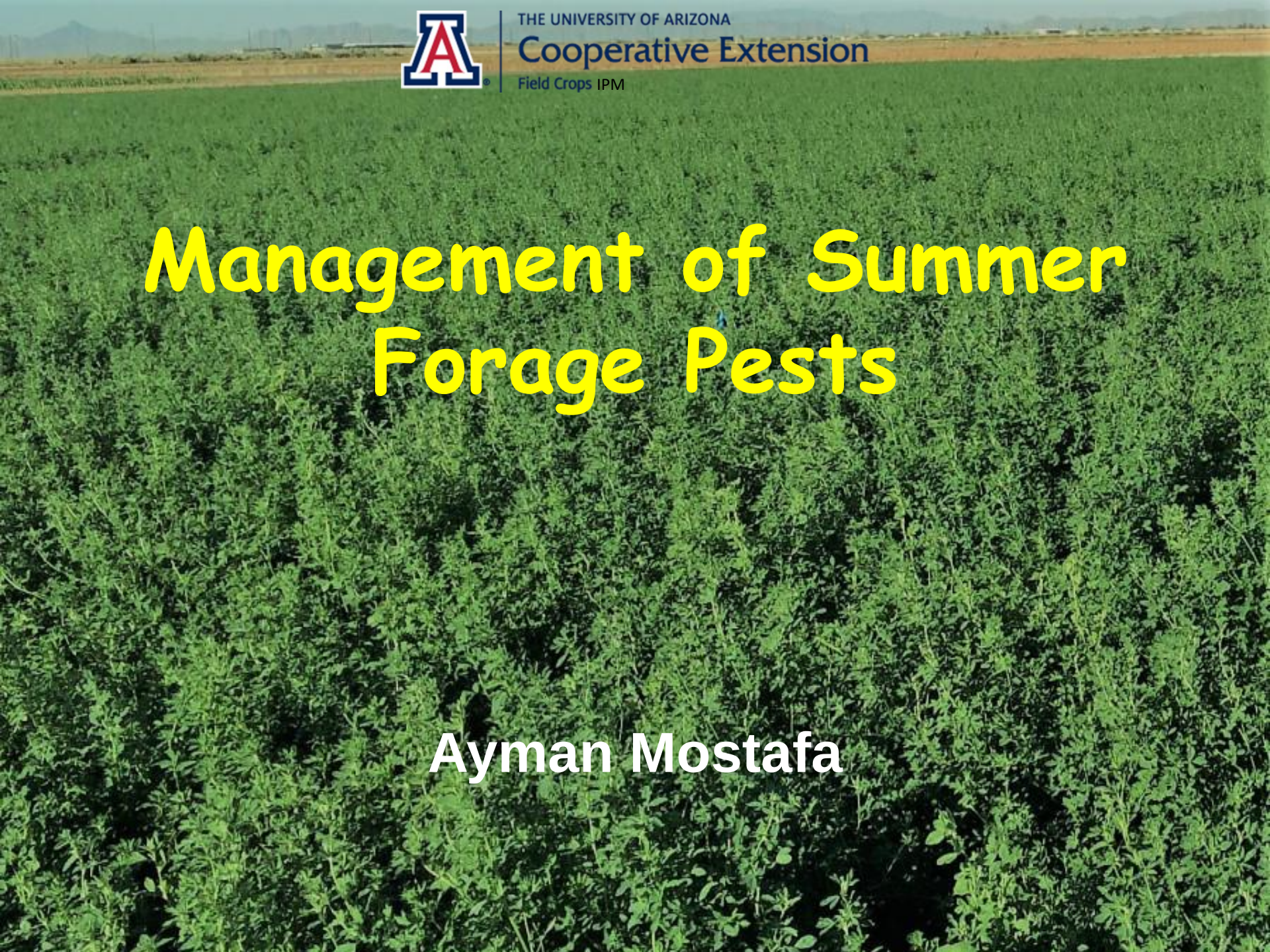
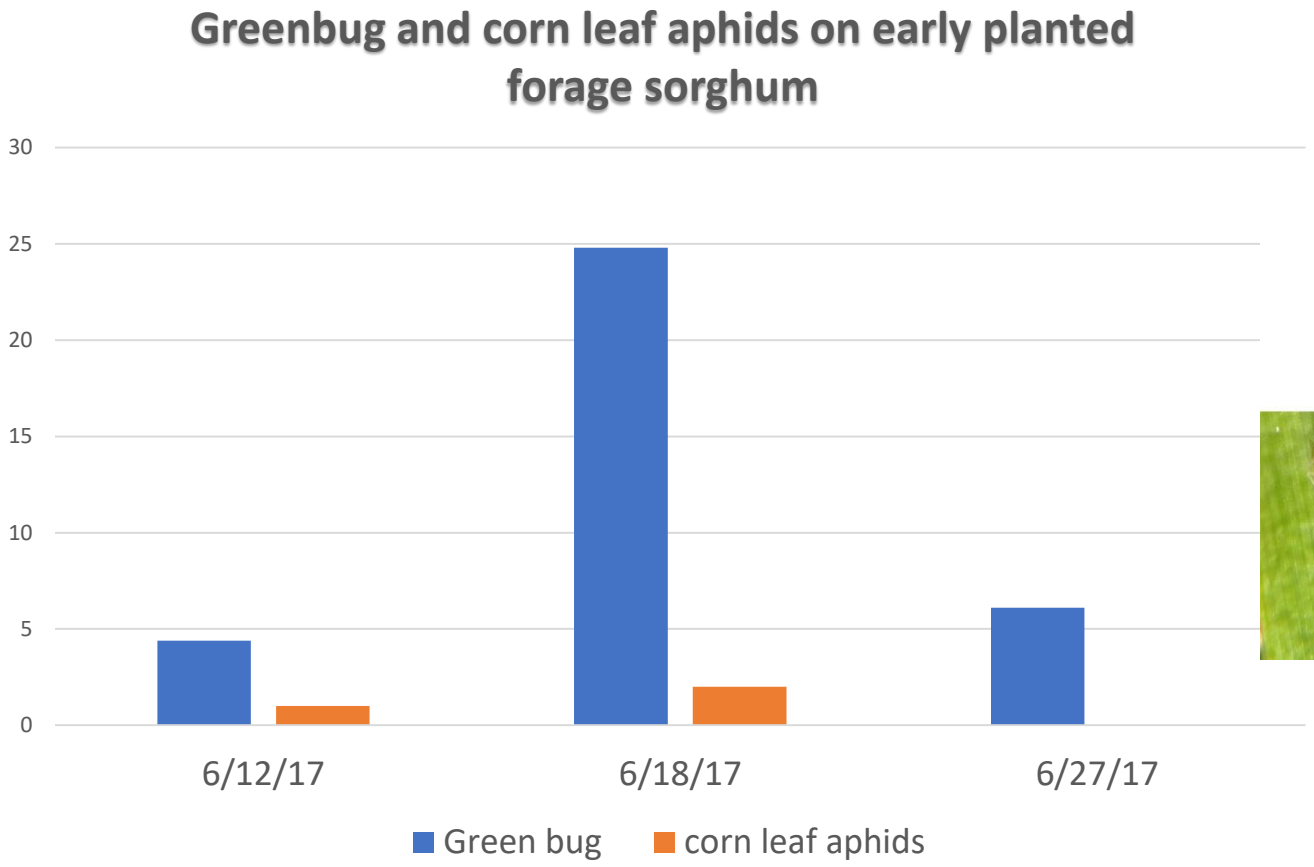
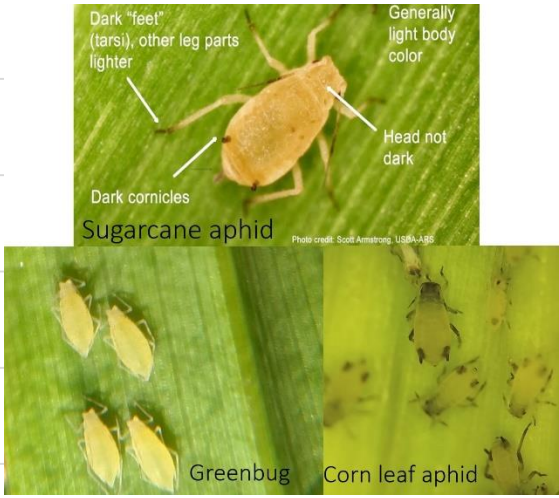

THE UNIVERSITY OF ARIZONA
Cooperative Extension
Field Crops IPM
Management of Summer Forage Pests
Ayman Mostafa

