

Weed Control Updates



**Steve Li. Extension Specialist, Associate Professor
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Cotoran 16 oz + Alite 27 3 oz/A PRE

**RUP PM3 30 oz + Engenia 12.8 oz +
Outlook 12.8 oz/A POST**



Cotoran 16 oz

**RUP PM3 30 oz + Engenia 12.8
oz/A POST**



NTC

Belle Mina AL. Sep 3rd, 2023



NTC at 28 DAP (Henry Co.)



dicamba at 28 DAP (Henry Co.)



**Alite 27 3 oz + dicamba at 28 DAP
(Henry Co.)**



**Alite 27 3 oz + Engenia 12.8 oz/A PRE on May 19
Liberty 32 oz + Outlook 12.8 oz + RU 32 oz + AMS POST on June 9**

**27 3 oz + Prowl H2O 2 pt/A PRE on May 19
PM 32 oz + Engenia 12.8 oz + Outlook 12.8 oz POST on June 9**

August 20 2021, Headland AL



Alite 27 1.5 fl oz +
Engenia 12.8 oz/A
sprayed on 7/29 PRE

GA-06G planted on 7/29
102



Alite 27 3 fl oz + Engenia
12.8 oz/A sprayed on
7/29 PRE

GA-06G planted on 7/29
103



Reflex 12 oz + Cotoran 1
pt/A sprayed on 7/29
PRE

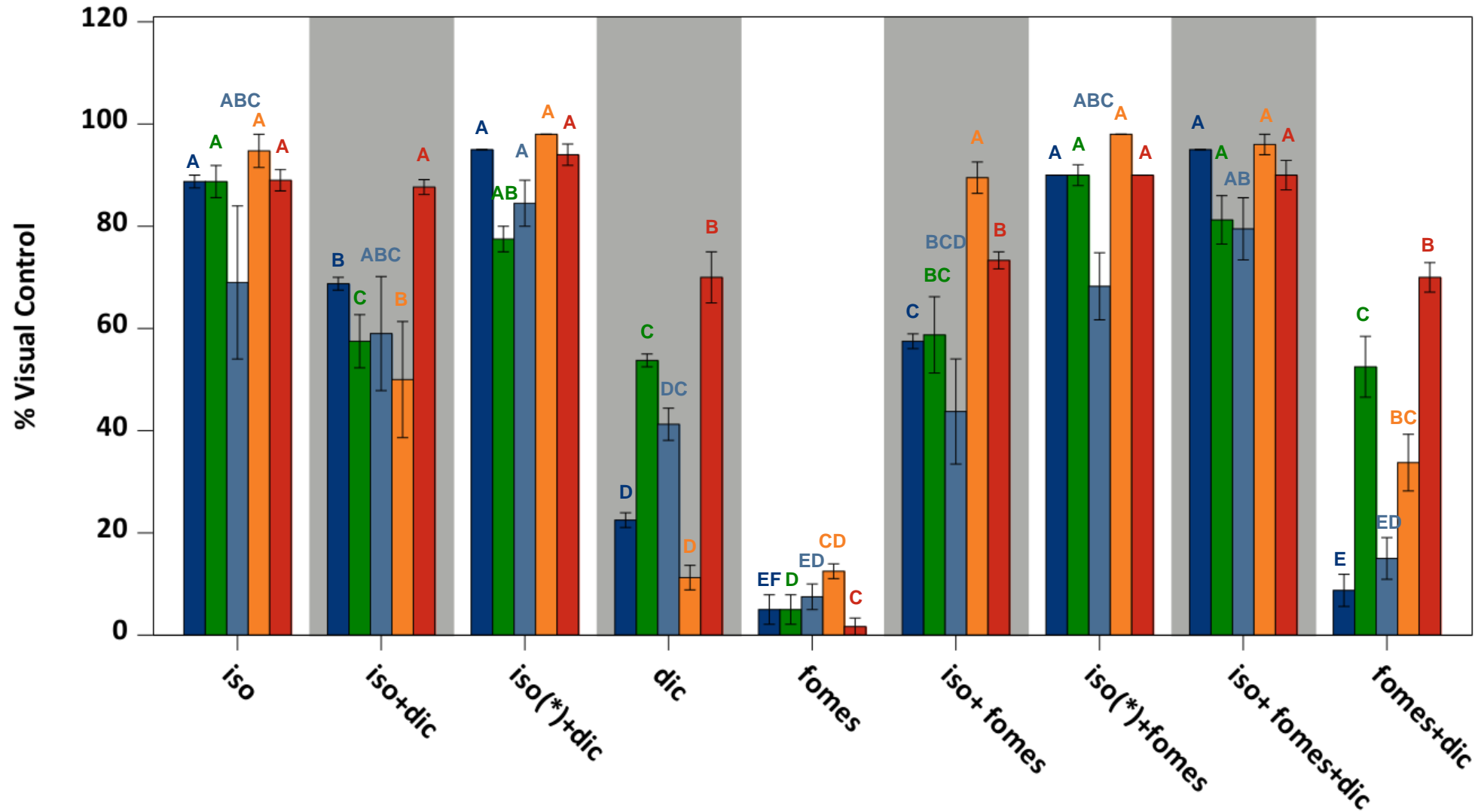
GA-06G planted on 7/29
106

**Alite 27 @ 1.5 oz + Engenia 12.8 oz/A
PRE on 7/29**

**Alite 27 @ 3 oz + Engenia 12.8 oz/A PRE
on 7/29**

**Reflex 12 oz + Cotoran 2 pt/A PRE on
7/29**

Volunteer Peanut Control at 42 DAP



■ P Value <.0001 Pickens Co.(SC)
 ■ P Value <.0001 Santa Rosa Co. (FL)
 ■ P Value <.0001 Baldwin Co. (AL)
 ■ P Value <.0001 Henry Co. (AL)
 ■ P Value <.0001 Lubbock Co. (TX)

What is a good weed control strategy???

