



# WTACI: An Update on Cotton diseases

Cecilia Monclova-Santana, PhD  
Texas A&M AgriLife, Lubbock,  
TX, USA



# Outline

- Current Challenges
  - Cotton Leafroll Dwarf Virus
  - Fusarium Wilt
    - 2019 Variety Trial
    - Greenhouse study
  - FOV4
- Future Projects

# CLRDV - Symptoms



Provided by: Dr. Thomas Isakeit

# CLRDV – Foliar details



Provided by: Dr. Thomas Isakeit

# History in the U.S.A. & TX

- 2017 In Alabama and Florida
- 2018 More in Alabama, Other States
- 2019 In 7 States & Confirmed In Texas:  
Brazos County Breeders' Nurseries  
Burleson County Sentinel Plot  
Lubbock County Farmer Field



**WIDESPREAD IN SOME AREAS, BUT  
YIELD LOSS DOCUMENTED ON A LIMITED  
SCALE**

# Fusarium wilt

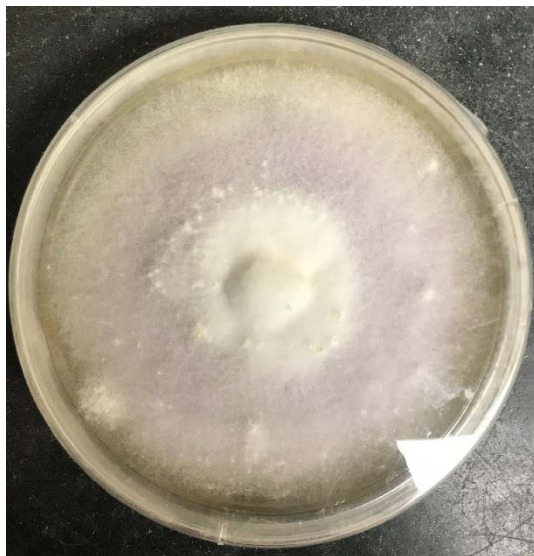
- Stunting
- Wilting
- Lower leaves progressive yellowing



