

## UNITED STATES ENVIRONMENTAL PROTECTION AGENCY WASHINGTON, DC 20460

OFFICE OF CHEMICAL SAFETY AND POLLUTION PREVENTION

May 11, 2015

Tim McPherson Senior Product Registration Manager E.I. du Pont de Nemours & Company 1007 Market Street, Wilmington, DE 19898

Subject: Label Amendment – Multiple revisions

Product Name: DuPont Basis Blend herbicide

EPA Registration Number: 352-854 Application Date: January 27, 2015

Decision Number: 499741

Dear Mr. McPherson:

The amended label referred to above, submitted in connection with registration under the Federal Insecticide, Fungicide and Rodenticide Act, as amended, is acceptable. This approval does not affect any conditions that were previously imposed on this registration. You continue to be subject to existing conditions on your registration and any deadlines connected with them.

A stamped copy of your labeling is enclosed for your records. This labeling supersedes all previously accepted labeling. You must submit one copy of the final printed labeling before you release the product for shipment with the new labeling. In accordance with 40 CFR 152.130(c), you may distribute or sell this product under the previously approved labeling for 18 months from the date of this letter. After 18 months, you may only distribute or sell this product if it bears this new revised labeling or subsequently approved labeling. "To distribute or sell" is defined under FIFRA section 2(gg) and its implementing regulation at 40 CFR 152.3.

Should you wish to add/retain a reference to the company's website on your label, then please be aware that the website becomes labeling under the Federal Insecticide Fungicide and Rodenticide Act and is subject to review by the Agency. If the website is false or misleading, the product would be misbranded and unlawful to sell or distribute under FIFRA section 12(a)(1)(E). 40 CFR 156.10(a)(5) list examples of statements EPA may consider false or misleading. In addition, regardless of whether a website is referenced on your product's label, claims made on the website may not substantially differ from those claims approved through the registration process. Therefore, should the Agency find or if it is brought to our attention that a website contains false or misleading statements or claims substantially differing from the EPA approved registration, the website will be referred to the EPA's Office of Enforcement and Compliance.

Your release for shipment of the product constitutes acceptance of these conditions. If these conditions are not complied with, the registration will be subject to cancellation in accordance

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with FIFRA section 6. If you have any questions, please contact Aswathy Balan by phone at 703-347-0510, or via email at <u>balan.aswathy@epa.gov</u>.

Sincerely,

Heather A. Garvie, Product Manager 24 Fungicide Herbicide Branch (7505P)

Office of Pesticide Programs

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Enclosure





# **DuPont™ Basis® Blend**

## HERBICIDE

GROUP	2	HERBICIDE

# For fallow, preemergence and postemergence use in Field Corn and preplant use in Seed Corn and Soybeans

Active Ingredients	By Weight
Rimsulfuron	
N-((4,6-dimethoxypyrimidin-2-yl)aminocarbonyl)-3-(ethylsulfonyl)-2-pyridinesulfonamide	20.0%
Thifensulfuron-methyl	
Methyl 3-[[[[(4-methoxy-6-methyl-1,3,5-triazin-2-yl) amino]carbonyl]amino]sulfonyl]-2-thiophenecarboxylate	10.0%
Other Ingredients	70.0%
TOTAL	100.0%
EPA REG. NO. 352-854 EPA Est. No	
Nonrefillable Container	
Net:	
OR	
Refillable Container	
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 5 minutes, then continue rinsing eye. Call a poison control center or doctor for treatment advice.

**IF ON SKIN OR CLOTHING:** Take off contaminated clothing. Rinse skin immediately with plenty of water for 15-20 minutes. Call a poison control center or doctor for treatment advice.

**IF SWALLOWED:** Call a poison control center or doctor immediately for treatment advice. Have person sip a glass of water if able to swallow. Do not induce vomiting unless told to by a poison control center or doctor. Do not give anything 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!** Avoid contact with skin, eyes, or clothing.

## PERSONAL PROTECTIVE EQUIPMENT (PPE)

## Applicators and other handlers must wear:

Long-sleeve shirt and long pants.

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

Shoes plus socks.

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 the Worker Protection Standard (WPS) for agricultural pesticides [40 CFR 170.240(d)(4-6)], the handler PPE requirements may be reduced or modified as specified in the WPS.

Important: When reduced PPE is worn because a closed system is being used, handlers must be provided all PPE specified above for "Applicators and Other Handlers" and have such PPE immediately available for use in an emergency, such as a spill or equipment breakdown.

#### **USER SAFETY RECOMMENDATIONS**

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

## **ENVIRONMENTAL HAZARDS**

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 by cleaning of equipment washwaters or rinsate.

## **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 in your State responsible for pesticide regulation.

DuPont™ BASIS® Blend herbicide, referred to below as DuPont™ BASIS® Blend or BASIS® Blend, must be used only in accordance with instructions on this label or in separately published DuPont instructions Supplemental Labels, Special Local Need Registrations, FIFRA Section 18 exemptions, FIFRA 2(ee) Bulletins, or as otherwise permitted by FIFRA. Always read the entire label, including the Limitation of Warranty and Liability.

#### 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.

Chemical resistant gloves.

Shoes plus socks.

## PRODUCT INFORMATION

BASIS® Blend must be used only in accordance with instructions on this label or in supplemental DuPont publications. DuPont will not be responsible for losses or damage resulting from use of this product in any manner not specified by DuPont.

BASIS® Blend is a water soluble granule which is a selective herbicide for burndown and residual control of certain annual grass and broadleaf weeds.

BASIS® Blend can be tank mixed with a variety of herbicides to improve burndown and residual control. However, the most restrictive label must be followed.

BASIS® Blend is absorbed through the roots and leaf tissue of plants, rapidly inhibiting the growth of susceptible weeds. Rainfall or sprinkler irrigation is needed to move BASIS® Blend into the soil. Susceptible weeds will generally not emerge from a preemergence application. In some cases, susceptible weeds may germinate and emerge a few days after application, but growth then ceases and leaves become chlorotic three to five days after emergence. Death of leaf tissue and growing point will follow in some species, while others will remain green, stunted and noncompetitive.