- Good burndown and start clean (Valor, Sharpen, Revition)
- Watch out for resistant ryegrass
- Two-way mix PRE behind planter (based on weed types)
- Use low rate for each product in two-way mix
- Spray first postemergence herbicides between 20-30 DAP based on timing, not scouting
- Add either Warrant, Dual Magnum or Outlook in first post with Roundup and Auxin
- 2nd post (Liberty + AMS + NIS) should go out around 14-21 days after 1st post
- The goal is to keep cotton field clean until 7-8 weeks after planting when plants are big enough to shade out new flush of weeds

What's new in cotton???

- **New Liberty (L-glufosinate) with lower use rate**
- **Zalo (glufosinate + quizalofop premix)**

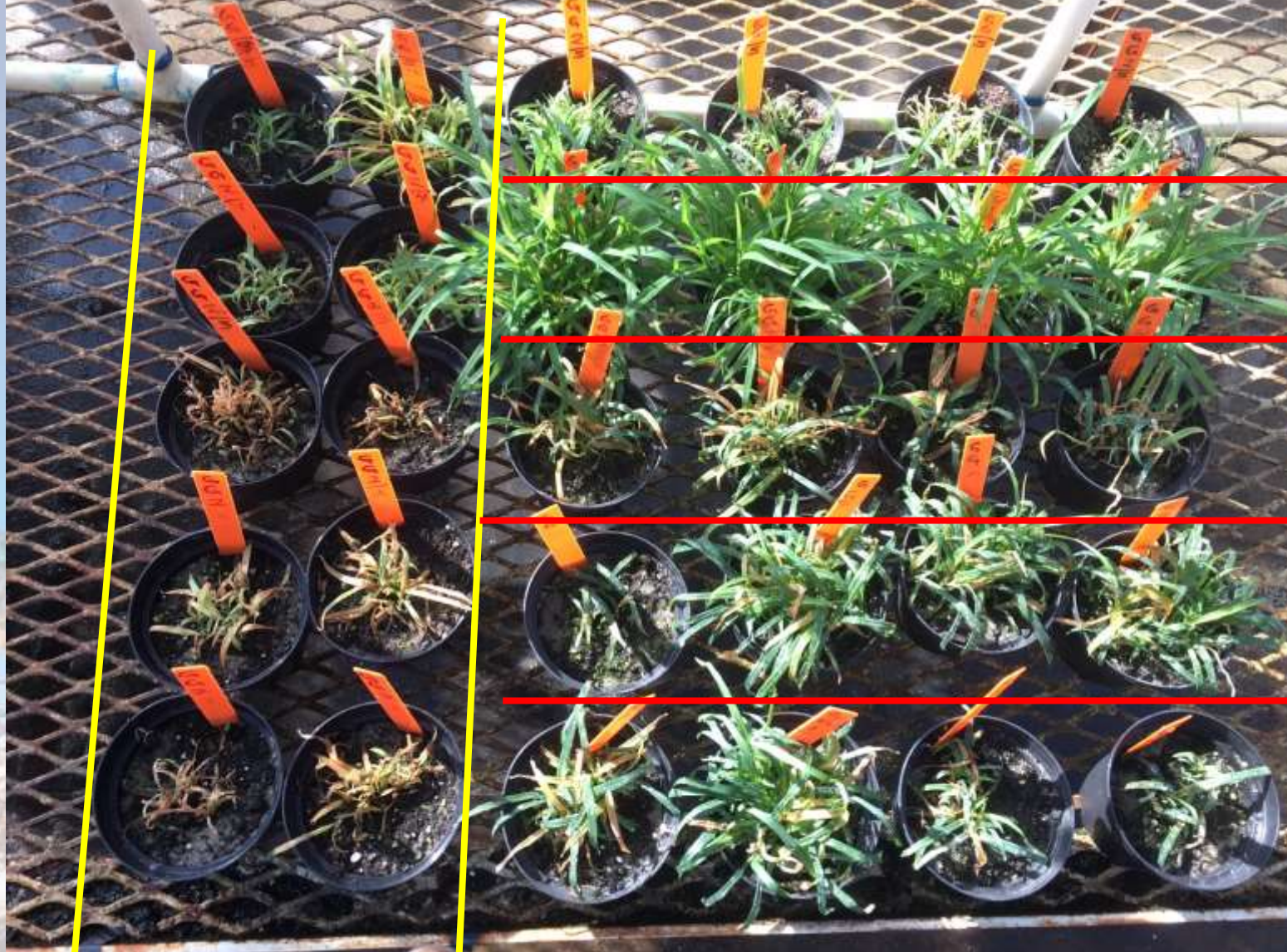


Peanut weed control

- Nothing new or really exciting in foreseeable future
- Biggest threats are herbicide resistance and PPO resistance pigweeds
- Gramoxone still works, but future is unclear
- Still no good answers for large sicklepod and coffeeweed (spray timing is everything)
- Tropical spiderwort remains a decent size problem
- Interaction of herbicide leaf burn, thrips and TSWV in early stage



Goosegrass population from Foley in 2016



Cadre 2x
(ALS)

Assure 2x (FOP)

Select max 2x
(DIM)

Poast 2x
(DIM)

Fusilade DX
2x (FOP)

Sensitive population

Resistant population from Foley

Goosegrass seeds from Foley in 2016
Target site mutation on Accase enzyme confirmed in lab

