## Crop Disease Management

Row Crop Short Course March 5<sup>th</sup>, 2020

Nicholas Dufault

Associate Professor and Extension Specialist

Plant Pathology Dept.

University of Florida





## PeanutRx Program Comparisons, Suwannee Co.

Cultivar: Georgia-06G

Four replications

Planted: 5/22/19

• Dug: 10/11/19

• 5 years continuous peanut





## Foliar Disease started 70 DAP

(Late and Early Leaf Spot)

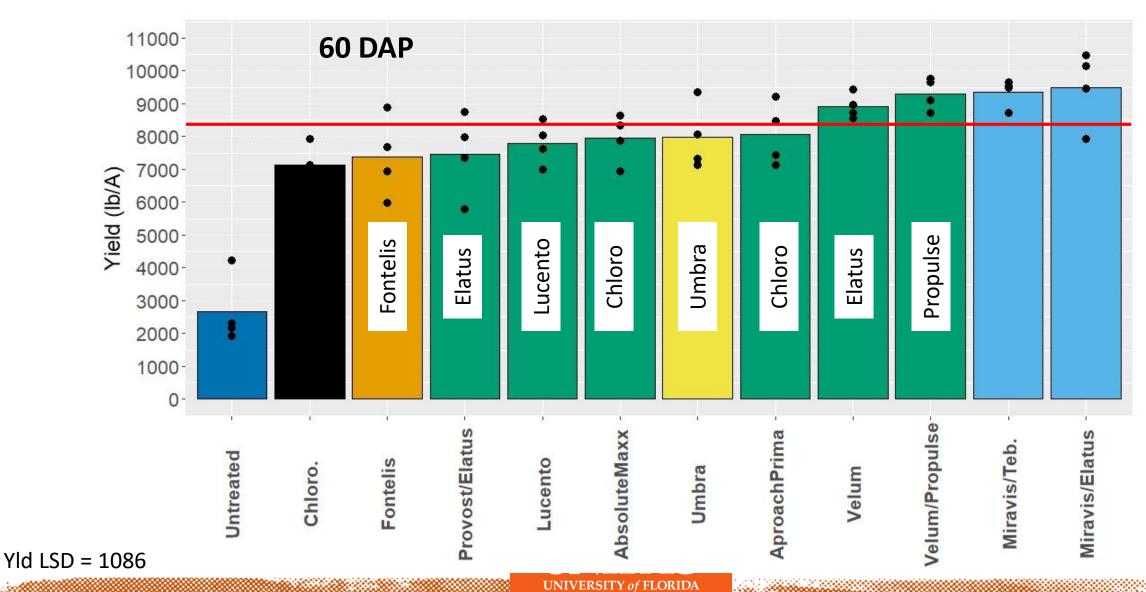


**Defoliation 127 DAP** 





# Velum and Miravis top yielding programs



## Velum: Crown Rot, White Mold, Nematodes







## 2019 Marianna Trials

Cultivar: Georgia-06G

Three replications

• Planted: 5/28/19

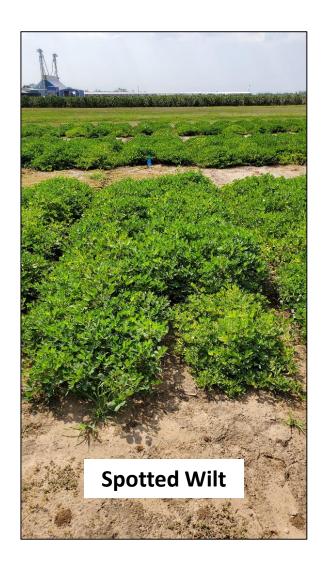
• Dug: 10/21/19

• Stem rot variable (4 to 12 hits)

