into the weed root zone, weeds that germinate after treatment will not be controlled.

Application of PASTORA® HERBICIDE provides the best control in vigorously growing pastures that shade competitive weeds. Weed control in areas of thin grass may not be as satisfactory. However, a bermudagrass canopy that is too dense at application can intercept spray and reduce weed control.

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

Weed control or suppression may be reduced if rainfall, or sprinkler irrigation occurs within 4 hours after application.

Weed control should be part of an overall pasture management plan which includes good fertility, adequate moisture (rainfall, irrigation), insect and rodent control, and other agronomic practices which maximize bermudagrass growth. Consult your state cooperative extension service, local agricultural dealer, professional consultant or other qualified authority for specific instructions regarding proper management of bermudagrass pastures.

IMPORTANT RESTRICTIONS

- Do not apply or drain or flush equipment on or near desirable trees or other plants, or on areas where their roots extend, or in locations where the product may be washed or moved into contact with their roots, as injury or loss of desirable trees or other plants may result.
- Do not use on lawns, walks, driveways, tennis courts, golf courses, athletic fields, or other high-maintenance, fine

turfgrass areas, or similar areas.

- Do not apply to irrigated land where the tailwater will be used to irrigate crops.
- Do not apply to frozen or snow-covered ground as surface runoff may occur.
- Do not apply more than 2.5 ounces of DuPont™ PASTORA® HERBICIDE per acre per year for use in bermudagrass pastures and non-agricultural uses.

IMPORTANT PRECAUTIONS

- Grass species or varieties may differ in their response to various herbicides. Some bermudagrass varieties such as World Feeder, Midland 99 and Jiggs are more sensitive to PASTORA® HERBICIDE and are more likely to exhibit crop response in the form of temporary yellowing or stunting. DuPont™ BAYER CROPS SCIENCE LP recommends that you first consult your state experiment station, university, or extension agent as to sensitivity to any herbicide. If no information is available, limit the initial use of PASTORA® HERBICIDE to a small area.
- Under certain conditions such as heavy rainfall, high pH, prolonged cold weather, or wide fluctuations in day/night temperatures prior to or soon after PASTORA® HERBICIDE application, temporary discoloration and/or grass injury may occur. PASTORA® HERBICIDE should not be applied to grass that is stressed by severe weather conditions, drought, low fertility, water saturated soil, disease, or insect damage, as grass injury may result. Severe winter stress, drought, disease, or insect damage before or following application also may result in grass injury.
- Applications may make some toxic plants more palatable to cattle as the weeds are dying. Do not graze treated areas until toxic plants are dry and unpalatable to livestock.
- Applications of PASTORA® HERBICIDE to pastures undersown with legumes may cause injury to the legumes.
- To reduce the potential for movement of treated soil due to wind erosion, do not apply to powdery dry or light sandy soils until they have been stabilized by rainfall, trashy mulch, reduced tillage, or other cultural practices. Injury to immediately adjacent crops may occur when treated soil is blown onto land used to produce crops other than bermudagrass.
- For ground applications applied to weeds when dry, dusty field conditions exist, control of weeds in wheel track areas may be reduced. The addition of 2,4-D should improve weed control under these conditions.
- Applications of PASTORA® HERBICIDE to grass grown for seed, sod or sprigging has not been evaluated for all bermudagrass varieties. Use of PASTORA® HERBICIDE may result in reduced yield and should be evaluated by the user under local conditions. To the extent consistent with applicable law, this risk must be assumed by the user.

WEED RESISTANCE

PASTORA® HERBICIDE, which contains the active ingredients, nicosulfuron and metsulfuron methyl, is a Group 2 herbicide based on the mode of action classification system of the Weed Science Society of America.

When herbicides with mode of action classifications that affect the same biological sites of action are used repeatedly over several years to control the same weed species in the same treatment area, naturally-occurring resistant biotypes may survive a correctly applied herbicide treatment, propagate, and become dominant in that area. Adequate control of these resistant weed biotypes cannot be expected. If weed control is unsatisfactory, it may be necessary to retreat the problem area using a product affecting a different biological site of action.

To better manage herbicide resistance through delaying the proliferation and possible dominance of herbicide resistant weed biotypes, it may be necessary to change cultural practices such as retreatment, tank-mix partners and/or sequential herbicide applications that affect a different site of action. Weed escapes that are allowed to go to seed, and movement of plant material between treatment areas on equipment will promote the spread of resistant biotypes.

It is advisable to keep accurate records of pesticides applied to individual fields to help obtain information on the spread and dispersal of resistant biotypes. Consult your agricultural dealer, consultant, applicator, and/or appropriate state agricultural extension service representative to determine appropriate actions for treating specific resistant weed biotypes in your area.

INTEGRATED PEST MANAGEMENT

This product may be used as part of an Integrated Pest Management (IPM) program that can include biological, cultural, and genetic practices aimed at preventing economic pest damage. IPM principles and practices include field scouting or other detection methods, correct target pest identification, population monitoring, and treating when target pest populations reach locally determined action thresholds. Consult your state cooperative extension service, professional consultants or other qualified authorities to determine appropriate action treatment threshold levels for treating specific pest/crop systems in your area.

AGRICULTURAL USES

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 4 hours.

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

Coveralls.

Shoes plus socks.

Chemical resistant gloves Category A (such as butyl rubber, natural rubber, neoprene rubber, or nitrile rubber), all > 14 mils.

BERMUDAGRASS PASTURES

APPLICATION TIMING

Apply DuPont™ PASTORA® HERBICIDE to bermudagrass pastures and hay meadows that have been established for at least one growing season. For best results, time applications to young, actively growing broadleaf or grass weeds.

Applications of PASTORA® HERBICIDE may result in temporary yellowing or stunting of bermudagrass. Crop response is more likely if bermudagrass is stressed from adverse environmental conditions (such as drought, extreme temperatures or moisture), abnormal soil conditions (such as soils low in potassium), or cultural practices (such as over-grazing).

Applications targeting winter and early season weeds while the bermudagrass is dormant will minimize potential for crop response.