Tropical spiderwort control (30 DAT, June 22)



NTC



Valor 3 oz/A



Valor 3 oz + Warrant 3pt



Valor 3oz + Strongarm 0.225oz



Warrant 3pt + Strongarm 0.45 oz



Valor 3oz + Strongarm 0.45oz



NTC, Pictures taken 79 DAP (Aug 10)



**Valor + Strongarm 0.225 oz/A (PRE,
May 22)**

**Cobra 12.5 oz + Strongarm 0.225 oz +
24DB 16 oz + Dual Magnum 16 oz/A
(30 DAP)**

Pictures taken 79 DAP (Aug 10)

Final control rating: 86.25%



Warrant 3pt + Strongarm 0.45oz/A (PRE)

**Cobra 12.5 oz + 24DB 16 oz + Dual
Magnum 16 oz/A (30 DAP)**

Pictures taken 79 DAP (Aug 10)

Final Control efficacy: 92.5% (Aug 10)

How to deal with tropical spiderwort???

- In peanut, Strongarm is the blessing. Split half and half is recommended
- Gramoxone is also very effective. Use Group 15 herbicide like Dual, Warrant and Outlook in PRE and 1st POST
- Control this weed in cotton is a challenge too, particularly Xtend cotton. NO PRE works very good on it
- Start with Warrant + Cotoran, followed by RUP + dicamba or Enlist + Dual Mag 3 weeks later, then Liberty 32 oz + Staple 2.5-3 oz/A + AMS



NO PRE on May 16th

**Gramoxone 8 oz +
Storm 16 oz + Dual Mag
16 oz + NIS @ June 1st**

Cadre + DB @ June 13th

NTC, July 14th 2023. Headland AL



Left:
NO PRE on May 16th

**Gramoxone 8 oz +
Storm 16 oz + Dual Mag
16 oz + NIS @ June 1st**

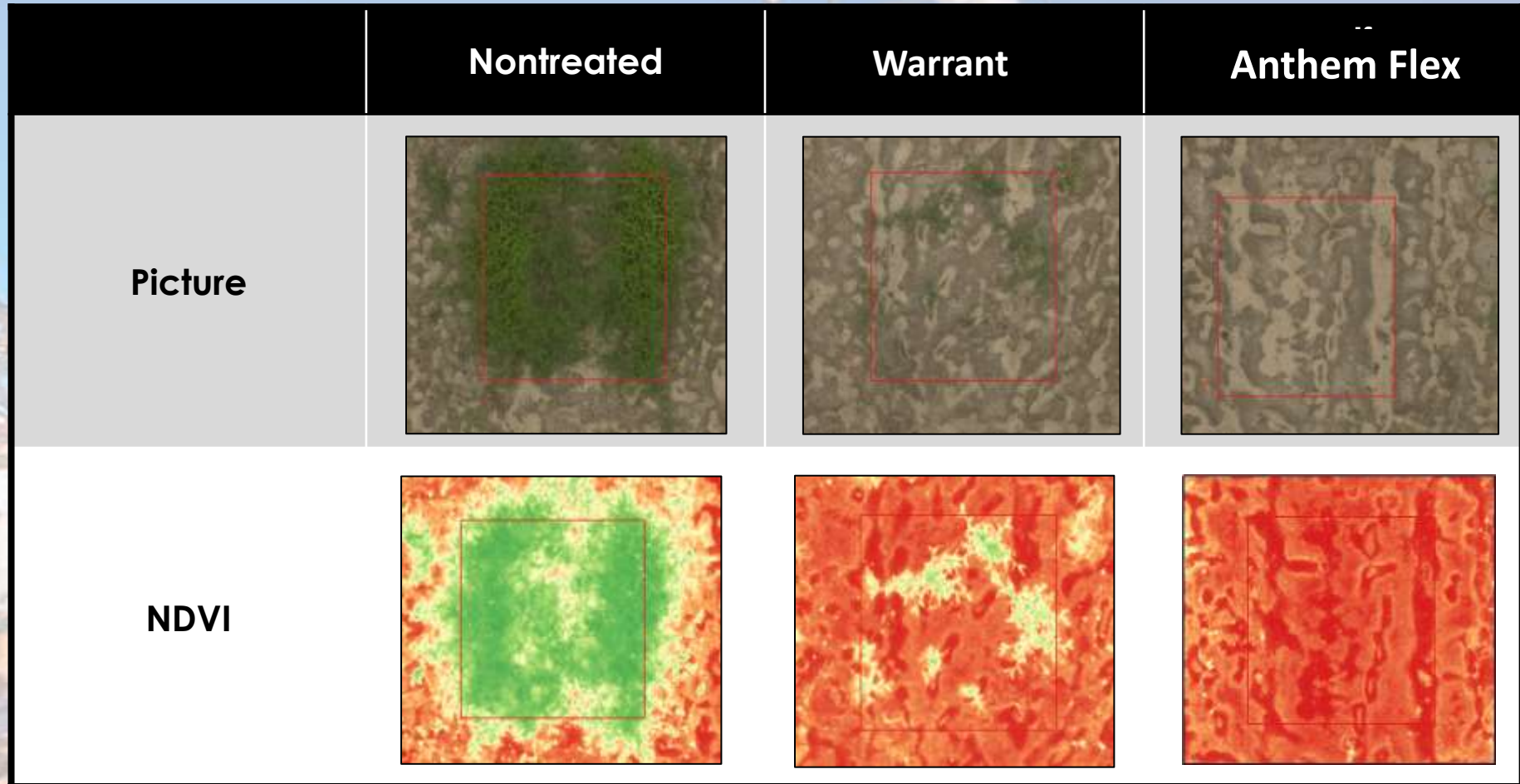
**Cadre 4 oz + DB 16 oz +
Dual Mag 16 oz + NIS @
June 13th**