# Fusarium oxysporum f.sp. vasinfectum

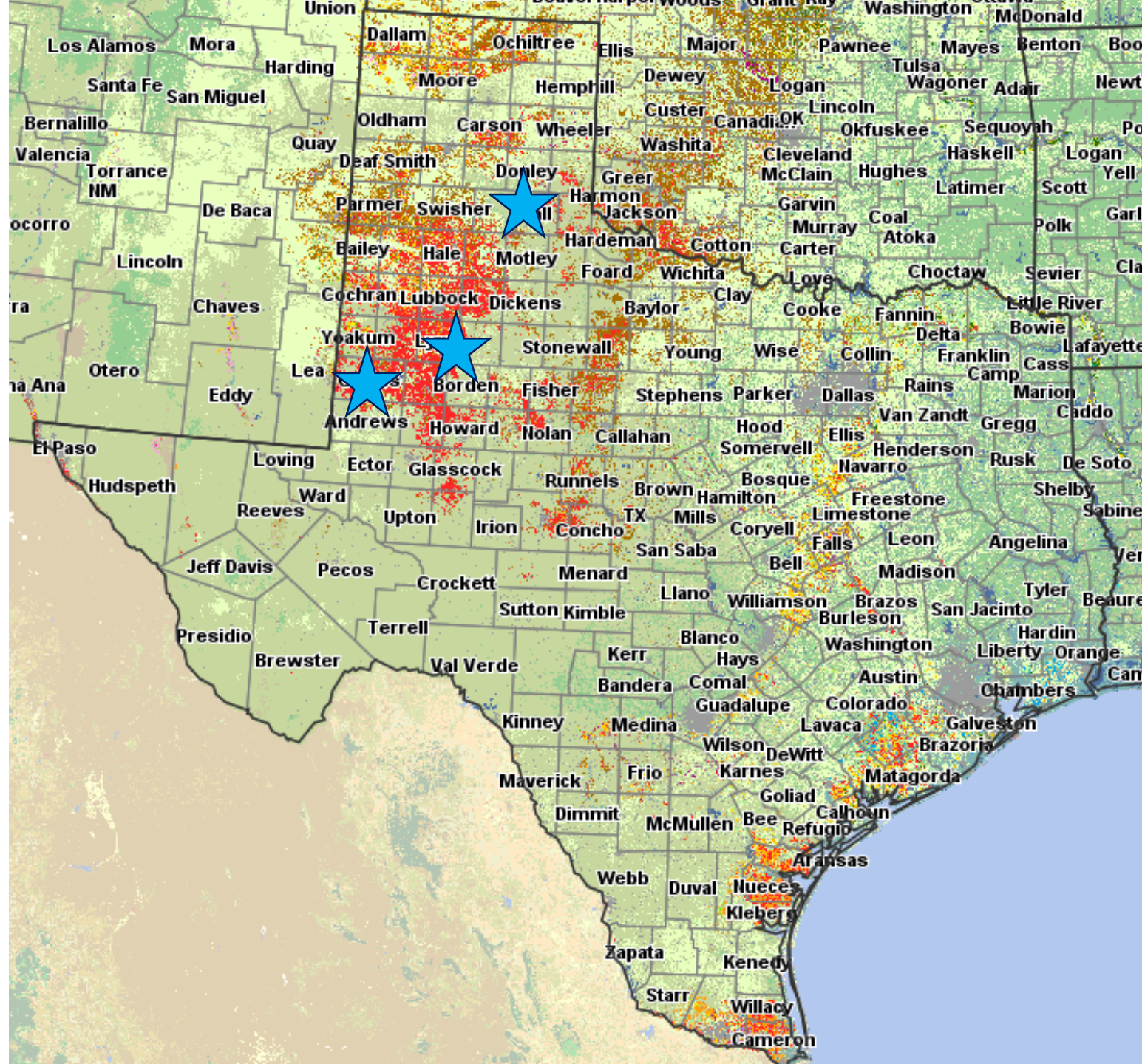
## Race 1 & 2

- Requires root knot (*Meloidogyne incognita*)
- Necrosis of vascular tissue

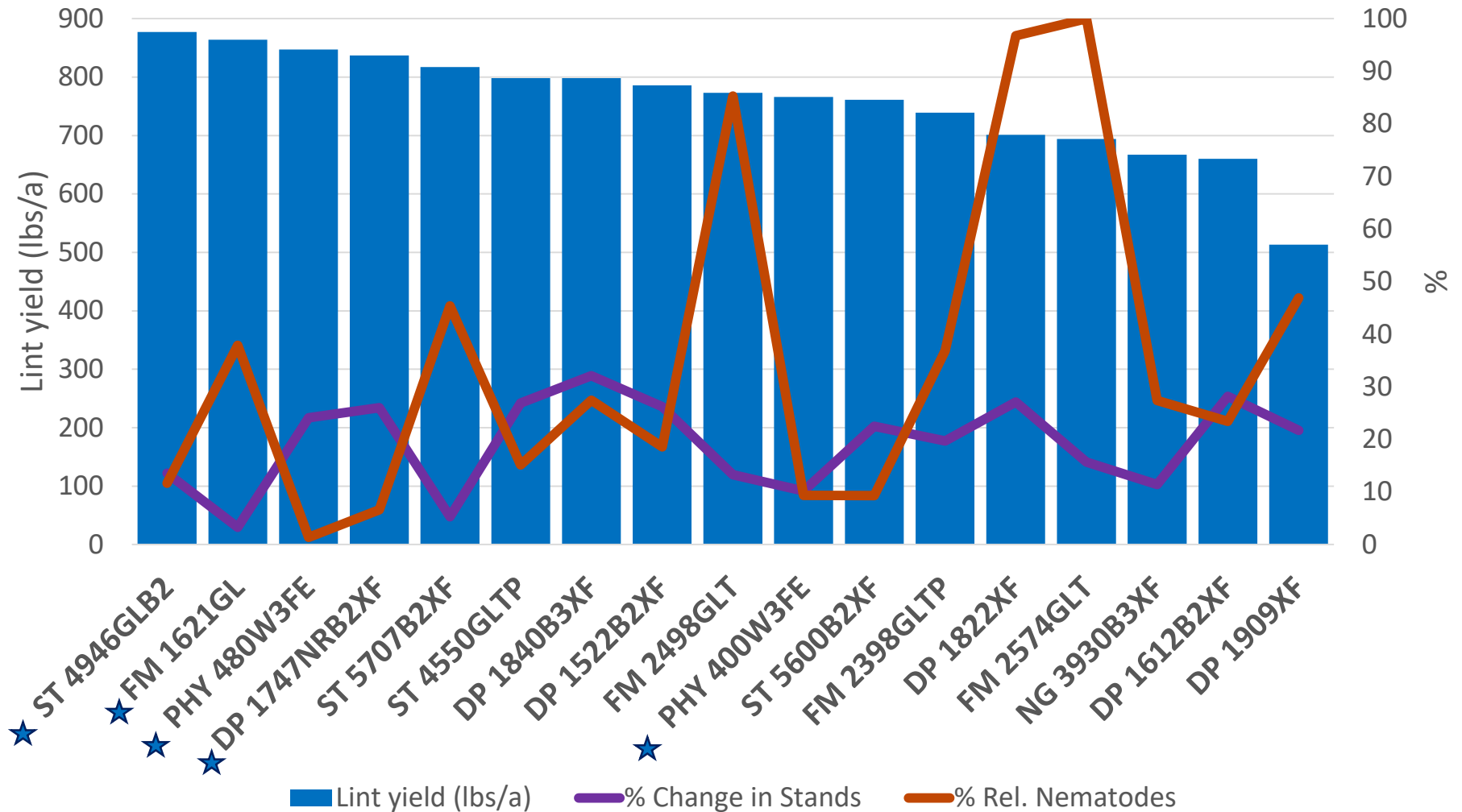




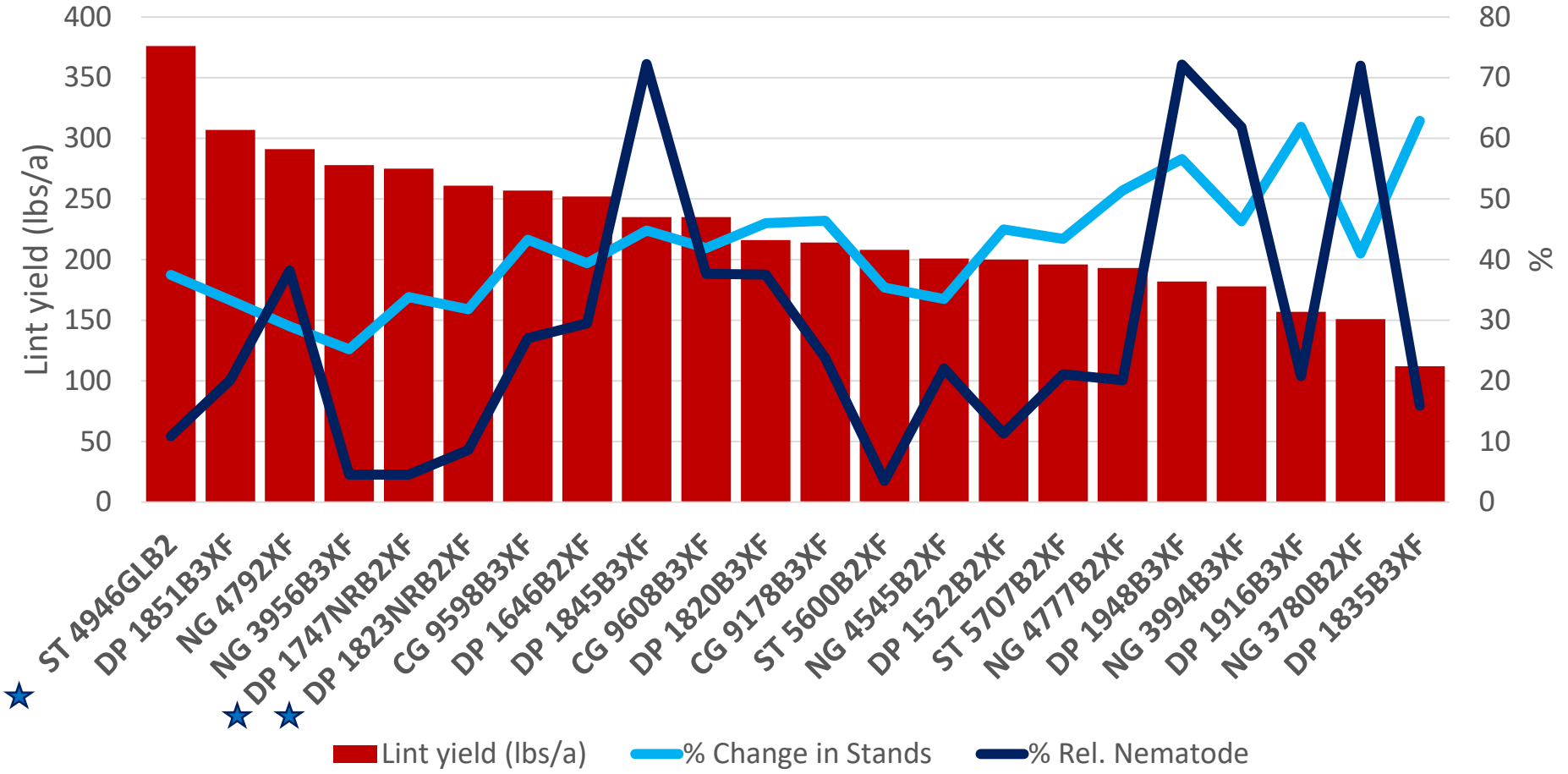