Spring or summer applications of PASTORA® HERBICIDE may temporarily reduce grass production. Crop response is minimized by treating when bermudagrass has less than 2" of new growth during initial green-up or by treating soon after cutting for hay (before one to two inches of new bermudagrass growth appears).

Weeds may continue to germinate throughout the growing season. Also, regrowth of treated weeds may occur due to adverse environmental conditions. To control weeds under these conditions, a sequential application of PASTORA® HERBICIDE may be necessary. Allow at least 16 days between applications of PASTORA® HERBICIDE.

USE RATES

Apply 1.0 to 1.5 ounces PASTORA® HERBICIDE per acre as a broadcast application to established bermudagrass pastures. Do not apply more than 2.5 ounces of PASTORA® HERBICIDE per acre per year. Do not make more than two applications of PASTORA® HERBICIDE to bermudagrass pastures per year.

For spot applications, mix 2.5 ounces of PASTORA® HERBICIDE per 100 gallons of water for suppression of weeds on the **WEEDS CONTROLLED OR SUPPRESSED** list.

SPRAY ADJUVANTS

Unless otherwise directed, applications of PASTORA® HERBICIDE must include a surfactant. In addition, ammonium nitrogen fertilizer and/or antifoaming agents can be used unless specifically prohibited by tank mix partner labeling. Consult local DuPont™ BAYER CROPS SCIENCE LP fact sheets, technical bulletins, and service policies prior to using other adjuvant systems. If another herbicide is tank mixed with PASTORA® HERBICIDE, select adjuvants authorized for use with both products. Products must contain only EPA-exempt ingredients.

Nonionic Surfactant (NIS)

- NIS is the preferred surfactant under most conditions
- Apply at 0.25% v/v (1 quart per 100 gallons spray solution) or 0.5% under arid conditions.
- Surfactant products must contain at least 60% nonionic surfactant with a hydrophilic/lipophilic balance (HLB) greater than 12.

Crop Oil Concentrate (COC)

- Use of COC may increase the potential for bermudagrass injury.
- Apply at 1% v/v (1 gallon per 100 gallons spray solution) or 2% under arid conditions.
- Oil adjuvants must contain at least 80% high quality petroleum (mineral) with at least 15% surfactant emulsifiers.

Ammonium Nitrogen Fertilizer

- Use 2 quarts/acre of a high-quality urea ammonium nitrate (UAN), such as 28%N or 32%N, or 2 pounds/acre of a spray grade ammonium sulfate (AMS). Use 4 quarts/acre UAN or 4 pounds/acre AMS under arid conditions.
- Do not use low rates of liquid fertilizer as a substitute for surfactant .
- See "Tank Mixtures with Liquid Solution Fertilizer" for instructions on using fertilizer as a carrier in place of water.

Special Adjuvant Types

- Combination adjuvant products may be used at doses that provide the required amount of NIS, COC and/or ammonium nitrogen fertilizer. Consult product literature for use rates and restrictions. Use of combination adjuvant products may increase the potential for bermudagrass injury.
- In addition to the adjuvants specified above, other adjuvant types may be used if they provide the same functionality and have been evaluated and approved by **DuPont BAYER CROPS SCIENCE LP**. Consult separate **DuPont BAYER CROPS SCIENCE LP** technical bulletins for detailed information before using adjuvant types not specified on this label.

WEED CONTROL INFORMATION

DuPont™ PASTORA® HERBICIDE may be applied post emergence to control or suppress weeds listed on, but not limited to, this label. For best results, treat weeds when they are small and actively growing. Unless otherwise directed, treat when broadleaf weeds are less than 4" and grass weeds are less than 2" tall or in diameter (natural size - not after mowing or grazing).

Broadleaf pasture species, such as alfalfa and clover, are highly sensitive to PASTORA® **HERBICIDE** and will be severely stunted or injured.

WEEDS CONTROLLED OR SUPPRESSED

1.0 ounce per acre

Annual bluegrass	Cutleaf evening primrose*†	Marestail†	Smartweed (green, ladysthumb, pale, PA)
Annual marshelder	Dandelion	Mayweed chamomile	Snow speedwell
Barnyardgrass	Dogfennel	Miners lettuce	Sorghum alnum
Bitter sneezeweed	Downy brome†	Morningglory (ivyleaf, pitted, tall)	Tansymustard*
Blackeyed-Susan	False chamomile	Musk thistle*	Timothy
Blue/purple mustard*	Field pennycress (fanweed)	Panicum (browntop, fall, Texas)	Treacle mustard (Bushy Wallflower)
Broadleaf signalgrass	Filaree	Pigweed† (redroot, smooth, tumble)	Tumble/Jim Hill mustard
Broomweed, common	Flixweed*†	Plains coreopsis	Vaseygrass*†
Buckbrush‡	Foxtails (bristly, giant, green, yellow*)	Plantain	Volunteer cereals (barley, oats, rye, triticale, wheat)
Bur buttercup (testiculate)	Goosegrass‡	Pokeweed‡	Waterpod
Burclover	Groundsel (common)	Prickly lettuce*†	Waterpod
Burcucumber	Hemp dogbane‡	Prostrate knotweed*†	Western snowberry‡
Buttercup	Henbit	Purple scabious	Wild buckwheat*†
Canada thistle*†	Horsenint (beebalm)	Quackgrass‡	Wild carrot
Carolina geranium	Horsenettle‡	Rescuegrass‡	Wild garlic*
Coast fiddleneck (tarweed)	Itchgrass	Russian thistle*†	Wild mustard
Common chickweed	Japanese brome*††	Ryegrass*† (Italian, perennial)	Wild oats
Common mullein	Jimsonweed	Sandbur* (field, longspine)	Wild proso millet
Common purslane	Johnsongrass*†	Scotch thistle*	Wild sunflower*†
Common yarrow	Kochia*†	Shattercane†	Wirestem muhly
Conical catchfly	Lambsquarters (common, slimleaf)	Shepherd's purse	Witchgrass
Corn gromwell*†	Little barley	Smallseed falseflax	Woolly croton*
Cowcockle			Woolly Cupgrass
Crabgrass, large*†			
Curly dock			

Additional weeds at 1.25 to 1.5 ounces per acre

Annual sowthistle	Cocklebur†	Pensacola bahiagrass*	Spotted knapweed*†
Aster	Corn cockle	Plumeless thistle‡	Sweet clover
Bittercress	Crown vetch	Redstem filaree	Teasel‡
Blackberry*†	Dewberry*†	Rough fleabane	Wild lettuce
Broom snakeweed*†	Goldenrod	Seaside arrowgrass	Wood sorrel
Buckhorn plantain‡	Honeysuckle‡	Sericea lespedeza*	Yankeweed
Chicory	Maximillion sunflower	Silky crazyweed (locoweed)	
Clover	Multiflora rose*†		

* See the **Specific Weed Instructions** section.