Right:
**Valor 3 oz + Prowl H2O
32 oz on May 16th**




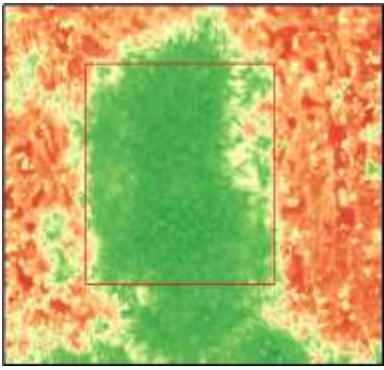
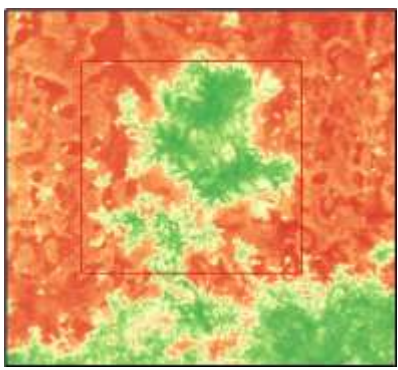
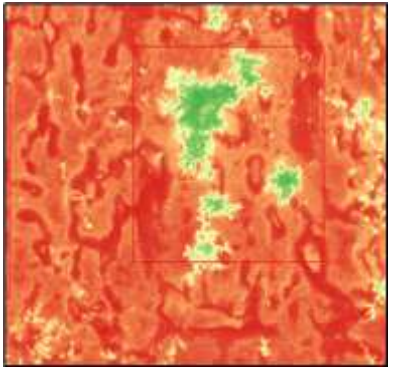
**Cadre 4 oz + DB 16 oz +
Dual Mag 16 oz + NIS @
June 13th**



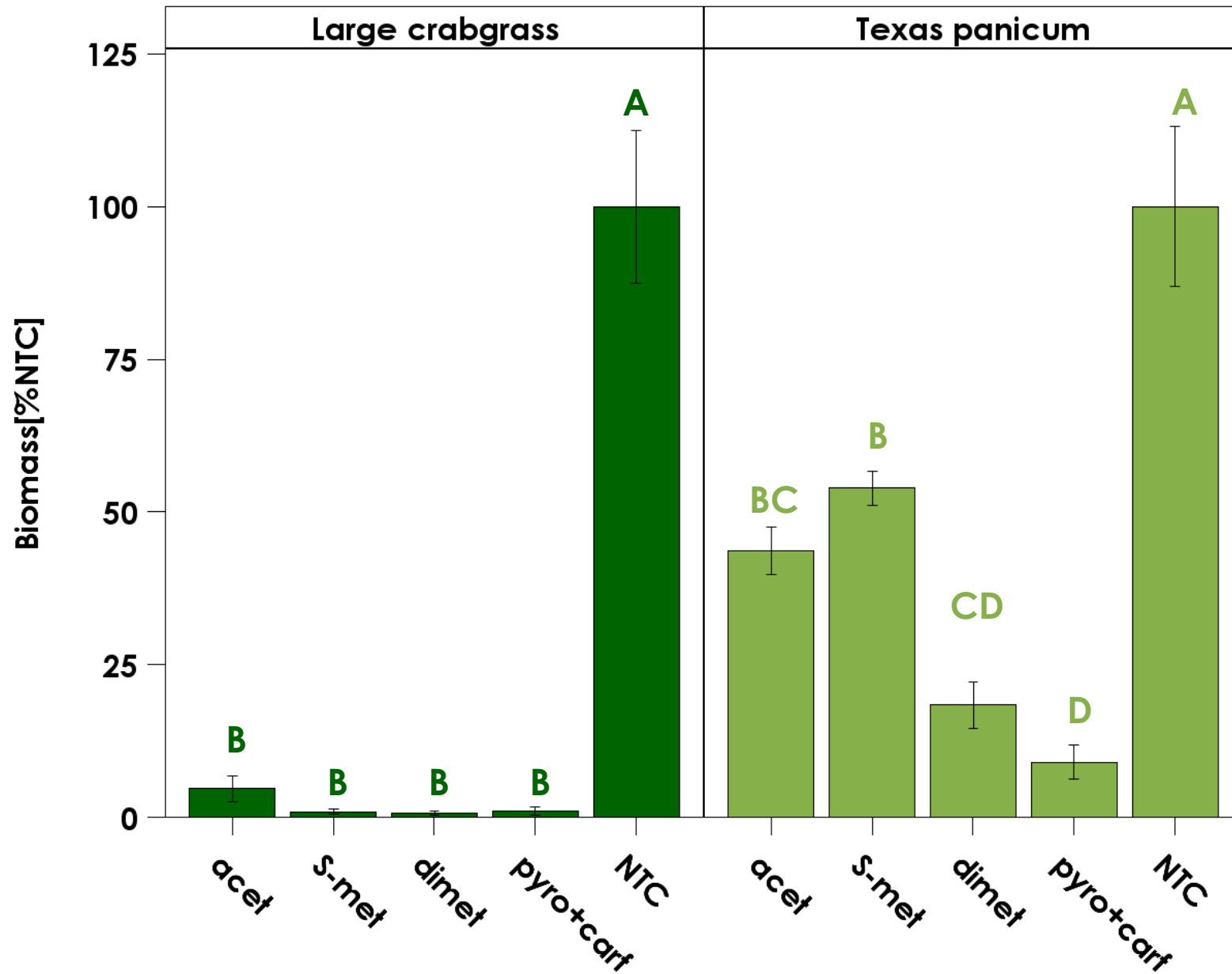
- large crabgrass at 42 DAT (Macon Co.):



- **Texas panicum at 42 DAT (Macon Co.):**

	Nontreated	Warrant	Anthem Flex
Picture			
NDVI			

Biomass at 42 DAT



Data of both years together;
Bars of different colors cannot
be compared to each other.
Means followed by the same
letter in same color are not
significantly different ($\alpha=0.05$).

