

352-819

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UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Washington, D C 20460

OFFICE OF  
CHEMICAL SAFETY AND  
POLLUTION PREVENTION

August 7, 2012

Rebecca M Ashley  
E I du Pont de Nemours and Company  
1007 Market Street  
Wilmington, DE 19898

Subject Label Amendment (reformat label, add weeds and tank mix directions,  
add weed resistance information, revise spray drift management  
section, change Alamo switchgrass for use in all states)  
DuPont Pastora Herbicide  
EPA Reg No 352-819  
Application Dated June 21, 2012

Dear Ms Ashley

The labeling referred to above submitted in connection with registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA), as amended, is acceptable

A stamped copy of your label is enclosed for your records This label supersedes all previously accepted labels You must submit one (1) copy of the final printed label before you release the product for shipment Products released for shipment after eighteen (18) months from the date of this letter must bear the new revised label If these conditions are not complied with, the registration will be subject to cancellation in accordance with FIFRA §6(e) Your release for shipment of the product constitutes acceptance of these conditions

If you have any questions, please contact Mindy Ondish at (703)605-0723 or at [ondish.mindy@epa.gov](mailto:ondish.mindy@epa.gov)

Sincerely,

A handwritten signature in black ink, appearing to read "Kable Bo Davis", written over a horizontal line.

Kable Bo Davis  
Product Manager 25  
Herbicide Branch  
Registration Division (7505P)



**DuPont™ Pastora®**  
herbicide

**DRAFT LABEL**

## DUPONT™ 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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GROUP	2	HERBICIDE
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# DuPont™ Pastora®

## herbicide

### Dry Flowable

**For Use on Established Bermudagrass Pastures and Hay Meadows Bermudagrass Turf (Unimproved Only) and Alamo Switchgrass**

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 352 819	EPA Est No _____
Nonrefillable Container	OR Refillable Container
Net _____	Net _____

### 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 1 800 441 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® must be used only in accordance with instructions on this label or in separate DuPont publications

DuPont will not be responsible for losses or damages resulting from the use of this product in any manner not specified by DuPont

Do not apply this product through any type of irrigation system

### PRODUCT INFORMATION

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

PASTORA® is a dry flowable granule that controls or suppresses broadleaf and grass weeds PASTORA® 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® is noncorrosive nonflammable nonvolatile and does not freeze

PASTORA® controls broadleaf weeds by preemergence and postemergence activity and grass weeds by postemergence activity For best results apply PASTORA® 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® 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® 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® into the weed root zone weeds that germinate after treatment will not be controlled

Application of PASTORA® 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®

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® per acre per year for use in bermudagrass pastures and non agricultural uses. Do not apply more than 2.0 ounces of PASTORA® per acre per year for use in Alamo Switchgrass

### **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® and are more likely to exhibit crop response in the form of temporary yellowing or stunting. DuPont 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® 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® application, temporary discoloration and/or grass injury may occur. PASTORA® 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® 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® to grass grown for seed, sod or sprigging has not been evaluated for all bermudagrass varieties. Use of PASTORA® 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® 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  $\geq 14$  mils

## BERMUDAGRASS PASTURES

### APPLICATION TIMING

Apply DuPont™ PASTORA® 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® 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 overgrazing).

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

Spring or summer applications of PASTORA® 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® may be necessary. Allow at least 16 days between applications of PASTORA®.

### USE RATES

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

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

### SPRAY ADJUVANTS

Unless otherwise directed, applications of PASTORA® 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 fact sheets, technical bulletins, and service policies prior to using other adjuvant systems. If another herbicide is tank mixed with PASTORA®, 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 Consult separate DuPont technical bulletins for detailed information before using adjuvant types not specified on this label

## WEED CONTROL INFORMATION

DuPont™ PASTORA® 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® and will be severely stunted or injured

### WEEDS CONTROLLED OR SUPPRESSED

#### 1 0 ounce per acre

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

#### 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	
Clover	Multiflora rose*‡	(locoweed)	

\* 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



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## **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® 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® may be tank mixed with 1/3 to 3/4 ounces of DuPont™ CIMARRON® PLUS per acre.