‡ **Weed suppression** is a reduction in weed competition (reduced population and/or vigor) as visually compared to an untreated area. The degree of suppression varies with the rate used, the size of the weeds, and the environmental conditions following treatment.

† Naturally occurring resistant biotypes of these weeds are known to occur. See WEED RESISTANCE section of the label for more information.

SPECIFIC WEED INSTRUCTIONS

Thorough spray coverage of all weed species listed below is very important.

Blackberry, Dewberry, Multiflora Rose: For suppression with broadcast applications, apply DuPont™ PASTORA® HERBICIDE at 1.5 ounces per acre. Apply in the spring, soon after plant is fully leafed and is less than 3 feet tall. For control with broadcast applications, PASTORA® HERBICIDE may be tank mixed with 1/3 to 3/4 ounces of DuPont™ CIMARRON® PLUS HERBICIDE per acre.

Blue/Purple Mustard, Flixweed, and Tansymustard: For best results, apply PASTORA® HERBICIDE tank mixtures with 2,4-D postemergence to mustards, but before bloom.

Broom Snakeweed: For best results, apply PASTORA® HERBICIDE at 1.5 ounces/acre in the fall.

Canada Thistle: For suppression, apply either PASTORA® HERBICIDE or PASTORA® HERBICIDE plus 2,4-D in the spring after the majority of thistles have emerged and are small (rosette stage to 6" elongating stems) and actively growing. The application will inhibit the ability of emerged thistles to compete with grass.

Corn Gromwell, Cutleaf Evening Primrose and Prostrate Knotweed: Apply PASTORA® HERBICIDE when weeds are actively growing, are no larger than 2" tall, and when crop canopy will allow thorough coverage. Tank mixing 2,4-D with PASTORA® HERBICIDE can improve results.

Crabgrass (large): For best suppression of Large Crabgrass, apply PASTORA® HERBICIDE in a tank mix with 2.5 to 4.1 ounces active ingredient glyphosate per acre (such as 4 to 6 fluid ounces of a 5.5 pound/gallon product or 5 to 8 fluid ounces of a 4 pound/gallon product). Note that "Large Crabgrass" refers to a type of crabgrass - not the size of crabgrass. For best results, you must treat crabgrass when it is newly germinated to less than 2" in height (not after mowing).

Japanese Brome: For best results, use PASTORA® HERBICIDE in a tank mix with glyphosate.

Johnsongrass: For best results on seedling Johnsongrass, apply PASTORA® HERBICIDE before seedlings reach 12" in height. For best results on rhizome Johnsongrass, apply PASTORA® HERBICIDE when Johnsongrass is from 10" to 18" in height. If treating after pasture has been mowed, treat about 10 to 14 days after mowing when Johnsongrass has 6" to 8" of leaf surface for herbicide to contact.

Kochia, Russian thistle, Prickly lettuce: Naturally occurring resistant biotypes of these weeds are known to occur. For best results, use PASTORA® HERBICIDE in a tank mix with dicamba (such as "Banvel" or "Clarity") and 2,4-D. Apply PASTORA® HERBICIDE in the spring when kochia, Russian thistle, and prickly lettuce are less than 2" tall or 2" across and are actively growing.

Musk Thistle, Scotch Thistle: Apply PASTORA® HERBICIDE at 1.0 to 1.5 ounces per acre in the spring or early summer prior to flowering or in the fall after newly emerged plants have reached the rosette stage of growth. Certain biotypes of Musk and Scotch Thistles are less sensitive to PASTORA® HERBICIDE and may not be fully controlled with PASTORA® HERBICIDE. Consult with your local DuPont BAYER CROPS SCIENCE LP representative, dealer or applicator for specific use rate and tank mix instructions for your area. Fall applications should be made before the soil freezes.

Pensacola bahiagrass: Apply PASTORA® HERBICIDE at 1.25 to 1.5 ounces per acre after green-up in the spring but before bahiagrass seedhead formation. Apply when moisture is sufficient to enhance grass growth.

PASTORA® HERBICIDE is very effective for removal of bahiagrass from bermudagrass pastures. In highly infested pastures, the use of PASTORA® HERBICIDE can clear the areas of useful forage until the bermudagrass has time to cover the area. Therefore, PASTORA® HERBICIDE treatments should be spread out over a period of years. Do not apply to an entire farm or ranch in one year. Fertilization (particularly with nitrogen and potassium) and/or replanting may accelerate the process of reestablishment of bermudagrass.

Under heavy bahiagrass pressure, grazing pressure, or adverse weather conditions (heat and drought), bahiagrass regrowth may occur.

Do not use PASTORA® HERBICIDE for the control of common or Argentine bahiagrass. Also, do not apply PASTORA® HERBICIDE in liquid fertilizer solutions for Pensacola bahiagrass control, as poor control and/or regrowth may occur.

Ryegrass (Italian, perennial): For best results when ryegrass is greater than 2" in height, for heavy populations or for later flushes, apply PASTORA® HERBICIDE at 1 ounce per acre and follow with a second application at 1 ounce per acre in 3 to 4 weeks. In areas where known populations of ALS herbicide resistant ryegrass are known to exist, control may not be satisfactory.

Sandbur: Apply when sandbur is newly germinated to 1.5" tall. Make applications when bermudagrass is less than 4" tall following green-up in the spring or after cutting for hay. Tall, dense stands of bermudagrass can intercept spray and reduce sandbur control.

