



UC Master Gardeners of Napa County

<http://napamg.ucanr.edu/>

Our mission: "To extend research-based knowledge and information on home horticulture, pest management, and sustainable landscape practices to the residents of California and be guided by our core values and strategic initiatives."



Challenges in the Summer Vegetable Garden



Help Us Better Serve You!

Our follow-up survey provides us the tools we need
to grow and improve the quality of our program.



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Agriculture and Natural Resources

■ UC Master Gardener Program

The Three Challenges

Watering

Harvesting

Problems

Watering Challenges



Same pumpkin plant, midafternoon & evening: normal summer wilting



Signs of water stress

- Wilted or drooping leaves that do not return to normal by evening
- Curled or yellow leaves that fold or drop
- Greyish foliage that loses its green luster
- Smaller than normal new leaves



Harvest produce when ripe



- Many vegetables are best when harvested young: summer squash, cucumbers
- Flavor and texture change as fruits age: broccoli, eggplant
- Some are best and sweetest when fully mature: sweet peppers, melons

Harvesting Romano Beans

Beans on the left would be good for fresh eating.

Beans on the right are going to be tough and stringy



Harvesting Cucumbers

Large mature (seedy!) cucumber “hid” under leaves.

Yellow lemon cucumber = over-mature

Crooked green cucumber, pollination or watering or heat problem

Small lemon cuke = just right



Harvesting Broccoli

Broccoli transplanted 3-3-20; main heads end of May, secondary shoots still producing in August 2020.

As it ages, broccoli gets bitter, especially in summer. Harvest before it opens up.



Harvesting Broccoli

Young broccoli, “curds” are very tight



Old broccoli, “curds” are loose



Harvesting Broccoli: Just Right!



Harvesting Eggplant



Mini Eggplant. Which one is at correct stage of ripeness for eating?

Harvesting Eggplant



First eggplant has shiny skin and small seeds. Second one is duller, seeds are larger. Last one is yellowing, seeds brown and mature

Deadhead Basil to keep it producing



Abiotic Problems in Vegetables

Abiotic means that the problem is not caused by a living organism, but by environmental factors.

Environmental factors can be air pollution, drought, nutrient deficiencies, mineral toxicities, freezing temperatures, excessive heat, lack or excess of light, or improper cultural practices.

Many common abiotic disorders are unsightly but do not affect the safe consumption of the vegetable.

Blossom End Rot, Tomatoes



Blossom End Rot in Squash



Sunscald



“Zippering” in Tomatoes: Flower development problem



Internal White Tissue: may be a potassium issue



Bitterness in Cucumbers



Common Summer Insect Pests

Insects usually damage vegetables by chewing on them or sucking out juices.

Some insects are vectors for disease organisms.

Identify your pest first, then figure out what to do.

Stinkbug damage to tomato



Squash bug



Harlequin Bug



Cucumber beetles



White Flies



Tomato Hornworm



**AKA Hawk or Sphinx
Moth**



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Fungal Diseases

According to UC scientists, fungi are the single most important cause of diseases in plants. There are more than 10,000 identified pathogenic fungi.

Some have a wide host range and afflict many kinds of plants.

Many fungi have the ability to survive in soil in the absence of their host plants.

Crop rotation is an important cultural practice to control these diseases.

Fungal diseases: Verticillium wilt



Fungal Disease: Fusarium Wilt



Fungal Disease: Powdery mildew



Infected cucumber plant



Infected tomato leaf

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Crop Rotation

- Balance soil fertility
 - Heavy feeders (corn, tomatoes, etc.) vs Light feeders (root crops and herbs)
 - Nitrogen fixers (peas, beans, other legumes) vs heavy Nitrogen consumers (tomatoes, leafy greens)
- Reduce soil-borne diseases
- Interrupt invertebrate pest life cycles

Crop Rotation by Families

Warm Season

- Cucurbits (Cucurbitaceae)-squash, melon, cucumber
- Nightshade (Solanaceae)-tomato, eggplant, pepper, potato
- Legumes (Leguminosae)-beans

