



Peanut Tolerance to Reviton[®] (tiafenacil)

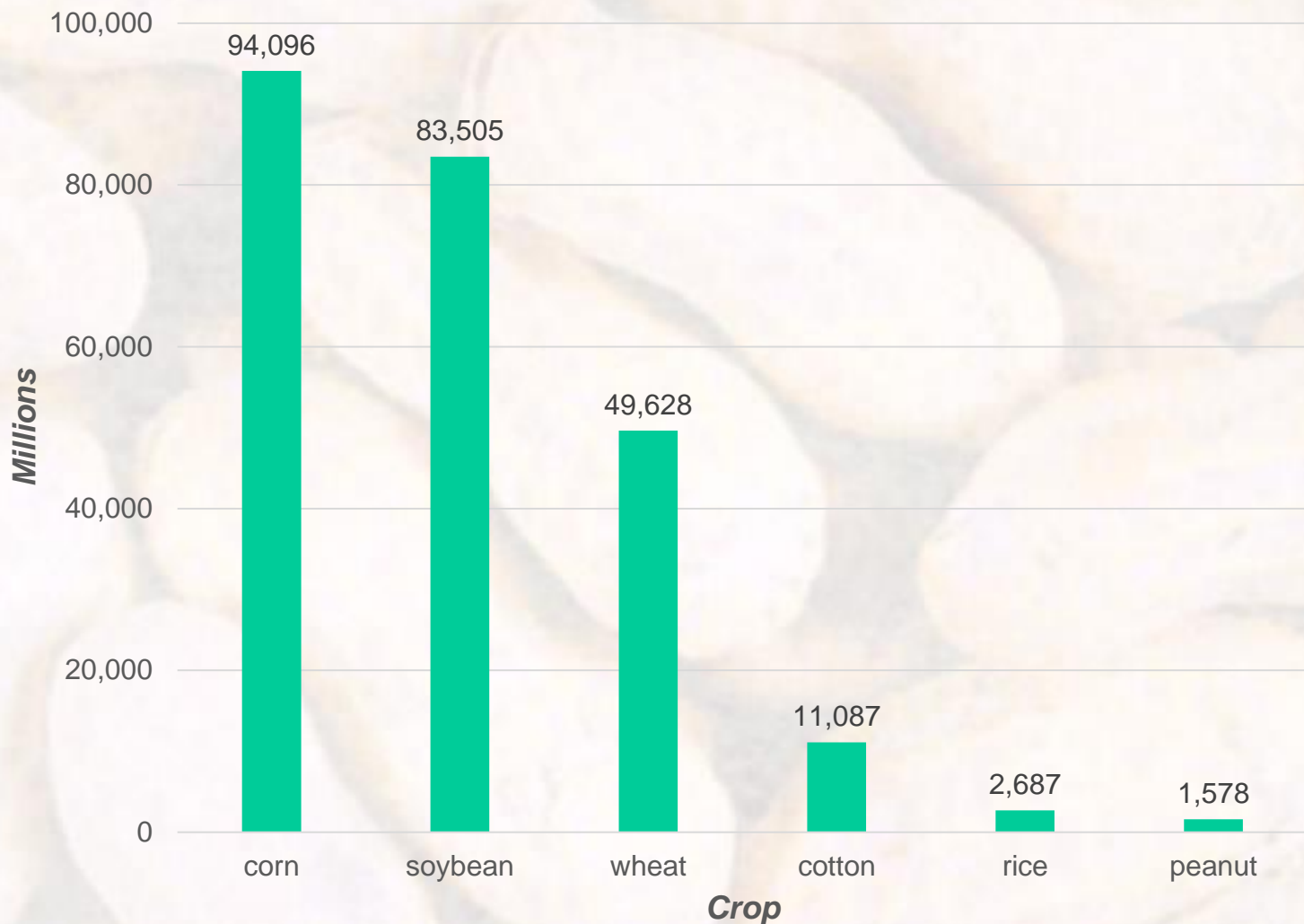
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Dept. Crop & Soil Sciences





U.S. Crop Production – 2023

Acres Planted





Peanut Herbicide History

Since the 1980's

- Dual - 1980
- Poast - 1985
- **Premerge/Dinitro/Dyanap (dinoseb) was cancelled in 1986**
- Sonalan - 1988
- Classic - 1988
- Paraquat – 1988
- **Lasso (alachlor) Issues - 1991**
- Pursuit - 1991
- Zorial/Solicam - 1993
- Tough - 1992
- Select - 1996
- Cadre - 1996
- Frontier - 1996
- Dual Magnum - 1997
- Outlook - 1999
- Strongarm - 2000
- Valor - 2001
- Spartan - 2003
- Cobra - 2005
- Fusilade - 2009
- Warrant - 2014
- Zidua - 2017
- Anthem Flex - 2020
- Brake - 2023
- Rexovor - ??????????
- Liberty - ??????????

Reviton® 2.83SC

- Helm Agro U.S.
- tiafenacil
- N-phenyl-imides
 - *flumioxazin, saflufenacil, trifludimoxazin*
- WSSA #14
 - *PPO-inhibitor*
- Preplant Burndown
 - *corn (0 d)*
 - *soybean (0-7 d)*
 - *wheat (0 d)*
 - *cotton (7-14 d)*
- 1-3 oz/A
- Peanut rotation is 120-150 days (rate)
 - Proposed 24-C label
 - 0 days (1 oz/A) and 7 days (2 oz/A)



The image shows the product label for Reviton 2.83SC. At the top right, it says 'TIAFENACIL GROUP 14 HERBICIDE'. The Helm logo is in a red oval. Below it, 'REVITON' is written in large black letters. A blue curved banner is above the logo. The text describes it as a nonselective burndown herbicide with the active ingredient TERGEO™. It includes a table of ingredients: ACTIVE INGREDIENT: TIAFENACIL* (30.0%), OTHER INGREDIENTS (70.0%), and TOTAL (100.0%). A footnote defines the asterisked ingredient. It states the product is formulated as a suspension concentrate (SC) with 2.83 pounds of active ingredient per gallon. EPA Reg. No. 71512-37-74530 is listed. Safety warnings include 'KEEP OUT OF REACH OF CHILDREN CAUTION/PRECAUCION' and instructions to read the next page for first aid and precautionary statements. The bottom right corner contains contact information for Helm Agro US, Inc. in Tampa, FL.

