

## DuPont Crop Protection Technical Update

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# Pioneer<sup>®</sup> brand soybeans with BOLT<sup>™</sup> Technology

- Non-GM, high-ALS herbicide tolerance trait available exclusively from DuPont Pioneer
  - More weed control options than STS<sup>®</sup> or other soybeans
- Enables zero-day plantback with DuPont™ LeadOff<sup>®</sup> and Basis<sup>®</sup> Blend herbicides
- Shorter recrop interval after use of DuPont<sup>™</sup>
   Finesse<sup>®</sup> cereal and fallow herbicide
- Stacked with glyphosate tolerance





# **DuPont™ Afforia® herbicide**

- Active Ingredients :
  - Thifensulfuron + tribenuron + flumioxazin
- Soybeans: preplant or pre (up to 3 Days after Planting) to soybeans at 2.5 oz/A
- 2.5 to 3.75 oz/A rate preplant or pre on soybeans with BOLT<sup>™</sup> Technology
- Rotational crop table: soybeans with BOLT™ technology - "immediately"
- Changes to tank mix language for chloroacetamides

## **DuPont™ Canopy® Blend herbicide**

- Blended a.i. product
- Canopy<sup>®</sup> Blend

- metribuzin 50% + chlorimuron 8.3% (6:1)

- DuPont<sup>™</sup> Canopy<sup>®</sup> herbicide

   metribuzin 64.3% + chlorimuron 10.7% (6:1)
- It takes 28% more Canopy<sup>®</sup> Blend to get equivalent a.i./acre

## **Rate comparison: Canopy® Blend vs Canopy®**

Canopy <sup>®</sup> Blend	Canopy®		
Equivalent rates (oz product/a)			
3.0	2.25		
4.0	3.0		
4.5	3.5		
5.0	4.0		
7.0	6.0		

## DuPont<sup>™</sup> Cinch<sup>®</sup> herbicide—soybeans

Cinch<sup>®</sup> = s-metolachlor

Added postemergence use in soybeans

- 2.5 pt/A seasonal total
- 1.33 pt/A maximum postemergence
- 90-day PHI
- Can tank mix with DuPont<sup>™</sup> Classic<sup>®</sup> herbicide or DuPont<sup>™</sup> Synchrony<sup>®</sup> XP herbicide postemergence



# DuPont<sup>™</sup> Realm<sup>®</sup> Q herbicide

- Rimsulfuron + mesotrione + safener
- Specifies corn grown for grain or silage
- Can be applied aerially in the states of: AL, AR, CO, FL, GA, IL, IN, IA, KS, KY, LA, MN, MS, MO, NC, ND, OH, OK, SD, TN and TX
- Addition of dicamba as tank mix partner
- Rotational crop table: 10 month plantback to peas and snap beans with certain restrictions.



# **DuPont™ Zest™ herbicide**

- Liquid nicosulfuron
- Postemergence grass weed control in grain sorghum containing the DuPont<sup>™</sup> Inzen<sup>™</sup> sorghum trait
- Tolerances received 11/15 & Zest<sup>™</sup> herbicide label anticipated early 2016
- Great plains (TX, OK, KS) and TX high plains as traited seed becomes available
- Stewardship requirements around ALS-resistance management

DuPont<sup>™</sup> Zest<sup>™</sup> herbicide is not registered for sale or use in the U.S. No offer for sale, sale or use of this product is permitted prior to the issuance of the required EPA and state registrations.



# Questions?



The miracles of science™

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#### **DUPONT<sup>™</sup> CANOPY<sup>®</sup> HERBICIDE PLUS BOUNDARY**

 CANOPY<sup>®</sup> Herbicide at 2.25 to 3.5 ounces per acre may be tank mixed with Boundary at 1.5 pints per acre for control of broadleaf weeds and grasses when applied preemergence to soybeans.

This recommendation is made as permitted under FIFRA Section 2(ee) and has not been submitted to or approved by EPA.

Boundary is a registered trademark of a Syngenta Group Company.



### **DUPONT<sup>™</sup> TRIVENCE<sup>®</sup> HERBICIDE PLUS ZIDUA**

 TRIVENCE<sup>®</sup> Herbicide at 6.0 to 10.0 ounces per acre may be tank mixed with Zidua at 1.5 ounces per acre for control of broadleaf weeds and grasses when applied preemergence to soybeans.

This recommendation is made as permitted under FIFRA Section 2(ee) and has not been submitted to or approved by EPA. Zidua is a registered trademark of BASF SE.



## DUPONT<sup>™</sup> PREVATHON<sup>®</sup> INSECT CONTROL FOR SUPPRESSION OF DECTES STEM BORER IN SOYBEAN IN THE STATES OF MISSOURI

- Dupont<sup>™</sup> PREVATHON<sup>®</sup> insect control is recommended for suppression of Dectes stem borer (*Dectes texanus*) in soybeans. Apply PREVATHON<sup>®</sup> at 20 fluid ounces per acre (0.067 lb ai/acre) as a foliar spray via aerial or ground application.
- To minimize crop damage by the pest, apply at R1 soybean maturity stage (beginning flowering) or at the onset of adult beetle flight.
- For best results, ensure thorough spray coverage and make application to soybeans prior to egg laying.