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

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

**Canada Thistle** For suppression apply either PASTORA® or PASTORA® 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® 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® can improve results.

**Crabgrass (large)** For best suppression of Large Crabgrass apply PASTORA® 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® in a tank mix with glyphosate.

**Johnsongrass** For best results on seedling Johnsongrass apply PASTORA® before seedlings reach 12" in height. For best results on rhizome Johnsongrass apply PASTORA® 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® in a tank mix with dicamba (such as Banvel® or Clarity®) and 2,4-D. Apply PASTORA® 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® 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® and may not be fully controlled with PASTORA®. Consult with your local DuPont 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® 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® is very effective for removal of bahiagrass from bermudagrass pastures. In highly infested pastures the use of PASTORA® can clear the areas of useful forage until the bermudagrass has time to cover the area. Therefore PASTORA® 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® for the control of common or Argentine bahiagrass. Also do not apply PASTORA® 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® 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® may only suppress growth resulting in a reduction in sandbur seedheads. For best results in these situations apply PASTORA® 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® 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® 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® 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® or PASTORA® 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® 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® 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® 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® in the late spring or early summer from cotyledon through 2 true leaf stage

**Yellow Foxtail** For best results use PASTORA® in a tank mix with glyphosate

### TANK MIXTURES

PASTORA® 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®

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

**DuPont™ CIMARRON® PLUS** PASTORA® may be tank mixed with 1/3 to 3/4 ounces of CIMARRON® PLUS 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

**CIMARRON® MAX** PASTORA® may be tank mixed with CIMARRON® MAX 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® 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® 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® plus glyphosate may result in temporary yellowing or stunting of bermudagrass Do not make a tank mix application of PASTORA® 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® in fertilizer solution

PASTORA® 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® 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 representative for a specific recommendation before adding an adjuvant to these tank mixtures

If 2,4-D is included with DuPont™ PASTORA® and liquid nitrogen fertilizer mixture ester formulations tend to be more compatible (See manufacturer's label). Do not add spray adjuvants when using PASTORA® 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 fertilizer 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® may be tank mixed or used sequentially with insecticides such as DuPont™ PREVATHON® and fungicides registered for use on pastures.

However, under certain conditions (drought stress or cold weather), tank mixes or sequential applications of PASTORA® 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® plus Malathion, as grass injury will result.

## **ADDITIONAL USES**

### **ALAMO SWITCHGRASS**

PASTORA® is registered for the control of grass and broadleaf weeds in Alamo switchgrass. Application can be made any time after the switchgrass has reached the 2 leaf stage. Apply PASTORA® at 1.0 ounce per acre with non-ionic surfactant when weeds are young and actively growing.

Temporary leaf yellowing or stunting is more likely to occur during the switchgrass establishment year and tends to be worse when the grass is in the 2 to 4 leaf stage. To the extent consistent with applicable law, this risk must be assumed by the user.

Do not make more than two applications of PASTORA® to switchgrass per year. Allow at least 16 days between applications of PASTORA®. Do not apply more than 2.0 ounces of PASTORA® per acre per year to switchgrass.

## **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® 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® 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® and 2 to 4 pints of non-ionic surfactant per 100 gallons of water. If PASTORA® 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® per year. Allow at least 16 days between applications of PASTORA®. Do not apply more than 2.5 ounces of PASTORA® 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® as directed Grazing animals do not have to be moved off the pasture before during or after applying PASTORA®

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® 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® applied PASTORA® 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® breakdown in soil while high soil pH low soil temperature and low soil moisture slow PASTORA® 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® 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® 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®

### CHECKING SOIL PH

Before using PASTORA® 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® 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 representative for information detailing the field bioassay procedure

## ROTATION INTERVALS

Location	Crop or Grass Species	Maximum PASTORA® 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® is measured using the PASTORA® volumetric measuring cylinder. The degree of accuracy of this cylinder varies by +/- 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®.
3. Continue agitation until the PASTORA® is fully dispersed, at least 5 minutes.
4. Once the PASTORA® is fully dispersed, maintain agitation and continue filling tank with water. PASTORA® 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® spray mixture within 24 hours of mixing to avoid product degradation.
8. If PASTORA® and a tank mix partner are to be applied in multiple loads, pre-slurry the PASTORA® in clean water prior to adding to the tank. This will prevent the tank mix partner from interfering with the dissolution of the PASTORA®.