Sugarcane Aphid in Sorghum

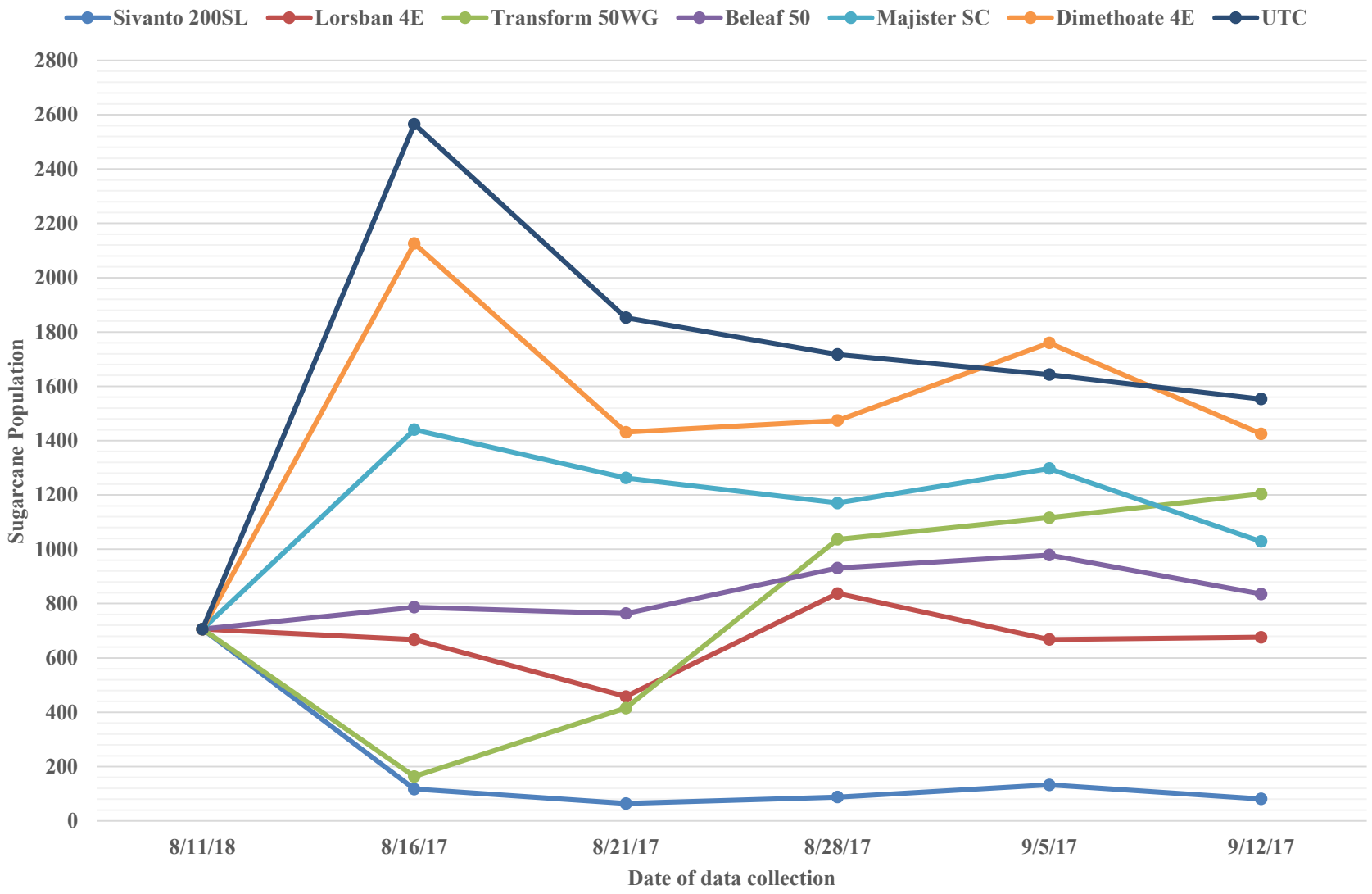
Identification

Early Panting Date Trial

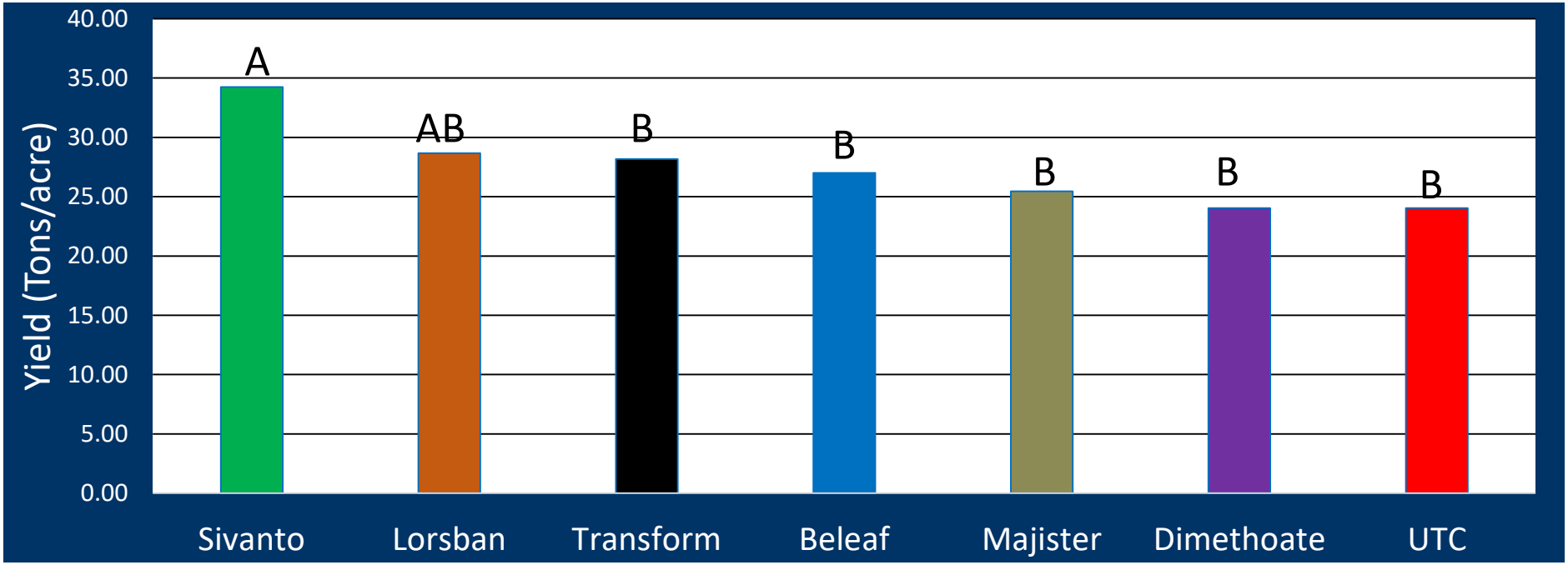


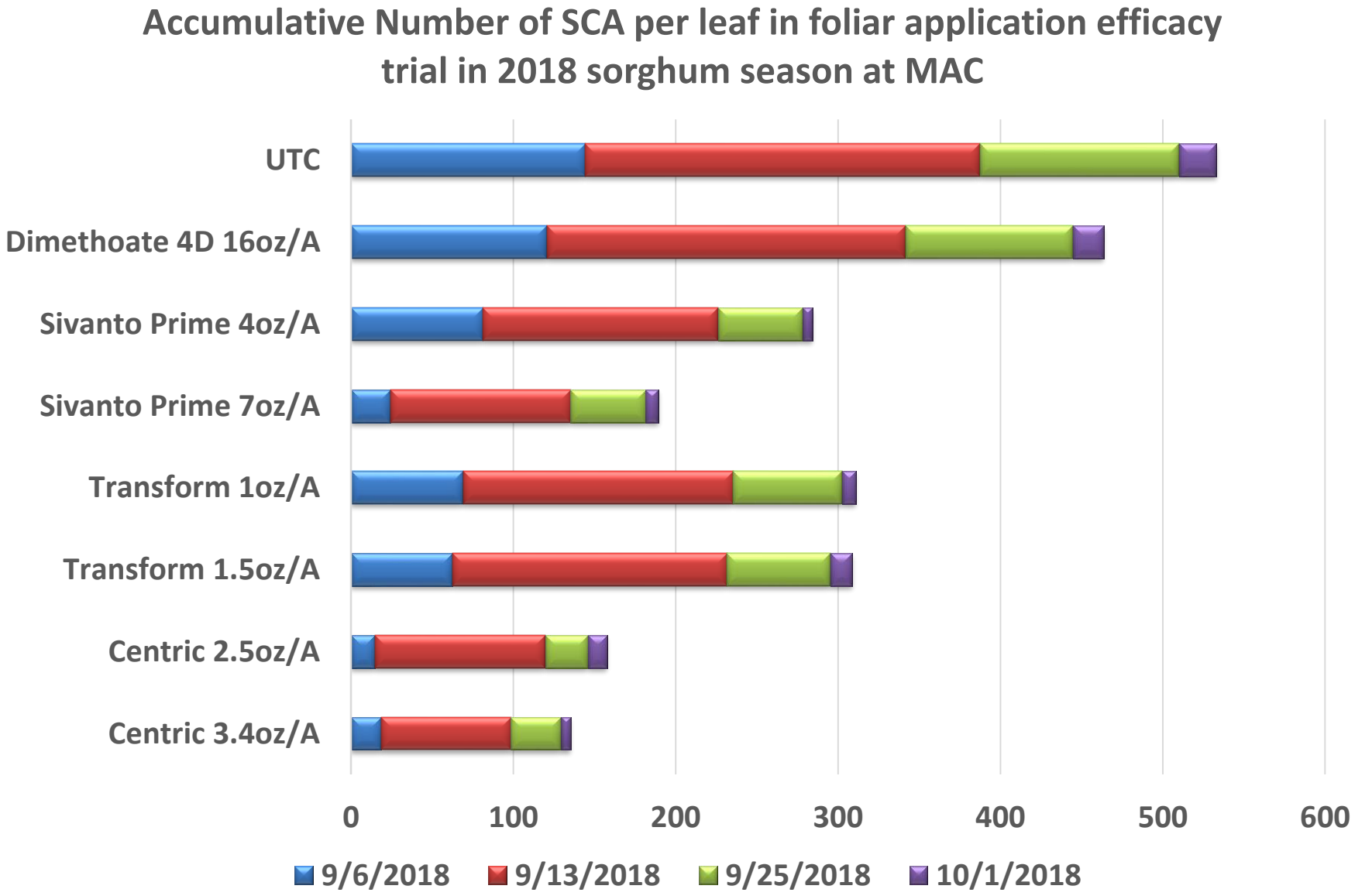


2017 foliar trial, Sugarcane Aphids in Forage Sorghum

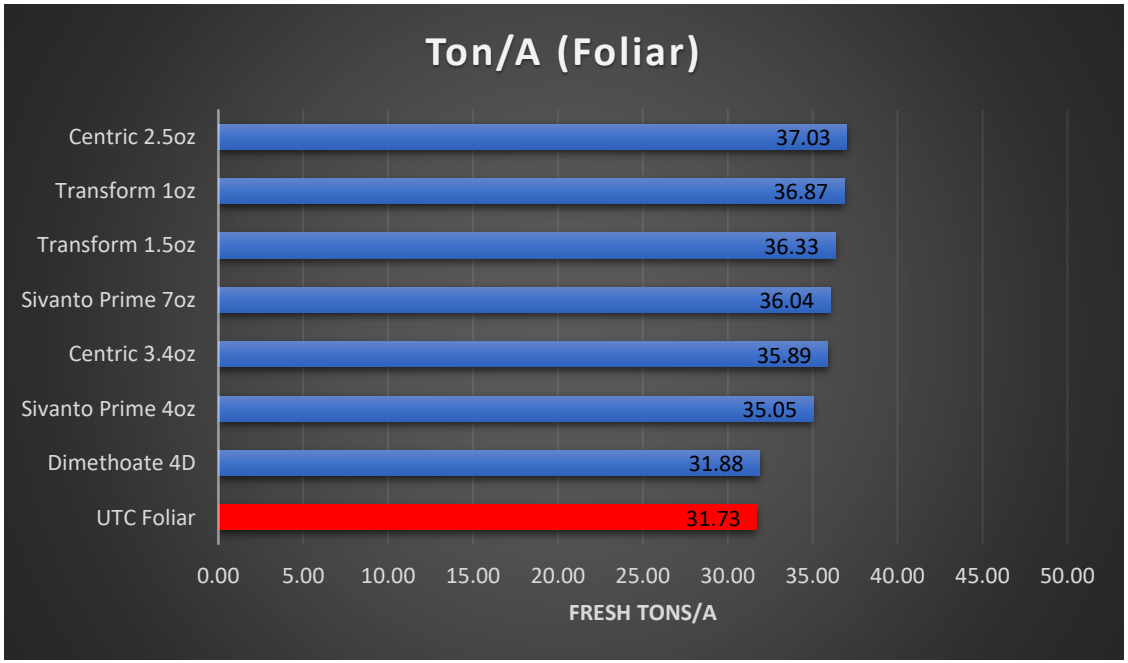


2017 Foliar Trial at MAC



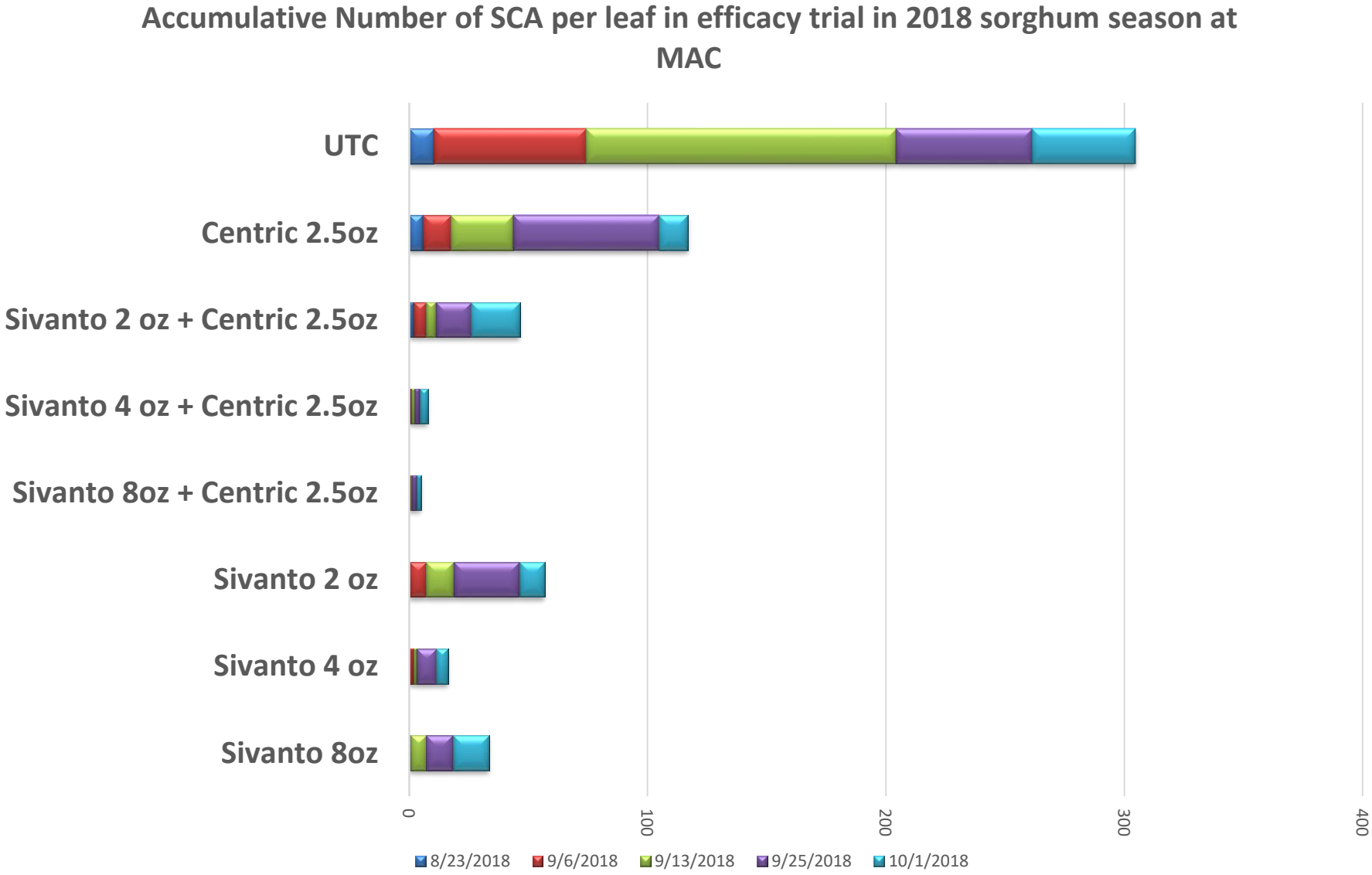

Accumulative Number of SCA per leaf in foliar application efficacy trial in 2018 sorghum season at MAC
UTC
Dimethoate 4D 16oz/A