ACTIVE INGREDIENT: TIAFENACIL*	30.0 %
OTHER INGREDIENTS	70.0 %
TOTAL	100.0 %

*methyl N-[2-[[[2-chloro-5-[3,6-dihydro-3-methyl-2,6-dioxo-4-(trifluoromethyl)-1(2H)-pyrimidinyl]-4-fluorophenyl]thio]-1-oxopropyl]-β-alanine

Reviton is formulated as a suspension concentrate (SC) and contains 2.83 pounds of active ingredient per gallon of formulated product (339 grams per liter).

EPA Reg. No. 71512-37-74530

**KEEP OUT OF REACH OF CHILDREN
CAUTION/PRECAUCION**

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.)

SEE NEXT PAGE FOR FIRST AID AND PRECAUTIONARY STATEMENTS.
READ ENTIRE LABEL CAREFULLY AND USE ONLY AS DIRECTED.

Manufactured For
HELM Agro US, Inc.
401 E. Jackson St., Suite 1400
Tampa, FL 33602
Phone: 813.621.1396
Fax: 813.621.0763
info@hmagro.com

Pre-Plant Burndowns - 2023



NTC



Roundup PowerMax3 5.88SL @ 22 oz/A
Reviton 2.83SC @ 1 oz/A
MSO @ 1% v/v

Objective



- Evaluate peanut response to PRE and POST applications of Reviton[®] (tiafenacil)

Materials and Methods



- **UGA Ponder Farm**
 - *small plots, 15 GPA, 11002AIXR, GA-06G, weed-free*
- **2021**
 - *NTC, 2 oz/A-PRE, 1 or 2 oz/A-POST (30 DAP) + Induce @ 0.25% v/v*
 - *RCBD, 3 reps*
- **2022**
 - *timing (4) X rate (3) factorial, 4 reps*
 - *PRE, 30 or 60 or 90 DAP (Induce @ 0.25% v/v)*
 - *0, 1 or 2 oz/A*
- **ANOVA, P=0.10, Fisher's**