#### PRECAUTIONS

- Do not apply more than 60 fluid ounces of PREVATHON<sup>®</sup> or 0.2 lb a.i. of chlorantraniliprole containing products per acre per year.
- Do not make more than 4 applications per acre per crop.
- Minimum interval between treatments is 3 days and preharvest interval is 1 day.
- The field re-entry interval is 4 hours.



#### DUPONT<sup>™</sup> PREVATHON<sup>®</sup> INSECT CONTROL FOR SUPPRESSION OF LESSER CORNSTALK BORER (*Elasmopalpus lignosellus*) IN PEANUT IN THE STATES OF MISSISSIPPI

- DuPont<sup>™</sup> PREVATHON<sup>®</sup> insect control is recommended for suppression of lesser cornstalk borer (*Elasmopalpus lignosellus* )in peanut.
- Apply PREVATHON<sup>®</sup> at 14 20 fluid ounces per acre (0.047 0.067 lb ai/acre) as a foliar spray for lesser cornstalk borer infestations later in the peanut growing season. Foliar applications should be made in sufficient water volume to achieve thorough coverage of peanut foliage and the soil area around the peanut main stem and growing limbs.
- See label for additional Use Directions

#### PRECAUTIONS

- Do not apply more than 60 fluid ounces of PREVATHON<sup>®</sup> or 0.2 lb a.i. of chlorantraniliprole containing products per acre per year.
- Do not make more than 4 applications per acre per crop.
- Minimum interval between treatments is 3 days and preharvest interval is 1 day.
- The field re-entry interval is 4 hours.



#### DUPONT<sup>™</sup> FIRSTSHOT<sup>™</sup> SG BURNDOWN HERBICIDE TANKMIXED WITH A COMMAND CONTAINNG HERBICIDE

- This label is intended to provide directions for use only for FIRSTSHOT<sup>™</sup> SG applications in tank mixes with a Command containing herbicide registered for use prior to planting rice.
- DUPONT<sup>™</sup> FIRSTSHOT<sup>™</sup> SG BURNDOWN HERBICIDE is recommended for the control of annual broadleaf weeds in a burndown application prior to planting rice. For ground and aerial application with Command herbicide, FIRSTSHOT<sup>™</sup> SG can be applied with other registered preplant burndown products listed on the FirstShot or Command labels.
- **APPLICATION TIMING :** FIRSTSHOT<sup>™</sup> SG may be applied as a preplant burndown at any time prior to planting rice.
- **APPLICATION RATES :** Apply FIRSTSHOT<sup>™</sup> SG at 0.5 to 0.8 ounces of product per acre. Refer to the tank mix partner labels for specific use rate instructions for each. Follow the most restrictive label directions. Refer to product labels for adjuvant use.



#### DUPONT<sup>™</sup> FINESSE<sup>®</sup> CEREAL AND FALLOW HERBICIDE ROTATION INTERVAL TO SOYBEANS WITH BOLT<sup>™</sup> TECHNOLOGY

#### • ROTATION INTERVAL TO SOYBEANS WITH BOLT™ TECHNOLOGY

 Labelled crops may be planted at specified time intervals following application of labelled rates of DuPont<sup>™</sup> FINESSE<sup>®</sup> cereal and fallow herbicide. Soybeans with Bolt<sup>™</sup> technology can be planted 6 months after a labeled application of FINESSE<sup>®</sup>, where soil pH is 7.9 or lower

State	Сгор	Soil pH	Application Rate (oz/A)	Rotation Interval* (months)
All Registered States	Soybeans with the Bolt™ technology	7.9 or lower	0.2 to 0.5	6

#### • ROTATION INTERVALS

- Rotational intervals are based on normal precipitation/irrigation amounts. If in a water deficit such as a drought, extend rotation intervals until cumulative rainfall/irrigation reaches the normal range.
- Under certain conditions (such as drought, prolonged cold weather, pH variability in fields), temporary discoloration and/or crop injury may occur to soybeans with the Bolt<sup>™</sup> technology planted after FINESSE<sup>®</sup> applications.



#### DUPONT<sup>™</sup> SYNCHRONY<sup>®</sup> XP herbicide or DUPONT<sup>™</sup> HARMONY<sup>®</sup> SG herbicide FOR POSTEMERGENT WEED CONTROL IN SOYBEANS WITH BOLT<sup>™</sup> TECHNOLOGY

- DuPont<sup>™</sup>SYNCHRONY<sup>®</sup> XP or HARMONY<sup>®</sup> SG Herbicide is recommended for weed control when applied postemergence to soybeans with BOLT<sup>™</sup> technology.
- Product Rate
- SYNCHRONY<sup>®</sup> XP 0.375 1.125 oz/acre
- HARMONY<sup>®</sup> SG 0.125 0.5 oz/acre
- For additional weed control these herbicides may be tank mixed with glyphosate.
- For additional control of grasses and volunteer corn these herbicides may be tank mixed with postemergence grass herbicides such as DuPont<sup>™</sup> ASSURE<sup>®</sup> II herbicide.
- See soybean section of SYNCHRONY<sup>®</sup> XP and HARMONY<sup>®</sup> SG labels for specifics on adjuvants and tank mixes.