Sivanto Prime 4oz/A
Sivanto Prime 7oz/A
Transform 1oz/A
Transform 1.5oz/A
Centric 2.5oz/A
Centric 3.4oz/A
0
100
200
300
400
500
600
9/6/2018
9/13/2018
9/25/2018
10/1/2018

Yield in foliar application efficacy trial in 2018 sorghum season at MAC

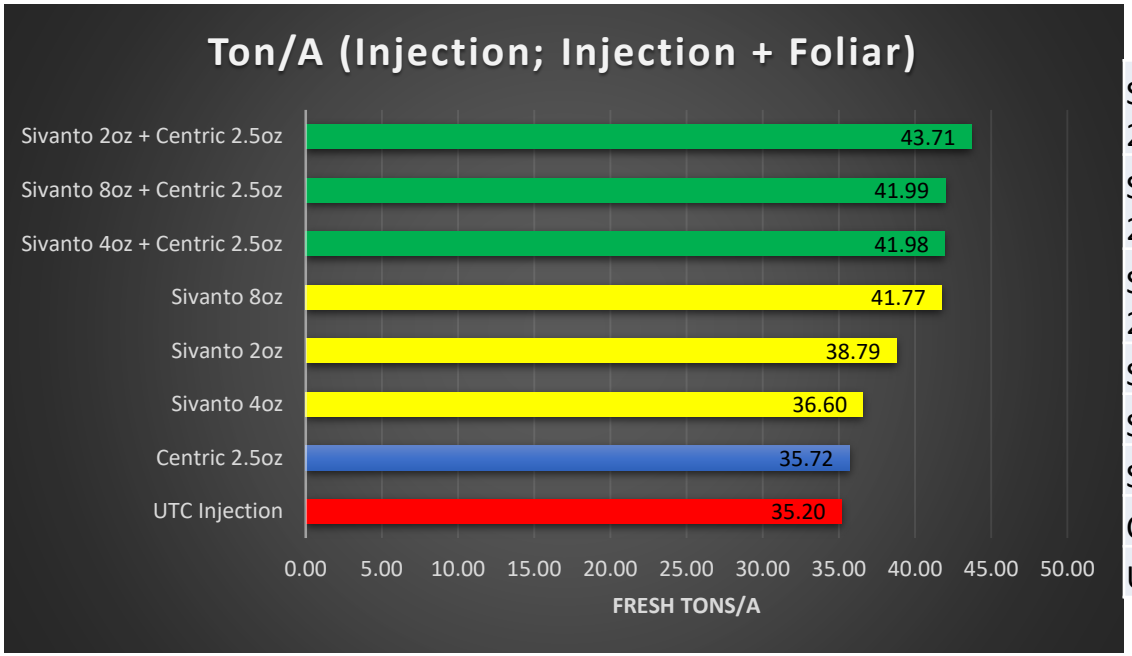


Centric 2.5oz	A	170.1
Transform 1oz	A	169.4
Transform 1.5oz	A	166.9
Sivanto Prime 7oz	A	165.55
Centric 3.4oz	A	164.89
Sivanto Prime 4oz	A	161
Dimethoate 4D	A	146.45
UTC Foliar	A	145.75