The herbicidal action of BASIS® Blend may be less effective on weeds stressed from adverse environmental conditions (such as extreme temperatures or moisture), abnormal soil conditions or cultural practices.

BASIS® Blend residual is most effective in controlling weeds when adequate rainfall is received within 5-7 days after application. If cultivation is necessary because of soil crusting, soil compaction or weed germination before rain occurs, use shallow tillage such as rotary hoe to lightly incorporate BASIS® Blend and make certain crop seeds are below the tilled area.

Consult with your local seed company representative for any additional information relative to potential crop sensitivity to BASIS® Blend.

## RESTRICTIONS

Do not apply to popcorn or sweet corn.

Do not apply preemergence or postemergence to seed corn or soybeans.

Do not apply more than 1.0 oz active ingredient rimsulfuron per acre per growing season. This includes combinations of fallow, preplant preemergence and postemergence applications of DuPont<sup>TM</sup> BASIS® Blend, as well as rimsulfuron from applications of products such as DuPont<sup>TM</sup> INSTIGATE<sup>TM</sup>, DuPont<sup>TM</sup> PREQUEL®, DuPont<sup>TM</sup> RESOLVE® Q, RESOLVE® SG and DuPont<sup>TM</sup> STEADFAST® Q herbicides.

Do not apply more than 0.825 ounces of BASIS® Blend postemergence, per acre per application to field corn, unless instructed to do so by DuPont technical bulletins, fact sheets, or supplemental labeling.

Do not apply to coarse-textured soils (sand, loamy sand or sandy loam) with less than 1% organic matter.

Do not tank mix BASIS® Blend with "Basagran" or severe crop injury may occur.

Do not tank mix BASIS® Blend with foliar-applied organophosphate insecticides such as chlorpyrifos ("Lorsban"), malathion, etc, as severe crop injury may occur. To avoid crop injury or antagonism, apply these products at least seven days before or 3 days after the application of BASIS® Blend.

Do not apply the organophosphate insecticide "Counter" within 45 days of a preplant or preemergence application of BASIS® Blend since crop injury may result.

Do not apply BASIS® Blend within 45 days of crop emergence where the organophosphate insecticide, terbufos ("Counter") was applied since crop injury may occur. Applications made to corn previously treated with chlorpyrifos or other similar organophosphate insecticides may result in unacceptable crop injury. Any crop injury or yield loss resulting from these applications are the responsibility of the grower.

Injury or loss of desirable trees or vegetation may result from failure to observe the following:

- Do not apply BASIS® Blend or drain or flush application equipment on or near desirable trees or other plants, or on areas where their roots may extend, or in locations where the chemical may be washed or moved into contract with their roots.
- Do not use on lawns, walks, driveways, tennis courts, or similar areas.
- Do not contaminate any body of water.

Do not graze, feed forage, grain or fodder (stover) from treated areas to livestock within 30 days of BASIS® Blend application.

Do not irrigate BASIS® Blend into coarse soils at planting time when soils are saturated.

Do not apply this product through any type of irrigation system unless instructed to do so by DuPont technical bulletins, fact sheets, or supplemental labeling.

Do not use flood or furrow irrigation to apply BASIS® Blend.

## **PRECAUTIONS**

Allow at least 4 weeks between preemergence application of BASIS® Blend and postemergence applications of unsafened rimsulfuron-containing herbicides such as INSTIGATE $^{\text{TM}}$ .

BASIS® Blend may interact with certain insecticides previously applied to the crop. Crop response varies with field crop, insecticide used, insecticide application methods, and soil type.

BASIS® Blend may be applied to corn previously treated with "Fortress", "SmartChoice", "Aztec", or "Force" insecticides, or nonorganophosphate soil insecticides regardless of soil type.

Preplant/Preemergence applications of BASIS® Blend to field crops where an application of "Lorsban" or "Thimet" is planned may cause unacceptable crop injury, especially on soils of less than 4% organic matter.

Crop injury may occur following an application of BASIS® Blend if there is a prolonged period of cold weather and/or in conjunction with wet soils.

Prevent drift or spray to desirable plants.

Thoroughly clean application equipment immediately after use. It is recommended to flush the sprayer system and recharge with clean water when there are extended periods between BASIS® Blend applications. See Sprayer Cleanup section of this label for instructions.

## **WEED RESISTANCE**

BASIS® Blend, which contains the active ingredients rimsulfuron and thifensulfuron-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 within and between crop seasons such as using a combination of tillage, 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.

## APPLICATION INFORMATION

#### **Fallow**

#### Rate

Apply DuPont™ BASIS® Blend at 0.825 - 2.5 ounces per acre.

#### **Timing to Crop & Weeds**

BASIS® Blend may be used as a fallow treatment, in the fall or spring when the majority of weeds have emerged and are actively growing.

#### **Tank Mixtures**

BASIS® Blend may be used as a fallow treatment and may be tank mixed with other herbicides that are registered for use in fallow such as ABUNDIT® Extra, DuPont™ EXPRESS®, DuPont™ PANOFLEX™, glyphosate, paraquat, glufosinate, saflufenacil, 2,4-D LVE, and dicamba herbicides for improved control of emerged weed species. Read and follow all instructions on this label and the labels of any tank mix partner before using any other herbicide in mixtures with BASIS® Blend. If the instructions on the tank mix partner label conflict with this BASIS® Blend label, do not use in a tank mixture with BASIS® Blend.

For best control of emerged weeds, apply BASIS® Blend to grasses less than 3" tall, broadleaf weeds less than 4" tall and winter annuals/biennials less than 6" tall. Make application prior to flowering.

## Field Corn - Preplant/Preemergence

#### Rate

Apply BASIS® Blend at 0.825 - 2.5 ounce per acre before corn emergence. See cumulative rimsulfuron rate limitation noted in Product Information. BASIS® Blend at 1.25 - 1.5 ounce per acre fits most preemergence/preplant applications.

#### **Timing to Crop**

BASIS® Blend may be applied preplant after fall harvest of the preceding crop through early spring, up to planting, whenever the ground is not frozen, to control emerged weeds and to provide limited residual control of early-emerging spring weeds.