In some areas, sandbur may overwinter and start the new season with an established root system. For overwintering sandbur or newly germinated sandbur that is greater than 1.5" tall, applications of PASTORA® HERBICIDE may only suppress growth resulting in a reduction in sandbur seedheads. For best results in these situations, apply PASTORA® HERBICIDE in a tank mix with 2.5 to 4.1 ounces active ingredient glyphosate per acre (such as 4 to 6 fluid ounces of a 5.5 pound/gallon product or 5 to 8 fluid ounces of a 4 pound/gallon product).

A follow-up application of PASTORA® HERBICIDE may be necessary to control subsequent germination (flushes) of sandbur following the first application or when the first application was made to larger sandbur or under unfavorable environmental conditions.

Sandbur Management should be part of an overall pasture management plan which includes good fertility, adequate moisture (rainfall, irrigation), insect and rodent control, and other agronomic practices which maximize bermudagrass growth. In contrast, sandbur control in areas with thin stands of bermudagrass may not be satisfactory.

Sericea lespedeza: For best results, apply DuPont™ PASTORA® HERBICIDE at 1.25 to 1.5 ounces per acre beginning at flower bud initiation through the full bloom stage of growth. Do not make applications if drought conditions exist at intended time of application.

Spotted Knapweed: For best results, apply PASTORA® HERBICIDE at 1.5 ounces per acre with 8 fluid ounces per acre of dicamba (such as "Banvel" or "Clarity") and 16 ounces active ingredient per acre of 2,4-D.

Sunflower (wild or volunteer): Apply either PASTORA® HERBICIDE or PASTORA® HERBICIDE plus 2,4-D after the majority of sunflowers have emerged, are 2" to 4" tall and are actively growing. Use spray volumes of at least 3 gallons by air or 10 gallons by ground.

Vaseygrass: Apply PASTORA® HERBICIDE at 1.0 to 1.5 ounces per acre when Vaseygrass is from 10" to 14" in height or diameter. If treating after pasture has been mowed, treat about 10 to 14 days after mowing when Vaseygrass has 6" to 8" of leaf surface for herbicide to contact. A repeat application may be necessary to achieve an adequate level of control.

Wild Buckwheat: For best results, apply PASTORA® HERBICIDE plus 2,4-D when plants have no more than 3 true leaves (not counting the cotyledons). If plants are not actively growing, delay treatment until environmental conditions favor active weed growth.

Wild Garlic: Apply PASTORA® HERBICIDE in the early spring when wild garlic is less than 12" tall with 2" to 4" of new growth. Typical symptoms of dying garlic plants may not be noticeable for 2 to 5 weeks.

Woolly Croton: Apply PASTORA® HERBICIDE in the late spring or early summer from cotyledon through 2 true leaf stage.

Yellow Foxtail: For best results, use PASTORA® HERBICIDE in a tank mix with glyphosate.

TANK MIXTURES

PASTORA® HERBICIDE may be tank mixed with other suitable registered herbicides, insecticides, and fungicides. Read and follow all manufacturer's label directions for the companion pesticide. If those directions conflict with this label, do not tank mix the pesticide with PASTORA® HERBICIDE.

Since formulations may be changed and new ones introduced, it is recommended that users premix a small quantity of a desired tank mix and observe for possible adverse changes (settling out, flocculation, etc.). Avoid mixtures of several materials and very concentrated spray mixtures. For best results, use of spray equipment having continuous agitation is recommended.

With Herbicides

PASTORA® HERBICIDE may be tank mixed with other suitable registered herbicides such as DuPont™ VELPAR® [VU] HERBICIDE to control weeds listed as suppressed, weeds resistant to PASTORA® HERBICIDE, or weeds not listed under **Weeds Controlled or Suppressed**. Some herbicide tank mixes may antagonize grass weed control.

DuPont™ CIMARRON® PLUS HERBICIDE: PASTORA® HERBICIDE may be tank mixed with 1/3 to 3/4 ounces of CIMARRON® PLUS HERBICIDE per acre for control of blackberry, dewberry, multiflora rose and honeysuckle. For best results on multiflora rose, application should be made in the spring, soon after plants are fully leafed and are less than 3 feet tall.

DuPont™ CIMARRON® MAX HERBICIDE: PASTORA® HERBICIDE may be tank mixed with CIMARRON® MAX HERBICIDE at Rate I to Rate II for additional control of blackberry, ragweed and other brush and broadleaf weeds.

2,4-D: For additional broadleaf weed control PASTORA® HERBICIDE may be tank mixed with amine or ester formulations of 2,4-D at a rate of 1/2 to 1 pound active ingredient per acre (such as 1 pint to 1 quart per acre of a 4 pound/gallon product).

Glyphosate: PASTORA® HERBICIDE may be tank mixed with 2.5 to 4.1 ounces active ingredient glyphosate per acre (such as 4 to 6 fluid ounces of a 5.5 pound/gallon product or 5 to 8 fluid ounces of a 4 pound/gallon product) for improved control of foxtails, little barley, ryegrass and sandbur or for improved suppression of crabgrass, Japanese brome and rescuegrass.

Postemergence application of PASTORA® HERBICIDE plus glyphosate may result in temporary yellowing or stunting of bermudagrass. Do not make a tank mix application of PASTORA® HERBICIDE plus glyphosate if the bermudagrass is under stress from drought or any other reason as it may result in unacceptable crop injury.

With Liquid Nitrogen Solution Fertilizer

Liquid nitrogen fertilizer solutions may be used as a carrier in place of water. Run a tank mix compatibility test before mixing PASTORA® HERBICIDE in fertilizer solution.

PASTORA® HERBICIDE must first be slurried with water and then added to liquid nitrogen solutions (e.g., 28-0-0, 32-0-0). Ensure that the agitator is running while the PASTORA® HERBICIDE is added. Use of this mixture is likely to result in temporary grass yellowing or burn as commonly seen with liquid fertilizer applications.

If using low rates of liquid nitrogen fertilizer (between 5% and 50% of the spray solution volume) in the spray solution, the addition of a non-ionic surfactant is necessary. Add surfactant at 1/4 pint per 100 gallons of spray solution (0.03% v/v).

Do not use a spray adjuvant other than non-ionic surfactant.

