

# Insects and Disease Affecting Canola Production in Texas



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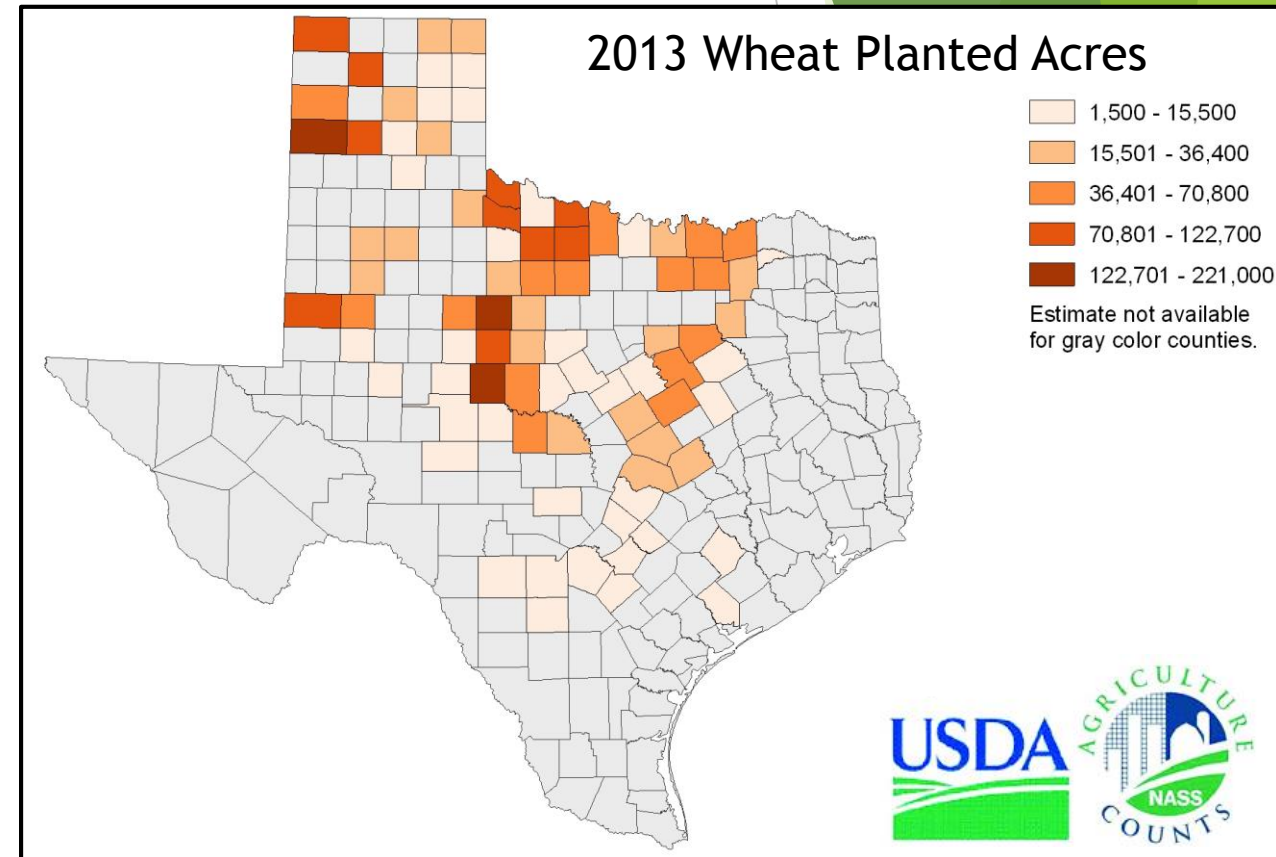
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2014 Winter Canola Field Day