LLS mostly present

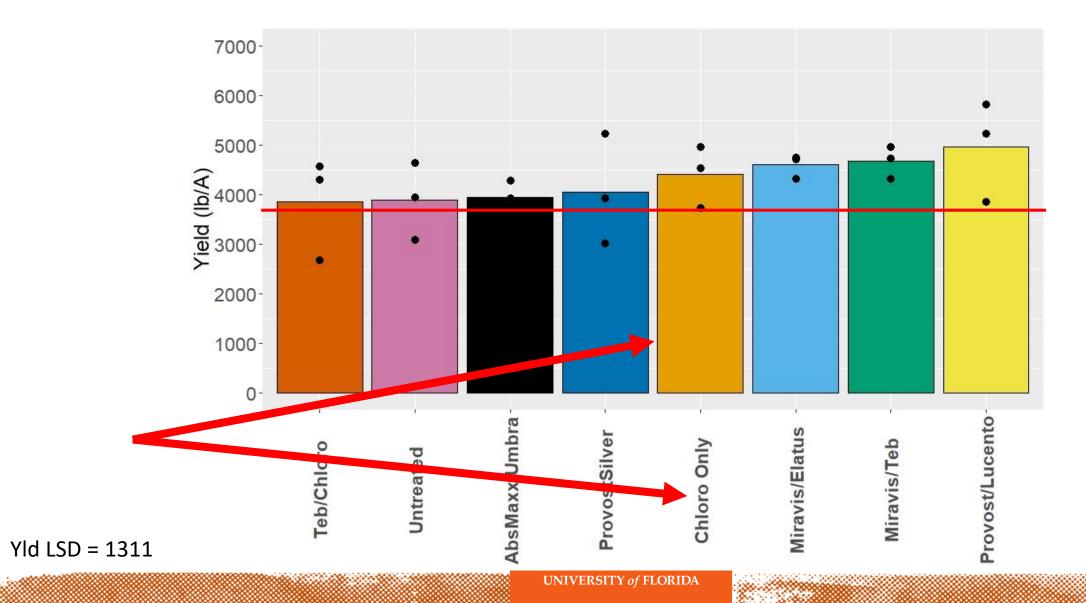
TSWV important too





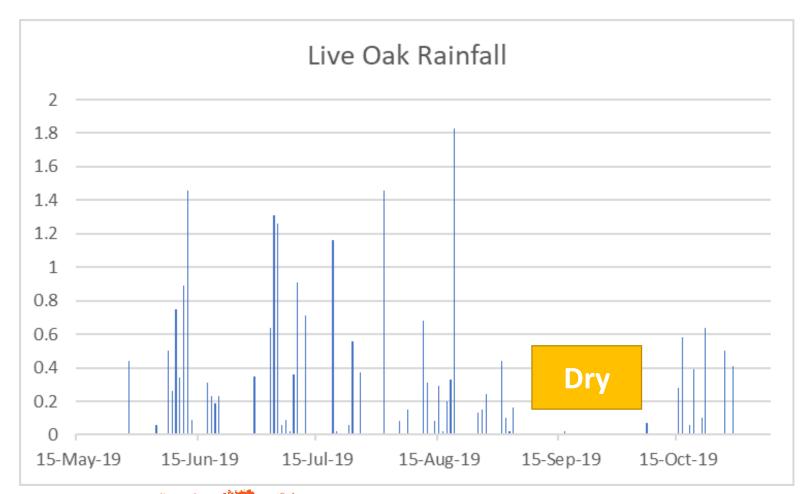


## Leaf spot control, but other factors affecting yield



### Hamilton Co. On-Farm

- Georgia-06G
- Four replications
- Planted: 5/30/19
- Harvested: 11/2/19
- Acres:
  - 5.08 to 5.34 totals
  - 0.64 to 1.69 reps
- Irrigated, dry corners
- Hot (94 days ≥ 90 F max)