When using high rates of liquid nitrogen fertilizer (greater than or equal to 50% of the spray solution volume) in the spray

solution, adding spray adjuvant(s) increases the risk of grass injury. Consult your agricultural dealer, consultant, fieldman, or DuPont™ BAYER CROPS SCIENCE LP representative for a specific recommendation before adding an adjuvant to these tank mixtures.

If 2,4-D is included with DuPont™ PASTORA® HERBICIDE and liquid nitrogen fertilizer mixture, ester formulations tend to be more compatible (See manufacturer's label). Do not add spray adjuvants when using PASTORA® HERBICIDE in tank mix with 2,4-D ester and liquid nitrogen fertilizer solutions greater than 5% of the spray volume.

When making a combined application of liquid fertilizer and herbicides, thorough spray coverage of the weeds is still important. Flat fan nozzles delivering a medium size droplet will provide best results. Cluster nozzles delivering a very coarse droplet may not provide satisfactory weed control.

Do not use low rates of liquid fertilizers as a substitute for spray adjuvants.

Do not use with liquid fertilizer solutions with a pH less than 3.0.

With Insecticides and Fungicides

PASTORA® HERBICIDE may be tank mixed or used sequentially with insecticides such as DuPont™ PREVATHON® HERBICIDE and fungicides registered for use on pastures.

However, under certain conditions (drought stress or cold weather), tank mixes or sequential applications of PASTORA® HERBICIDE with organophosphate insecticides (such as parathion) may produce temporary grass yellowing or, in severe cases, grass injury.

The potential for grass injury is greatest when wide fluctuations in day/night temperatures occur just prior to or soon after application.

Test these mixtures in a small area before treating large areas.

Do not use PASTORA® HERBICIDE plus Malathion, as grass injury will result.

NON-AGRICULTURAL USES

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. Non-crop weed control is not within the scope of the Worker Protection Standard. Do not enter or allow others to enter the treated area until sprays have dried.

UNIMPROVED BERMUDAGRASS TURF AND NON-CROP SITES

PASTORA® HERBICIDE is registered for the control of grass and broadleaf weeds in Bermudagrass turf and bare ground sites on private, public, and military lands as follows: uncultivated nonagricultural areas (such as airports, highway, railroad, and utility rights-of-way, sewage disposal areas, etc.); uncultivated agricultural areas (such as farmyards, fuel storage areas, fence rows, soil bank land, barrier strips, etc.); and, industrial sites (such as lumberyards, pipelines, tank farms, etc.) including grazed areas on all these sites. It is also recommended for the control of certain noxious and troublesome weeds.

Application can be made any time of the year, except when the soil is frozen. For best results, apply PASTORA® HERBICIDE at 1.0 to 2.0 ounces per acre with a surfactant when weeds are young and actively growing. For spot applications, use 2.5 ounces of PASTORA® HERBICIDE and 2 to 4 pints of non-ionic surfactant per 100 gallons of water. If PASTORA® HERBICIDE is tank mixed with a herbicide that includes an adequate adjuvant package, no additional adjuvant is required. Do not make more than two applications of PASTORA® HERBICIDE per year. Allow at least 16 days between applications of PASTORA® HERBICIDE. Do not apply more than 2.5 ounces of PASTORA® HERBICIDE per acre per year.

Temporary leaf yellowing or stunting is more likely to occur at higher rates or when bermudagrass is under environmental stress such as drought.

GRAZING/HAYING

There are no grazing or haying restrictions for non-lactating or lactating livestock including cattle, horses, sheep, goats, and other animals when using DuPont™ PASTORA® HERBICIDE as directed. Grazing animals do not have to be moved off the pasture before, during, or after applying PASTORA® HERBICIDE.

Coveralls, shoes plus socks must be worn if cutting within 4 hours of treatment. Do not enter within 4 hours of treatment if cutting hay for sale.

CROP ROTATION

Before using PASTORA® HERBICIDE, carefully consider your crop rotation plans and options. For rotational flexibility, do not treat all of your pasture acres at the same time.

MINIMUM ROTATIONAL INTERVALS

Minimum rotation intervals* are determined by the rate of breakdown of PASTORA® HERBICIDE applied. PASTORA® HERBICIDE breakdown in the soil is affected by soil pH, presence of soil microorganisms, soil temperature, and soil moisture. Low soil pH, high soil temperature, and high soil moisture increase PASTORA® HERBICIDE breakdown in soil, while high soil pH, low soil temperature, and low soil moisture slow PASTORA® HERBICIDE breakdown.

Of these 3 factors, only soil pH remains relatively constant. Soil temperature, and to a greater extent, soil moisture, can vary significantly from year to year and from area to area. For this reason, soil temperatures and soil moisture should be monitored regularly when considering crop rotations.

* The minimum rotation interval represents the period of time from the last application to the anticipated date of the next planting.

SOIL pH LIMITATIONS

PASTORA® HERBICIDE should not be used on soils having a pH above 7.9, as extended soil residual activity could extend crop rotation intervals beyond normal. Under certain conditions, PASTORA® HERBICIDE could remain in the soil for 34 months or more, injuring wheat and barley. In addition, other crops planted in high-pH soils can be extremely sensitive to low concentrations of PASTORA® HERBICIDE.

CHECKING SOIL pH

Before using PASTORA® HERBICIDE, determine the soil pH of the areas of intended use. To obtain a representative pH value for the test area, take several 0" to 4" samples from different areas of the field and analyze them separately. Consult local extension publications for additional information on recommended soil sampling procedures.

BIOASSAY

A field bioassay must be completed before rotating to any crop or grass species/variety not listed in the Rotation Intervals Table, or if the soil pH is not in the specified range, or if the use rate applied is not specified in the table.

To conduct a field bioassay, grow test strips of the crop(s) or grass(es) you plan to grow the following year in fields previously treated with PASTORA® HERBICIDE. Crop or grass response to the bioassay will indicate whether or not to rotate to the crop(s) or grass(es) grown in the test strips.

If a field bioassay is planned, check with your local Agricultural dealer or DuPont™ BAYER CROPSCIENCE LP representative for information detailing the field bioassay procedure.

