Diagnosing Vegetable Crop Issues

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What to know:

- Crop
- Variety
- Number of plants affected (number out of how many or percentage of acreage)

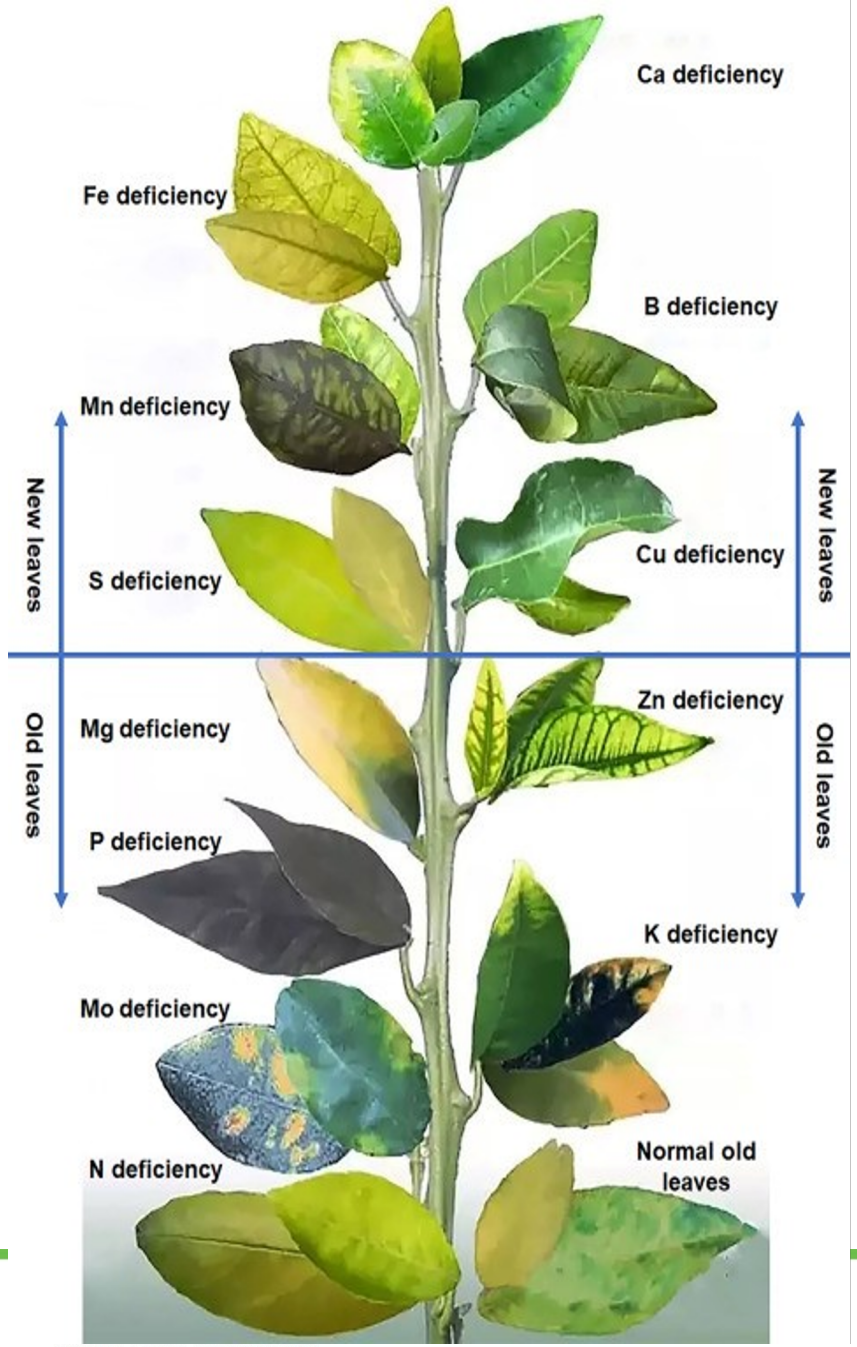
Is there a pattern to which plants are affected?

- Is it randomly distributed?
- All in one row?
- Clustered together?
- On one side or end of the field?

Don’t jump to conclusions!

Where on the plant do you see symptoms?

- Older leaves near bottom of plant or basal leaves on shoots?
- Younger leaves at top of plant or upper parts of new shoots?
- Stem near the soil line?
- Leaves only?
- Fruit only?
- Stem only?
- Whole plant?



Google "Plant Nutrient Functions and Deficiency and Toxicity Symptoms"

Field conditions for the season?

- Really wet periods?
- Droughts or high temps?
- Extreme events?
  - Hail
  - Frost
  - Other

https://www.highmowingseeds.com/blog/blossom-drop-on-tomatoes/

Other Field Records or Observations

- Crops grown in field previously, especially last season?
  - Rotations?
  - Cover crops?
- Root conditions of affected plants?
- Any insects in the field or suspected feeding?

Tissue or soil sampling

- When was the last soil sample taken?
- What is the soil pH?
- Have plant tissue samples been submitted for nutrient analysis?