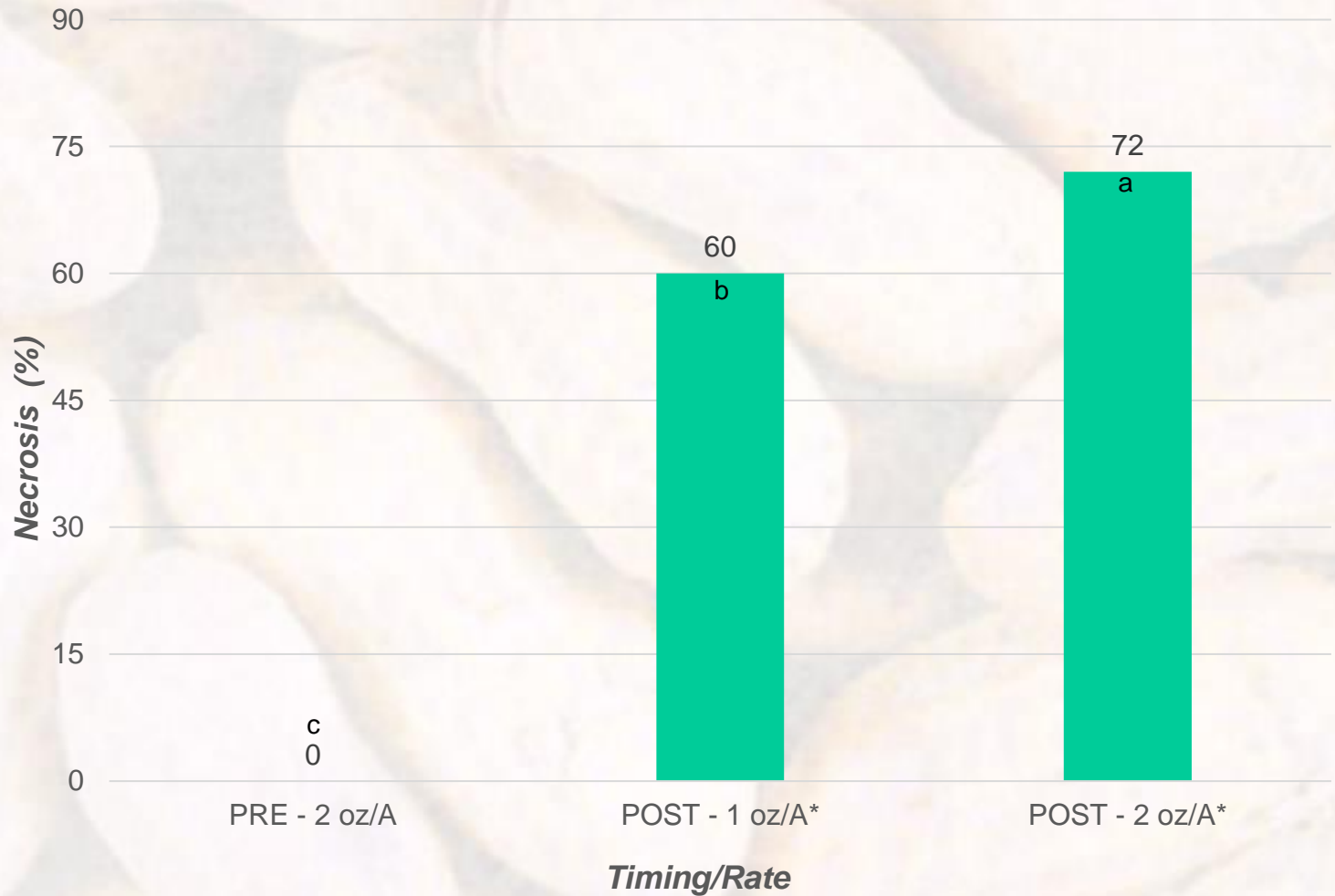
Results - 2021



Screven Co. 2021



Peanut Leaf Necrosis (32 DAP) As Influenced By Reviton® 2.83SC



*Applied 30 DAP and included Induce @ 0.25% v/v



Peanut Response to Reviton® 2.83SC - 2021

NTC



2 oz/A - PRE



1 oz/A + Induce - POST

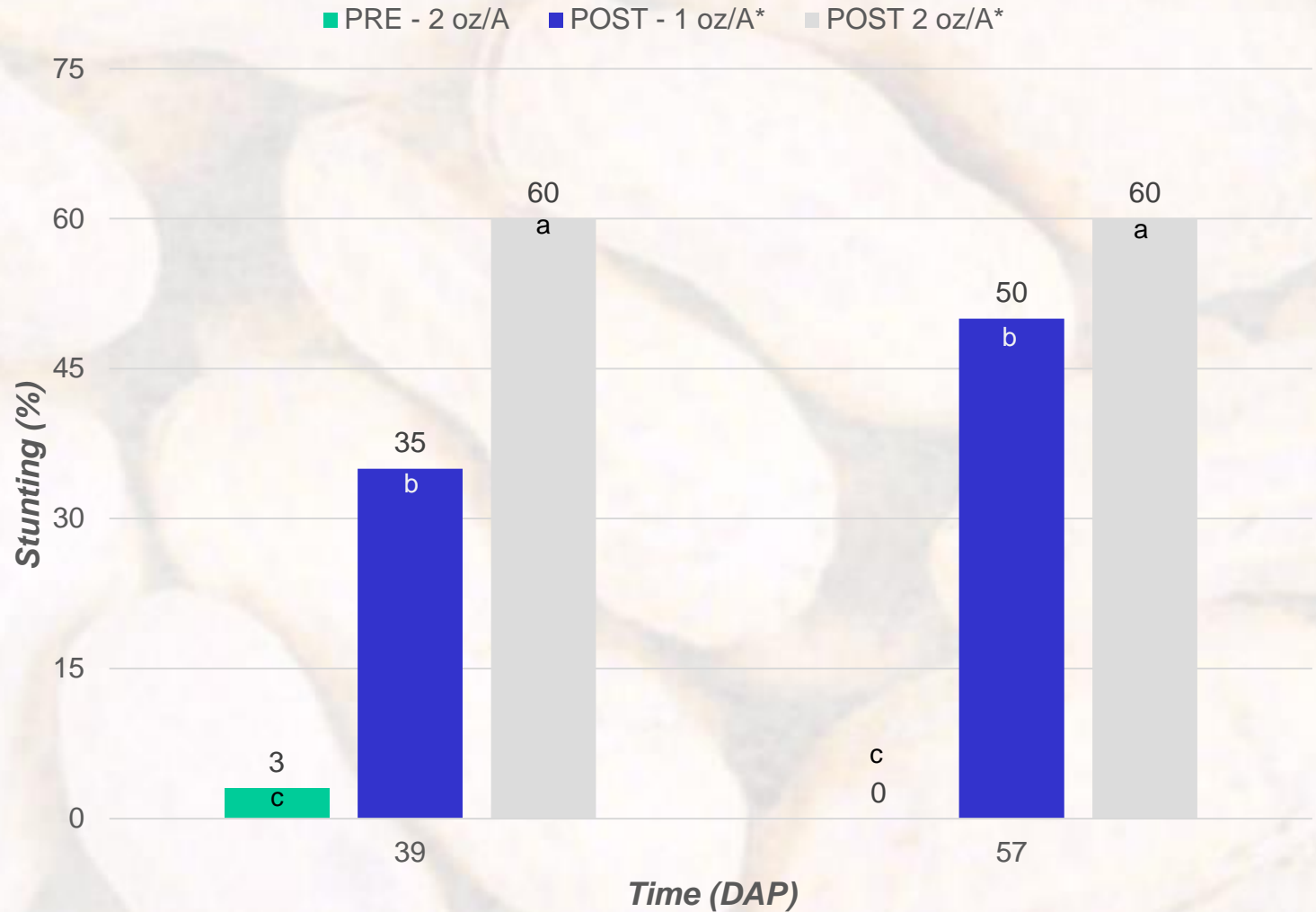


2 oz/A + Induce - POST

PE-14-21
June 4
2 DAT (POST)
32 DAP



Peanut Stunting As Influenced By Reviton® 2.83SC

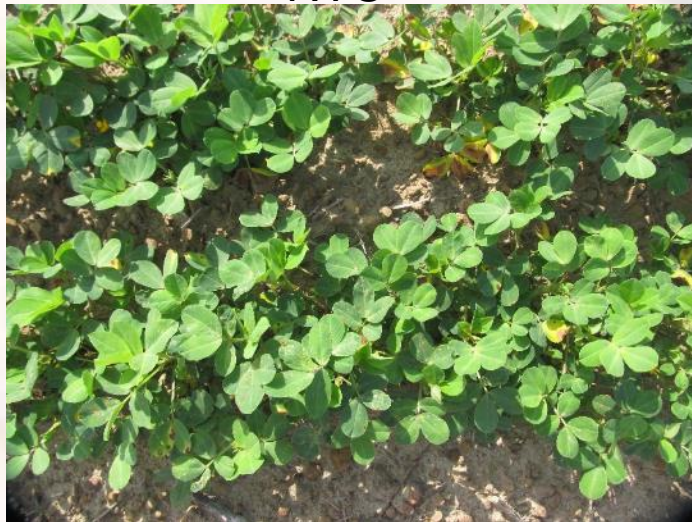


