



Pest Management in Vegetables with Cultural Practices

Surendra Dara

**Strawberry and Vegetable Crops Advisor
Santa Barbara and San Luis Obispo Counties
UC Cooperative Extension**

Cultural practices

- Crop rotation
- Cover crops
- Cultivars
- Cultivation
- Planting
- Irrigation
- Sanitation
- Nutrition

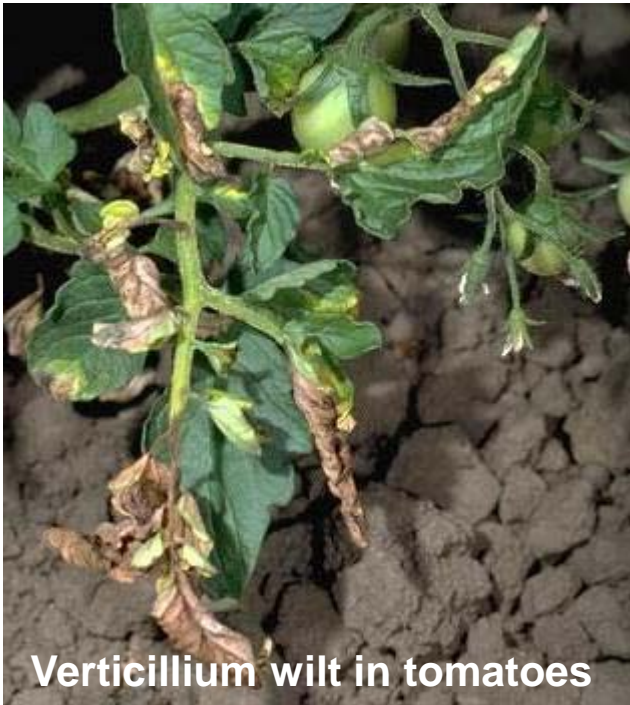


Crop rotation

- Rotate with unrelated or non-susceptible hosts
- Rotate with resistant cultivars
- Rotate with green manure crops