Marestail burndown-Autauga county AL

Roundup PM 32 oz + Sharpen 1 oz/A + Interlock 0.5% v/v

Marestail was 6-18 inches tall in general, glyphosate resistant biotype

T30, 20 ft wide swath, 2 GPA, 15.5 MPH, 10 ft altitude, AM 11001



Untreated



In between

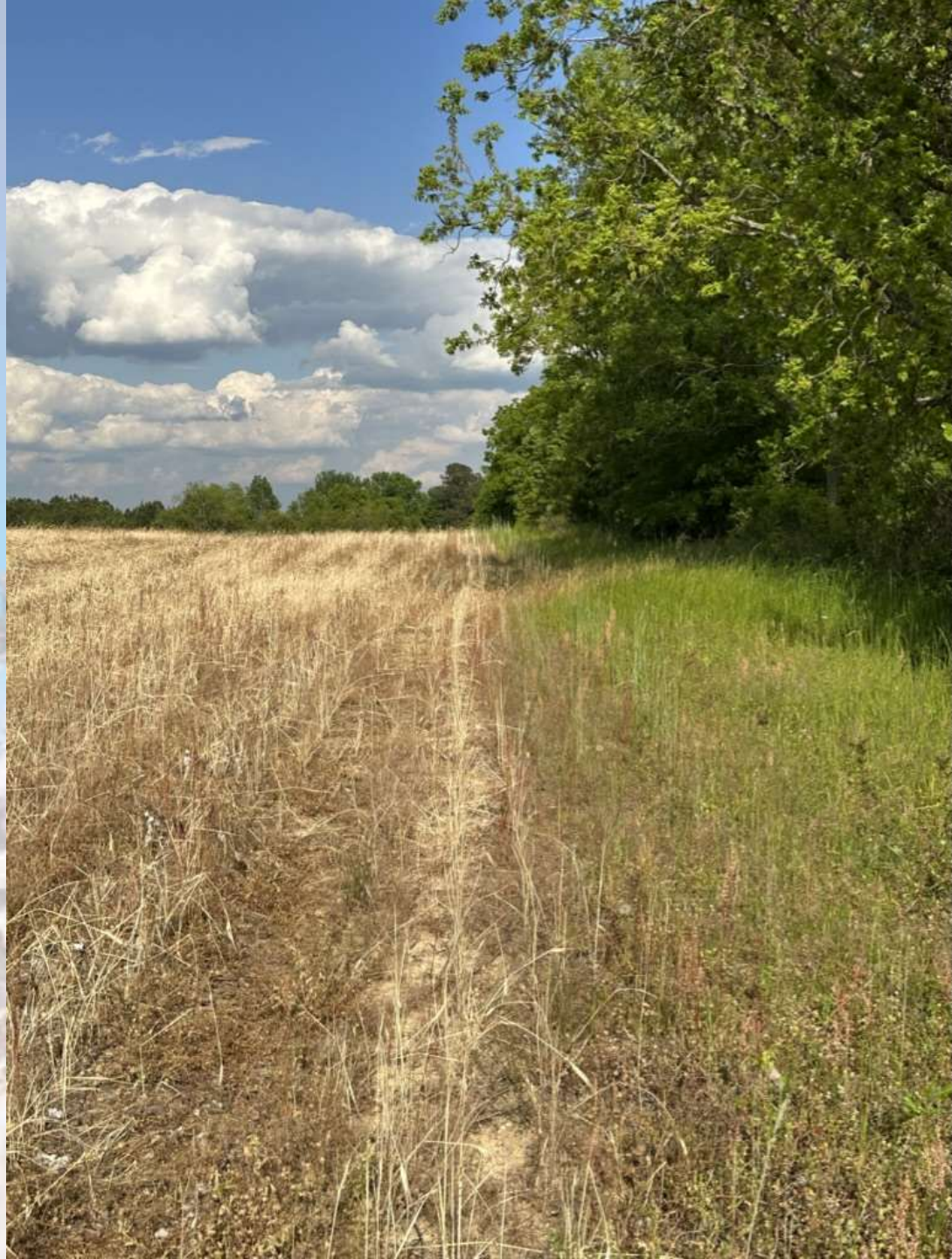


Treated

T30 and T40 burndown example 4

T40, 33 ft swath, 32.8 ft/s, 10 ft, 2 GPA,
average wind speed < 4 MPH







**Untreated
plants**





Bellefonte, Pennsylvania

**Veltyma fungicide sprayed at 7 oz/A
with 0.5 oz/A of Justified (drift
reducing agent and deposition aid)**

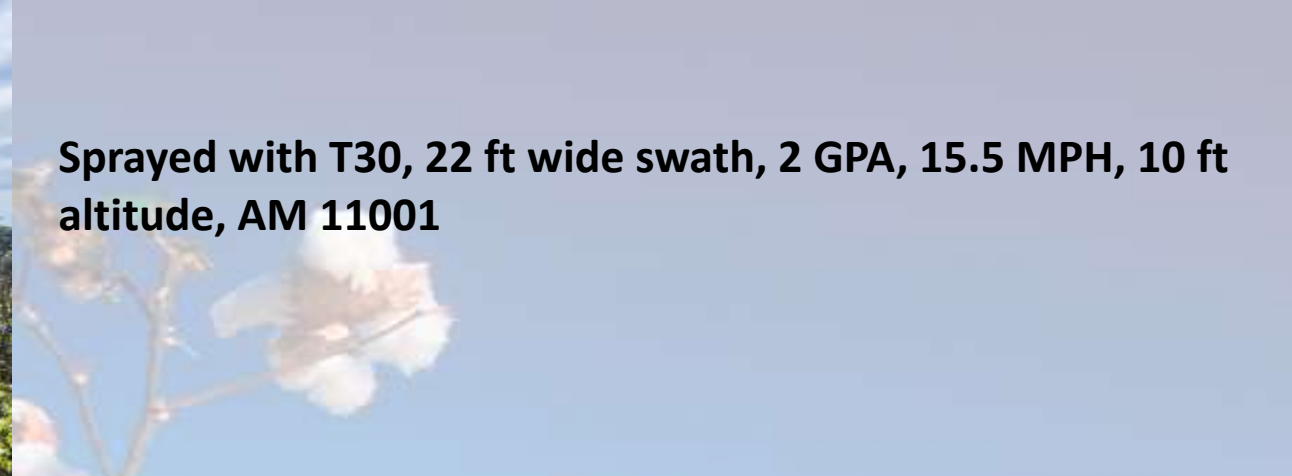
2 GPA with T40

**13 ft height, 32 fps, 27-28 ft swath
width**

Photo credit to:
Tyler Fleck and Flecks Ag Services of
Warriors Mark, Pennsylvania