In-furrow Application Method


Accumulative Number of SCA per leaf in efficacy trial in 2018 sorghum season at MAC
UTC
Centric 2.5oz
Sivanto 2 oz + Centric 2.5oz
Sivanto 4 oz + Centric 2.5oz
Sivanto 8oz + Centric 2.5oz
Sivanto 2 oz
Sivanto 4 oz
Sivanto 8oz
0
100
200
300
400
8/23/2018
9/6/2018
9/13/2018
9/25/2018
10/1/2018

Yield in efficacy trial in 2018 sorghum season at MAC



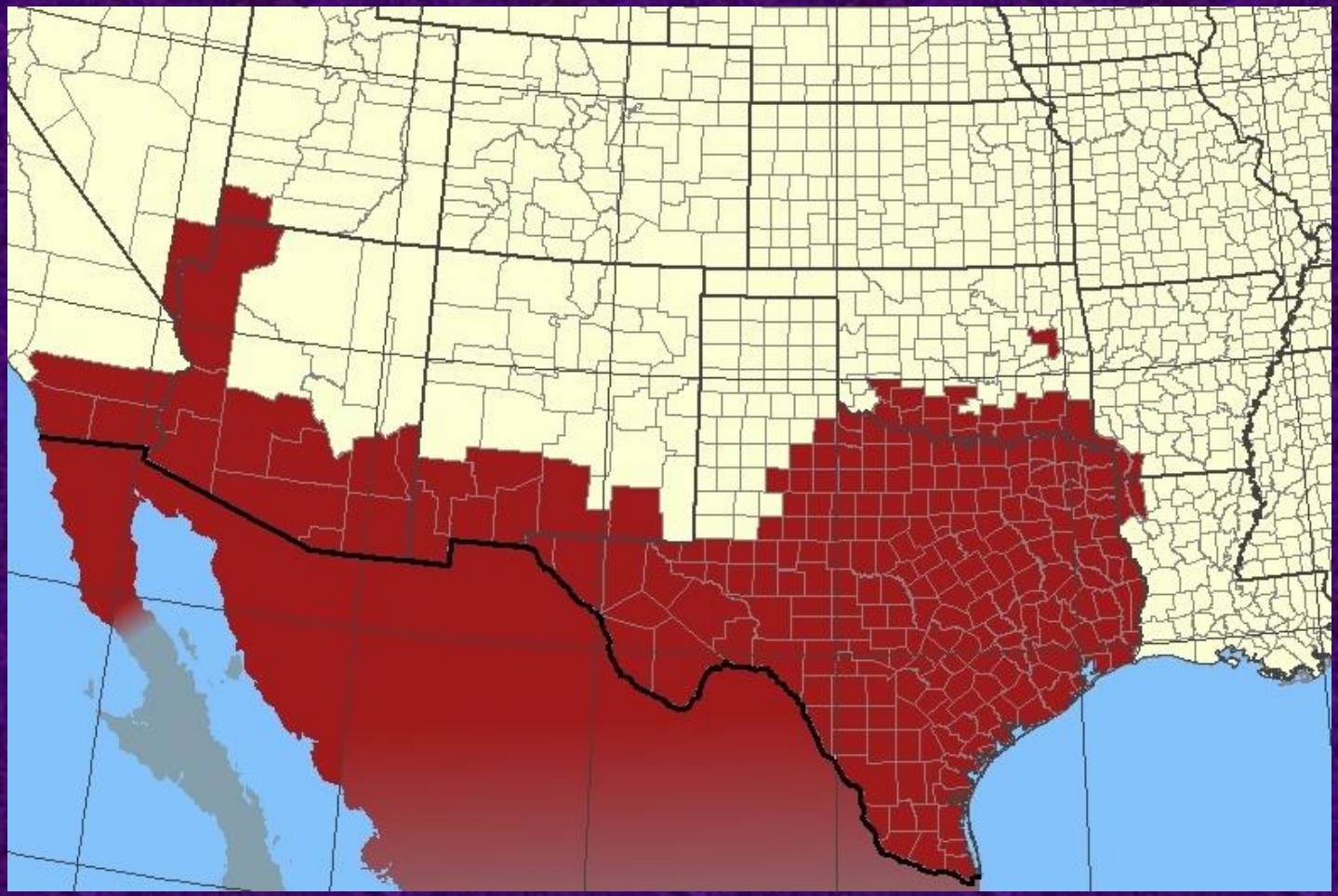
Sivanto 2oz + Centric 2.5oz	A			200.8
Sivanto 8oz + Centric 2.5oz	A	B		192.9
Sivanto 4oz + Centric 2.5oz	A	B		192.85
Sivanto 8oz	A	B		191.9
Sivanto 2oz		B	C	178.2
Sivanto 4oz			C	168.15
Centric 2.5oz			C	164.1
UTC Injection			C	161.7

Best Management Practices for SCA

- Control Johnson grass and other sorghum species around field
- Plant early to avoid infestations early in the season
- Scout early and often
- Do not let SCA populations develop to large numbers
  - Treat when 20% of leaves checked have 50 or more SCAs
  - Use common sense concerning pending weather, number of fields needing to cover, etc.
- Use an efficacious insecticide; preferably one that is soft on beneficials
  - Avoid pyrethroids for other pests if possible
- Good spray coverage is key for SCA control

Phymatotrichopsis Root Rot

Phymatotrichum omnivorum



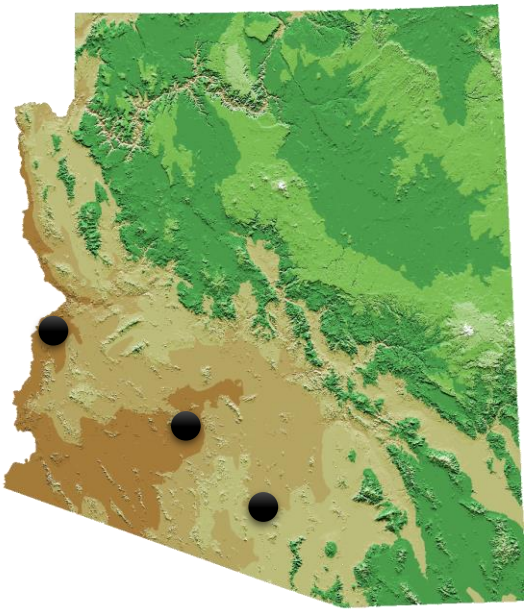
Characteristics

- Soil-borne fungus – high pH and low organic matter – typically associated with river basins
- Rapid wilt
- Followed by death
- Dead and dying leaves remain on plant
- Tap root is destroyed
- Forms characteristic strands on root
  - Results in rotted, cortical outer tissue
- Geographically defined

Visual Symptoms – Roots and Shoots

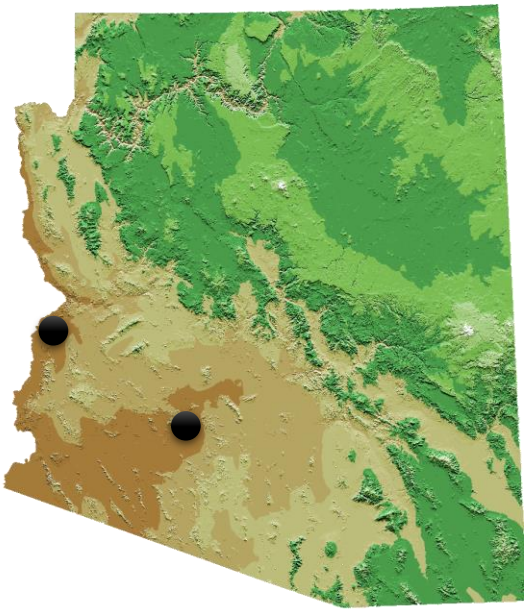
Locations &Treatments for Topguard Terra for Alfalfa Root Rot 2015 & 2016

- Locations:
  - Marana 2015
  - Enterprise Ranch 2015 & 2016
- 2015 Treatments:
  - 2 oz / A
  - 4 oz / A
  - 8 oz / A
- 2016 Treatments:
  - 4 oz/A
  - 7.5 oz/A
  - 15 oz/A
  - 7.5 + 7.5 oz/A