*Applied 30 DAP and included Induce @ 0.25% v/v

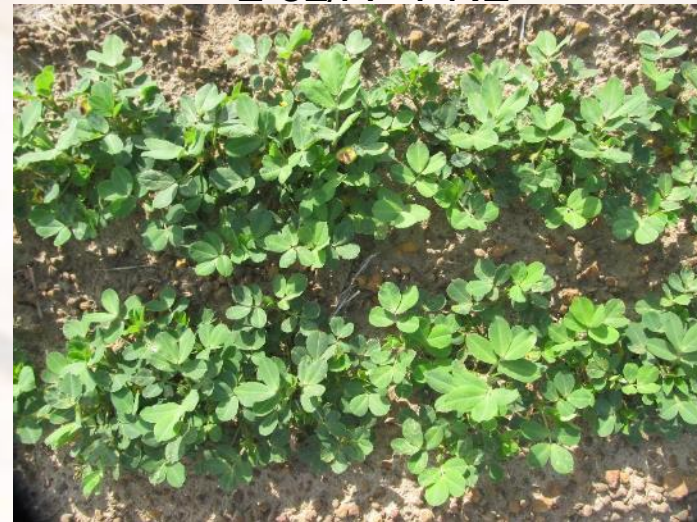


Peanut Response to Reviton® 2.83SC - 2021

NTC



2 oz/A - PRE



1 oz/A + Induce - POST

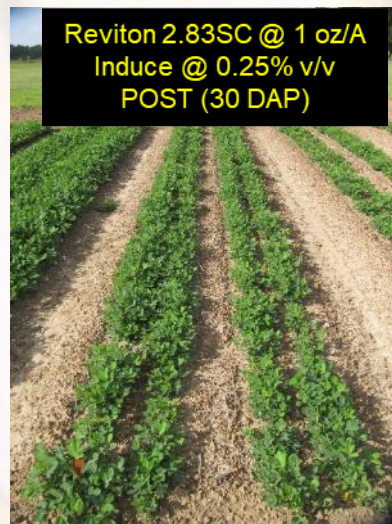


2 oz/A + Induce - POST

PE-14-21
June 11
9 DAT (POST)
39 DAP

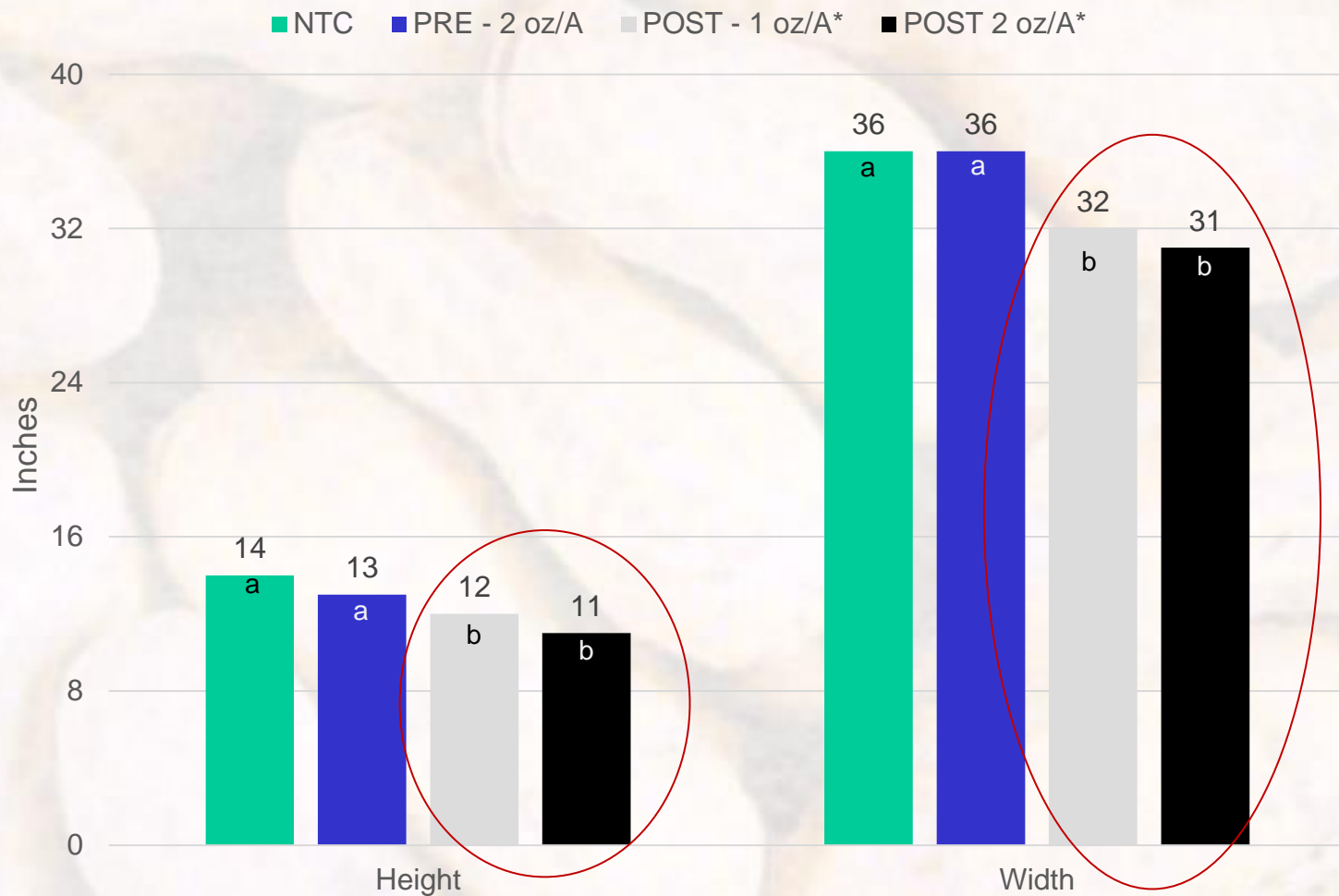


Peanut Response to Reviton® - 2021





Peanut Height/Width (84 DAP) As Influenced By Reviton® 2.83SC



*Applied 30 DAP and included Induce @ 0.25% v/v