ROTATION INTERVALS

Location	Crop or Grass Species	Maximum PASTORA® HERBICIDE Rate on Pasture (ounce/acre)	Minimum Rotation Interval (months)
All areas	Alfalfa, red clover, white clover, sweet clover	2.0	12
	Bermudagrass, bluegrass, ryegrass, tall fescue	2.0	4
	Wheat (except durum)	2.0	4
	Durum, barley, oat	1.5	10
Areas with Soil pH of 7.0 or Less	STS soybeans	1.0	6
	Field corn	1.0	12

APPLICATION INFORMATION

PRODUCT MEASUREMENT

DuPont™ PASTORA® HERBICIDE is measured using the PASTORA® HERBICIDE volumetric measuring cylinder. The degree of accuracy of this cylinder varies by +/- 7.5%. For more precise measurement, use scales calibrated in ounces.

MIXING INSTRUCTIONS

1. Fill the tank 1/4 to 1/3 full of water (If using liquid nitrogen fertilizer solution in place of water, see Tank Mixtures sections for additional details).
2. While agitating, add the required amount of PASTORA® HERBICIDE.
3. Continue agitation until the PASTORA® HERBICIDE is fully dispersed, at least 5 minutes.
4. Once the PASTORA® HERBICIDE is fully dispersed, maintain agitation and continue filling tank with water. PASTORA® HERBICIDE should be thoroughly mixed with water before adding any other material.
5. As the tank is filling, add tank mix partners (if desired) then add the necessary volume of spray adjuvants. Always add spray adjuvants last.
6. If the mixture is not continuously agitated, settling will occur. If settling occurs, thoroughly re-agitate before using.
7. Apply PASTORA® HERBICIDE spray mixture within 24 hours of mixing to avoid product degradation.
8. If PASTORA® HERBICIDE and a tank mix partner are to be applied in multiple loads, pre-slurry the PASTORA® HERBICIDE in clean water prior to adding to the tank. This will prevent the tank mix partner from interfering with the dissolution of the PASTORA® HERBICIDE.

Do not use PASTORA® HERBICIDE with spray additives that reduce the pH of the spray solution to below 3.0.

APPLICATION METHOD

Ground Broadcast Application

When applying a broadcast application by ground, maintain a 50-foot buffer between the point of direct application and the closest downwind edge of non-target aquatic and terrestrial areas. Apply only using nozzles which will deliver medium or larger (VMD > 175 microns) droplets as defined by ASABE S572.1 standard. Do not release spray at a height greater than 4 feet above the ground or crop canopy. Do not apply when wind speed is greater than 10 mph. Do not apply during a temperature inversion.

To obtain optimum spray distribution and thorough coverage, use flat-fan or low-volume flood nozzles.

For flat-fan nozzles, use at least 10 GPA for broadcast applications.

For flood nozzles on 30" spacings, use at least 10 gallons per acre (GPA), flood nozzles no larger than TK10 (or equivalent), and a pressure of at least 30 pounds per square inch (psi). For 40" nozzle spacings, use at least 13 GPA; for 60" spacings, use at least 20 GPA. It is essential to overlap the nozzles 100% for all spacings.

With "Raindrop RA" nozzles, use at least 30 GPA and ensure that nozzle spray patterns overlap 100%.

Use 50-mesh screens or larger.

Ground Spot Application

Spot applications may be made using equipment such as back pack, ATV, or hand sprayers. Thorough coverage of foliage and stems is necessary to optimize results. Use an adjustable conejet nozzle with an orifice size of X6 to X12 or equivalent. The application volume required will vary with the height and density of the weeds or brush and the application equipment used.

Aerial Application

When applying by air, maintain a 100-foot buffer between the point of direct application and the closest downwind edge of non-target aquatic and terrestrial areas. Apply only using nozzles which will deliver medium or larger (VMD > 175 microns) droplets as defined by ASABE S572 standard. Do not release spray at a height greater than 10 feet above the ground or crop canopy unless a greater height is required for aircraft safety. Do not apply when wind speed is greater than 10 mph. Do not apply during a temperature inversion.

Use nozzle types and arrangements that provide optimum spray distribution and maximum coverage.

Use a minimum of 2 GPA.

When applying PASTORA® HERBICIDE by air in areas adjacent to sensitive crops, use solid stream nozzles oriented straight back. Adjust the swath to avoid spray drift damage to sensitive crops downwind and/or use ground equipment to treat the border edge of fields. See the **Spray Drift Management** section of this label. Aerial application is not permitted in New York state.

Chemigation

Do not apply through any type of irrigation system.

SPRAY EQUIPMENT

For specific application equipment, refer to the manufacturer's recommendations for additional information on GPA, pressure, speed, nozzle types and arrangements, nozzle heights above the target canopy, etc.

Be sure to calibrate air or ground equipment properly before application. Select a spray volume and delivery system that will ensure thorough coverage and a uniform spray pattern with minimum drift. Use higher spray volumes to obtain better

coverage when the crop canopy is dense. Avoid swath overlapping, and shut off spray booms while starting, turning, slowing, or stopping to avoid crop injury.

Do not make applications using equipment and/or spray volumes or under weather conditions that might cause spray to drift onto nontarget sites. For additional information on spray drift, refer to the **Spray Drift Management** section of the label.

Continuous agitation is required to keep DuPont™ PASTORA® HERBICIDE in suspension.

BEFORE SPRAYING PASTORA® HERBICIDE

Spray equipment must be clean before PASTORA® HERBICIDE is sprayed. Follow the cleanup procedures specified on the labels of previously applied products. If no directions are provided, follow the six steps outlined in **After Spraying PASTORA® HERBICIDE** section of this label.

AT THE END OF THE DAY

When multiple loads of PASTORA® HERBICIDE herbicide are applied, it is recommended that at the end of each day of spraying, the interior of the tank be rinsed with fresh water and then partially filled, and the boom and hoses flushed. This will prevent the buildup of dried pesticide deposits that can accumulate in the application equipment.