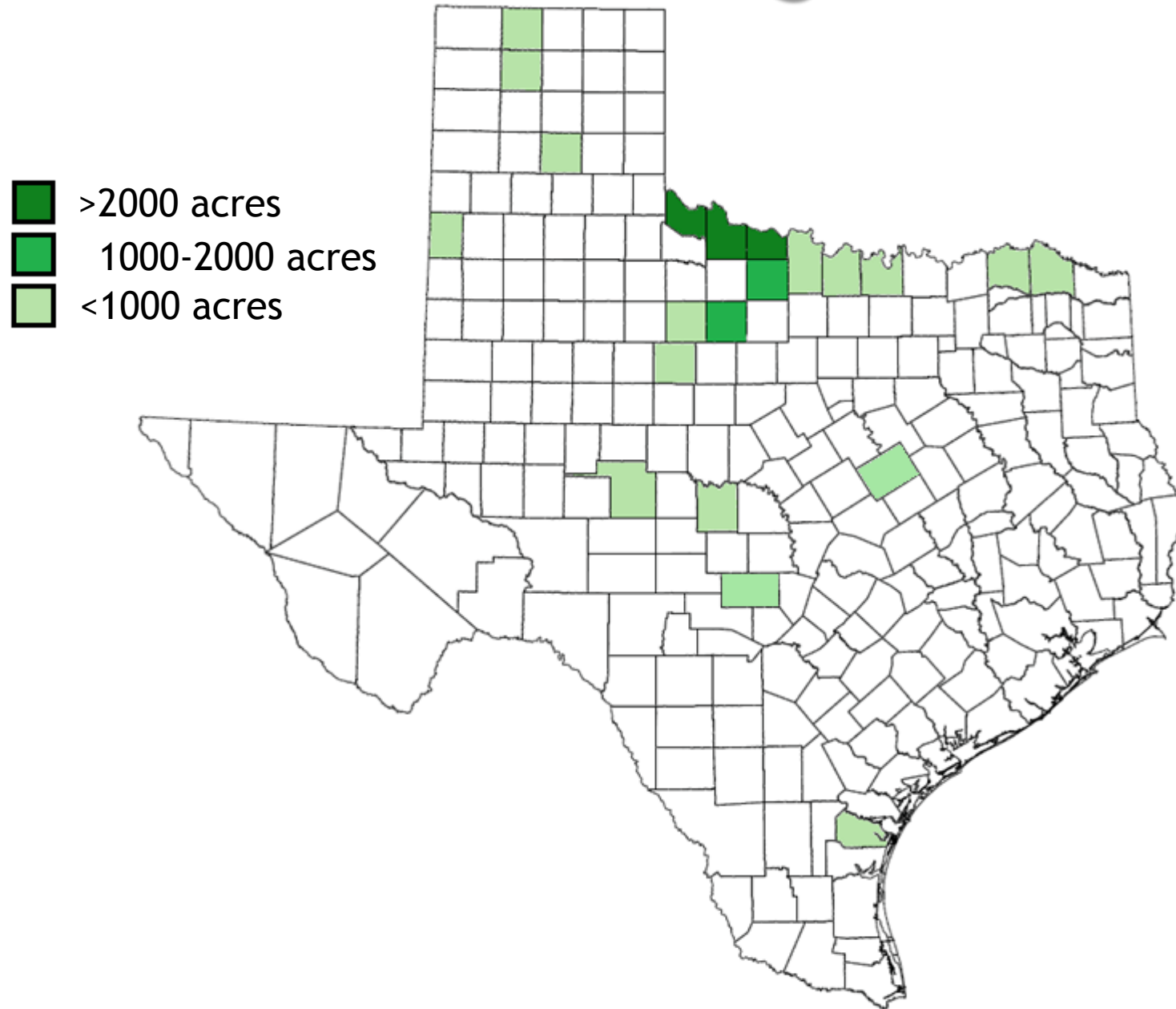


# Why Canola in Texas?

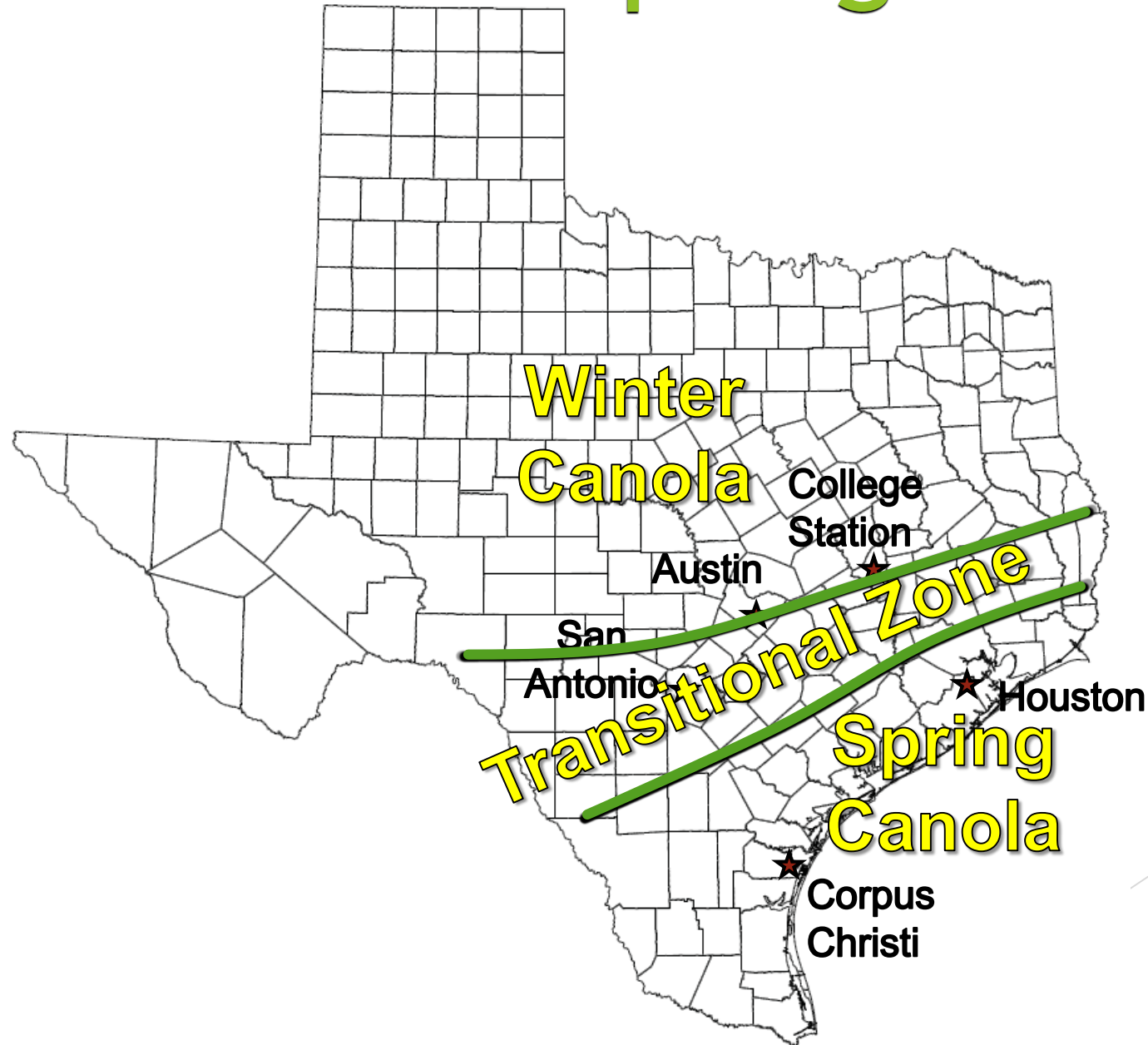
- ▶ We grow 6 million acres of wheat
- ▶ Few cool-season rotational crops available
- ▶ Grassy weeds tough to control in continuous wheat
- ▶ Canola is profitable!