Control of emerged weeds will require the addition of spray adjuvants, and can be further enhanced with additional tank mix partners as noted in this label.

#### **Sequential Application**

BASIS® Blend may be used in a sequential herbicide program in corn. Apply BASIS® Blend for burndown and residual weed control, followed by a post, in-crop application of  $DuPont^{TM}$  REALM® Q,  $DuPont^{TM}$  RESOLVE® Q or  $DuPont^{TM}$  STEADFAST® Q herbicides.

Make sequential applications after the corn has reached the 2 collar stage but before the corn exceeds the maximum application height listed on the respective product label.

Refer to the appropriate product label for use restrictions, application information, rotational crop guidelines, and cautionary statements prior to application.

## **Additional Control of Grasses and Broadleaves**

DuPont<sup>TM</sup> BASIS® Blend may be tank mixed with full or reduced rates of labeled preplant/preemergence grass and broadleaf herbicides such as atrazine, DuPont<sup>TM</sup> CINCH® brands and DuPont<sup>TM</sup> BREAKFREE® brands to provide added residual activity or burndown activity on emerged weeds. Sequential applications of DuPont<sup>TM</sup> INSTIGATE<sup>TM</sup>, DuPont<sup>TM</sup> PREQUEL<sup>TM</sup>, DuPont<sup>TM</sup> CINCH® brands and DuPont<sup>TM</sup> BREAKFREE® brands may also be made following preplant applications of BASIS® Blend. Consult tank mix partner labeling for rate and soil-type restrictions.

## Field Corn - Postemergence

#### Rate

Apply BASIS® Blend at 0.825 ounces per acre as a postemergence broadcast application.

#### **Timing to Crop**

BASIS® Blend may be applied to field corn in the spike through 4-leaf (2 collar) stage (approximately 1/2" to 6" tall). Do not apply to corn having 3 fully emerged collars or over 6" tall.

## **Timing to Emerged Weeds**

Apply BASIS® Blend when grasses are young and actively growing, but before they exceed the sizes listed on this label.

On "Roundup Ready" corn, glyphosate may be applied with BASIS® Blend after weeds emerge but before they reach the maximum size listed on the glyphosate herbicide label.

On "Liberty Link" corn, glufosinate may be applied with BASIS® Blend after weeds emerge but before they reach the maximum size listed on the glufosinate herbicide label.

Applications made to weed sizes greater than those listed on these product labels may result in incomplete control. Grass competition due to incomplete control may reduce yields.

## **Sequential Application - Postemergence**

Apply DuPont™ ACCENT® Q herbicide 14 or more days after the BASIS® Blend application to control grasses that may emerge later in the season. Refer to the ACCENT® Q label for grass species controlled, proper size of weeds, rates, corn sizes, and other information. When following a BASIS® Blend application, do not use more than 0.9 ounce per acre of ACCENT® Q.

## Seed Corn - Early Preplant in the Fall

#### Rate

Apply BASIS® Blend at 0.825 oz/A.

#### **Timing to Crop**

BASIS® Blend may be applied after fall harvest of the preceding crop until ground freezes or December 15.

#### **Control of Grasses and Broadleaves**

BASIS® Blend may be used in a sequential herbicide program in seed corn. Apply BASIS® Blend for burndown and residual weed control.

Preplant/preemergence applications of atrazine, CINCH® brands or BREAKFREE® brands may be made following fall applications of BASIS® Blend.

Fall applied BASIS® Blend can be followed by a post, in-crop application of products such as ACCENT® Q herbicide.

Refer to the appropriate product label for use restrictions, application information, rotational crop guidelines, and cautionary statements prior to application.

#### Soybeans - Preplant

#### Rate

Apply BASIS® Blend at 0.825 ounces per acre 15 days or more prior to planting.

Apply BASIS® Blend at 1.25 ounces per acre 60 days or more prior to planting in the states of KS and OK the counties containing HWY 81 and east and in MO (excluding the bootheel), IL, IN, OH, and WV the counties that contain I-70 and south and the states of DE, MD and VA.

Apply BASIS® Blend at 0.825 - 2.5 ounces per acre 0 days or more prior to planting soybeans with Bolt™ technology.

Refer to Rotational Crop Guidelines for additional rotational interval information.

## **Timing to Crop**

BASIS® Blend may be applied preplant after fall harvest through early spring, whenever the ground is not frozen, to control emerged weeds and to provide limited residual control of early-emerging spring weeds.

Control of emerged weeds will require the addition of spray adjuvants, and can be further enhanced with additional tank mix partners as noted in this label.

## **Sequential Application - Soybeans**

DuPont<sup>TM</sup> BASIS® Blend may be used in a sequential herbicide program in soybeans followed by an appropriate application of DuPont products such as DuPont<sup>TM</sup> AFFORIA<sup>TM</sup>, DuPont<sup>TM</sup> CANOPY, DuPont<sup>TM</sup> CINCH®, DuPont<sup>TM</sup> ENVIVE®, DuPont<sup>TM</sup> ENLITE®, DuPont<sup>TM</sup> CLASSIC®, DuPont<sup>TM</sup> SYNCHRONY®, and/or DuPont<sup>TM</sup> ASSURE® II herbicides. Refer to the product labels for use restrictions, application information, rotational crop guidelines, and cautionary statements prior to application.

BASIS® Blend may be tank mixed with preplant herbicides registered for soybeans such as AFFORIA™, CANOPY®, CINCH®, ENVIVE®, ENLITE®, CLASSIC® and SYNCHRONY® herbicides. Refer to the product labels for use restrictions, application information, rotational crop guidelines, and cautionary statements prior to application.

#### **Additional Information:**

Soybeans may be planted per the label guidelines following a BASIS® Blend application provided any one of the following conditions is met:

- Soil temperature post application is > 50° for more than 10 days prior to planting.
- Field cultivation or discing is utilized to prepare the seedbed (not vertical tillage).
- The soybean variety has been designated to have a high degree of crop tolerance to ALS inhibiting and/or sulfonylurea herbicides. Consult seed provider for confirmation.

If none of these conditions are met, extend soybean recrop interval to 10 months.

