

2017 Product / Label Update DuPont Crop Protection

LACA Update February 2017

> Steve Crawford For Dickie Edmund Field Development Rep Little Rock, AR



DuPont[™] Dermacor[®] X-100 Seed Treatment in Rice

- 2(ee) Recommendation for Reduced Rates for control or suppression of Rice Water Weevil, Mexican Rice Borer, Rice Stalk Borer, & Sugarcane Borer
 Rate range – 1.5 to 5 oz/cwt - target is 1.5 oz/A, except for Hybrids
 - Hybrid Rice 4-5 oz /cwt
- Allows for economical approach to treating Hybrid rice in combination with a neonic due to 1 loading rate for all seeding rates with Crusier Maxx & Nipsit Inside
 - Crusier Maxx 7 oz/cwt
 - Nipsit Inside 1.92 oz/cwt
- Benefits of combination (Dermacor plus neonic)
 - Broader pest spectrum
 - Less impact from high moisture environments
 - Longer residual and better control of RWW larvae compared to neonic alone
 - Fall armyworm control
 - Late season protection against borer complex

Hybrid Rice - Rough Rice Yields bu/A

Cooperator	Dermacor [®] X-100	Nipsit	+/-
	+ Nipsit or Cruiser	or Cruiser	
Turner	NA	NA	
Jaggers	187	181	+6 bu/A
Koger	233	230	+3 bu/A
Farr	256	255	+1 bu/A
<u>Univ. of AR</u>	189	175	+14 bu/A
Yield Res	+6 bu/A		



DuPont™ FirstShot® Herbicide

- FirstShot[®] Rate Range: 0.5 0.8 oz/A
 - 0.5 oz/A soybean preplant interval 1 day (excluding coarse textured soils or pH > 7.9)
 > 0.5 - 0.8 oz/A preplant interval is 7 days
 - Excellent tank mix option with Sharpen close to planting – complement one another, reduces regrowth
 - Rice: 0 day
 - Soybean: 1 day (0.5 oz/A)
 - Follow the most restrictive label regarding adjuvants and preplant intervals



Control of PPO-Resistant Palmer Amaranth

2016 University of Arkansas Field Evaluations – 26 Pre Programs

Leading PRE Treatments included several DuPont Programs

- Trivence[®] 8 oz/A
- Trivence[®] 8 oz/A + Zidua 1.5 oz/A
- Canopy[®] 6 oz/A + Cinch 1 pt/A (Metolachlor)
- Canopy[®] 6 oz/A + Zidua 1.5 oz/A (Soil pH < or = 7)
- Canopy[®] 2.25 oz/A + Boundary 1.5 pt/A (2ee label) (Soil pH > 7, no rotational restrictions)

Pre Programs fit all Herbicide Tolerant Traits

(Roundup Ready, Liberty Link, Xtend, and Enlist)

Apply the Post application no later than 21 days after planting, include a residual component per labeling



DuPont Crop Protection - Pre / Post Programs for 2017



Pre's applied 5/12/16 E.Post applied 6/10/16 Photos taken 7/8/16, 28 DAT of E.Post

SWH-16-089 Crawfordsville, AR



DuPont[™] FeXapan[™] herbicide plus VaporGrip[™] Technology Technical Presentation





DuPont¹⁰ FeXapan¹⁰ herbicide plus VaporGrip¹⁰ Technology is not registered for sale or use on Roundup Ready 2 Xtend⁸ soybeans or other Xtend crops in the United States. No offer for sale, sale or use of this product for these uses is permitted prior to the issuance of the required EPA and state registrations.



Pioneer[®] Brand Soybeans with Roundup Ready 2 Xtend[™] Technology

- 20 commercial varieties in Groups IV and V
- Extensive local testing for proven performance on your farm





DuPont[™] Inzen[™]

herbicide tolerance trait for sorghum

DuPont[™] Zest[™] WDG (water-dispersible-granule)

postemergence herbicide for grass control









Cinch[®] ATZ 3.25 pts/A – PRE fb Zest^{TM*} 0.75 ozai/A - POST + COC 1%v/v + AMS 2lb/A

Untreated

Application Information:

Pre – April 4, 2014 Post - May 1, 2014 SWK-14-001 Mertens, TX

35 DAT - POST

THANK YOU



The miracles of science™



1st - THANK YOU

Sales Reps:

Josh Wilson – North / Northeast AR Jim Burkett – East Central AR Steve Frost – Southeast AR

Darrin Malone – Field Development Technical Consultant

Grower Program:

DuPont Crop Protection / Pioneer Seed Herbicides / Insecticides / Fungicides Financing Program See your local Sales Rep for details



General Information: DuPont[™] Zest[™] WDG herbicide

- Received registration in 2016
- Postemergence application for control of key annual grass weeds – use rate of 2/3 to 1 oz/A + COC or NIS
- Target Market: DuPont[™] Inzen[™] Grain Sorghum only
- Apply between 4-20" tall grain sorghum
- Tank mix flexibility key tank mix partner is atrazine
- Fits best in a pre –fb- post program
 - Metolachlor PRE –fb Zest[™] + Atrazine POST
- Follow all label use directions