Do not use PASTORA® 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® 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® in suspension.

#### **Before Spraying PASTORA®**

Spray equipment must be clean before PASTORA® 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® section of this label.

#### **At the End of the Day**

When multiple loads of PASTORA® 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® 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® 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® 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 precleanout 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® and applications of other pesticides to PASTORA® sensitive crops during the same spray season, it is recommended that a sprayer be dedicated to PASTORA® 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 VMDs 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® 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® 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 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 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 at 1 800 441 3637 day or night

**NOTICE TO BUYER** Purchase of this material does not confer any rights under patents of countries outside of the United States

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Ban el and Clarity are trademarks or registered trademarks of BASF Corporation

Raindrop is a registered trademark of GP Companies Inc

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## LIMITATION OF WARRANTY AND LIABILITY

NOTICE Read this Limitation of Warranty and Liability Before Buying or Using This Product If the Terms Are Not Acceptable Return the Product at Once Unopened and the Purchase Price Will Be Refunded

It is impossible to eliminate all risks associated with the use of this product Such risks arise from weather conditions soil factors off target movement unconventional farming techniques presence of other materials the manner of use or application or other unknown factors all of which are beyond the control of DuPont These risks can cause ineffectiveness of the product crop injury or injury to non target crops or plants WHEN YOU BUY OR USE THIS PRODUCT YOU AGREE TO ACCEPT THESE RISKS

DuPont warrants that this product conforms to the chemical description on the label thereof and is reasonably fit for the purpose stated in the Directions for Use subject to the inherent risks described above when used in accordance with the Directions for Use under normal conditions

TO THE EXTENT CONSISTENT WITH APPLICABLE LAW DUPONT MAKES NO OTHER EXPRESS OR IMPLIED WARRANTY OF FITNESS OR OF MERCHANTABILITY OR ANY OTHER EXPRESS OR IMPLIED WARRANTY TO THE EXTENT CONSISTENT WITH APPLICABLE LAW IN NO EVENT SHALL DUPONT OR SELLER BE LIABLE FOR ANY INCIDENTAL CONSEQUENTIAL OR SPECIAL DAMAGES RESULTING FROM THE USE OR HANDLING OF THIS PRODUCT BUYER S OR USER S BARGAINED FOR EXPECTATION IS CROP PROTECTION TO THE EXTENT CONSISTENT WITH APPLICABLE LAW THE EXCLUSIVE REMEDY OF THE USER OR BUYER AND THE EXCLUSIVE LIABILITY OF DUPONT OR SELLER FOR ANY AND ALL CLAIMS LOSSES INJURIES OR DAMAGES (INCLUDING CLAIMS BASED ON BREACH OF WARRANTY OR CONTRACT NEGLIGENCE TORT OR STRICT LIABILITY) WHETHER FROM FAILURE TO PERFORM OR INJURY TO CROPS OR OTHER PLANTS AND 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 DUPONT OR SELLER THE REPLACEMENT OF THE PRODUCT

To the extent consistent with applicable law that allows such requirement DuPont or its Ag Retailer must have prompt notice of any claim so that an immediate inspection of buyer s or user s growing crops can be made Buyer and all users shall promptly notify DuPont or a DuPont Ag Retailer of any claims whether based on contract negligence strict liability other tort or otherwise or be barred from any remedy

This Limitation of Warranty and Liability may not be amended by any oral or written agreement

**ACCEPTED**

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Under the Federal Insecticide  
Fungicide and Rodenticide Act  
as amended for the pesticide  
registered under  
EPA Reg No 352-819

For product information call 1 888 6 DUPONT [1 888 638 7668]

Internet address [http //cropprotection dupont com/](http://cropprotection.dupont.com/)

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