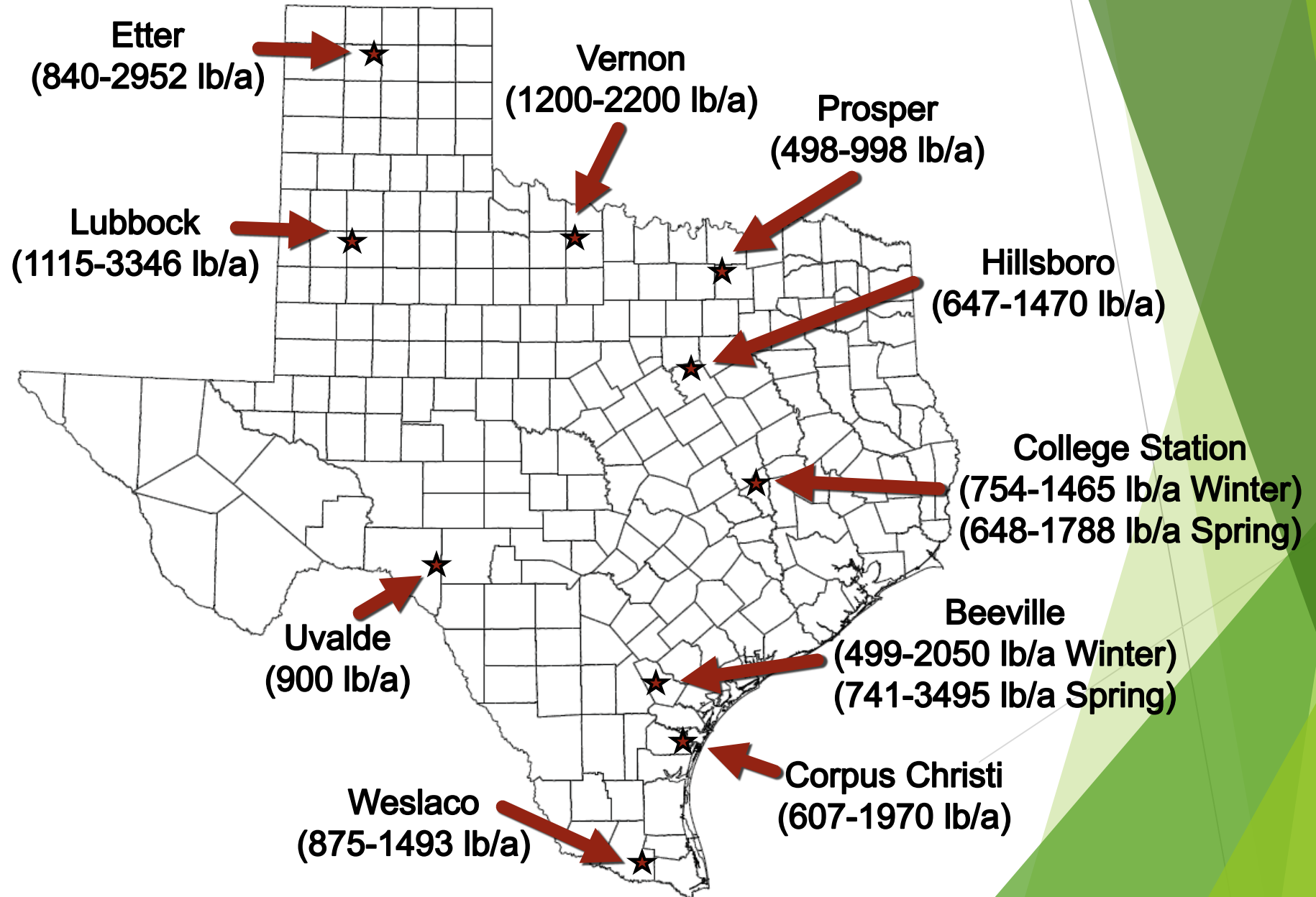
# Where is canola grown in Texas?