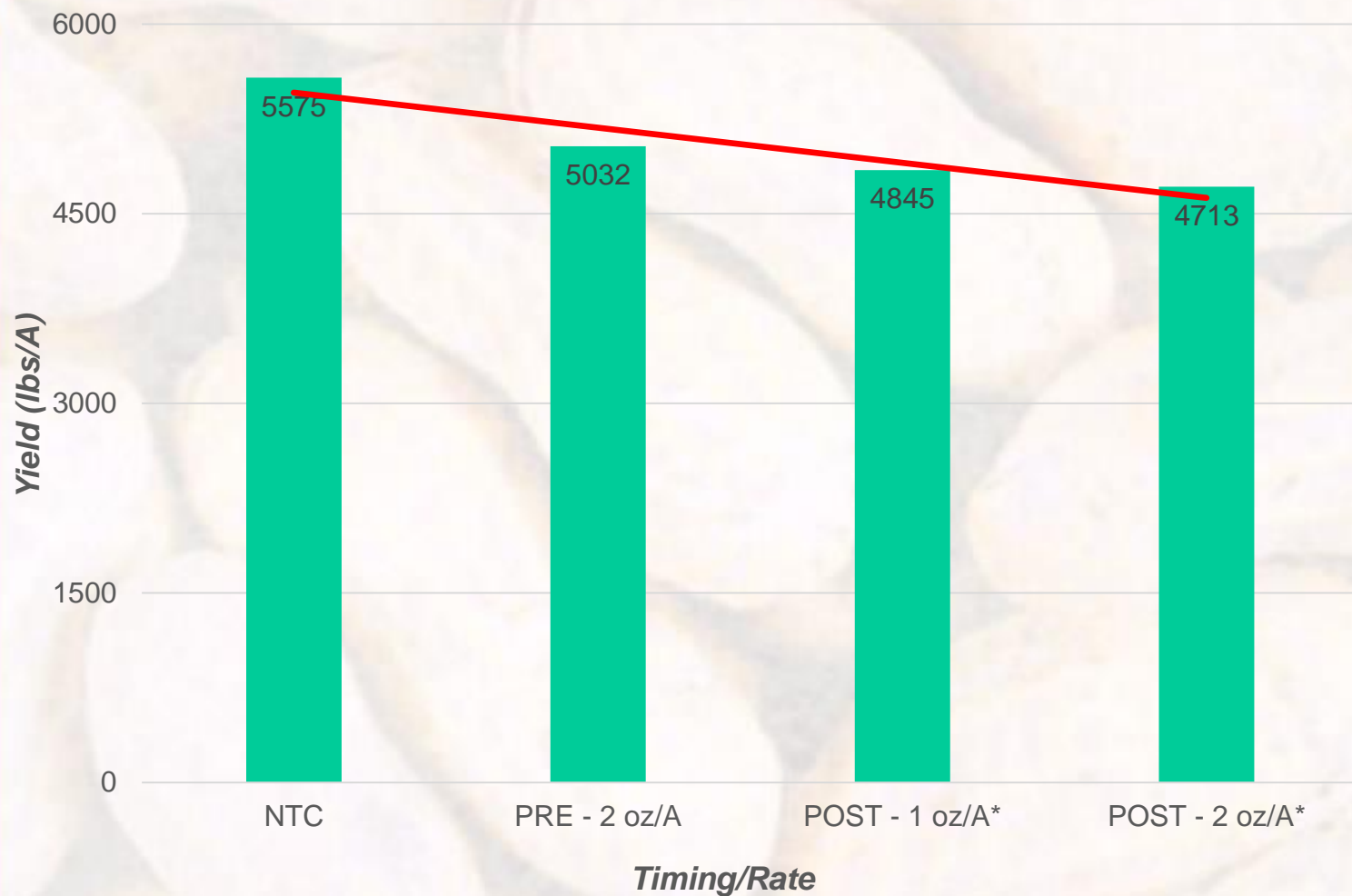


Peanut Response to Reviton® - 2021





Peanut Yield As Influenced By Reviton® 2.83SC - 2021



*Applied 30 DAP and included Induce @ 0.25% v/v

P=0.2037
CV=9.36

Results - 2022





Reviton® 2.83SC Applied 30 DAP



1 oz/A + Induce @ 0.25% v/v



2 oz/A + Induce @ 0.25% v/v



Peanut Response to Reviton® 2.83SC Applied PRE

0 oz/A



1 oz/A



2 oz/A



PE-01-22
August 9
98 DAP



Peanut Response to Reviton® 2.83SC Applied POST (30 DAP)