Crop injury may occur from applications made to poorly drained soils under cool, and excessively wet conditions. Risk of crop injury can be minimized by not using on poorly drained soils, and planting at least 1.5 inches deep.

The use of soil-active ALS herbicides contained in products such as Autumn brands, Corvus or Capreno in the previous crop or prior to planting soybeans in the current cropping year may impact soybean tolerance to BASIS® Blend.

## **Spray Adjuvants**

For control of emerged weeds, application of BASIS® Blend must include a crop oil concentrate, modified seed oil or a nonionic surfactant. In addition, an ammonium nitrogen fertilizer must be used unless specifically prohibited by the tankmix partner labeling. Crop oil concentrate/modified seed oil plus ammonium nitrogen fertilizer is the preferred adjuvant system for BASIS® Blend for control of emerged weeds. When applied in tank mix combination with a glyphosate or glufosinate herbicide that contains a built-in adjuvant system, ensure the total adjuvant load is equivalent to the recommendations on this label. Select adjuvants authorized for use with both products.

Consult local DuPont fact sheets, technical bulletins, and service policies prior to using other adjuvant systems. Products must contain only EPA-exempt ingredients.

Do not use with spray additives that alter the pH of the spray solution below 5.0 or above 9.0 as rapid product degradation can occur. Spray solutions of pH 6.0 - 8.0 allow for optimum stability of BASIS® Blend.

#### Petroleum Crop Oil Concentrate (COC) or Modified Seed Oil (MSO)

- Apply at 1% v/v (1 gallon per 100 gallons spray solution) or 2% under arid conditions.
- MSO adjuvants may be used at 0.5% v/v (0.5 gallon per 100 gallons spray solution) if specifically noted on adjuvant product labeling.
- Oil adjuvants must contain at least 80% high quality, petroleum (mineral) or modified vegetable seed oil with at least 15% surfactant emulsifiers.

#### **Nonionic Surfactant (NIS)**

- Apply at 0.25% v/v (1 qt per 100 gal spray solution).
- Surfactant products must contain at least 60% nonionic surfactant with a hydrophilic/lipophilic balance (HLB) greater than 12.

## **Ammonium Nitrogen Fertilizer**

- Use 2 qt/acre of a high-quality urea ammonium nitrate (UAN) such as 28%N or 32%N, or 2 lb/acre of a spray-grade ammonium sulfate (AMS).
- Do not use liquid nitrogen fertilizer as the total carrier solution after crop emergence.

#### **Special Adjuvant Types**

• Combination adjuvant products may be used at doses that provide the required amount of NIS and ammonium nitrogen fertilizer. Consult product literature for use rates and restrictions.

## Weeds Controlled/Suppressed

BASIS® Blend may be tank mixed with glyphosate, paraquat, glufosinate, saflufenacil, 2,4-D LVE, and dicamba herbicides for improved control of emerged weed species. For application methods and other use specifications use the most restrictive label directions for the intended combination.

Refer to the Spray Adjuvants section for additional information on proper adjuvant selection.