## Low Levels of Late Leaf Spot & Stem Rot

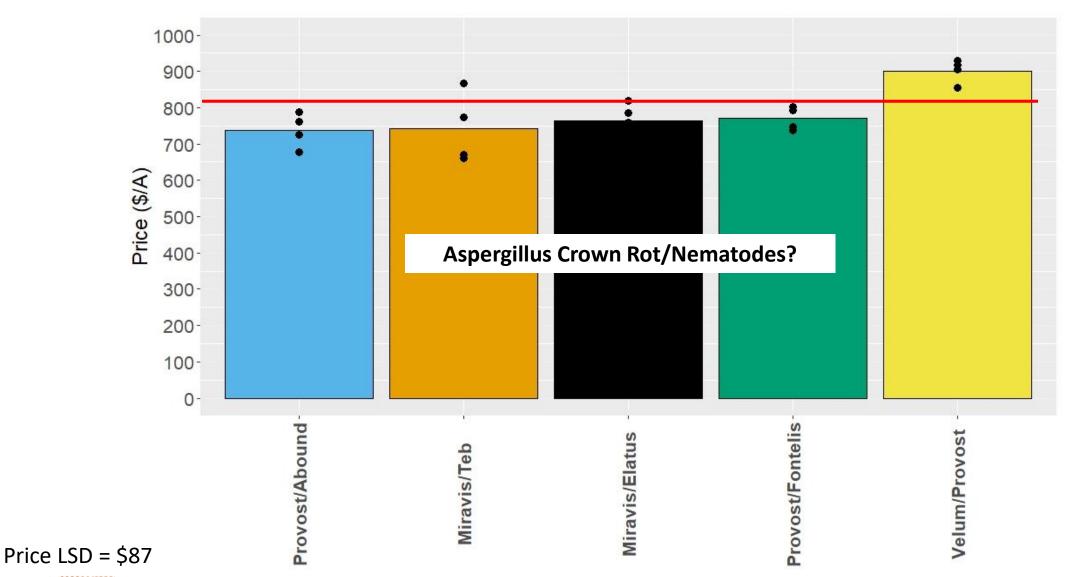




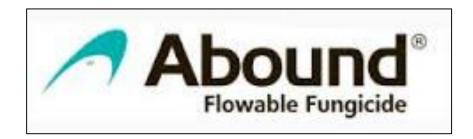




# Velum had higher yield and price



# Concern about azoxystrobin's crown rot efficacy

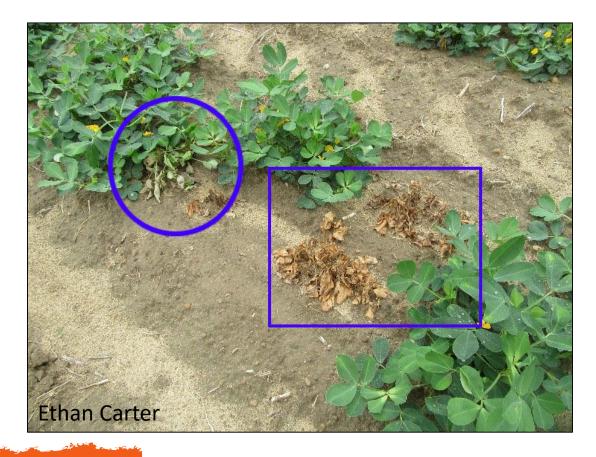




Concerns with other FRAC 11









## Options for Crown Rot include:









# Many hybrid fungicide programs available

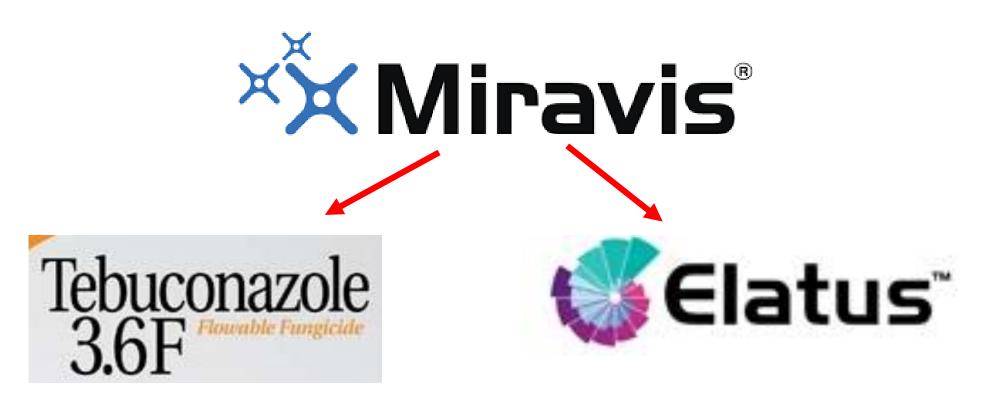








https://www.wayfair.com/bed-bath/pdx/winston-porter-townsend-romantic-dance-partners-single-shower-curtain-wnpr2896.html