0 oz/A



1 oz/A



2 oz/A



PE-01-22
August 9
98 DAP



Peanut Response to Reviton® 2.83SC Applied POST (60 DAP)

0 oz/A



1 oz/A



2 oz/A



PE-01-22
August 9
98 DAP



Peanut Response to Reviton® 2.83SC Applied POST (90 DAP)

0 oz/A



1 oz/A



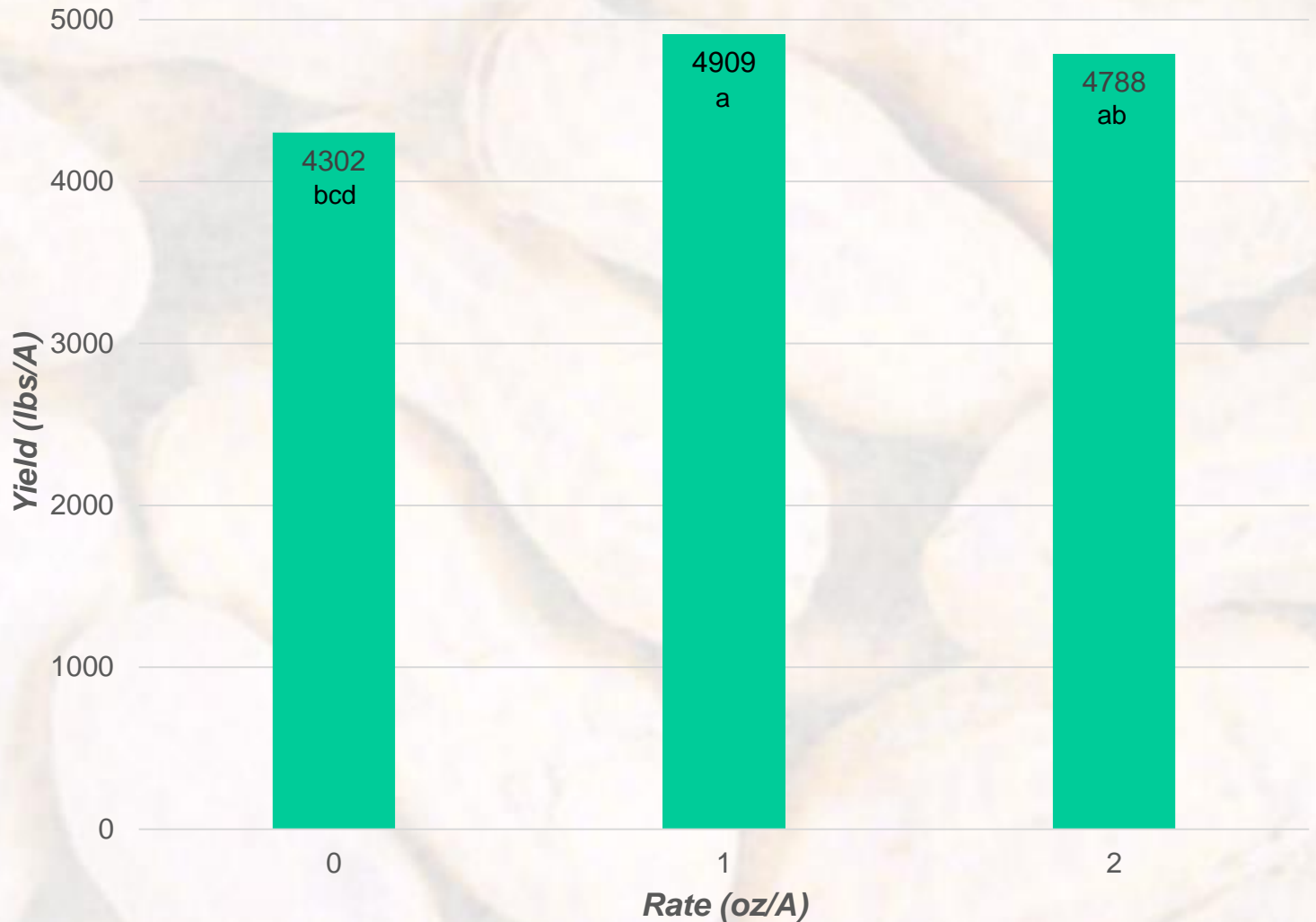
2 oz/A



PE-01-22
August 9
98 DAP

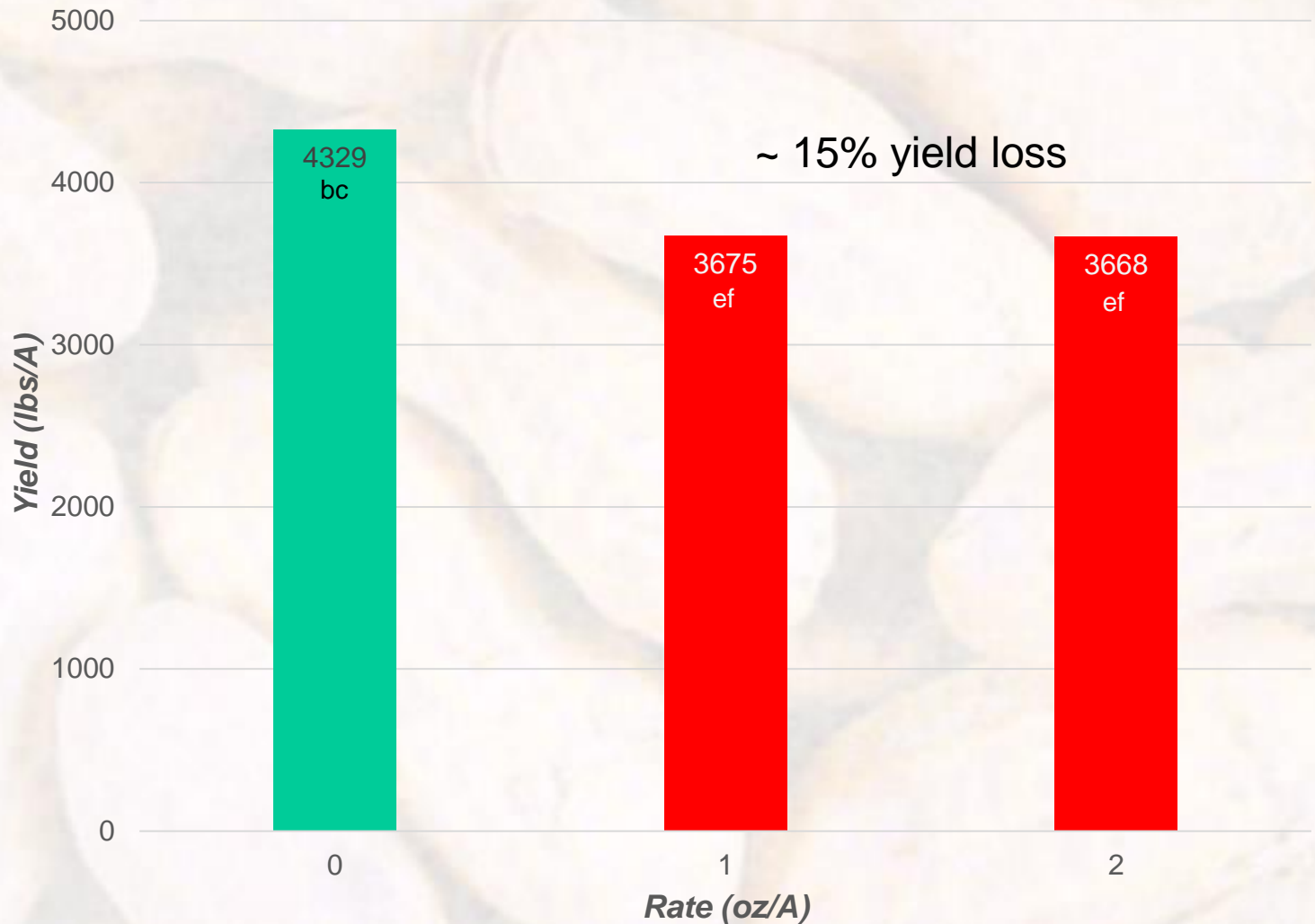


Peanut Yield Response to PRE Applications of Reviton® 2.83SC - 2022