Stewardship – DuPont[™] Inzen[™] Grain Sorghum

- Stewardship requirements must be met to grow Inzen[™] grain sorghum
- Growers must complete training on stewardship website to better understand resistance management within the Inzen[™] system
 - Zest.DuPont.com, available once we have state registrations
- Growers will sign a stewardship agreement at the time of seed purchase
- Seed Tags will contain instructional information (much like you see on corn or soybean seed tags)
- Growers should follow best management practices listed on the label

DuPont[™] Dermacor[®] X-100 Seed Treatment – 2016 Univ of AR Trials

Trial #	Technology, Seeding Rate/A	Rate fl oz/cwt	#RWW/Core UTC % Con	+/- Bu/A vs UTC
SWH-16-076	Hybrid, 23 lbs	5 oz	7.8, 81%	- 1.8
SWH-16-077	Hybrid, 23 lbs	5 oz + Nipsit Inside 1.92 oz	26.9, 62%	+ 23.0
SWH-16-078	Hybrid, 23 lbs	5 oz	9.6, 53%	+ 13.4
SWH-16-118	Clearfield, 60 lbs	2.5 oz	6.3, 43%	- 3.6
SWH-16-119	Clearfield, 60 lbs	2.5 oz	6.7, 92%	+ 8.8
SWH-16-120	Clearfield, 60 lbs	2.5 oz	2.3, 99%	+ 0.8
SWH-16-121	Clearfield, 60 lbs	2.5 oz	4.9, 61%	- 2.5
SWH-16-122*	Conv, 75 lbs	2.3 oz	10.4, 82%*	+5.8*

(* Planting date study, averaged across 6 planting dates, 3/22 through 6/9) (Trials conducted by Drs. Gus Lorenz & Jarrod Hardke)



General Information: DuPont [™] Inzen[™] grain sorghum

- Novel, non-genetically modified crop herbicide tolerance that provides the first post emergence grass control in grain sorghum
- Naturally occurring ALS resistance trait (obtained from shattercane)
- Seed Availability DuPont Pioneer and Advanta are currently developing Inzen[™] sorghum hybrids
 - Additional seed companies have expressed interest in adding this to their portfolios
- Advanta limited seed supply in 2017



Crop Response from DuPont™ Zest™ WDG Herbicide





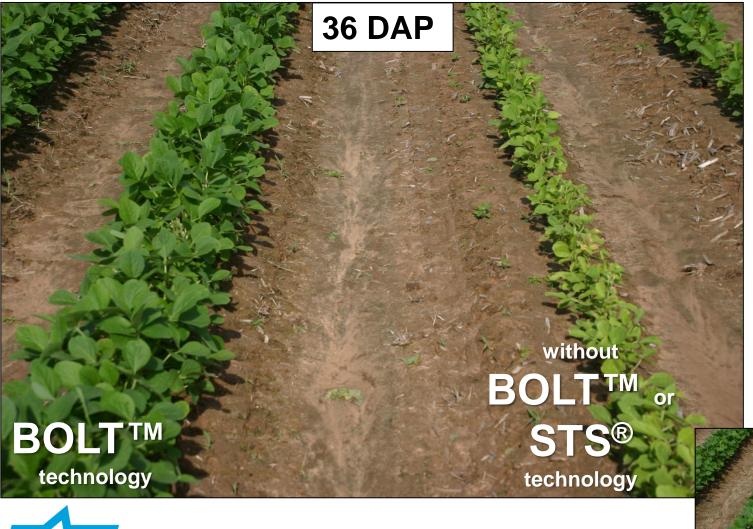
Stillwater, OK CEH-16-018 6 Days After Application (6/5/16)

Stillwater, OK CEH-16-018 27 Days After Application (6/26/16)

- Temporary yellowing and reduction in height of DuPont[™] Inzen[™] traited grain sorghum may occur following a postemergence application of Zest[™] WDG herbicide.
- Crop response may be more pronounced when conditions exist that result in slowed crop growth, such as but not limited to cloudy, cool, or wet conditions, or the Inzen[™] traited grain sorghum is small (4 to 6 inches in height) at application.
- Normal growth and appearance should resume when normal growing conditions return.



Results: Crop response to 6.0 oz/a LeadOff® (4X) @ planting





USA-15-172, SWH-15-021, England, AR Picture taken: 6/18/15

Untreated Check



Inzen[™] traited grain and forage must be channeled until PNT Approval

- Inzen[™] traited grain sorghum is currently in review by the Canadian Food Inspection Agency under the Canadian Regulatory Process for Plants with Novel Traits (PNT)
- Grain or forage must not be released into the commercial grain channel until PNT approval expected late 2017
- Grain may be used in the United States for farm feeding, feedlots or in ethanol production
- Forage *may* be use anywhere within the US