#### 2019 Large Plot

## 1100-1000-900-800-700-600-500-400-300-200-100-Miravis/Elatus

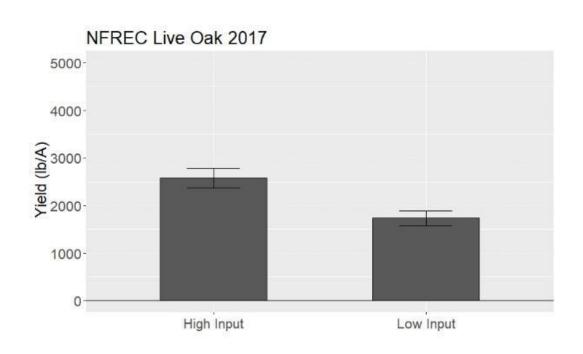
## Yes, but.....

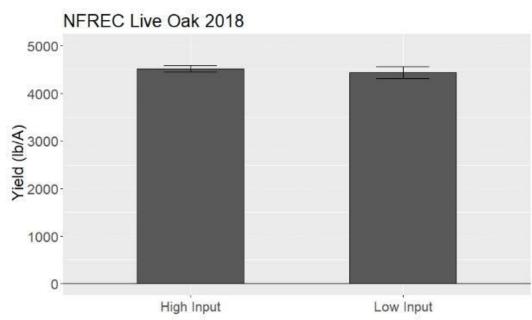




**Low & Late Appearing Leaf Spots** 

# "Older & cheaper" fungicides do not always make sense



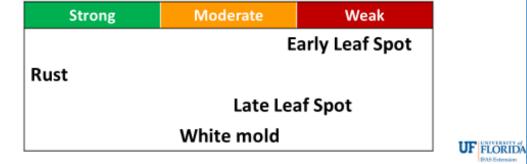




## Limitations exist for our fungicides



Rating based on research from azoxystrobin and pyraclostrobin

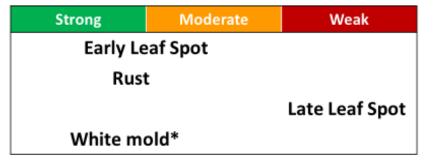




Mostly research from tebuconazole

\*Proline has been strong:

- White mold
- Leafspots

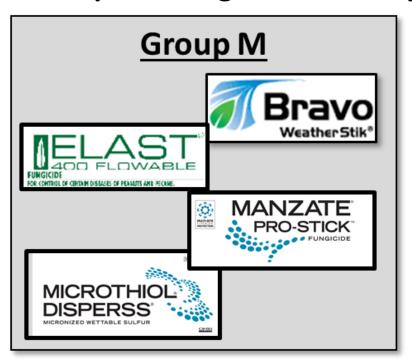




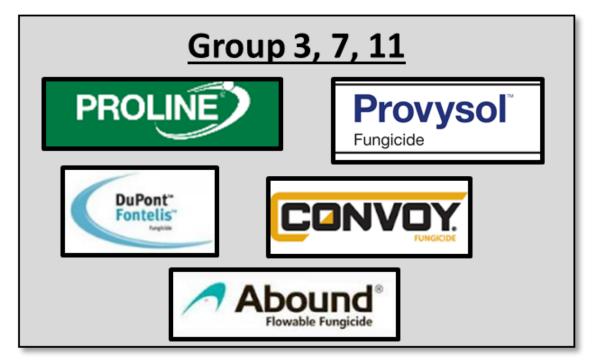


## Add a "dance partner" and know your disease

Multisite products good for leaf spots



Specific products good for white mold





## Peanut Rx can help avoid getting burned

#### Reduce/limit

Variety	Leaf spot	White mold
Georgia-06G	20	20
Georgia-12Y	15	10
FloRun™'331'	20	15
TUFRunner™'511'	30	15