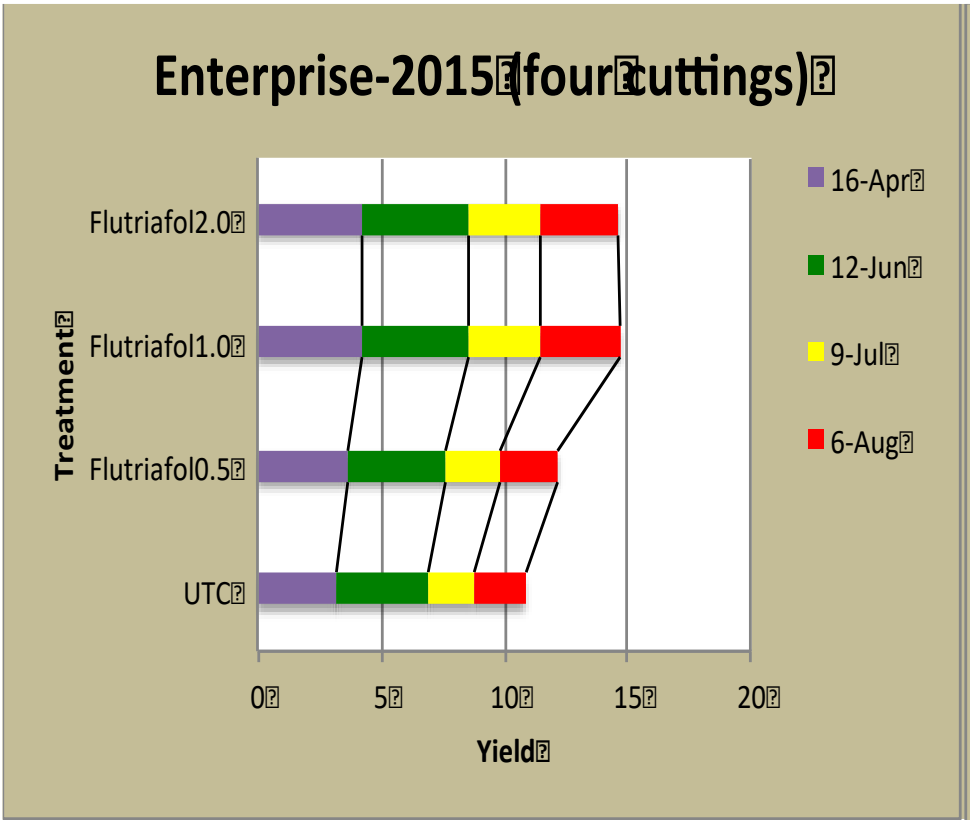
2017 Flutriafol Trials for Root Rot in Alfalfa

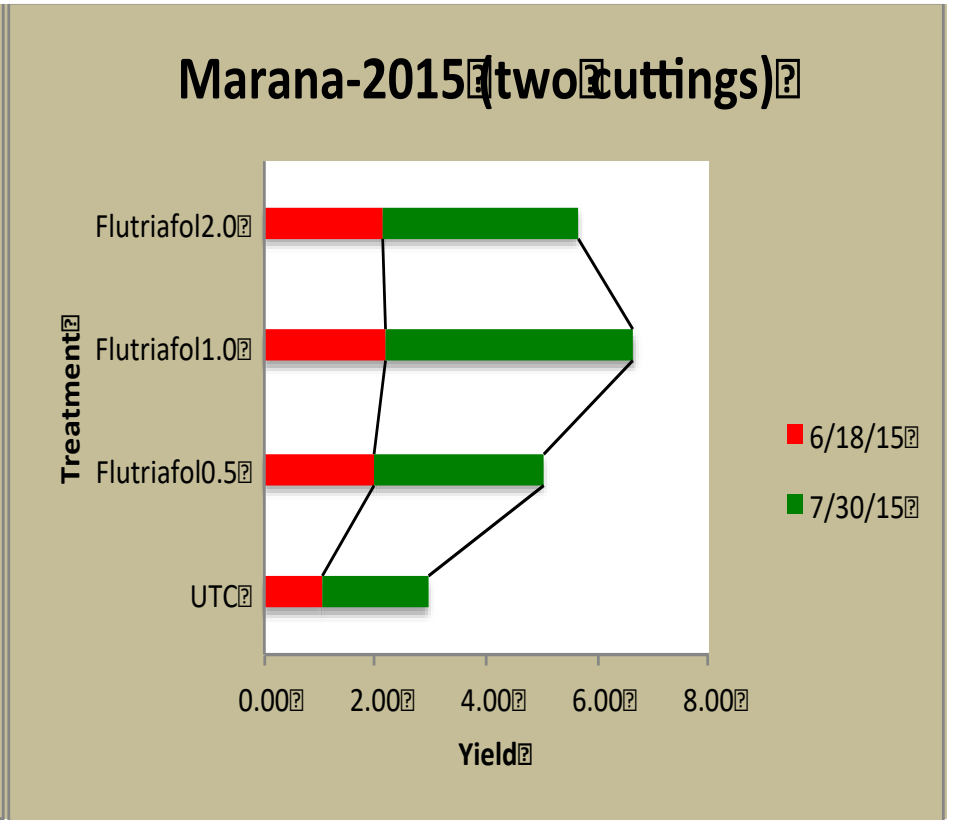
- **Ongoing trials** (results will be finalized by end of 2017)
- **Locations:**
  - CRIT Farms
  - Enterprise Ranch
- **Treatments:**
  - 4 oz/A
  - 7.5 oz/A
  - 4 + 4 oz/A
  - UTC