Alfaffa volunteer  C		Burn down	Burndown when tank mixed with	n ii inigraani i
Balley, volunteer	Weeds & Grasses	DuPont™ BASIS® Blend Alone	glyphosate plus 2,4D or dicamba	Residual-BASIS® Blend
Barnyardgrass				
Bitheresis				
Bluegrass, annual   C				
Rome, downy				
Buckwheat, common				
Butercup, smallfower				
Carpetweed				
Canada thistle	1			
Cachewood hesternw				
Chanomite, false				
Chickwed (common, mousear)				
Cocklebur				
Carbgrass	` ` `			
Congress woolly (1")   C				
Curly Dock				
Dandelrot (6" diametery				
Deadnettle_purple				
Eveningprimose, cutleaf				
Fescue, tall				
Field pennycress				
Filarce, redstem				
Foxtail (bristly, giant, green, yellow)   C	1 2			
Foxtail   Carolina   C				
Geranium, Carolina   C				
Groundsel, common				
Hemlock, poison (up to 12")   C				
Henbit				
Knotweed, prostrate				
Jimsonweed				
Johnsongrass, seedling				
Color			<del></del>	
Lambsquarters, common         C         C         C           Marestail (Horseweed)         S         C         NC           Millet, wild proso         S         C         NC           Morningglory, ivyleaf         S         C         S           Mustard (birdsrape, black)         C         C         C           Mustard, wild         C         C         C           Nightshade, hairy         S         C         S           Nightshade, black         NC         C         C           Palmer amaranth         NC         C         S           Palmer amaranth         NC         C         S           Panicum, fall         C         C         C         S           Parsinj, wild         C         C         S         S           Parsing, common         S         C         C         C           Purslane, common         S         C         C         C           Purslane, common         S         C         C         C           Purslane, common         S         C         C         C           Rayeed, prostrate, redroot, smooth)         C'         C         C         C				
Marestail (Horseweed)         S         C         C'           Millet, wild proso         S         C         NC           Morningglory, ivyleaf         S         C         S           Mustard (birdsrape, black)         C         C         C           Mustard, wild         C         C         NC           Mightshade, blairy         S         C         S           Nightshade, black         NC         C         S           Palmer amaranth         NC         C         S           Palmer amaranth         NC         C         S           Parsinj, wild         C         C         S           C         C         S         S           Pigweed (prostrate, redroot, smooth)         C'         C         C           Pigweed (prostrate, redroot, smooth)         C'         C         C           Pigweed (prostrate, redroot, smooth)         C'         C         C           Purslane, common         S         C         C         C           Reason, common         S         C         C         C           Rayears, stallate, common         S         C         NC         S           Russian thistle,				
Millet, wild proso         S         C         NC           Morningglory, ivyleaf         S         C         S           Mustard (birdsrape, black)         C         C         C           Mustard, wild         C         C         C           Nightshade, hairy         S         C         S           Nightshade, black         NC         C         S           Palmer amaranth         NC         C         S           Palmer amaranth         NC         C         S           Panicum, fall         C         C         C         S           Parsnip, wild         C         C         C         S           Pigweed (prostrate, redroot, smooth)         C°         C         C         S           Pigweed (prostrate, redroot, smooth)         C°         C         C         C           Parsnip, wild         C°         C         C         C         C           Parsnip, wild         C°         C				
Morningglory, ivyleaf         S         C         S           Mustard (birdsrape, black)         C         C         C         C           Mustard, wild         C         C         NC         NC           Nightshade, hairy         S         C         S         NC           Nightshade, black         NC         C         S         Palmer amaranth         NC         C         S           Palmer amaranth         NC         C         C         S         Palmer amaranth         NC         C         S         Palmer amaranth         NC         C         S         S         Panicum, fall         C         C         S         S         C         S         S         Panicum, fall         C         C         C         S         S         C         C         S         S         C         C         C         S         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         C         NC         NC         C         C         C         NC         NC         NC         NC         NC         NC	` ′			
Mustard (birdsrape, black)         C         C         C           Mustard, wild         C         C         NC           Nightshade, hairy         S         C         S           Nightshade, black         NC         C         S           Palmer amaranth         NC         C°         S¹           Panicum, fall         C         C         S           Parsnip, wild         C         C         S           Parsnip, wild         C         C         C           Pigweed (prostrate, redroot, smooth)         C°         C         C           Pigweed (prostrate, redroot, smooth)         C°         C         C           Purslane, common         S         C         C         C           Purslane, common         S         C         C         C           Ragweed, common         S         C         C         C           Ragweed, common         S         C         S         NC           Ragweed, common         S         C         S         S           Russian thistle, seedling         NC         C         S           Russian thistle, seedling         NC         C         S				
Mustard, wild         C         C         NC           Nightshade, hairy         S         C         S           Nightshade, black         NC         C         S           Palmer amaranth         NC         C°         S¹           Panicum, fall         C         C         S           Parsnip, wild         C         C         C           Rayned, common         S         C         NC				
Nightshade, hairy         S         C         S           Nightshade, black         NC         C         S           Palmer amaranth         NC         C'         S'           Panicum, fall         C         C         S           Parsnip, wild         C         C         S           Parsnip, wild         C         C         S           Pigweed (prostrate, redroot, smooth)         C'         C         C           Purslane, common         S         C         C         C           Purslane, common         S         C         NC         C           Ragweed, common         S         C         NC         S           Russian thistle, seedling         NC         C         S           Ryegrass, Italian†         S'         C         S           S'         C         S         S           Ryegrass, Italian†         S'         C         NC           Shantercane (4")         C         C         NC           Sharter (4")         C         C         NC           Shepherd's purse         C         C         NC           Signalgrass, broadleaf         S         C <t< td=""><td></td><td></td><td></td><td></td></t<>				
Nightshade, black         NC         C         S           Palmer amaranth         NC         C'         S'           Panicum, fall         C         C         S           Parsnip, wild         C         C         S           Pigweed (prostrate, redroot, smooth)         C'         C         C           Purslane, common         S         C         C           Quackgrass         S         C         NC           Ragweed, common         S         C         NC           Ragweed, common         S         C         S           Russian thistle, seedling         NC         C         S           Russian thistle, seedling         NC         C         S           Ryegrass, Italian†         S¹         C         S           Sandbur (field, longspine)         NC         C         NC           Shattercane (4")         C         C         NC           Shattercane (4")         C         C         NC           Shattercane (4")         C         C         NC           Signalgrass, broadleaf         S         C         C         NC           Smartweed, Pennsylvania         C         C         <				
Palmer amaranth         NC         C¹         S⁴           Panicum, fall         C         C         S           Parsnip, wild         C         C         S           Pigwed (prostrate, redroot, smooth)         C¹         C         C           Pigwed (prostrate, redroot, smooth)         C¹         C         C           Purslane, common         S         C         C         C           Quackgrass         S         C         NC         S           Ragwed, common         S         C         S         NC           Ragwed, common         S         C         S         NC           Ragwed, common         S         C         S         S         C         NC         S         Revealing         NC         C         S         Revealing         NC         C         S         Revealing         NC         C         S         S         C         S         C         S         S         C         S         S         C         S         C         NC         S         A         S         C         C         NC         NC         NC         S         NC         S         NC         NC         NC <td></td> <td></td> <td></td> <td></td>				
Panicum, fall         C         C         S           Parsnip, wild         C         C         S           Pigweed (prostrate, redroot, smooth)         C¹         C         C           Purslane, common         S         C         C         C           Quackgrass         S         C         NC         NC           Ragweed, common         S         C         S         S           Russian thistle, seedling         NC         C         S           Ryegrass, Italian†         S¹         C         S           Sandbur (field, longspine)         NC         C         NC           Shattercane (4")         C				
Parsnip, wild         C         C         S           Pigweed (prostrate, redroot, smooth)         C³         C         C           Purslane, common         S         C         C           Quackgrass         S         C         NC           Ragweed, common         S         C         S           Russian thistle, seedling         NC         C         S           Ryegrass, Italian†         S³         C         S³           Sandbur (field, longspine)         NC         C         NC           Shattercane (4")         C         C         NC           Shattercane (4")         C         C         NC           Shepherd's purse         C         C         NC           Signalgrass, broadleaf         S         C         C         NC           Signalgrass, broadleaf         S         C         C         NC           Smartweed, Pennsylvania         C         C         S           Smartweed, Ladysthumb         C         C         NC           Stinkgrass         S         C         NC           Sturbinglass         S         C         NC           Surflower         C         C				
Pigwed (prostrate, redroot, smooth)         C¹         C         C           Purslane, common         S         C         C           Quackgrass         S         C         NC           Ragwed, common         S         C         S           Russian thistle, seedling         NC         C         S           Ryegrass, Italian†         S¹         C         S¹           Sandbur (field, longspine)         NC         C         NC           Shattercane (4")         C         C         NC           Signalgrass, broadleaf         S         C         C         NC           Smartweed, Pennsylvania         C         C         S           Smartweed, Ladysthumb         C         C         NC           Stinkgrass         S         C         NC           Sunflower         C         C         S				