Sprayed with T30, 22 ft wide swath, 2 GPA, 15.5 MPH, 10 ft altitude, AM 11001



Before application

Monroe county, AL







**After application. Monroe county, AL
AM11001, 2 GPA, 22 ft swath, 10 ft height, 15.5 MPH**



After application

Monroe county, AL



Airplane at 3 GPA



T30, Airmix 11001, 2 GPA, 15 ft height/25 ft swath, 15.6 MPH



Eufaula AL

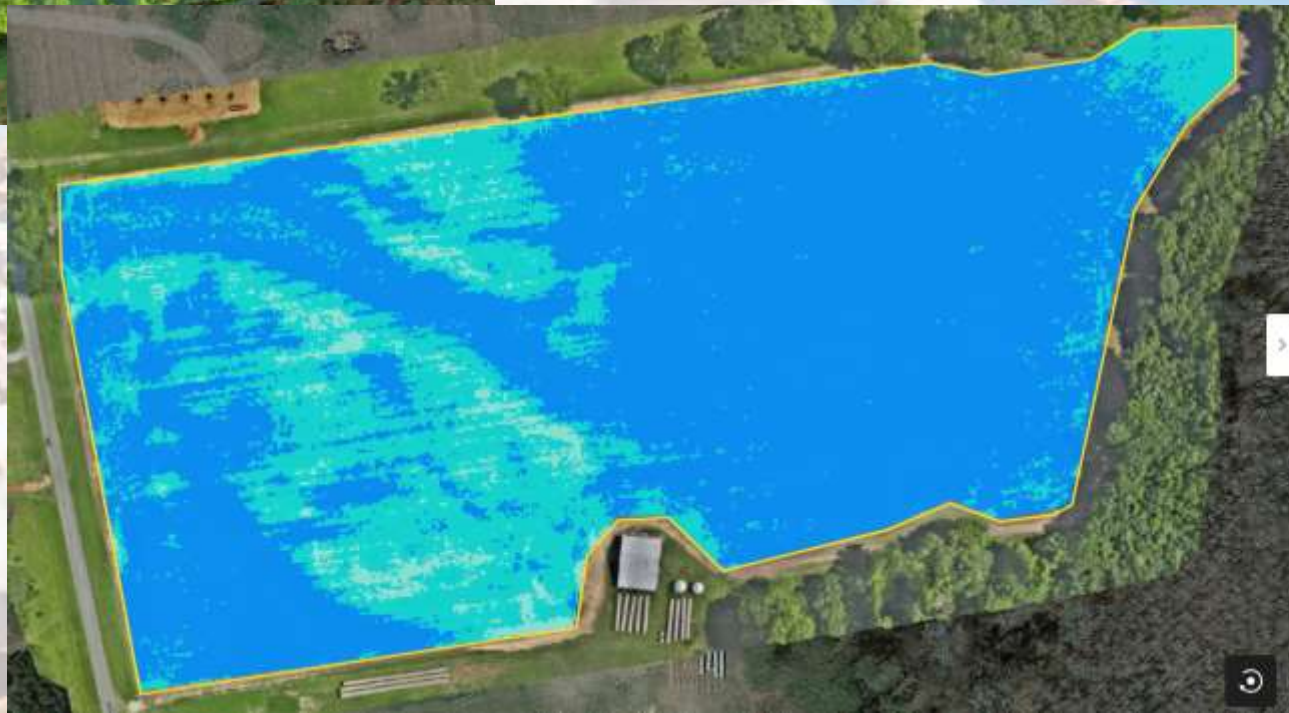




Cotton variation caused by soil type change



**Variable rate application prescription
16 oz and 6 oz/A of Pix depending on the area**



Method

Leveling Zonation

Number of classes *

3

Distribution of index values *



-0.01 - 0.28 = 0.24 ha

0.00 L(kg)/ha

0.28 ~ 0.5 = 1.95 ha

14.02 L(kg)/ha

0.5 - 0.85 = 5.32 ha

28.05 L(kg)/ha



Sep 6, 2023
Headland AL