Planting Date	Leaf spot	White Mold		
Prior to May 1	0	10		
May 1 to May 10	5	5		
May11 to May 25	10	0		
May 26 to June 10	15	0		
After June 10	15	0		

#### New to 2020 Peanut Rx

Insecticide used	TSWV	Leaf spot	White mold
None	15	5	NA
Other than Thimet 20G	15	5	NA
Velum Total	15	0	NA
Thimet 20G	5	0	NA

Velum and Thimet can suppress leaf spots



## THE IMPACT OF MISSING FUNGICIDE SPRAYS





## SPRAY PROGRAMS: 3 MOA, GENERICS

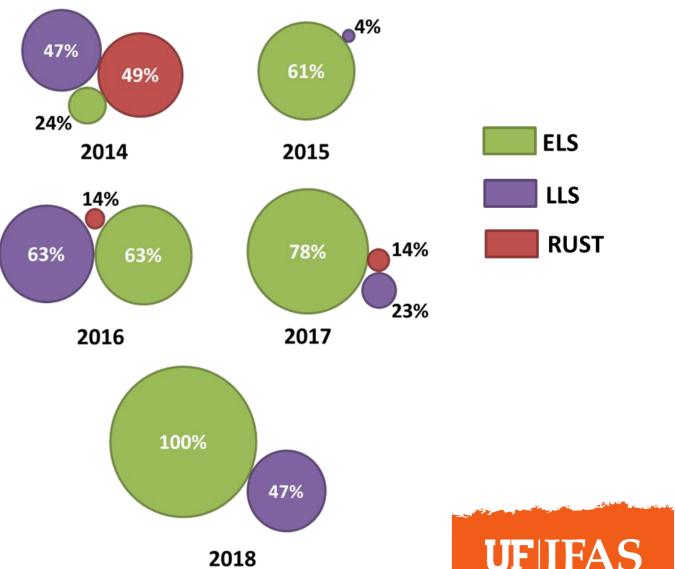
	Spray Schedule								
DAP:	30	40	50	60	75	90	105	110	120
Zero									
Four		Echo 720 @ 1.5 pt/a		TebuStar @ 7.2 fl oz/a + Echo 720 1 pt/a		Abound 2.08SC @ 18 fl oz/a + Echo 720 1 pt/a		TebuStar @ 7.2 fl oz/a + Echo 720 1 pt/a	
Five		Echo 720 @ 1.5 pt/a		TebuStar @ 7.2 fl oz/a + Echo 720 1 pt/a	Echo 720 @ 1.5 pt/a	Abound 2.08SC @ 18 fl oz/a + Echo 720 1 pt/a		TebuStar @ 7.2 fl oz/a + Echo 720 1 pt/a	
Seven	Echo 720 @ 1.5 pt/a		Echo 720 @ 1.5 pt/a	TebuStar @ 7.2 fl oz/a + Echo 720 1 p:/a	TebuStar @ 7.2 fl oz/a + Echo 720 1 pt/a	Abound 2.08SC @ 18 fl oz/a + Echo 720 1 pt/a	TebuStar @ 7.2 fl oz/a + Echo 720 1 pt/a	1	Echo 720 @ 1.5 pt/a

Four and five spray differed only by one chlorothalonil spray at 75 DAP.

Seven spray program had one more tebuconazole and two-three more chlorothalonil sprays.