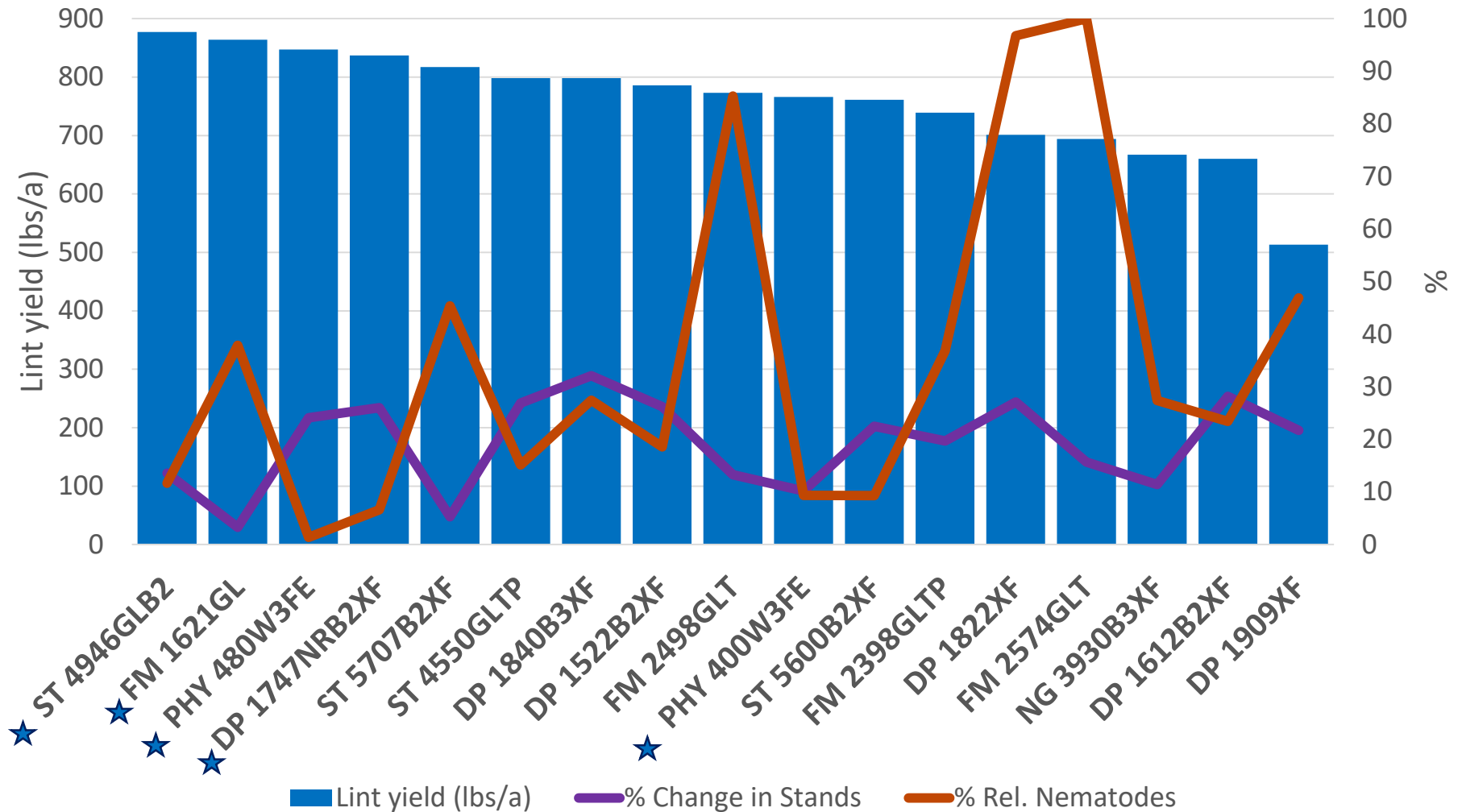
# O'Donnell/Lynn County



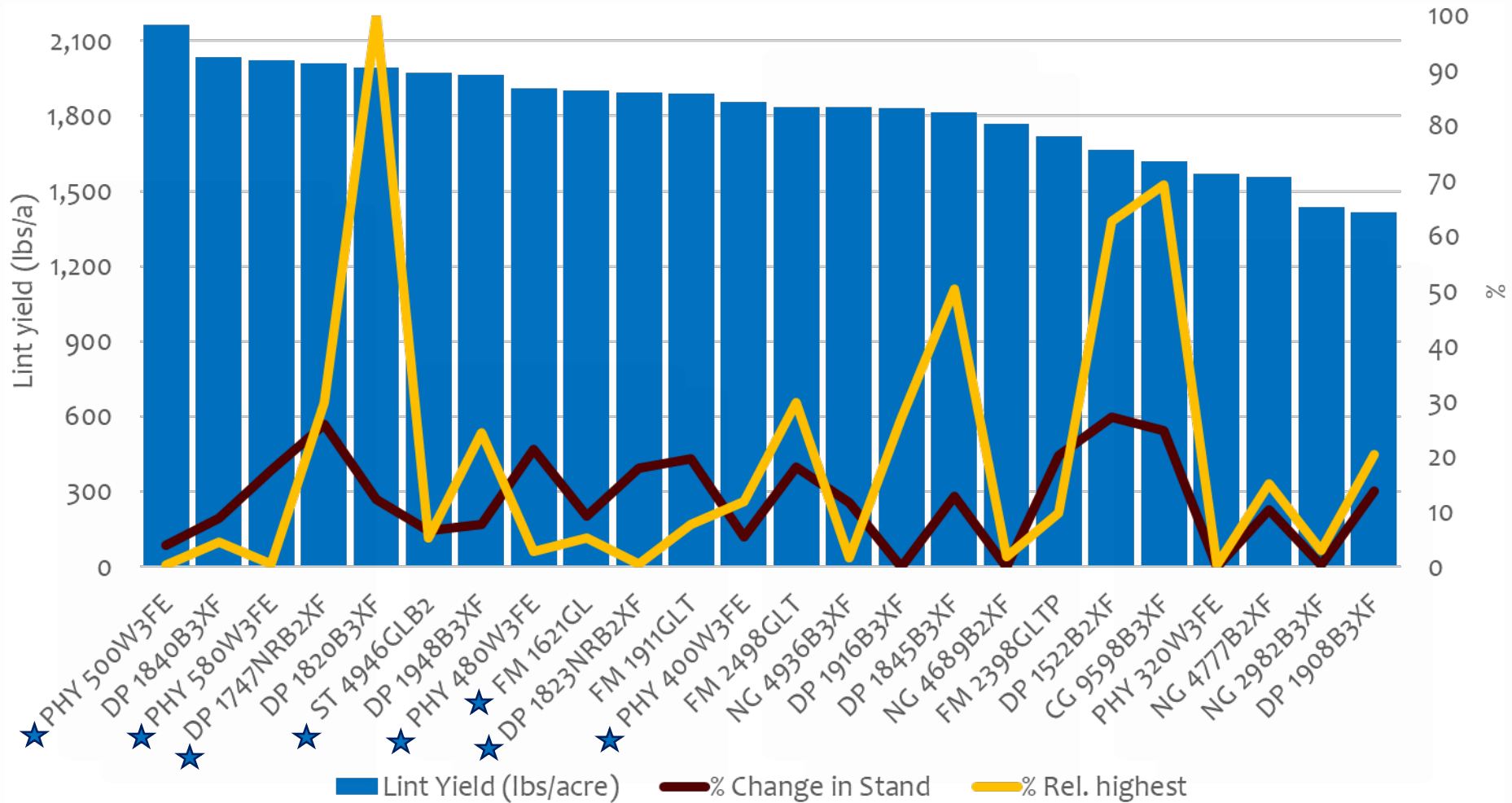
# Seminole/Gaines County



# O'Donnell/Lynn County



# Turkey/Hall County - FOV1



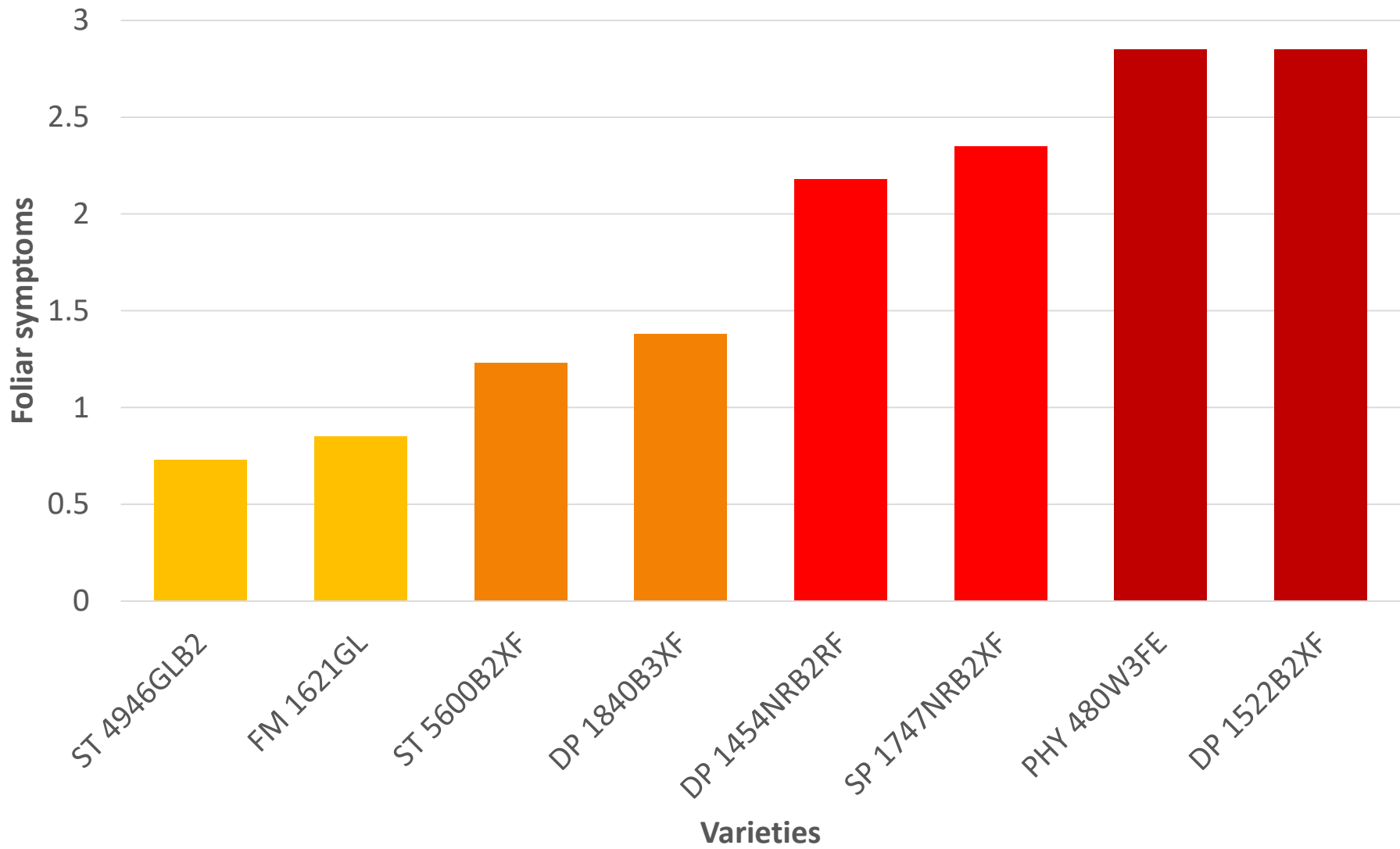