Purslane, common         S         C         C           Quackgrass         S         C         NC           Ragweed, common         S         C         S           Russian thistle, seedling         NC         C         S           Ryegrass, Italian†         S*         C         S*           Sandbur (field, longspine)         NC         C         NC           Sandbur (field, longspine)         NC         C         NC           Shattercane (4")         C         C         NC           Shepherd's purse         C         C         NC           Signalgrass, broadleaf         S         C         C         NC           Signalgrass, broadleaf         S         C         C         NC           Smartweed, Pennsylvania         C         C         S           Smartweed, Ladysthumb         C         C         NC           Stinkgrass         S         C         NC           Stinkgrass         S         C         NC           Sunflower         C         C         S           Velvetleaf         C         C         S           Wallflower, bushy         C         C         C <td></td> <td></td> <td></td> <td></td>				
Quackgrass         S         C         NC           Ragweed, common         S         C         S           Russian thistle, seedling         NC         C         S           Ryegrass, Italian†         S4         C         S4           Sandbur (field, longspine)         NC         C         NC           Sandbur (field, longspine)         NC         C         NC           Shattercane (4")         C         C         NC           Shetherd's purse         C         C         NC           Shepherd's purse         C         C         NC           Signalgrass, broadleaf         S         C         C         NC           Signalgrass, broadleaf         S         C         C         C           Smartweed, Pennsylvania         C         C         S           Smartweed, Ladysthumb         C         C         NC           Stinkgrass         S         C         NC           Sunflower         C         C         NC           Velvetleaf         C         C         S           Velvetleaf         C         C         NC           Wild buckwheat         NC         C         NC <td></td> <td></td> <td></td> <td></td>				
Ragweed, common         S         C         S           Russian thistle, seedling         NC         C         S           Ryegrass, Italian†         S4         C         S4           Sandbur (field, longspine)         NC         C         NC           Shattercane (4")         C         C         NC           Shepherd's purse         C         C         NC           Signalgrass, broadleaf         S         C         C           Signalgrass, broadleaf         S         C         C           Smartweed, Pennsylvania         C         C         S           Smartweed, Ladysthumb         C         C         NC           Stinkgrass         S         C         NC           Stinkgrass         S         C         NC           Sunflower         C         C         S           Velvetleaf         C         C         S           Wallflower, bushy         C         C         NC           Wheat, volunteer         C         C         C           Wild oat         S         C         NC           Wild oat         S         C         NC           Yellow nutsedge				
Russian thistle, seedling         NC         C         S           Ryegrass, Italian†         S*         C         S*           Sandbur (field, longspine)         NC         C         NC           Shattercane (4")         C         C         NC           Shepherd's purse         C         C         NC           Signalgrass, broadleaf         S         C         C           Signalgrass, broadleaf         S         C         C           Smartweed, Pennsylvania         C         C         S           Smartweed, Ladysthumb         C         C         NC           Stinkgrass         S         C         NC           Stinkgrass         S         C         NC           Sunflower         C         C         S           Velvetleaf         C         C         S           Wallflower, bushy         C         C         NC           Wheat, volunteer         C         C         C           Wild oat         S         C         NC           Wild oat         S         C         NC           Wild radish         C         NC         NC	Ragweed, common			
Ryegrass, Italian†         S4         C         S5           Sandbur (field, longspine)         NC         C         NC           Shattercane (4")         C         C         NC           Shepherd's purse         C         C         NC           Signalgrass, broadleaf         S         C         C           Smartweed, Pennsylvania         C         C         S           Smartweed, Ladysthumb         C         C         NC           Stinkgrass         S         C         NC           Sunflower         C         C         S           Velvetleaf         C         C         S           Wallflower, bushy         C         C         NC           Wheat, volunteer         C         C         C           Wild buckwheat         NC         C         NC           Wild oat         S         C         S           Wild radish         C         C         NC           Yellow nutsedge         S         C         NC	Russian thistle, seedling			
Sandbur (field, longspine)         NC         C         NC           Shattercane (4")         C         C         NC           Shepherd's purse         C         C         NC           Signalgrass, broadleaf         S         C         C           Signalgrass, broadleaf         S         C         C           Smartweed, Pennsylvania         C         C         S           Smartweed, Ladysthumb         C         C         NC           Stinkgrass         S         C         NC           Sunflower         C         C         NC           Velvetleaf         C         C         S           Wallflower, bushy         C         C         NC           Wheat, volunteer         C         C         C           Wild buckwheat         NC         C         NC           Wild oat         S         C         S           Wild radish         C         C         NC           Yellow nutsedge         S         C         NC				
Shattercane (4")         C         C         NC           Shepherd's purse         C         C         NC           Signalgrass, broadleaf         S         C         C           Smartweed, Pennsylvania         C         C         S           Smartweed, Ladysthumb         C         C         NC           Stinkgrass         S         C         NC           Sunflower         C         C         S           Velvetleaf         C         C         S           Wallflower, bushy         C         C         NC           Wheat, volunteer         C         C         C           Wild buckwheat         NC         C         NC           Wild oat         S         C         NC           Yellow nutsedge         S         C         NC				
Shepherd's purse         C         C         NC           Signalgrass, broadleaf         S         C         C           Smartweed, Pennsylvania         C         C         S           Smartweed, Ladysthumb         C         C         NC           Stinkgrass         S         C         NC           Sunflower         C         C         S           Velvetleaf         C         C         S           Wallflower, bushy         C         C         NC           Wheat, volunteer         C         C         C           Wild buckwheat         NC         C         NC           Wild oat         S         C         S           Wild radish         C         C         NC           Yellow nutsedge         S         C         NC				
Signalgrass, broadleaf         S         C         C           Smartweed, Pennsylvania         C         C         S           Smartweed, Ladysthumb         C         C         NC           Stinkgrass         S         C         NC           Sunflower         C         C         S           Velvetleaf         C         C         S           Wallflower, bushy         C         C         NC           Wheat, volunteer         C         C         C           Wild buckwheat         NC         C         NC           Wild oat         S         C         S           Wild radish         C         C         NC           Yellow nutsedge         S         C         NC	Shepherd's purse			
Smartweed, Pennsylvania         C         C         S           Smartweed, Ladysthumb         C         C         NC           Stinkgrass         S         C         NC           Sunflower         C         C         S           Velvetleaf         C         C         S           Wallflower, bushy         C         C         NC           Wheat, volunteer         C         C         C           Wild buckwheat         NC         C         NC           Wild oat         S         C         S           Wild radish         C         C         NC           Yellow nutsedge         S         C         NC	Signalgrass, broadleaf			
Smartweed, Ladysthumb         C         C         NC           Stinkgrass         S         C         NC           Sunflower         C         C         S           Velvetleaf         C         C         S           Wallflower, bushy         C         C         NC           Wheat, volunteer         C         C         C           Wild buckwheat         NC         C         NC           Wild oat         S         C         S           Wild radish         C         C         NC           Yellow nutsedge         S         C         NC				
Stinkgrass         S         C         NC           Sunflower         C         C         S           Velvetleaf         C         C         S           Wallflower, bushy         C         C         NC           Wheat, volunteer         C         C         C           Wild buckwheat         NC         C         NC           Wild oat         S         C         S           Wild radish         C         C         NC           Yellow nutsedge         S         C         NC	Smartweed, Ladysthumb			
Sunflower         C         C         S           Velvetleaf         C         C         S           Wallflower, bushy         C         C         NC           Wheat, volunteer         C         C         C           Wild buckwheat         NC         C         NC           Wild oat         S         C         S           Wild radish         C         C         NC           Yellow nutsedge         S         C         NC	Stinkgrass			
Velvetleaf         C         C         S           Wallflower, bushy         C         C         NC           Wheat, volunteer         C         C         C           Wild buckwheat         NC         C         NC           Wild oat         S         C         S           Wild radish         C         C         NC           Yellow nutsedge         S         C         NC	Sunflower			
Wallflower, bushy         C         C         NC           Wheat, volunteer         C         C         C           Wild buckwheat         NC         C         NC           Wild oat         S         C         S           Wild radish         C         C         NC           Yellow nutsedge         S         C         NC				
Wheat, volunteer         C         C         C           Wild buckwheat         NC         C         NC           Wild oat         S         C         S           Wild radish         C         C         NC           Yellow nutsedge         S         C         NC				
Wild buckwheat         NC         C         NC           Wild oat         S         C         S           Wild radish         C         C         NC           Yellow nutsedge         S         C         NC	Wheat, volunteer			
Wild oat         S         C         S           Wild radish         C         C         NC           Yellow nutsedge         S         C         NC				
Wild radish         C         C         NC           Yellow nutsedge         S         C         NC				
Yellow nutsedge S C NC				
	Yellow rocket	C	C	C