## **FOCUS ON LEAF SPOTS AND RUST**



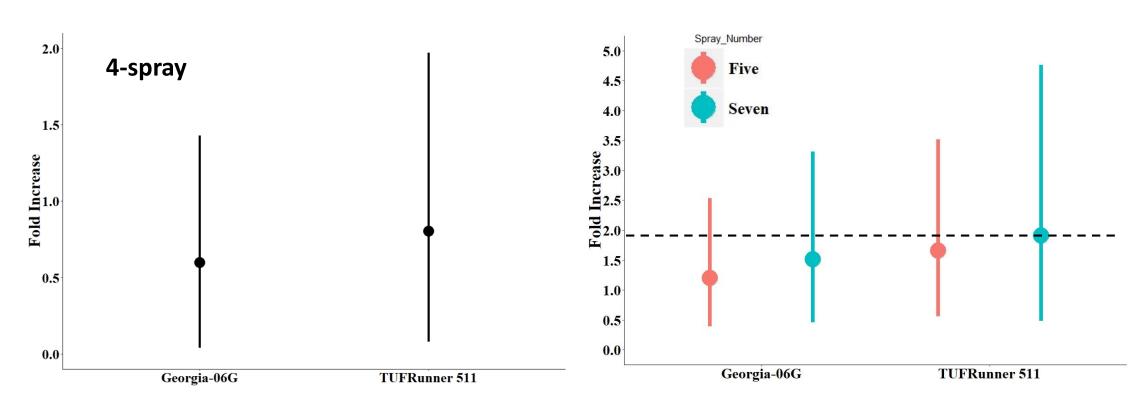
< 5% TSWV



< 1% Stem Rot



# Minimum of 5 sprays needed to significantly improve yields



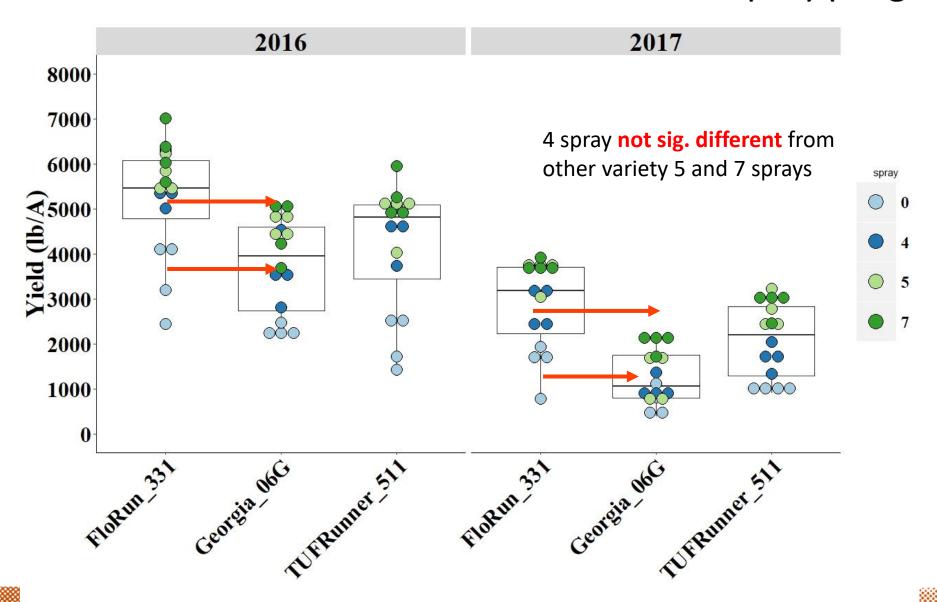


# WHAT HAPPENS WHEN MORE "RESISTANT" VARIETY IS ADDED?

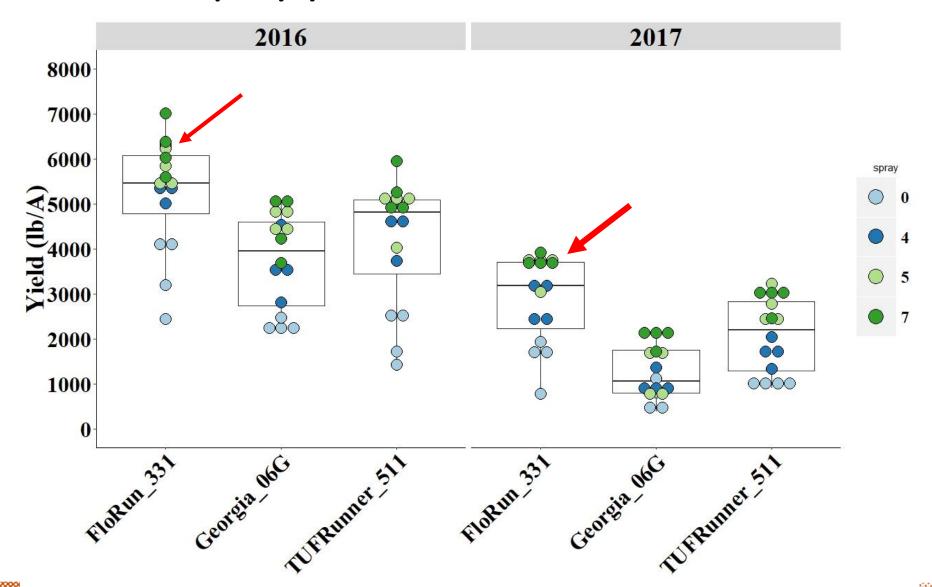
Variety	Leaf Spot		
Georgia-06G	20		
TUFRunner™ '511'	30		
FloRun™'331'	20		