# Winter vs. Spring Canola

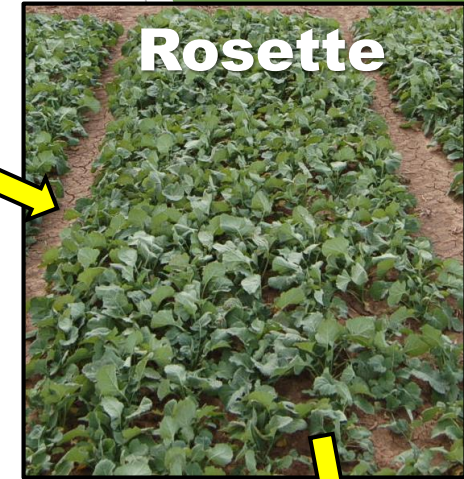


# Canola Yield Potential in Texas



**Oct 15 – Nov 15**

**Nov 15 –  
Dec 15**



# Winter Canola Life Cycle in College Station

**Apr 15 – May 15**

**Mar 15 – Apr 15**



**May 15 – May 30**

**Dec 15 –  
Feb 15**

# Canola Pests Observed in Texas

- ▶ Aphids
- ▶ Diamondback Moth Larvae
- ▶ False Chinch Bugs
- ▶ Flea Beetles
- ▶ Stinkbugs
- ▶ Birds

# Aphids

- ▶ Well documented pest throughout Southern Great Plains
- ▶ Include Green Peach, Cabbage, and Turnip aphids



**Green Peach Aphid**



# Aphids



**Turnip Aphid**



**Cabbage Aphid**

# Green Peach/Turnip Aphid Management

- ▶ Seed treatment
- ▶ Early insecticide applications may require additional applications
- ▶ Economic threshold:

Canola Price (\$/lb)	Aphids/Plant*
0.30	50-100
0.25	60-120
0.20	70-140
0.15	80-160
0.10	90-180

\*Lower numbers during dry conditions

# Cabbage Aphid Management

- ▶ Scout often
- ▶ Open flower buds when scouting
- ▶ Economic threshold:
  - ▶ 15% infested racemes during budding, early or mid-bloom