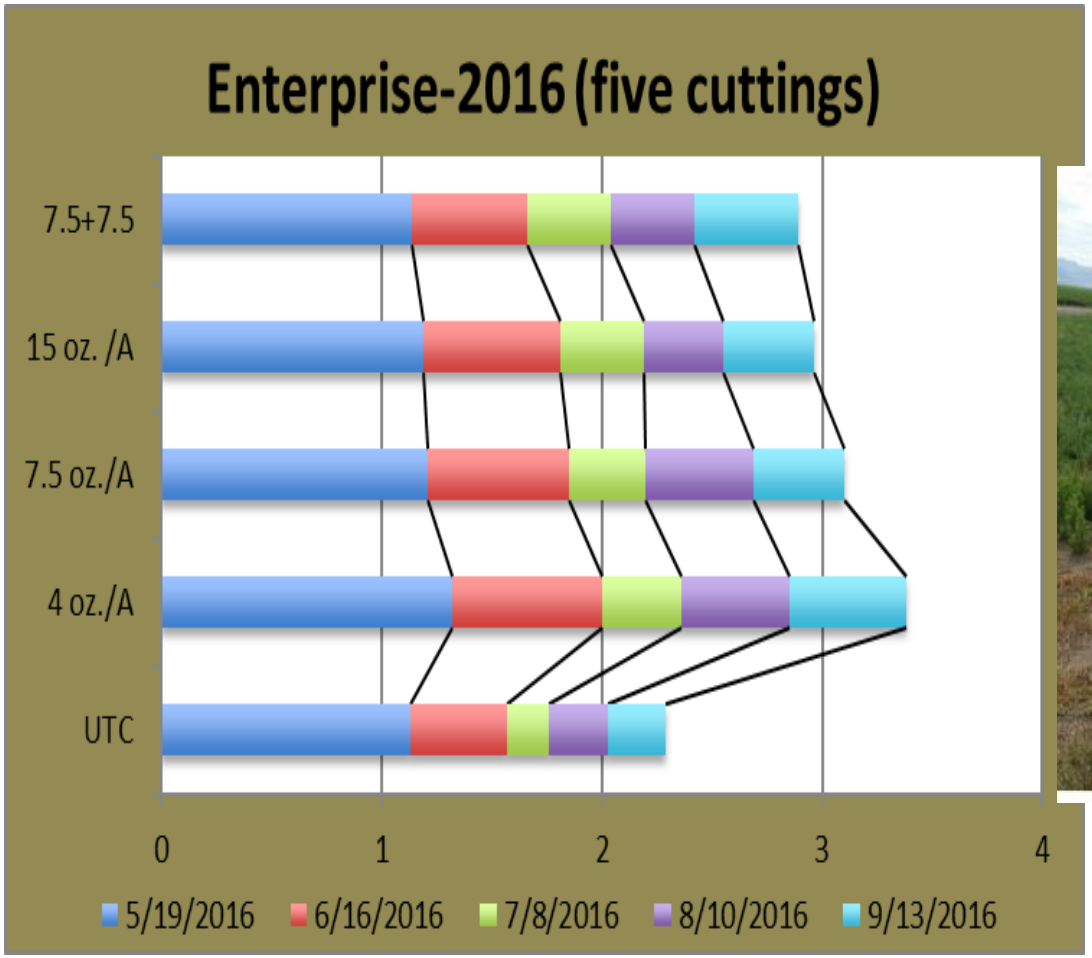
Application

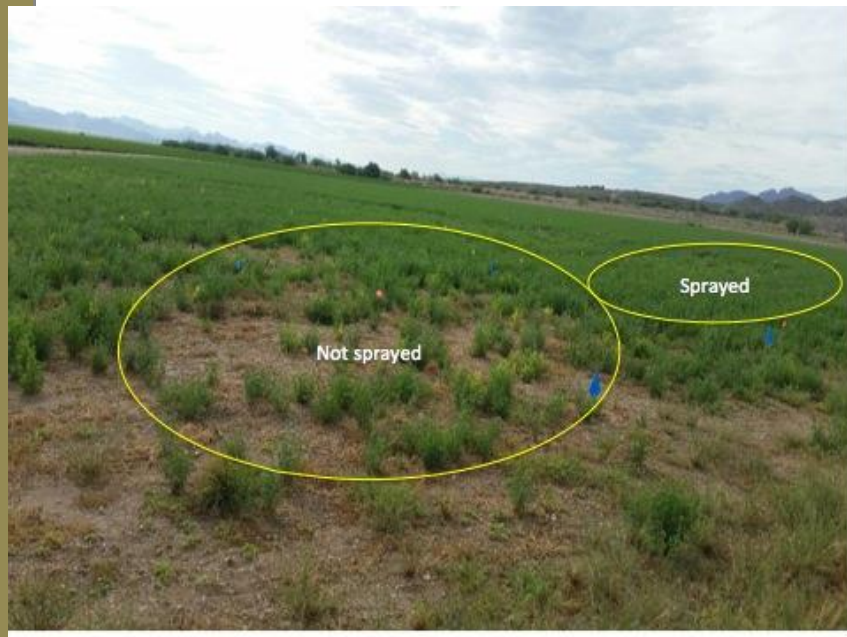
2015 Alfalfa Root Rot trials



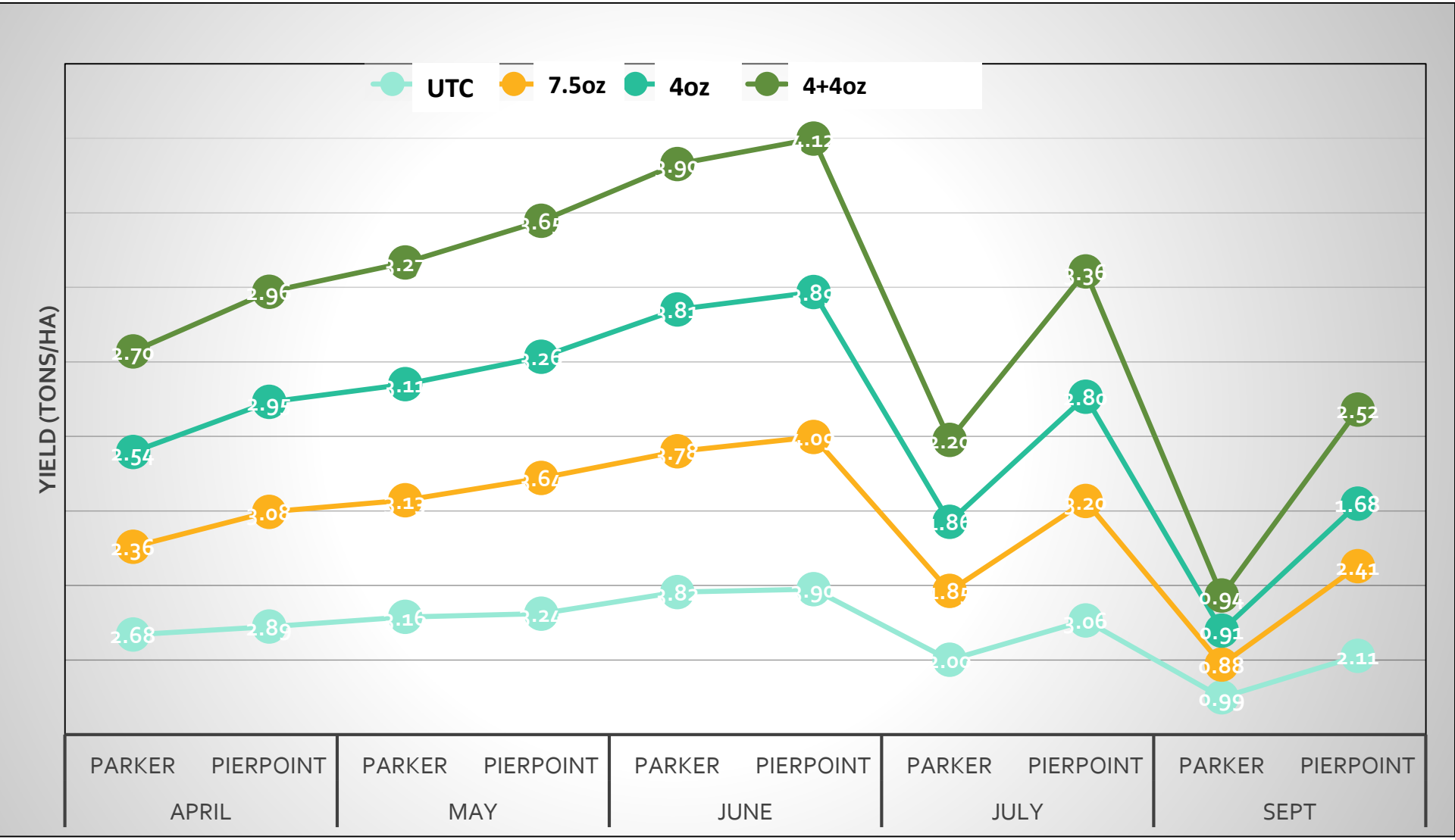


2016 Results

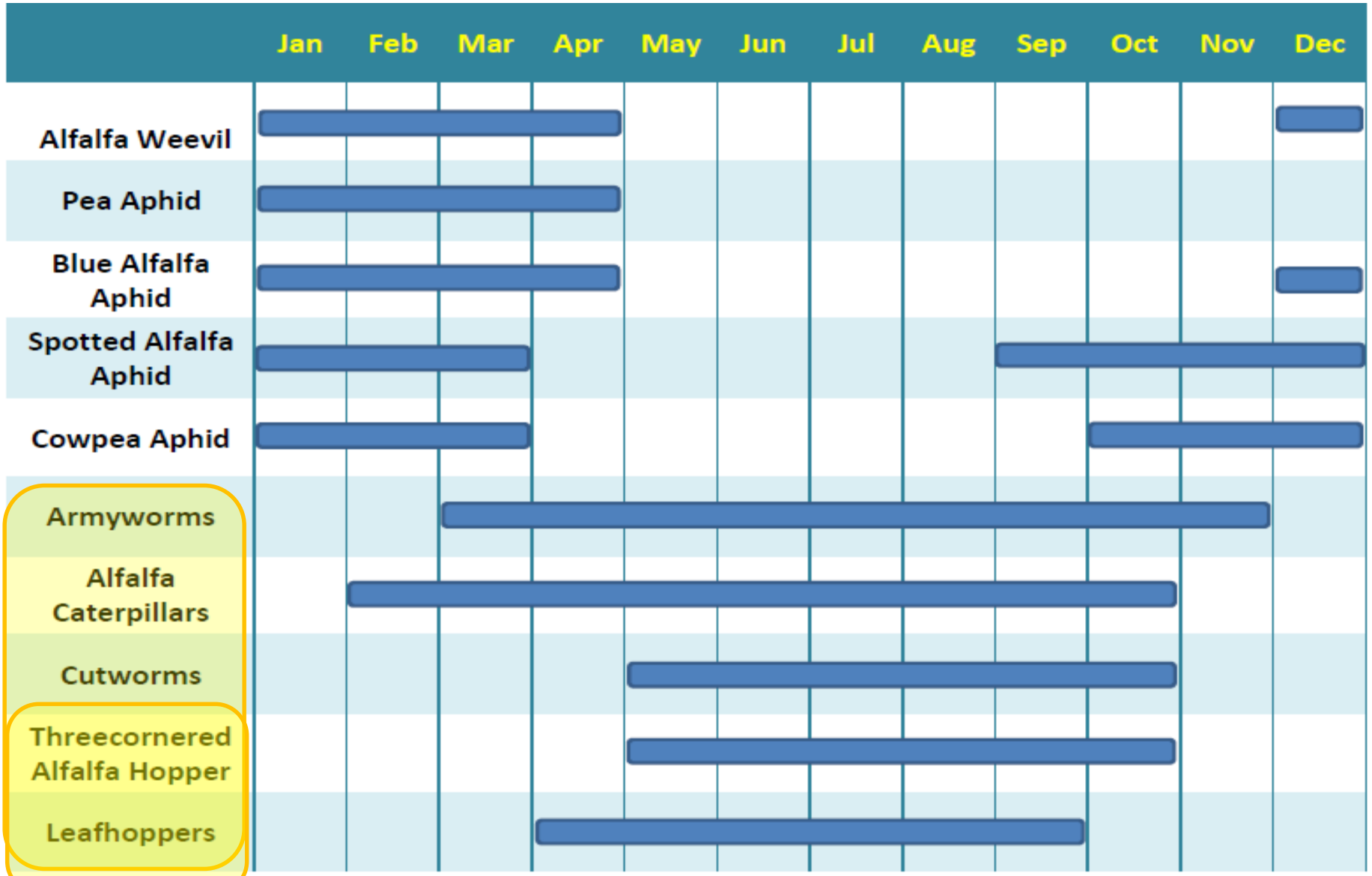




2017 Alfalfa Root Rot trials



Seasonal occurrence of Major Insect Pests of Desert-Grown Alfalfa

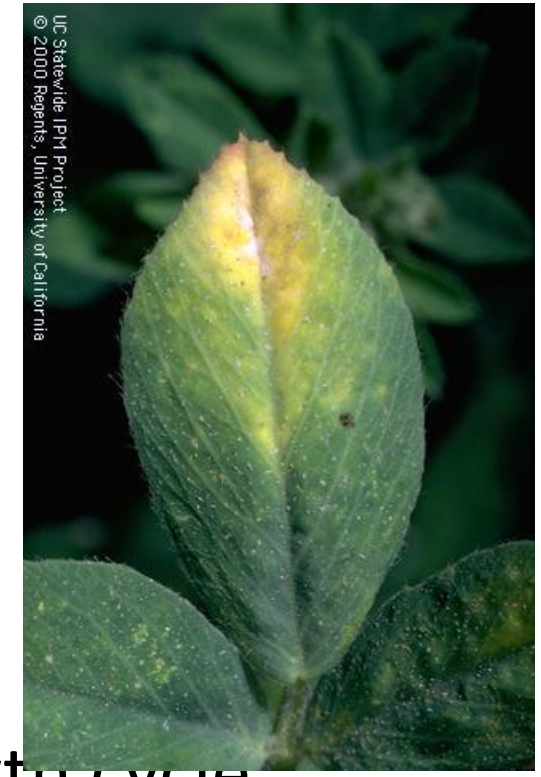


Leafhoppers

- **Garden leafhopper: *Empoasca solana***
- **Potato leafhopper: *E. fabae***
- **Mexican leafhopper: *E. mexara***

Leafhoppers

- **Damage**