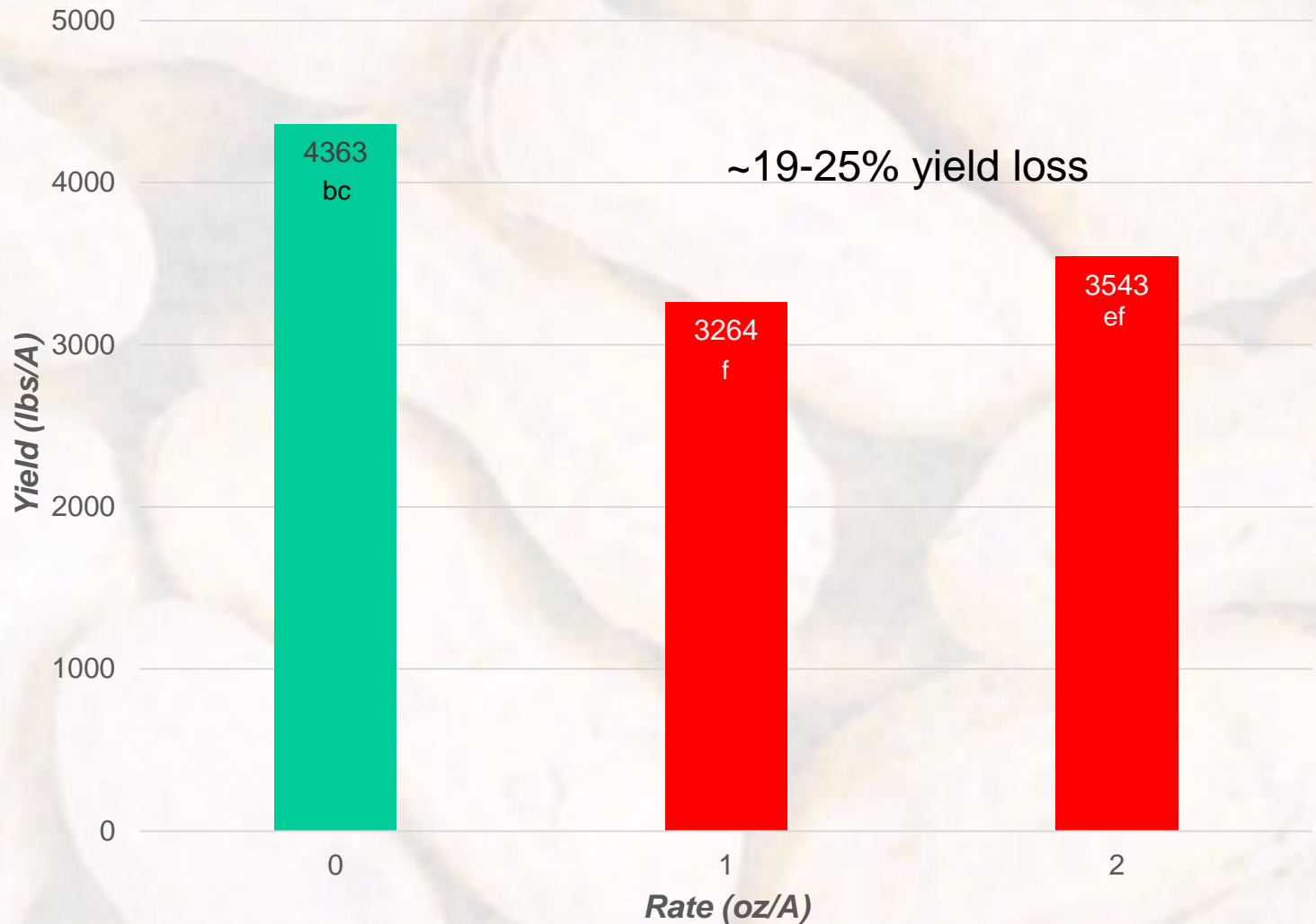


Peanut Yield Response to POST (30 DAP) Applications of Reviton® 2.83SC - 2022



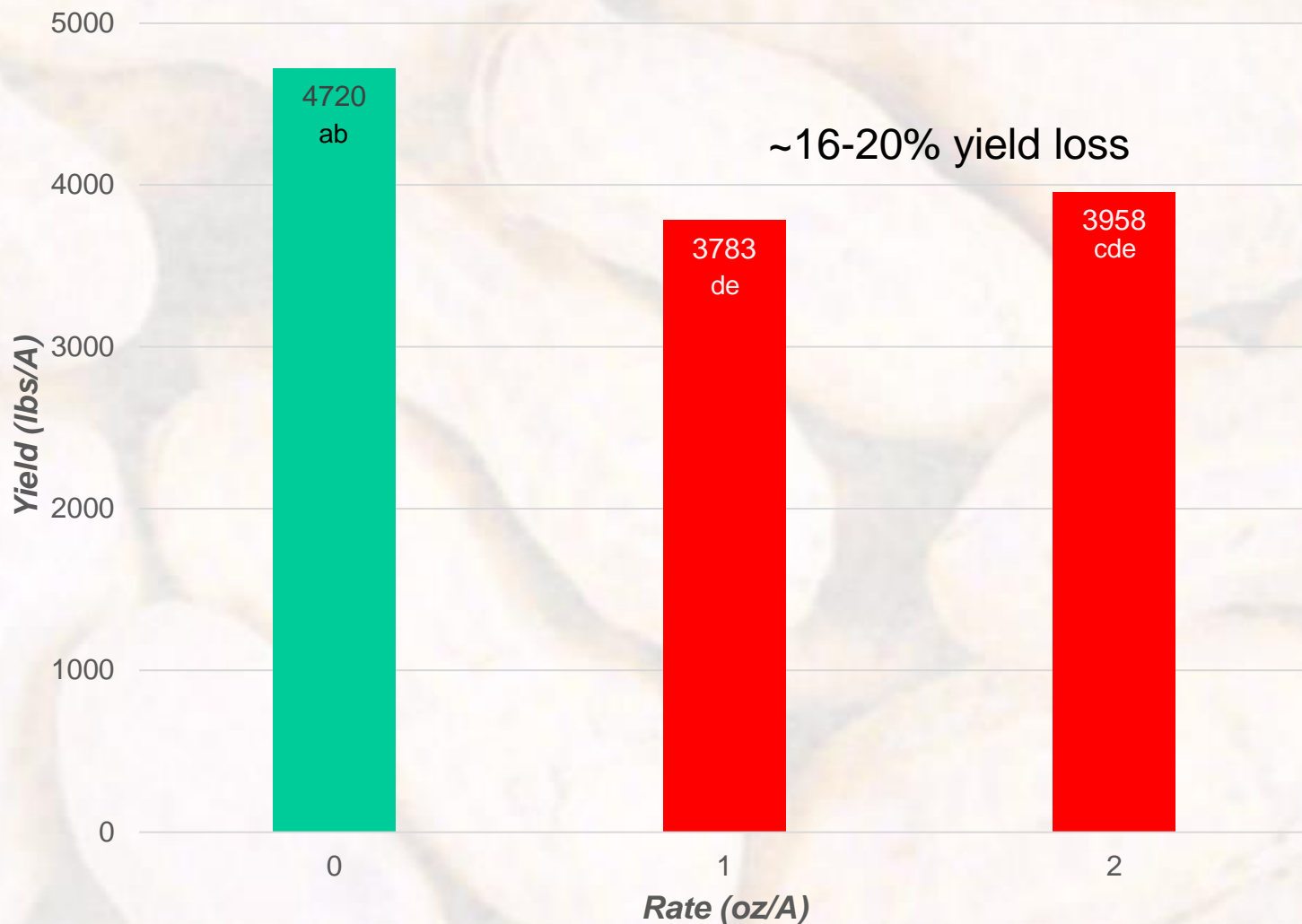


Peanut Yield Response to POST (60 DAP) Applications of Reviton® 2.83SC - 2022





Peanut Yield Response to POST (90 DAP) Applications of Reviton® 2.83SC - 2022





Summary

- PRE applications little to no injury in both years
 - $< 5\%$
- POST applications cause leaf necrosis, stunting, and yield loss
 - 2021 = *no yield loss*
 - 2022 = *16-25% yield loss*



Future Research/Direction

- Repeated test in 2023
- Reviton® is not a likely candidate for in-crop use
- Proposed preplant 24-C label in 2023
 - *0 days = 1 oz/A*
 - *7 days = 2 oz/A*
- *On new Section 3 in 2025?*





Peanut/Reviton – 2023

2 oz/A



PE-05-23
June 26
62 DAP



Questions/Comments?



Bulloch Co. 2021