After Spraying PASTORA® HERBICIDE and Before Spraying Crops Other Than Bermudagrass

To avoid subsequent injury to desirable crops, thoroughly clean all mixing and spray equipment immediately following applications of PASTORA® HERBICIDE as follows:

1. Drain tank; thoroughly rinse spray tanks, boom, and hoses with clean water. Loosen and physically remove any visible deposits.
2. Fill the tank with clean water and 1 gallon of household ammonia* (contains 3% active) for every 100 gallons of water. Flush the hoses, boom, and nozzles with the cleaning solution. Then add more water to completely fill the tank. Circulate the cleaning solution through the tank and hoses for at least 15 min. Flush the hoses, boom, and nozzles again with the cleaning solution, and then drain the tank.
3. Remove the nozzles and screens and clean separately in a bucket containing cleaning agent and water.
4. Repeat step 2.
5. Rinse the tank, boom, and hoses with clean water.
6. If only Ammonia is used as a cleaner, the rinsate solution may be applied back to the crop(s) listed on this label. Do not exceed the maximum labeled use rate. If other cleaners are used, consult the cleaner label for rinsate disposal instructions. If no instructions are given, dispose of the rinsate on site or at an approved waste disposal facility.

* Equivalent amounts of an alternate-strength ammonia solution or a cleaner which dissolves and removes sulfonyleurea herbicide residues can be used in the cleanout procedure. Carefully read and follow the individual cleaner instructions.

Notes:

1. Attention: Do not use chlorine bleach with ammonia, as dangerous gases will form. Do not clean equipment in an enclosed area.
2. Steam-cleaning aerial spray tanks is recommended prior to performing the above cleanout procedure to facilitate the removal of any caked deposits.
3. When PASTORA® HERBICIDE is tank mixed with other pesticides, all required cleanout procedures should be examined and the most rigorous procedure should be followed.
4. In addition to this cleanout procedure, all pre-cleanout guidelines on subsequently applied products should be followed as per the individual labels.
5. Where routine spraying practices include shared equipment frequently being switched between applications of PASTORA® HERBICIDE and applications of other pesticides to PASTORA® HERBICIDE -sensitive crops during the same spray season, it is recommended that a sprayer be dedicated to PASTORA® HERBICIDE to further reduce the chance of crop injury.

SPRAY DRIFT MANAGEMENT

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

IMPORTANCE OF DROPLET SIZE

The most effective drift management strategy is to apply the largest droplets which are consistent with pest control objectives. The presence of sensitive species nearby, the environmental conditions, and pest pressure may affect how an applicator balances drift control and coverage. Applying larger droplets reduces drift potential, but will not prevent drift if applications are made improperly or under unfavorable environmental conditions.

A droplet size classification system describes the range of droplet sizes produced by spray nozzles. The American Society of Agricultural and Biological Engineers (ASABE) provide a Standard that describes droplet size spectrum categories defined by a number of reference nozzles (fine, coarse, etc.). Droplet spectra resulting from the use of a specific nozzle may also be described in terms of volume mean diameter (VMD). Coarser droplet size spectra have larger VMD's and

lower drift potential.

CONTROLLING DROPLET SIZE - GROUND APPLICATION

- Nozzle Type - Select a nozzle type that is designed for the intended application. With most nozzle types, narrower spray angles produce larger droplets. The use of low-drift nozzles will reduce drift potential.
- Pressure - The lowest spray pressures recommended for the nozzle produce the largest droplets. Higher pressure reduces droplet size and does not improve canopy penetration. When higher flow rates are needed, using a higher-capacity nozzle instead of increasing pressure results in the coarsest droplet spectrum.
- Flow Rate/Orifice Size - Using the highest flow rate nozzles (largest orifice) that are consistent with pest control objectives reduces the potential for spray drift. Nozzles with higher rated flows produce coarser droplet spectra.

CONTROLLING DROPLET SIZE – AIRCRAFT

- Nozzle Type - Solid stream, or other low drift nozzles produce the coarsest droplet spectra.
- Number of Nozzles - Using the minimum number of nozzles with the highest flow rate that provide uniform coverage will produce a coarser droplet spectrum
- Nozzle Orientation - Orienting nozzles in a manner that minimizes the effects of air shear will produce the coarsest droplet spectra. For some nozzles such as solid stream, pointing the nozzles straight back parallel to the airstream will produce a coarser droplet spectrum than other orientations.
- Pressure – Selecting the pressure that produces the coarsest droplet spectrum for a particular nozzle and airspeed reduces spray drift potential. For some nozzle types such as solid streams, lower pressures can produce finer droplet spectra and increase drift potential

BOOM LENGTH (AIRCRAFT), AND APPLICATION HEIGHT

- Boom Length (aircraft) - Using shorter booms decreases drift potential. Boom lengths are expressed as a percentage of an aircraft's wingspan or a helicopter's rotor blade diameter. Shorter boom length and proper positioning can minimize drift caused by wingtip or rotor vortices.
- Application Height (aircraft) - Applications made at the lowest height that are consistent with pest control objectives and the safe operation of the aircraft will reduce the potential for spray drift.
- Application Height (ground) - Applications made at the lowest height consistent with pest control objectives, and that allow the applicator to keep the boom level with the application site and minimize bounce, will reduce the exposure of spray droplets to evaporation and wind, and reduce spray drift potential.

WIND

Drift potential is lowest when applications are made in light to gentle sustained winds (2-10 mph), which are blowing in a constant direction. Many factors, including droplet size and equipment type also determine drift potential at any given wind speed. AVOID GUSTY OR WINDLESS CONDITIONS.

Local terrain can also influence wind patterns. Every applicator is expected to be familiar with local wind patterns and how they affect spray drift.

TEMPERATURE AND HUMIDITY

Setting up equipment to produce larger droplets to compensate for droplet evaporation can reduce spray drift potential. Droplet evaporation is most severe when conditions are both hot and dry.

SURFACE TEMPERATURE INVERSIONS

Drift potential is high during a surface temperature inversion. Surface inversions restrict vertical air mixing, which may cause small suspended droplets to remain close to the ground and move laterally in a concentrated cloud. Surface inversions are characterized by increasing temperature 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. Mist or fog may indicate the presence of an inversion in humid areas. Inversions may also be identified by producing smoke and observing its behavior. Smoke that remains close to the ground, or moves laterally in a concentrated cloud under low wind conditions indicates a surface inversion. Smoke that moves upward and rapidly dissipates indicates good vertical air mixing.