# Diamondback moth



Larvae



Pupa

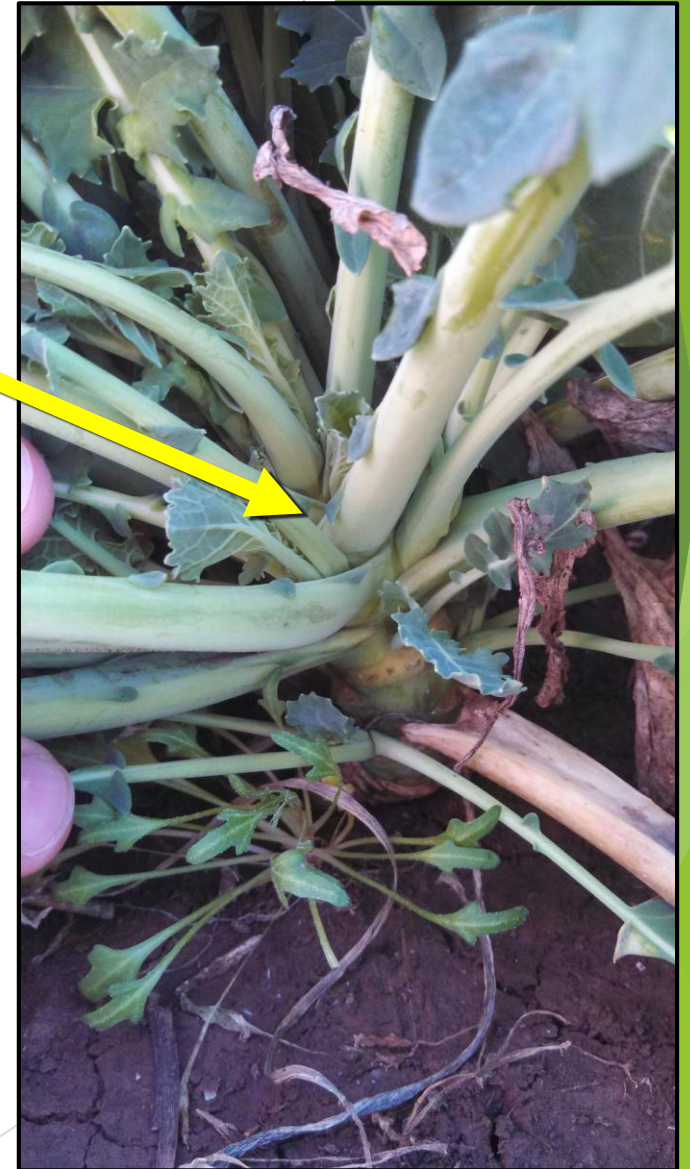


Adult

# Diamondback Moth

Mostly eat  
holes in leafs

Can migrate to  
crown of plant  
to over winter



# Diamondback Moth



Little to no impact on healthy, unstressed plants



Can further stress plants already injured by cold

# Diamondback Moth Management

- ▶ Found world wide - very common canola pest
- ▶ Economic threshold:
  - ▶ Seedlings: 2-3 larvae/row ft
  - ▶ Rosette: “Significant leaf damage”
- ▶ Check crowns of overwintering plants
- ▶ Use high end of labeled insecticide rate

# False Chinch Bug





# False Chinch Bug

- ▶ Overwinter in wild mustards and other annual broadleaf weeds
- ▶ Mostly problematic during bloom/early pod set
- ▶ Worse in dry conditions
- ▶ Can “swarm” under right conditions

# False Chinch Bug Management

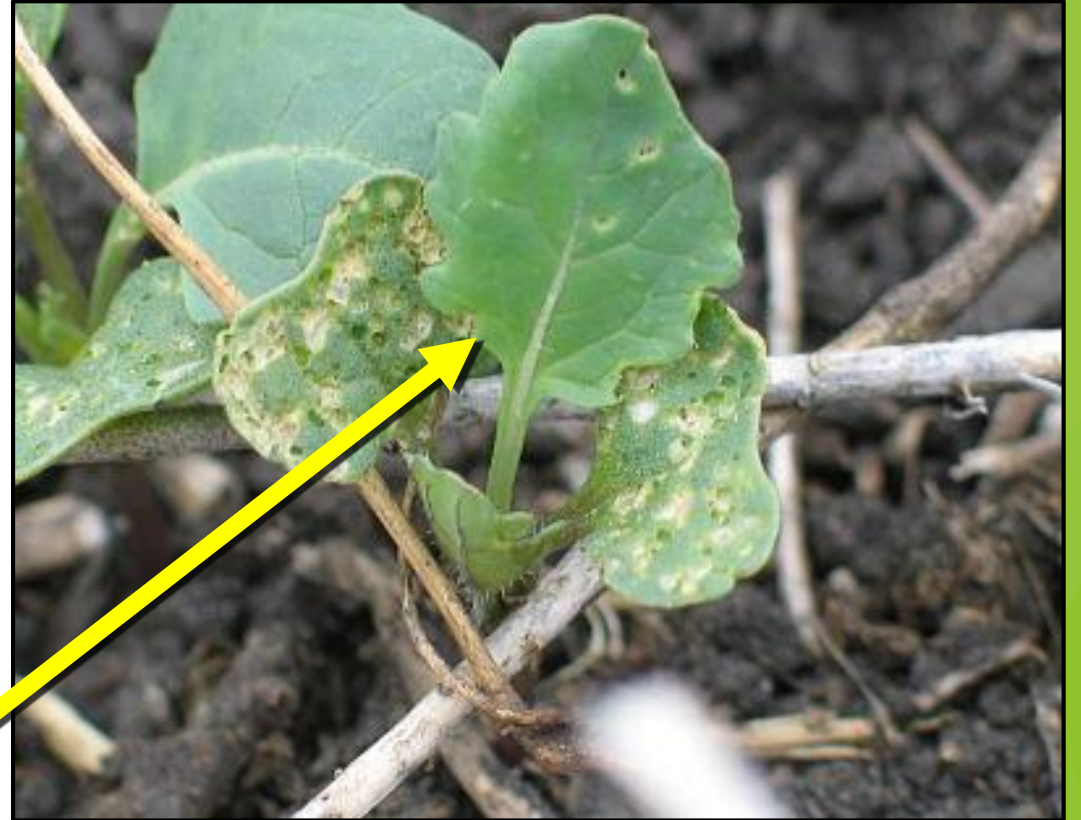
- ▶ Economic thresholds:
  - ▶ Flower: 5-10/raceme
  - ▶ Pod set: 10-20/raceme
- ▶ Use high spray rate (more gal/a of water carrier)
  - ▶ >5 gal for aerial applications