**3 way mix was spread
right before peanut
digging**

**Spreading date: Oct
10, 2023. Headland AL**



**3 way mix was spread
4 days after cotton
defoliation**

**Spreading date: Oct
10, 2023. Headland AL**

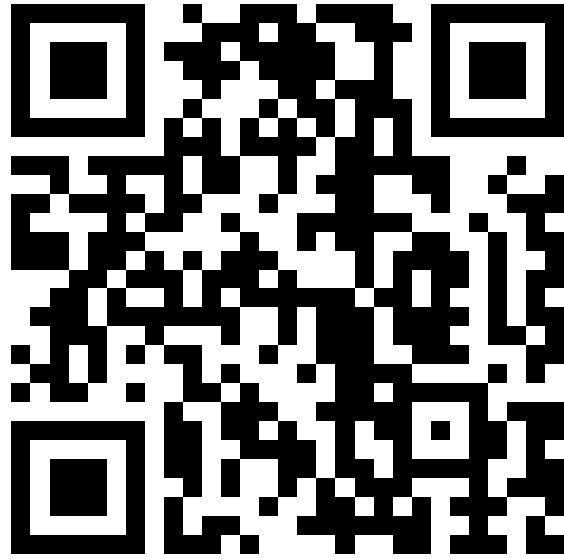






Dec 12, 2023





Scan this QR code for registration page

- The 2nd spray drone end user conference
- Feb 26-29, 2024. Gulf Shore, AL
- In-person event with virtual option (limited to presentations)
- Presentations and latest updates from FAA, EPA, AAPCO, Crop Life of America, global spray drone task force, CA DPR, researchers, equipment manufactures, experienced operators, etc.
- Panel discussions and field demo of 4 drone brands and auto mixing trailer



Questions??? steveli@auburn.edu

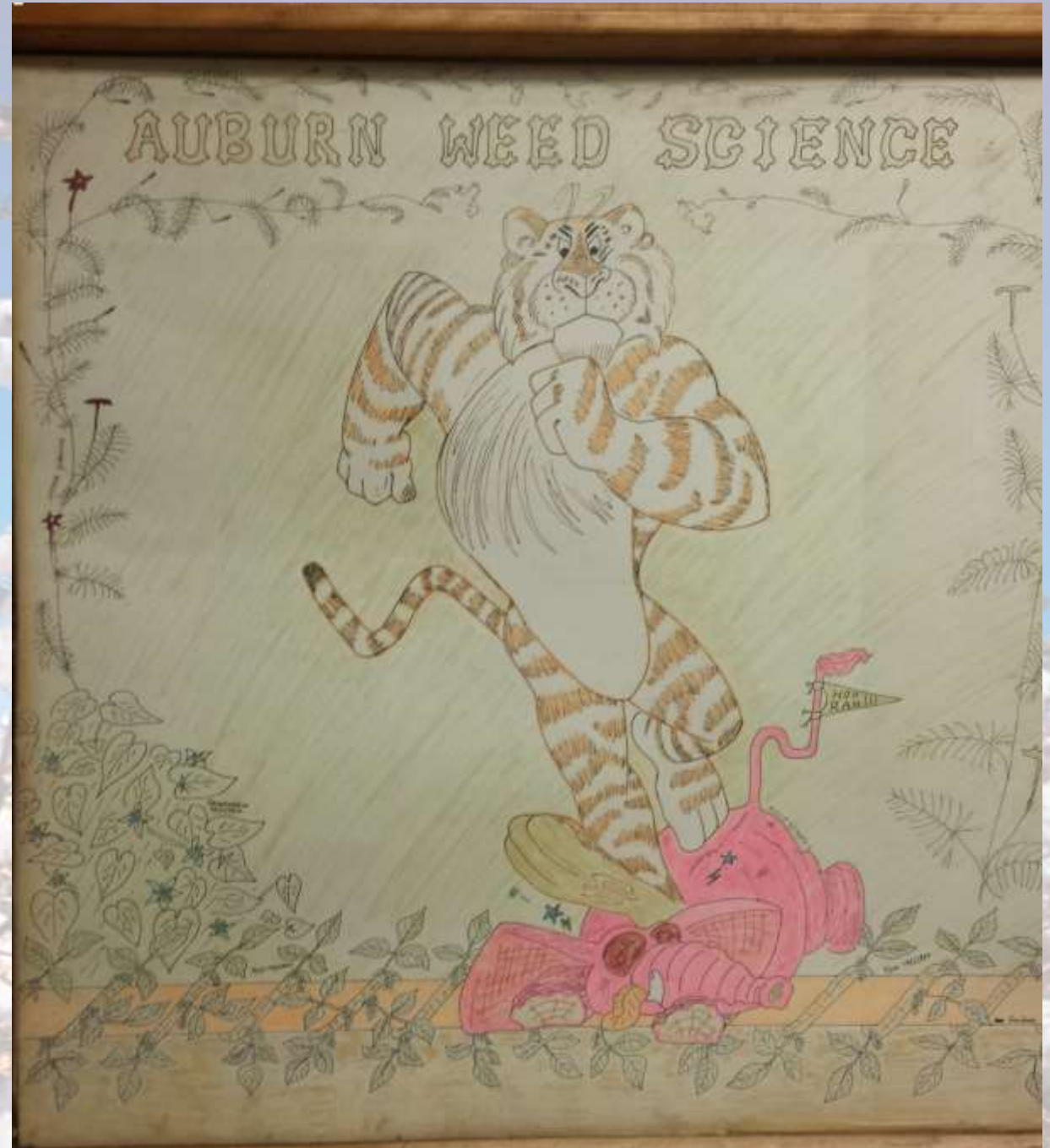
Questions???