SHIELDED SPRAYERS

Shielding the boom or individual nozzles can reduce the effects of wind. However, it is the responsibility of the applicator to verify that the shields are minimizing drift potential, and not interfering with uniform deposition of the product.

AIR ASSISTED (AIR BLAST) FIELD CROP SPRAYERS

Air assisted field crop sprayers carry droplets to the target via a downward directed air stream. Some may reduce the potential for drift, but if a sprayer is unsuitable for the application and/or set up improperly, high drift potential can result. It is the responsibility of the applicator to determine that a sprayer is suitable for the intended application, that it is configured properly, and that drift potential has been minimized.

Note: Air assisted field sprayers can affect product performance by affecting spray coverage and canopy penetration. Read the specific crop use and application equipment instructions to determine if an air assisted field crop sprayer can be used.

SENSITIVE AREAS

Making applications when there is a sustained wind moving away from adjacent sensitive areas (e.g., residential areas, bodies of water, known habitat for threatened or endangered species, non-target crops) is an effective way to minimize the effect of spray drift.

DRIFT CONTROL ADDITIVES

Using product compatible drift control additives can reduce drift potential. When a drift control additive is used, read and carefully observe cautionary statements and all other information on the additive's label. If using an additive that increases viscosity, ensure that the nozzles and other application equipment will function properly with a viscous spray solution. Preferred drift control additives have been certified by the Chemical Producers and Distributors Association (CPDA).

STORAGE AND DISPOSAL

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

Pesticide Storage: Store product in original container only. Do not contaminate water, other pesticides, fertilizer, food or feed in storage.

Pesticide Disposal: Do not contaminate water, food, or feed by storage, disposal or cleaning of equipment. Waste resulting from the use of this product must be disposed of on site or at an approved waste disposal facility.

Container Handling: Refer to the Net Contents section of this product's labeling for the applicable "Nonrefillable Container" or "Refillable Container" designation.

Nonrefillable Plastic and Metal Containers (Capacity Equal to or Less Than 50 Pounds): Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water and recap. Shake for 10 seconds. Pour rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Drain for 10 seconds after the flow begins to drip. Repeat this procedure two more times. Then, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Nonrefillable Plastic and Metal Containers (Capacity Greater Than 50 Pounds): Nonrefillable container. Do not reuse or refill this container. Triple rinse container (or equivalent) promptly after emptying. Triple rinse as follows: Empty the remaining contents into application equipment or a mix tank. Fill the container 1/4 full with water. Replace and tighten closures. Tip container on its side and roll it back and forth, ensuring at least one complete revolution, for 30 seconds. Stand the container on its end and tip it back and forth several times. Turn the container over onto its other end and tip it back and forth several times. Empty the rinsate into application equipment or a mix tank or store rinsate for later use or disposal. Repeat this procedure two more times. Then, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Nonrefillable Plastic and Metal Containers, e.g., Intermediate Bulk Containers [IBC] (Size or Shape Too Large to be Tipped, Rolled or Turned Upside Down): Nonrefillable container. Do not reuse or refill this container. Clean container promptly after emptying the contents from this container into application equipment or mix tank and before final disposal using the following pressure rinsing procedure. Insert a lance fitted with a suitable tank cleaning nozzle into the container and ensure that the water spray thoroughly covers the top, bottom and all sides inside the container. The nozzle manufacturer generally provides instructions for the appropriate spray pressure, spray duration and/or spray volume. If the manufacturer's instructions are not available, pressure rinse the container for at least 60 seconds using a minimum pressure of 30 PSI with a minimum rinse volume of 10% of the container volume. Drain, pour or pump rinsate into application equipment or rinsate collection system. Repeat this pressure rinsing procedure two more times. Then, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

Nonrefillable Paper or Plastic Bags, Fiber Sacks including Flexible Intermediate Bulk Containers (FIBC) or Fiber Drums With Liners: Nonrefillable container. Do not reuse or refill this container. Completely empty paper or plastic bag, fiber sack or drum liner by shaking and tapping sides and bottom to loosen clinging particles. Empty residue into application or manufacturing equipment. Then offer for recycling if available or dispose of empty paper or plastic bag, fiber sack or fiber drum and liner in a sanitary landfill, or by incineration, or, if allowed by state and local authorities, by burning. If burned, stay out of smoke.

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

All Other Refillable Containers: Refillable container. *Refilling Container:* Refill this container with PASTORA® HERBICIDE containing nicosulfuron and metsulfuron methyl only. Do not reuse this container for any other purpose. Cleaning before refilling is the responsibility of the refiller. Prior to refilling, inspect carefully for damage such as cracks, punctures, abrasions, worn out threads and closure devices. If damage is found, do not use the container, contact DuPont™ BAYER CROPSCIENCE LP at the number below for instructions. Check for leaks after refilling and before transporting. If leaks are found, do not reuse or transport container, contact DuPont™ BAYER CROPSCIENCE LP at the number below for instructions. *Disposing of Container:* Do not reuse this container for any other purpose other than refilling (see preceding). Cleaning the container before final disposal is the responsibility of the person disposing of the container. To clean the container before final disposal, use the following pressure rinsing procedure. Insert a lance fitted with a suitable tank cleaning nozzle into the container and ensure that the water spray thoroughly covers the top, bottom and all sides inside the container. The nozzle manufacturer generally provides instructions for the appropriate spray pressure, spray duration and/or spray volume. If the manufacturer's instructions are not available, pressure rinse the container for at least 60 seconds using a minimum pressure of 30 PSI with a minimum rinse volume of 10% of the container volume. Drain, pour or pump rinsate into application equipment or rinsate collection system. Repeat this pressure rinsing procedure two more times. Then, for Plastic Containers, offer for recycling if available or puncture and dispose of in a sanitary landfill, or by incineration. Do not burn, unless allowed by state and local ordinances. For Metal Containers, offer for recycling if available or reconditioning if appropriate, or puncture and dispose of in a sanitary landfill, or by other procedures approved by state and local authorities.

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

Do not transport if this container is damaged or leaking. If the container is damaged, leaking or obsolete, or in the event of a major spill, fire or other emergency, contact DuPont™ BAYER CROPSCIENCE LP at 1-800-441-3637 1-800-334-7577, day or night.

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