

UF/IFAS Extension Presents
SPRING INTO VEGETABLE GARDENING

Interactive Video Series for Novice Gardeners



Troubleshooting Vegetable Garden Problems

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Common Problems

- Blossom Drop
- Catface
- Puffiness
- Cracking
- Sunscald
- Blossom-End Rot

Blossom Drop

- Blooms develop but dry up and fall off without producing fruit



Blossom drop on tomatoes

Image: UF/IFAS

Causes of Blossom Drop

- Temperature
 - Days over 85° F, nights over 75° F
 - Nights below 55° F
 - 104° F or higher
- Nitrogen
 - Excess or not enough
- Soil Moisture
 - Too little stresses and weakens plants
- Excess pruning
- Wind
 - desiccation
- Light
 - Too much or little
- Stress caused by disease and/or insects
 - Weakened plants

Prevention/Control of Blossom Drop

- Choose varieties suited to our climate
- Recommended fertilization rates
- Water deeply during dry weather
- Pest management

Catface

- Malformed and scarred fruit
- Puckered with swollen protuberances
- Common at blossom end



Catface
Images: UF/IFAS

Causes and Prevention of Catface

Causes

- Not 100% understood
- Night temperatures below 58° F at flowering
- Drought
- Excess Nitrogen
- Herbicide injury

Prevention

- Do not plant too early in season
- Avoid herbicides
- Manage fertility

Puffiness

- Bloated, flat sided or angular fruit
- Lack firmness
- May not see until cut
- Large open areas



Puffiness

Images: UF/IFAS



Causes and Prevention of Puffiness

Causes

- Incomplete fertilization or seed development due to low temperatures
- Low light or rainy weather
- High Nitrogen or low Potassium

Prevention

- Timing of planting to avoid low temps
- Nutrition management

Cracking

- Radial, concentric or both types of cracks
- May feel leathery
- Internal expansion is faster than external; skin splits
- Secondary infection may occur

<http://nwdistrict.ifas.ufl.edu/hort/2013/07/07/why-are-my-tomatoes-cracking/>



Cracking

Image: Mary Derrick,
UF/IFAS

Causes and Prevention of Cracking

Causes

- Susceptible varieties
- Fluctuating air temperatures
- Fluctuation soil moisture

Prevention

- Uses resistant varieties (but can happen on any)
- Control water
- Provide foliage cover to fruit/avoid excess pruning

Sunscald

- Yellow, hard area that may turn white and die
- May eventually turn black if fungi invade dead tissue
- Usually on shoulder of fruit



Sunscald
Image: UF/IFAS

Causes and Prevention of Sunscald

Causes

- Sub lethal - tissue temperatures get above 86° F
- Lethal – tissue gets above 104° F
- More common in exposed fruit

Prevention

- Avoid excess pruning, allow leaf cover
- May need light shade cloth

Blossom-End Rot

- Begins as light colored water soaked spots
- Progresses to black and leathery
- May get secondary infection by fungus or bacteria
- Usually on blossom end but can be in other areas



Blossom-End Rot
Images: UF/IFAS



Causes of Blossom-End Rot

- Caused by a localized Calcium (Ca) deficiency in the fruit
- Many factors can influence Ca delivery to fruit
- Calcium route in plant:
 - Taken in by young root tips passively
 - Travels mostly in water through transpiration stream
 - Areas of increased transpiration receive Ca first (leaves over fruit)

Causes of Blossom-End Rot

- Inadequate soil moisture can prevent Ca uptake
- Increased Nitrogen promotes foliage growth which may outcompete fruit for Ca
- Soluble salts in the soil can interfere with root uptake of Ca
- Damage to roots
 - Mechanical
 - Nematode
 - flooding

Prevention/Control Blossom-End Rot

- Irrigation management
 - May need more if weather is dry and windy
- Nitrogen management
- Protect root zone

****Foliar Ca applications are not effective**



Healthy bell pepper plants

Image: Julie McConnell, UF/IFAS

Conclusions

- Many problems can be avoided with best management practices
 - Water
 - Nutrition
 - Pruning
 - Planning



Raised bed vegetable garden.

Image: Julie McConnell, UF/IFAS

References

- Blossom Drop, Reduced Fruit Set, and Post-Pollination Disorders in Tomato, EDIS #HS1195
- Physiological, Nutritional, and Other Disorders of Tomato Fruit, EDIS #954
- Blossom-End Rot in Bell Pepper: Causes and Prevention, EDIS #SL 284

Thank You!