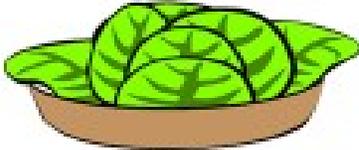
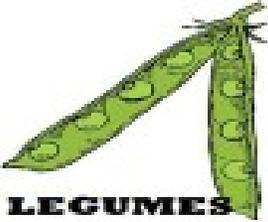
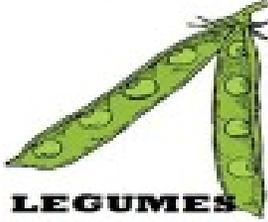
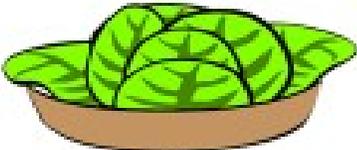
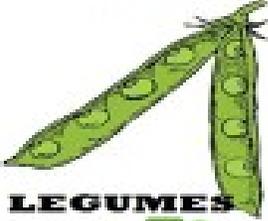
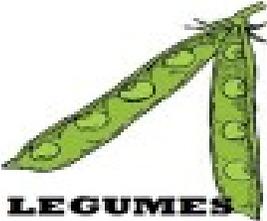
Cool Season

- Umbel-flowered (Umbelliferae)-carrots, parsley, celery
- Onion/Allium (Amaryllidaceae)-garlic, leeks, onion
- Legumes (Leguminosae)-fava

Extended Cool Season

- Cruciferous (Cruciferae)-cabbage, radish, turnips
- Spinach (Chenopodiaceae)-beets, chard, spinach
- Legumes (Leguminosae)-peas

CROP ROTATION CHART

	AREA 1	AREA 2	AREA 3	AREA 4
YEAR 1	 LEAVES	 FRUIT	 ROOTS	 LEGUMES
YEAR 2	 LEGUMES	 LEAVES	 FRUIT	 ROOTS
YEAR 3	 ROOTS	 LEGUMES	 LEAVES	 FRUIT
YEAR 4	 FRUIT	 ROOTS	 LEGUMES	 LEAVES

Bird Damage



Rodent Damage

- Rats are common in our area.



Identifying the night culprit



Birds and Rats

Deter birds with netting, frightening devices, shooting, trapping, or repellants.

UC IPM Pest Note 74152

<http://ipm.ucanr.edu/PDF/PESTNOTES/pnbirdstreefruitsvines.pdf>

Deter rats with sanitation, rodent-proofing buildings, and trapping to control populations.

UC IPM Pest Note 74106

<http://ipm.ucanr.edu/PDF/PESTNOTES/pnrats.pdf>



Questions?

**Please use the chat
feature of Zoom to
send in your questions.**

Sources of information

California Master Gardener Handbook, second edition

UC Master Gardeners of Sacramento County: Vegetable Problems in Summer-Abiotic Disorders

http://sacmg.ucanr.edu/Vegetable_Problems_Summer/Abiotic/#shape

UC Master Gardeners of Sacramento County: Vegetable Problems in Summer-Diseases http://sacmg.ucanr.edu/vegetable_problems_summer/diseases/

UC Master Gardeners of Sacramento County: Vegetable Problems in Summer-Pests http://sacmg.ucanr.edu/vegetable_problems_summer/pests/

University of Massachusetts Amherst, Tomato, Physiological Ripening Disorders <https://>

ag.umass.edu/vegetable/fact-sheets/tomato-physiological-ripening-disorders

UC IPM, Home, Garden, Turf, and Landscape Pests (find all mentioned pests at this site) <http://ipm.ucanr.edu/PMG/menu.homegarden.html>

Pests in the Urban Landscape Blog, “Rats in the Garden” Elaine Lander <https://ucanr.edu/blogs/UCIPMurbanpests/>

Healthy Garden Tips: Crop Rotation

**FIND this slideshow & further resources
on our website:**

UC Master Gardeners of Napa County
<http://napamg.ucanr.edu>





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Go to **Events Find Us!**

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The Master Gardener program is a volunteer organization associated with the University of California Cooperative Extension. *Our mission is to extend research based knowledge on home horticulture, pest*

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UC Master Gardeners of Sacramento County: Vegetable Problems in Summer-Diseases http://sacmg.ucanr.edu/vegetable_problems_summer/diseases/

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Healthy Garden Tips: Crop Rotation



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**Thank you for
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