C= Control

S= Suppression

NC = No Control

1 = <1/2

- 2 = Must add 2,4D LVE or dicamba for control
- 3 = ALS Sensitive
- 4 = Resistant biotypes are known to occur

#### **Tank Mix Compatibility Testing**

Perform a jar test prior to tank mixing to ensure compatibility of DuPont™ BASIS® Blend and other pesticides. Use a clear quart jar with lid and mix the tank mix ingredients in their relative proportions. Invert the jar containing the mixture several times and observe the mixture for approximately 1/2 hour. If the mixture balls-ups, forms flakes, sludge, gel, oily film or layers, or other precipitates, it is not compatible and the tank mix combination should not be used.

## **Mixing Instructions**

#### **Fertilizer Carrier Instructions**

BASIS® Blend may be mixed with water or pre-dissolved in water and added to liquid fertilizer for preemergence application. When using liquid fertilizer as the carrier, always pre-slurry BASIS® Blend in water before adding fertilizer solutions. Add the BASIS® Blend slurry to the final complete liquid fertilizer mixture – do not add BASIS® Blend during the fertilizer mixing process. Always use good agitation while adding the BASIS® Blend slurry to liquid fertilizers and maintain good agitation until sprayed. When using liquid fertilizer as the carrier, conduct a compatibility test with all components prior to mixing.

Do not use with spray additives or liquid fertilizer carriers that alter the pH of the spray solution below pH 5.0 or above pH 9.0 as rapid product degradation can occur. Spray solutions of pH 6.0 -8.0 allow for optimum stability of BASIS® Blend.

#### **Water Carrier Instructions**

- 1. Fill the tank 1/3 to 1/2 full of clean water.
- 2. While agitating, add the required amount of BASIS® Blend.
- 3. Continue agitation until the BASIS® Blend is fully dispersed, at least 5 minutes. When the water temperature is 40° F or less, it is important to allow agitation and mixing to occur for the full 5 minutes to ensure the product is completely dissolved.
- 4. Once the BASIS® Blend is fully dispersed, maintain agitation and continue filling tank with water. BASIS® Blend should be thoroughly mixed and dissolved with water before adding any other material such as water conditioners or other additives.
- 5. As the tank is filling, add tank mix partners in the proper mixing order.
- 6. If the mixture is not continuously agitated, settling will occur. If settling occurs, thoroughly re-agitate before using.
- 7. At the end of the day, or for extended periods of time between BASIS® Blend applications, it is recommended to flush boom hoses and lines of spray solution and recharge with clean water. This will aid in proper sprayer cleanout when concluding BASIS® Blend applications before moving on to spray other products/crops.
- 8. Apply BASIS® Blend spray mixture within 48 hours of mixing to avoid product degradation.

If the selected companion herbicide has a ground or surface water advisory, consider this advisory when using the companion herbicide.

## **Application and Spray Volumes**

## Ground

Use a minimum of 15 gallons of water per acre (GPA) to ensure thorough coverage of the weeds and the best performance. Use a minimum of 10 GPA for light, scattered stands of weeds. For best performance, select nozzles and pressure that deliver MEDIUM spray droplets, as indicated, for example, by ASABE Standard S572.1. Nozzles that deliver COARSE spray droplets may be used to reduce drift, provided spray volume is increased to maintain coverage on small weeds.

Heavy crop residues may reduce burndown control of emerged weeds if residues impede spray coverage. Higher spray volumes and pressures can improve burndown control in heavy crop residue situations.

For optimal product performance and minimal spray drift, adjust the spray boom to the lowest possible spray height recommended in manufacturers' specifications. Overlaps or starting, stopping, slowing, and turning while spraying may result in crop injury.