334-707-7370

steveli@auburn.edu

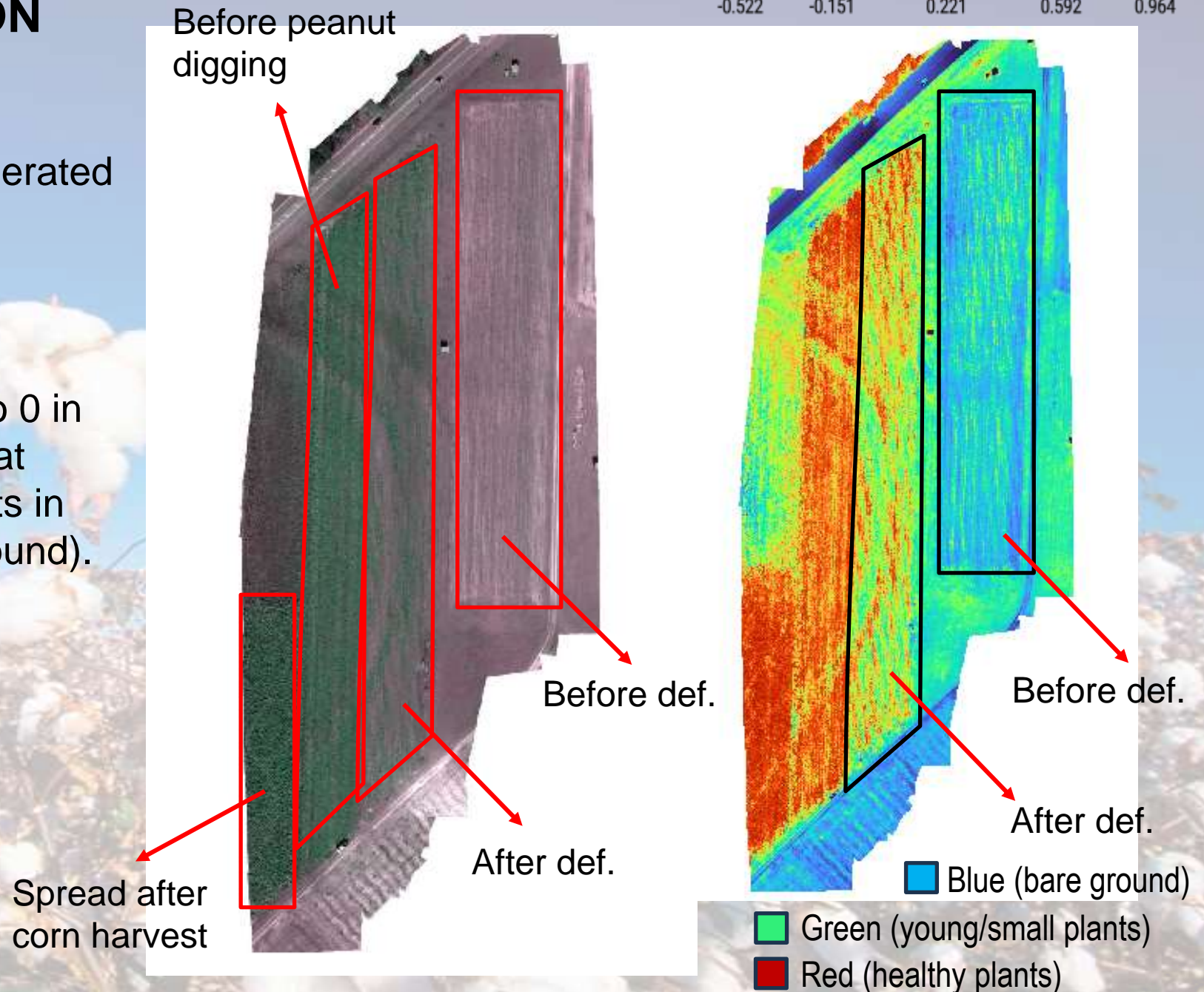
Thanks for ALFA for providing funding

Cotton and peanut check-off at work!!!



IMAGERY DATA COLLECTION

- Red, green, and blue ortho mosaic and NDVI map generated from Headland cotton field
- Flight date: **01/15/2023**
- The NDVI index is closer to 0 in the blue spots, meaning that there are less healthy plants in those spots (more bare ground).





Left:
NO PRE on May 16th

**Gramoxone 8 oz +
Storm 16 oz + Dual Mag
16 oz + NIS @ June 1st**

**Cadre 4 oz + DB 16 oz +
Anthem Flex 3 oz @
June 13th**

Right:
NO PRE on May 16th

**Gramoxone 8 oz +
Storm 16 oz + Dual Mag
16 oz + NIS @ June 1st**

Cadre + DB @ June 13th





Left:

**Reflex 10 oz/A
PRE**

**RUP PM3 and
Liberty 30 and 29
oz/A POST**

Right:

**Alite 27 1.5 oz/A
PRE**

**RUP PM3 and
Liberty 30 and 29
oz/A POST**

**Headland AL
Aug 25th 2023**





Left:

**Reflex + Alite 27
10 oz and 1.5
oz/A PRE**

**RUP PM3 +
Engenia +
Outlook 30 + 12.8
+ 12.8 oz/A POST**

Right:

**Reflex + Alite 27
10 oz and 1.5
oz/A PRE**

**RUP PM3 +
Liberty + Outlook
30 + 29 + 12.8
oz/A POST**

**Headland AL
Aug 25th 2023**