# Flea Beetle



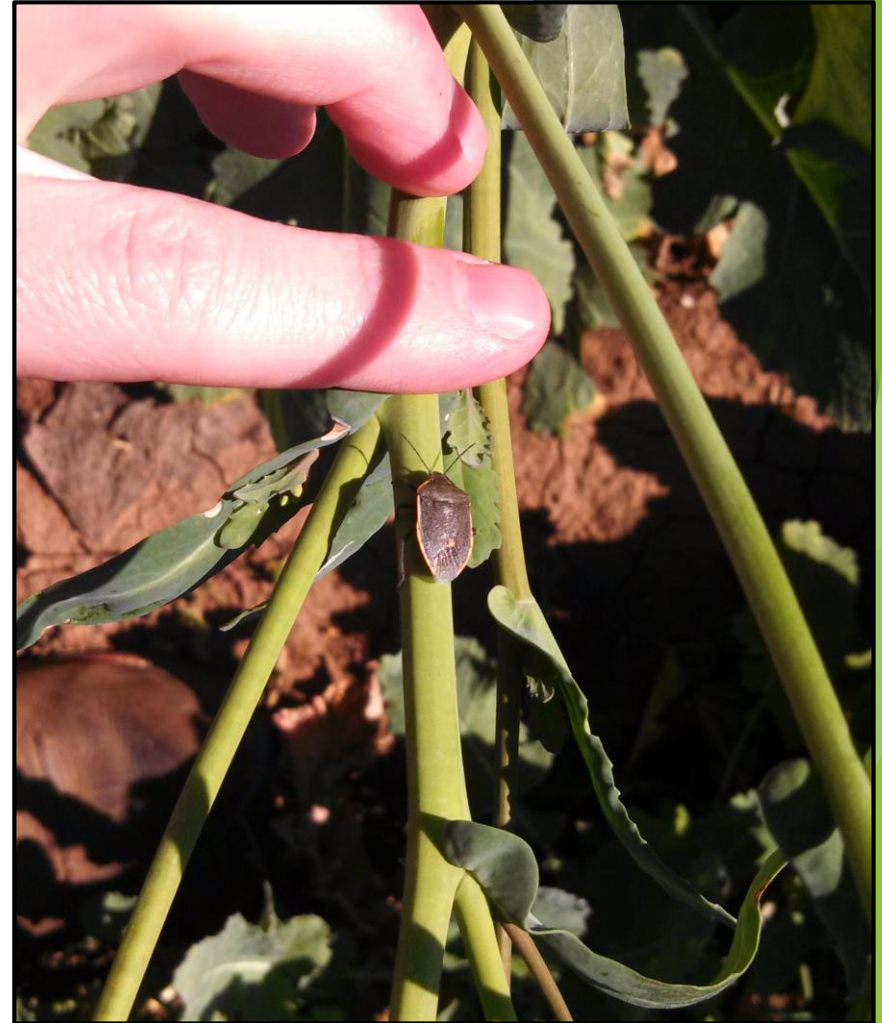
# Flea Beetle Management

- ▶ Keep plant density  $>7$  plts/ft<sup>2</sup>
- ▶ Use seed treatments
- ▶ Use larger seeds at planting
- ▶ Economic threshold:
  - ▶ Seedling: 25-50% leaf damage
  - ▶ Consider not spraying if newer leaves are relatively untouched



# Stinkbugs

- ▶ No economic thresholds established in canola
- ▶ Common on soybeans in SE TX
- ▶ Will these be significant pest???
  - ▶ Not so far....