### FloRun 331 untreated matched other varieties spray programs.



The 5 & 7 spray yields were similar for all varieties



## BASICALLY....

	Spray Schedule									
DAP:	30	40	50	60	75	90	105	110	120	
Zero										
		Echo 720 @		TebuStar @ 7.2		Abound 2.08SC		TebuStar @ 7.2		
		1.5 pt/a		720 1 pt/a		Echo 720 1 pt/a		720 1 pt/a		
Five		Echo 720 @ 1.5 pt/a		TebuStar @ 7.2 fl oz/a + Echo 720 1 pt/a	Echo 720 @ 1.5 pt/a	Abound 2.08SC @ 18 fl oz/a + Echo 720 1 pt/a		TebuStar @ 7.2 fl oz/a + Echo 720 1 pt/a		
Seven	Echo 720 @ 1.5 pt/a		Echo 720 @ 1.5 pt/a	TebuStar @ 7.2 fl oz/a + Echo 720 1 pt/a	TebuStar @ 7.2 fl oz/a + Echo 720 1 pt/a	Abound 2.08SC @ 18 fl oz/a + Echo 720 1 pt/a	TebuStar @ 7.2 fl oz/a + Echo 720 1 pt/a		Echo 720 @ 1.5 pt/a	

Spray reductions lead to lower top end yield savings



"Resistant" variety should reduce the risk of lower top end

## PRODUCTS FOR 2020 AND BEYOND





## Many products means millions of choices



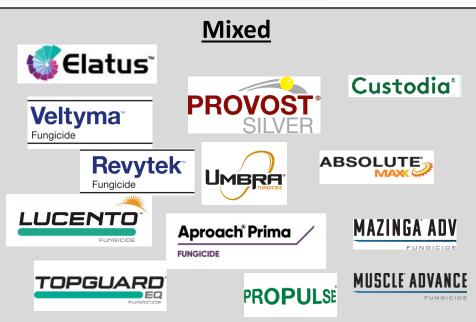












## New(er) product for 2020





A Seed Treatment Fungicide For Use On Peanuts

Seed trt (FRAC 3, 4 and 7)

Possible improved Aspergillus control

Comparable to Dynasty PD in previous trials



## New(er) product for 2020



Protectant/Leaf spots

Mix with DMI and Qol





## New product for 2020



 SDHI (Priaxor, Fontelis, Elatus, Miravis)

 Mixture (DMI, Topguard, Rhyme)

Rotational leaf spot product

Not a stand-alone white mold



## **New Products for 2020**

### **D-BASF**

We create chemistry

# **Provysol**

Fungicide

# **Veltyma**<sup>™</sup>

Fungicide

# **Revytek**<sup>m</sup>

Fungicide

- DMI (tebuconazole, Provost)
- Activity on leaf spot & white mold
- Three chemistries (3, 7, 11)
  - Veltyma (Headline + Provysol)
  - Revytek (Priaxor + Provysol)
- Plan rotation appropriately



## Expected peanut product 2021 or later



No label online (yet)

 Dr. Brenneman "Highly effective on white mold"

Good rotational in UF plots (no white mold pressure)

SDHI (Fontelis, Elatus, Convoy)