  - Sucking plant sap
  +
  - Hopper burning



  - Wedge-shaped Yellow or reddish coloration
  - Stunt plant growth
  - May carry over to the next growth cycle

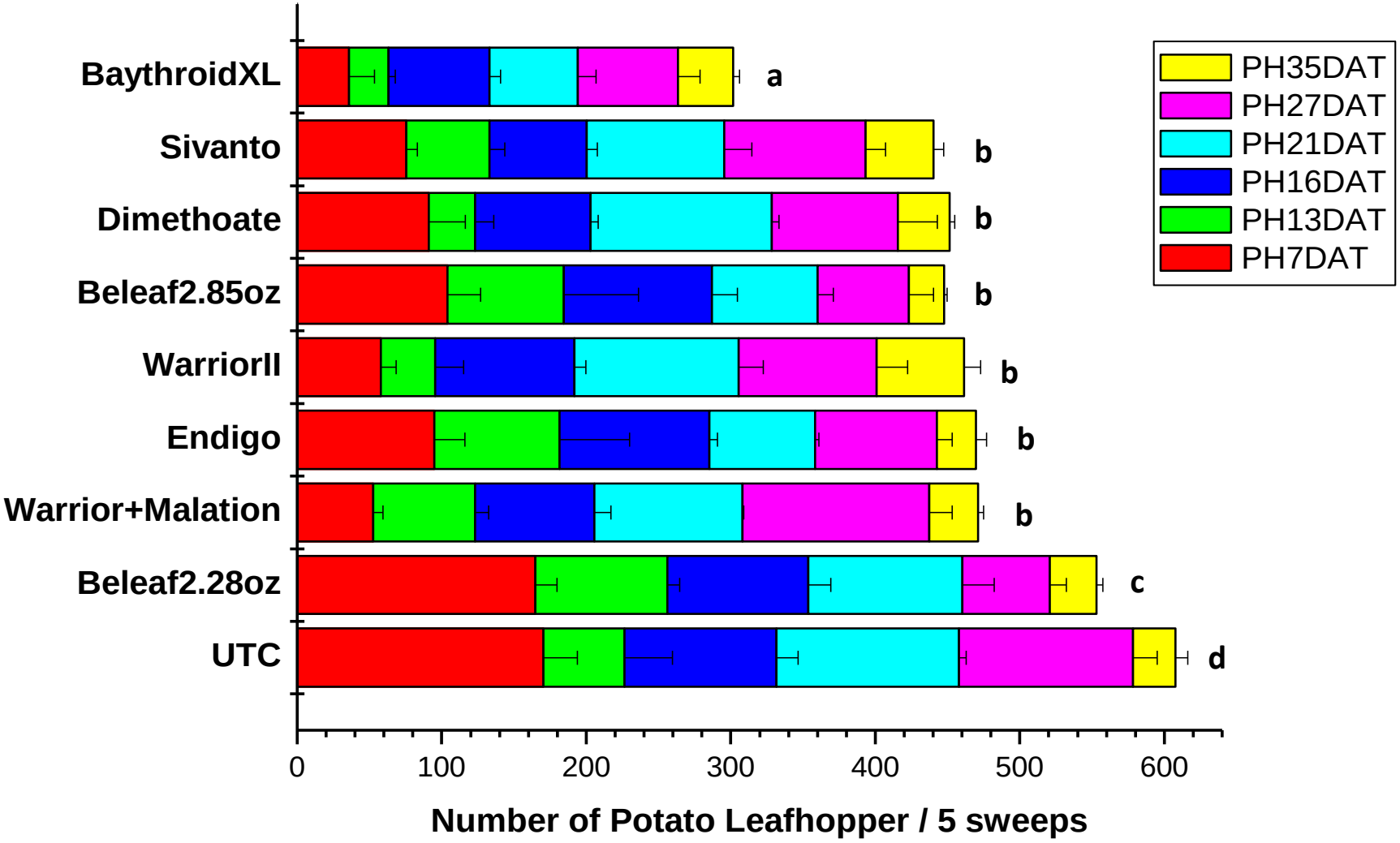
Three-cornered Alfalfa Hopper

- Buffalo Hopper
- Rarely cause significant damage
- Heat and/or water stressed plant are at greater risk of damage
- Damage caused by feeding and oviposition activity of the adult (girdle stems)

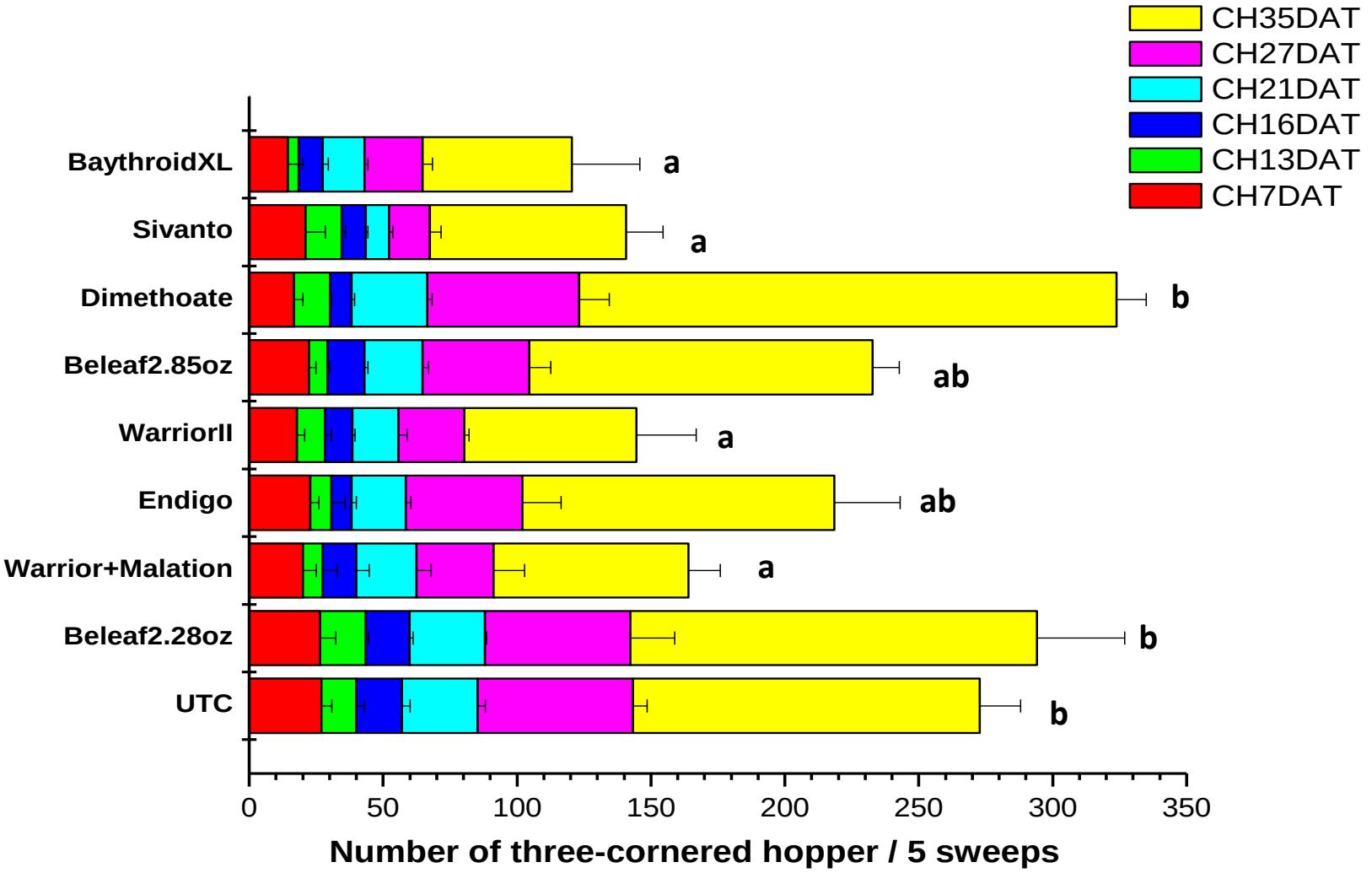
Treatments of alfalfa Hoppers' efficacy trial at MAC in 2014