# Tolerant vs Susceptible



# Greenhouse test

- DP 1747B2XF = RK-R; FW-S
- ST 4946GLB2 = RK-PR; FW-R









# FOV4 in El Paso

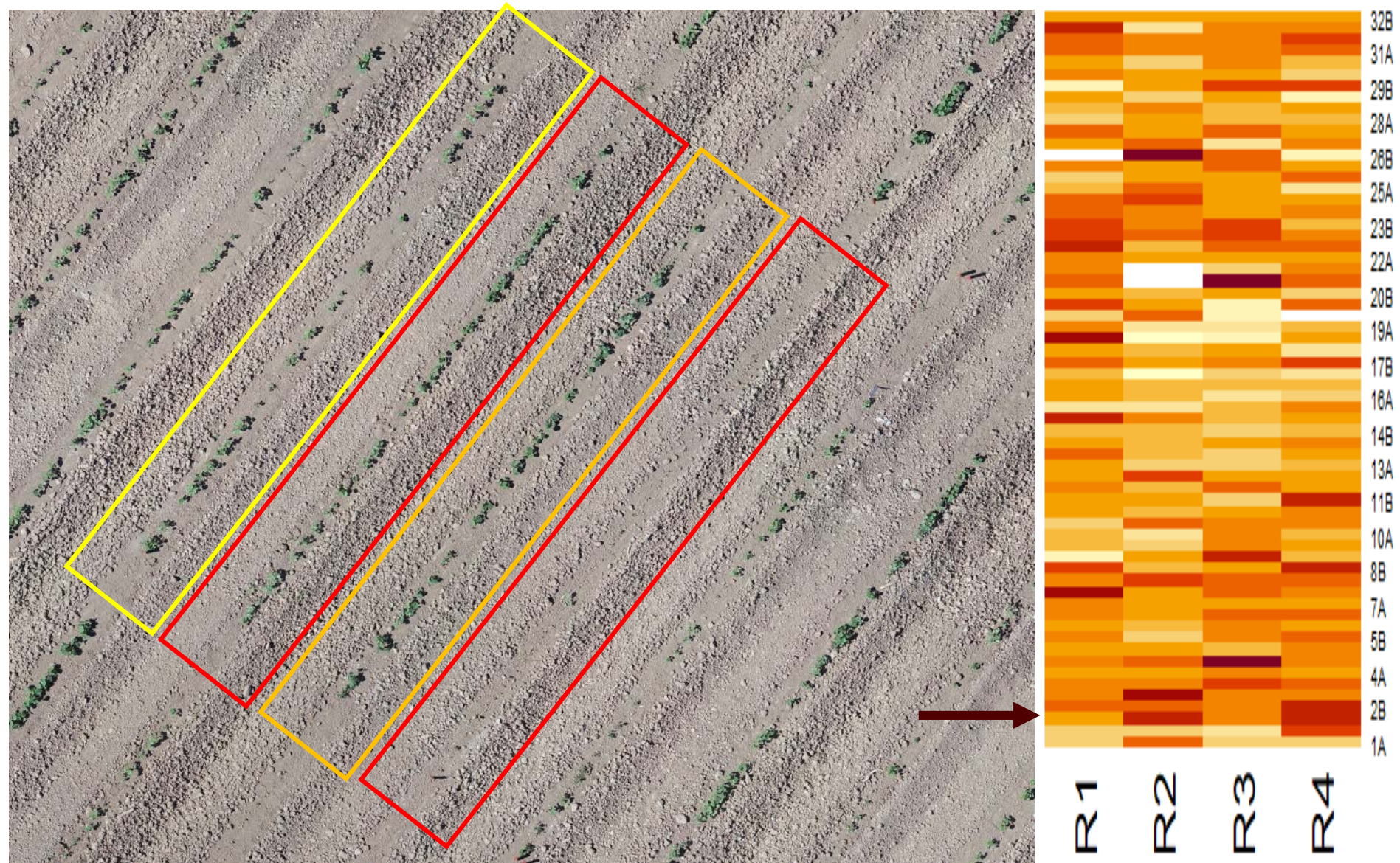




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**FOV4** - *Fusarium oxysporum* f.sp. *vasinfectum* Race 4

# Quantification of pathogen



# Coming NEXT...

- Gin testing for FOV4



# What to do?



Do not share farm equipment from infected areas



Wash farm equipment and truck with biocide



Use rubber boots or disposable plastic cover



Wash thoroughly with Bleach (Clorox<sup>®</sup>)



Do not buy seed from El Paso area



# Ongoing Cotton

- *FOV1* variety screening 2020
- *FOV4*
  - Trichoderma
- Cover Crops
- Multi-state disease modeling

# Diagnostics

- Texas High Plains Plant Disease Diagnostic Lab @Amarillo
  - Dr. Ken Obasa, 806-677-5600, [ken.obasa@ag.tamu.edu](mailto:ken.obasa@ag.tamu.edu)
- The Texas Plant Disease Diagnostic Lab @College Station
  - 500 Research Pkwy a130, College Station, TX 77845



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# Stay Connected



cecilia.monclova-san@ag.tamu.edu



(806) 723-8416



The Cotton Gal  
@CeciliaMonclov8



Cecilia Monclova



Cecilia Monclova-Santana



@The Cotton Gal