Refer to labels of other herbicides used as a tank mix partner or in sequential applications for additional use directions, restrictions, rotational crop intervals, and precautions. The most restrictive provision on any label shall apply.



#### DERMACOR<sup>™</sup> INSECTICIDE FOR CONTROL OF ARMYWORM SPECIES IN RICE IN THE STATES OF LOUISIANA, ARKANSAS, MISSISSIPPI AND TEXAS

			DUPONT™ DERMACOR™ RATE
Crop	Application Method	Target Pest	fluid ounces product per 100 lbs seed
Rice	Seed Treatment	Armyworm Species (Fall Armyworm, Yellowstripe Armyworm, True Armyworm)	See Label for rate



#### DUPONT<sup>™</sup> DERMACOR<sup>®</sup> X-100 SEED TREATMENT - REDUCED RATE IN ARKANSAS, LOUISIANA, MISSISSIPPI AND MISSOURI Conventional rice varieties and Clearfield rice varieties

 DuPont<sup>™</sup> Dermacor<sup>®</sup> X-100 Treatment Insecticide is recommended for use as a seed treatment on dry seeded rice for control of rice water weevil (*Lissorhoptrus oryzophilus*), Mexican rice borer (*Eoreuma loftini*), rice stalk borer (*Chilo plejadellus*), and sugarcane borer (*Diatraea saccharalis*)

DuPont™ DERMACOR® X- 100 Seed Treatment	Rough Rice Seeding rate (Ibs rice seed per acre)		lb. ai per acre range
fl. oz per 100 lb seed	Low	High	
1.50	80	120	0.049-0.073
1.75	70	79	0.049-0.056
2.50	50	69	0.051-0.071

The rice seeding rates of 80 to 120 lbs. of rice seed per acre is for conventional rice varieties. The rice seeding rates of 50 to 69 and 70 to 79 lbs. of rice seed per acre is for Clearfield rice varieties.



#### DUPONT<sup>™</sup> DERMACOR<sup>®</sup> X-100 SEED TREATMENT - REDUCED RATE IN ARKANSAS, LOUISIANA, MISSISSIPPI AND MISSOURI Hybrid rice varieties

• Dermacor<sup>®</sup> X-100 will provide control of rice water weevil (*Lissorhoptrus oryzophilus*), Mexican rice borer (*Eoreuma loftini*), rice stalk borer (*Chilo plejadellus*), and sugarcane borer (*Diatraea saccharalis*) in dry seeded hybrid rice.

DuPont™ DERMACOR® X-100 Seed Treatment	Rough Rice Seeding rate (Ibs rice seed per acre)		lb. ai per acre range
fl. oz per 100 lb seed	Low	High	
4.0 - 5.0	20	35	0.033-0.071

The rice seeding rates of 20 to 35 lbs. of rice seed per acre is for Hybrid rice varieties

Dermacor<sup>®</sup> X-100 applied to hybrid rice at rates below 5.0 fl oz per 100 lb rice seed may result in variable or diminished control or suppression of rice water weevil (*Lissorhoptrus oryzophilus*), Mexican rice borer (*Eoreuma loftini*), rice stalk borer (*Chilo plejadellus*), and sugarcane borer (*Diatraea saccharalis*) particularly under conditions of moderate to high pest pressure.



#### DUPONT<sup>™</sup> DERMACOR<sup>®</sup> X-100 seed treatment FOR USE ON FLOODED RICE FIELDS FOR CONTROL OF MEXICAN RICE BORER IN RICE IN THE STATE OF MISSISSIPPI

• DERMACOR<sup>®</sup> X-100 may be applied to dry rice seed, including conventional, "Clearfield", and hybrid seed varieties, which will be broadcast into flooded rice fields.

DuPont™ DERMACOR® X-100 Seed	Rough Rice Seeding rate	
Treatment	(lbs rice seed per acre)	
fl. oz per 100 lb seed	Low	High
2.0	101	125
3.0	76	100
4.0	51	75
4.0 5.0	25	50

When applied according to the DERMACOR<sup>®</sup> X-100 Rates table, DERMACOR<sup>®</sup> X-100 will provide protection against injury by early to mid-season Mexican rice borer.

For controlling severe infestations or when longer residual control is desired, use the higher seeding rate for any given rate of DERMACOR<sup>®</sup> X-100 per 100 lbs of rice seed.

**COMMERCIAL SEED BAG LABELING :** In accordance with the Federal Seed Act and EPA 40CFR, seeds commercially treated with a pesticide must be labeled

Dry rice treated with DERMACOR<sup>®</sup> X-100 cannot be soaked or pre-germinated before planting.