- **Baythroid XL (2.8 oz / A)**
- **Endigo (4.35 oz / A)**
- **Warrior II (1.6 oz / A)**
- **Dimethoate 4E (1 pt / A)**
- **Sivanto (10.5 oz / A)**
- **WarriorII (1.44 oz/A) + Malathion8 (1pt/A)**
- **Beleaf 50 (2.28 oz / A)**
- **Beleaf 50 (2.85 oz / A)**
- **UTC**

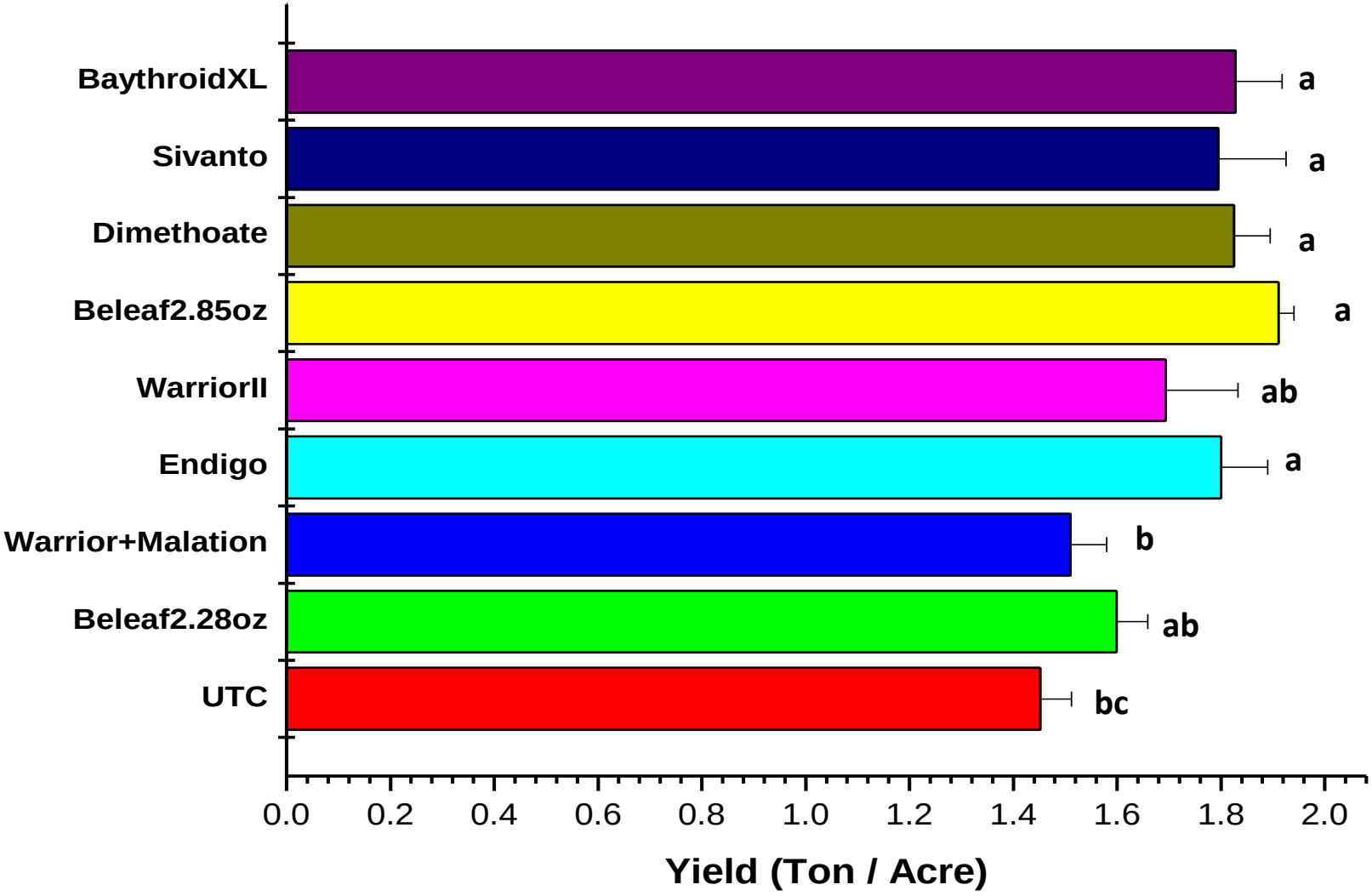
Potato Leafhoppers



Three-cornered Alfalfa Hopper



Yield


BaythroidXL
Sivanto
Dimethoate
Beleaf2.85oz
WarriorII
Endigo
Warrior+Malation
Beleaf2.28oz
UTC
a
a
a
a
ab
a
b
ab
bc
0.0
0.2
0.4
0.6
0.8
1.0
1.2
1.4
1.6
1.8
2.0
Yield (Ton / Acre)

Treated vs. untreated areas in commercial alfalfa field - Buckeye, AZ. (Baythroid XL 2.8 oz / acre)

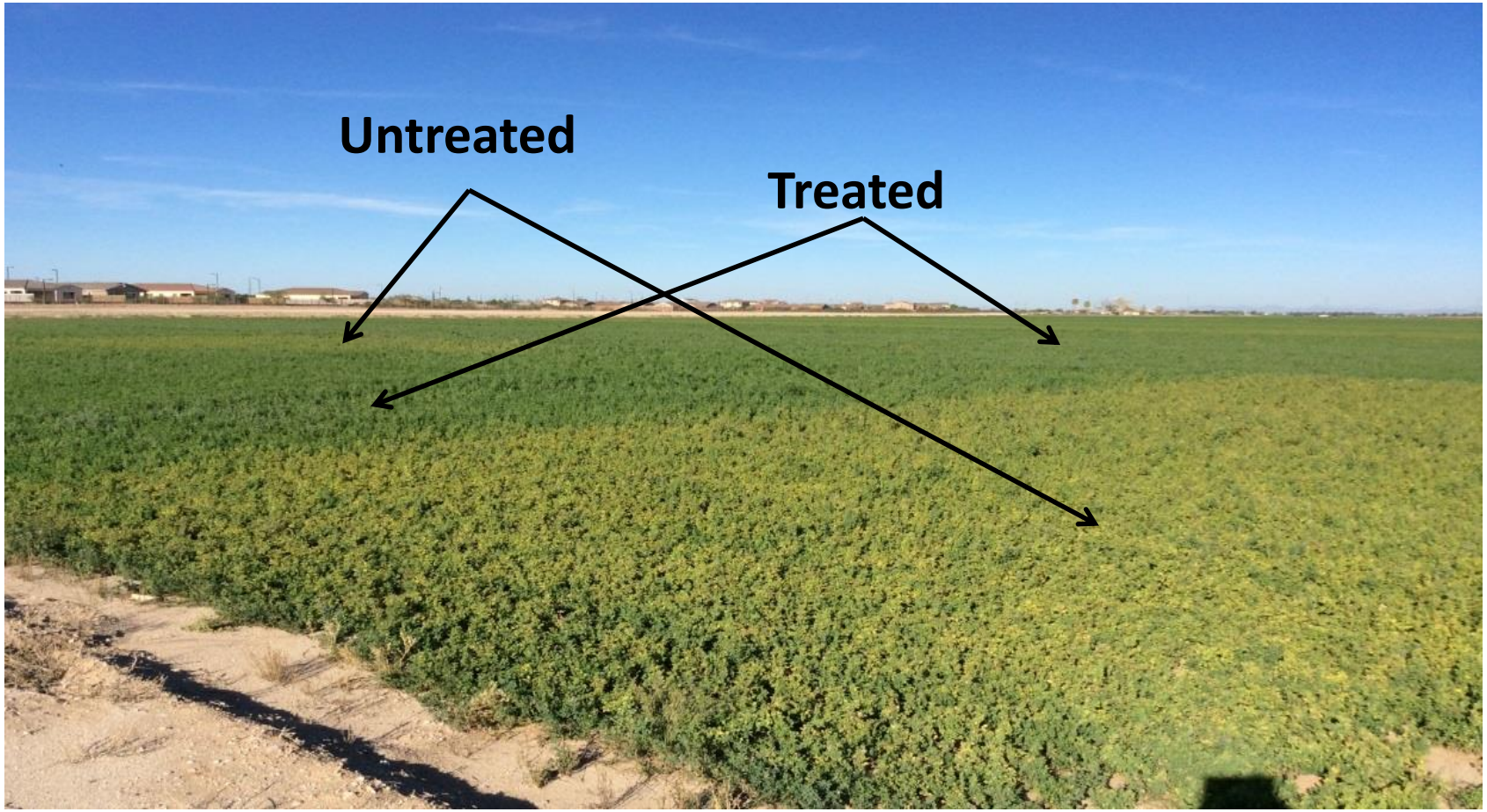


Photo credit: Jason Rovey

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- **University of Arizona**
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