#### Aerial

Use nozzle types and arrangements that will provide optimum spray distribution and maximum coverage at a minimum of  $5\,$  GPA

Do not apply during a temperature inversion, when winds are gusty, or when conditions favor poor coverage and/or off-target spray movement.

Aerial application is not permitted in the State of New York.

## **ROTATIONAL CROP INTERVALS**

The following rotational intervals must be observed when using DuPont™ BASIS® Blend:

#### 1.25 OZ MAXIMUM USE RATE PER ACRE PER SEASON

Rotation Crop	Interval (months)	
Corn, field	Anytime	
Soybeans with Bolt Technology	Anytime	
Potatoes	1	
Sulfonylurea tolerant soybeans	1	
Cotton††	1	
Tomato	1	
Cereals, Winter	3	
Cereals, Spring	9	
Alfalfa*†	10	
Canola†	10	
Corn, pop seed** or sweet	10	
Cucumber	10	
Flax	10	
Peas	10	
Peanuts	1.5	
Rice	10	
Red Clover†	10	
Sorghum†	10	
Soybeans†††	10	
Snap beans, dry beans	10	
Sunflower	10	
Sugarbeets†	10	
Sweet potatoes/yams***	10	
Tobacco	1.5	
Crops Not Listed	18	

<sup>\*</sup> On sprinkler irrigated fields in Idaho, Utah, and Northern Nevada it is best to use deep fall tillage such as plowing prior to planting alfalfa. Product degradation may be less on furrow irrigated soils and may result in some crop injury.

<sup>\*\*</sup>Rotational interval to seed corn is 60 days if applying 0.825 oz per acre in the fall by December 15.

<sup>\*\*\*</sup>On soils with pH 6.5 or less

<sup>† 18</sup> months in the Red River Valley region of ND and MN. In all other areas, the rotation interval must be extended to 18 months if drought conditions prevail after application and before the rotational crop is planted, unless sprinkler irrigation has been applied and totals greater than 15" during the growing season.

<sup>††</sup>Except in Oklahoma and Texas west of Route 183, where the rotational interval is 10 months.

<sup>†††</sup>In the states of AL, AR, GA, KY, LA, MO (bootheel), MS, NC, SC, and TN the recrop interval is 30 days. In the states of KS and OK the counties containing HWY 81 and east and in MO (excluding the bootheel), IL, IN, OH, and WV the counties that contain I-70 and south and the states of DE, MD and VA, the recrop is 60 days.

#### GREATER THAN 1.25 OZ UP TO 2.5 OZ MAXIMUM USE RATE PER ACRE PER SEASON

Rotation Crop	Interval (months)		
Corn, field	Anytime		
Soybeans with Bolt Technology	Anytime		
Potatoes	1		
Tomato	1		
Sulfonylurea tolerant soybeans	4		
Cereals, Winter	3		
Cereals, Spring	9		
Corn pop, seed or sweet	10		
Cotton†	10		
Cucumber	10		
Flax	10		
Soybeans	10		
Snap beans, dry beans	10		
Sunflower	10		
Crops Not Listed	18		

<sup>†</sup>The rotation interval must be extended to 18 months if drought conditions prevail after application and before the rotational crop is planted, unless sprinkler irrigation has been applied and totals greater than 15" during the growing season.

## SPRAYER PREPARATION/CLEANUP

It is important that spray equipment is clean and free of previous pesticide deposits before using DuPont™ BASIS® Blend and then properly cleaned out following application. Clean all application equipment before applying BASIS® Blend. Follow the cleanup procedures specified on the label of the product previously sprayed. If no cleanup procedure is provided, use the procedure that follows. Immediately following applications of BASIS® Blend, thoroughly clean all mixing and spray equipment to avoid subsequent crop injury.

- When cleaning spray equipment before applying BASIS® Blend, read and follow label directions for proper rinsate disposal of the product previously sprayed.
- When spraying or mixing equipment will be used over an extended period to apply multiple loads of BASIS® Blend, partially fill the tank with fresh water at the end of each day of spraying, flush the boom and hoses, and allow to sit overnight. This will prevent the buildup of dried pesticide deposits, which can accumulate in the application equipment.

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

- 1. Empty the tank and drain the sump completely.
- 2. Spray the tank walls with clean water using a minimum volume of 10% of the tank volume. Circulate the water through the lines, including all by-pass lines, for at least two minutes. Flush the boom well and empty the sprayer. Completely drain the sump.
- 3. Repeat step 2.
- 4. Remove the nozzles, screens and the end caps of sprayer booms and clean separately in a bucket containing water.

The rinsate solution may be applied back to the crop(s) specified on this label. Do not exceed the maximum labeled use rate. If 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.

#### Notes

- 1. Always start with a clean spray tank. Ensure boom sections between end nozzles and the end of the boom are clean of deposits (It is recommended to remove end caps and visually inspect). If needed, thoroughly flush rinse water through the boom sections with the end caps removed to ensure booms are clean and free of any residue or deposits.
- 2. Steam-cleaning aerial spray tanks is recommended to facilitate the removal of any caked deposits.
- 3. When BASIS® Blend is tank mixed with other pesticides, all cleanout procedures for each product should be examined and the most rigorous procedure should be followed.
- 4. Follow any pre-cleanout guidelines recommended on other product labels.

## 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 way to reduce drift potential 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**

When making applications in hot and dry conditions, set up equipment to produce larger droplets to reduce effects of evaporation.

#### **Temperature Inversions**

Drift potential is high during a surface temperature inversion. Surface temperature 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 temperature 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 preventing drift 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 airstream. 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 and is configured properly, and that drift is not occurring.

## **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 Council of Producers & Distributors of Agrotechnology (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. Store in a cool, dry place.

**PESTICIDE DISPOSAL:** Do not contaminate water, food, or feed by disposal. 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. Do not burn, unless allowed by state and local ordinances.

Refillable Fiber Drums With Liners: Refillable container (fiber drum only). Refilling Fiber Drum: Refill this fiber drum with DuPont<sup>TM</sup> BASIS® Blend containing rimsulfuron and thifensulfuron-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 DuPont™ BASIS® Blend containing rimsulfuron and thifensulfuron-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 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 Foil 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.

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