Nutrient management

- What has been done for nutrient management?
- Have any amendments been incorporated?
  - Manure?
  - Compost?
  - Grass clippings?
  - Other?

Irrigation

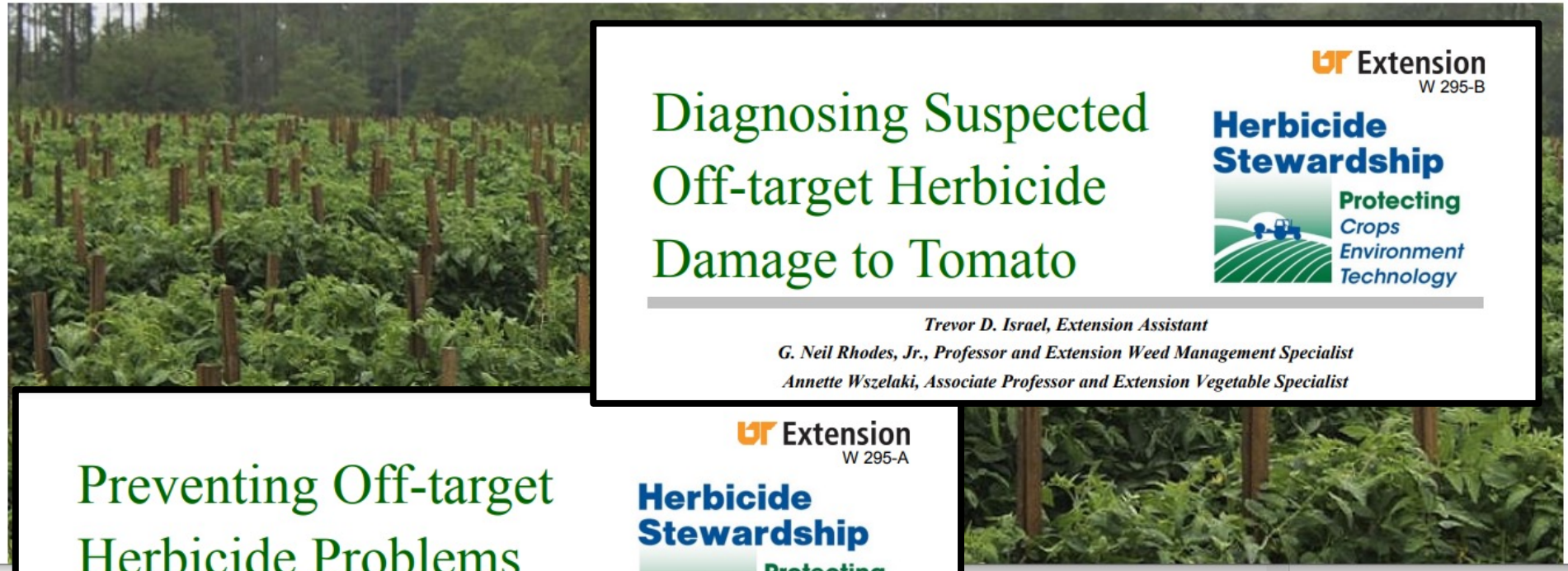
- How is the crop being irrigated?
  - Overhead
  - Trickle/drip
  - None
- What is the source of irrigation water?
  - Surface water (river, creek, pond)
  - Well
  - Municipal

Insect, disease and weed management

- What has been done for insect management?
- What has been done for weed management?
- What has been done for disease management?

(On-farm and on surrounding farms…)

Herbicide Stewardship | Diagnosing Suspected Herbicide Damage in Tomatoes



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Diagnosing Suspected Off-target Herbicide Damage to Tomato

Herbicide Stewardship
Protecting Crops Environment Technology

Trevor D. Israel, Extension Assistant
G. Neil Rhodes, Jr., Professor and Extension Weed Management Specialist
Annette Wszelaki, Associate Professor and Extension Vegetable Specialist

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Preventing Off-target Herbicide Problems in Tomato Fields

Herbicide Stewardship
Protecting Crops Environment Technology

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G. Neil Rhodes Jr., Professor and Extension Weed Management Specialist
Annette Wszelaki, Associate Professor and Extension Vegetable Specialist

What makes a good sample photo?

- Four key factors
  - Subject
  - Focus
  - Resolution
  - Light

What makes a good sample photo?

- Photo subject (*what* are you photographing?)
  - Photograph what you suspect to be the problem
  - If you are unsure, photograph several plant parts
    - Whole plant, problematic leaves and fruit, stem, roots if possible
    - At least photograph the symptoms of interest

Photo subject

Photo subject

What makes a good sample photo?

- Resolution (can we zoom in and retain clarity?)
  - Original photo files are usually high resolution

High resolution

Low resolution

What makes a good sample photo?

- Focus (is the intended subject in focus?)

Focus

What makes a good sample photo?

- Light (too much or too little?)
  - Direct sunlight usually not ideal
  - May need to take sample back to vehicle or shade in the field

Realistic expectations for photo diagnostics

- Some problems are easily diagnosed with photos
- Others cannot be diagnosed with photos alone

Thank you!

Questions?

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