# Bird Damage



# Other Pests...

- ▶ Fall armyworm
- ▶ Beet armyworm
- ▶ Army cutworm
- ▶ Cabbage worms
- ▶ Loopers
- ▶ Root maggot
- ▶ Grasshopper
- ▶ Thrips
- ▶ Harlequin bug
- ▶ Lygus bug
- ▶ Red turnip beetle
- ▶ Wireworm
- ▶ Aster leafhopper

# Canola Diseases

## Fungal

- ▶ Blackleg
- ▶ Sclerotinia Stem Rot
- ▶ Alternaria Black Spot
- ▶ Downy Mildew
- ▶ Powdery Mildew

## Bacterial

- ▶ Black Rot

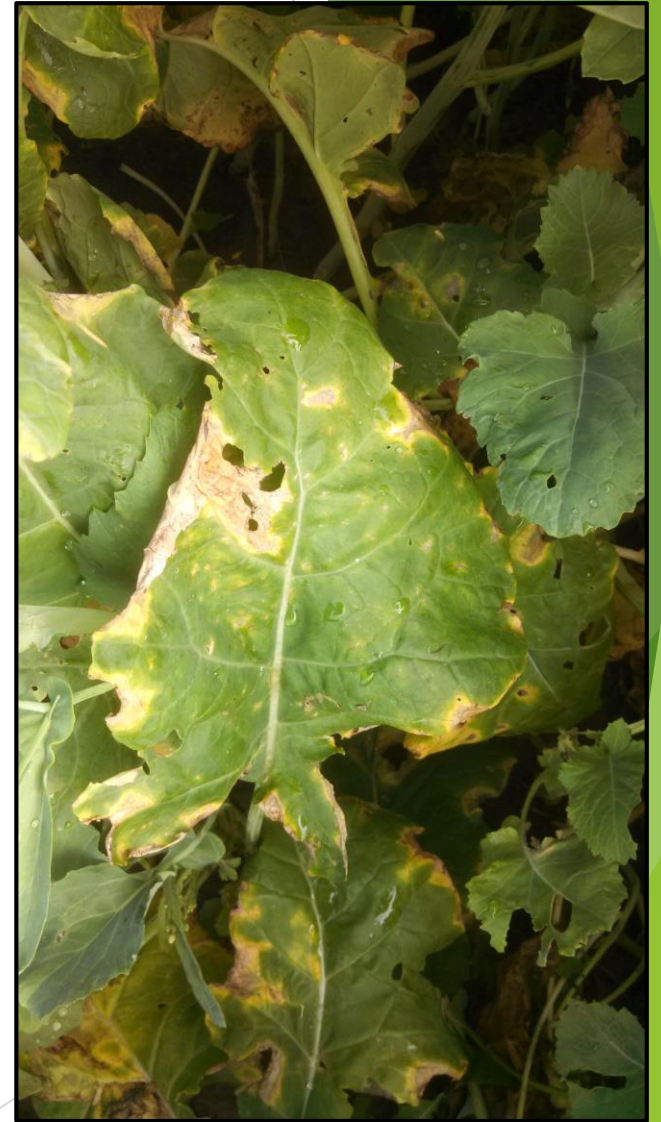
## Viral

- ▶ Aster Yellow



# Black Rot

- ▶ Bacterial disease
- ▶ Mostly superficial (no yield loss)
- ▶ Likes moist conditions



# Blackleg following freeze injury

- ▶ Normally does not impact stems
- ▶ Freeze injury creates wounds/entry point
- ▶ Bacteria enters through wound



# Canola Freeze Injury



# Questions??

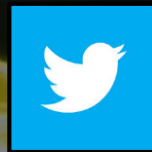
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