Crop rotation

- Breaks pest cycles



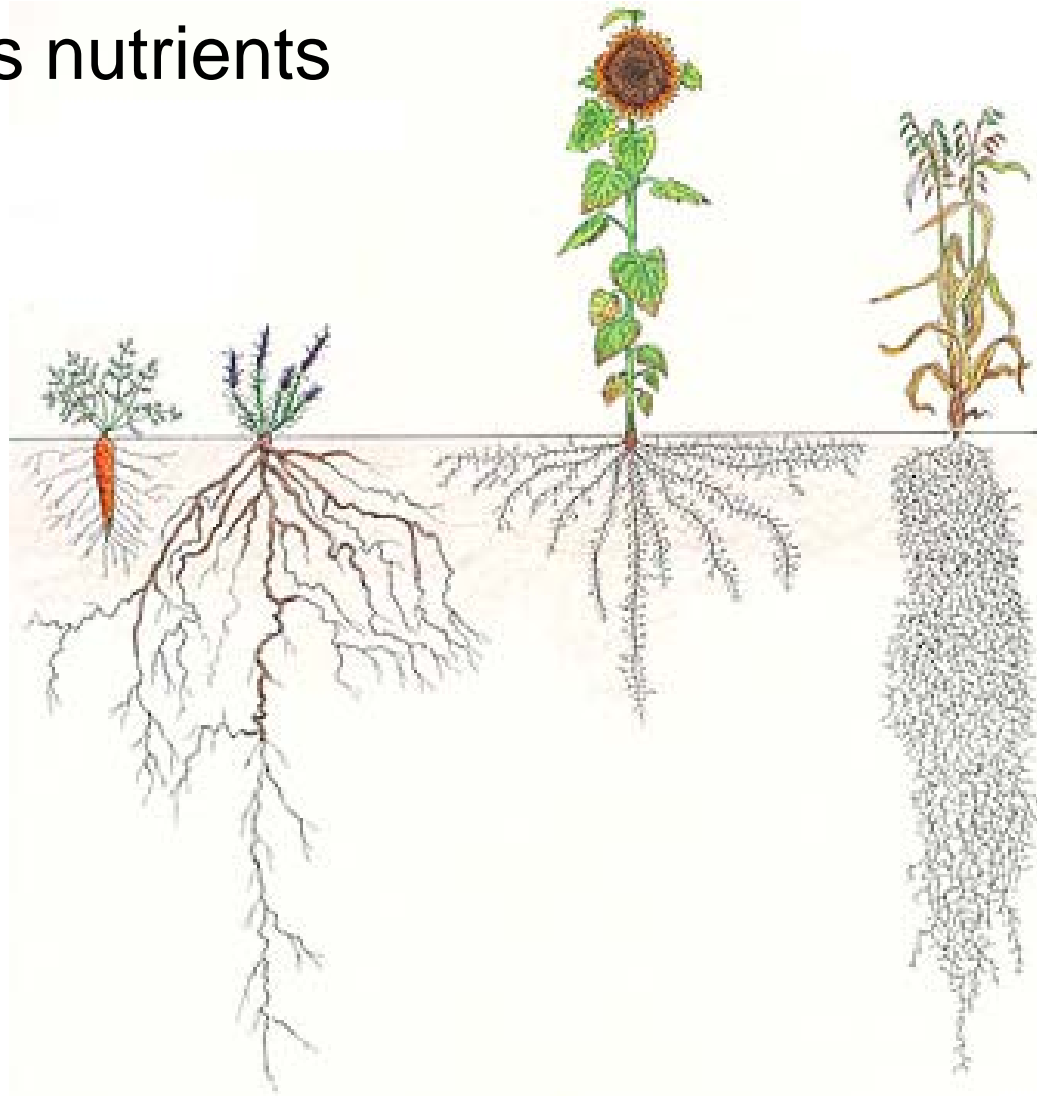
Rotate with broccoli



Rotate with resistant tomato or
bean cultivars

Crop rotation

- Recycles nutrients



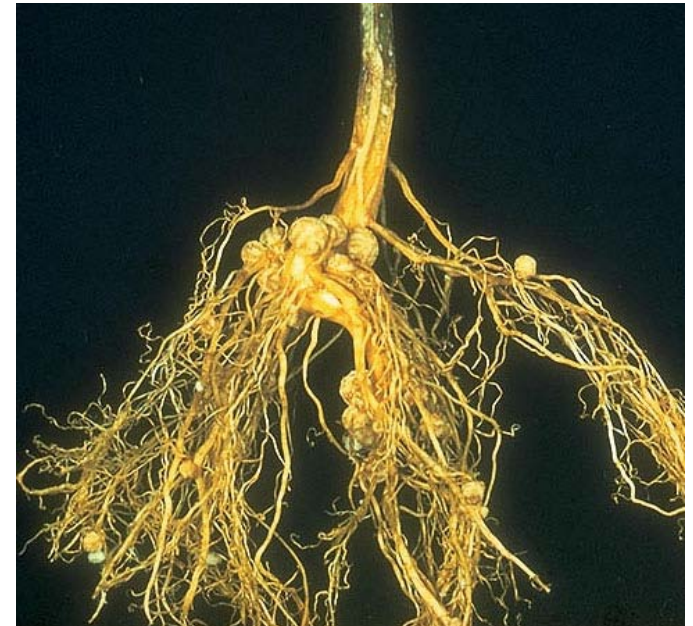
Crop rotation

- Enhances soil quality
 - Maintains balance between the accumulation and decomposition of organic matter
 - Improves soil structure
 - Prevents erosion



Cover crops

- Weed suppression
- Attract natural enemies
- Improved water penetration
- Increased microbial activity
- Increased nutrients



Cultivars

- Disease and pest resistant varieties
 - Tomato cultivars HMX 4801, U 567, UGX 10405, DRI 8058 are resistant to Fusarium wilt, Verticillium wilt, bacterial speck, spotted wilt and root knot nematode.
 - Glossy cultivars of certain crucifers with reduced wax are resistant to diamondback moth



- Early or late maturing varieties to avoid the severity of pest incidence.

Cultivation

- Thorough cultivation to manage pests and weeds



Irrigation

- Type of irrigation influences pest occurrence



Thrips on onion



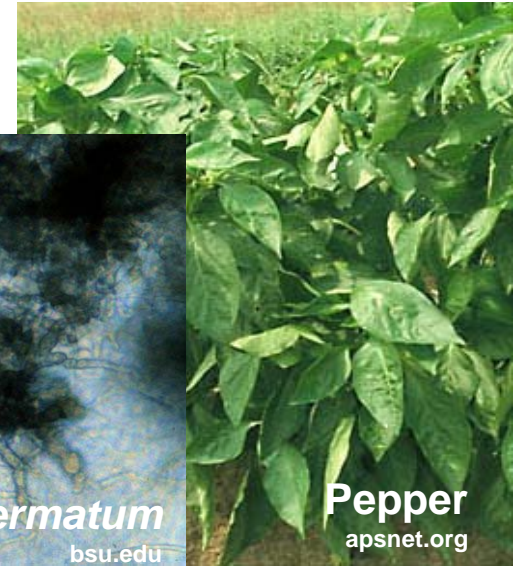
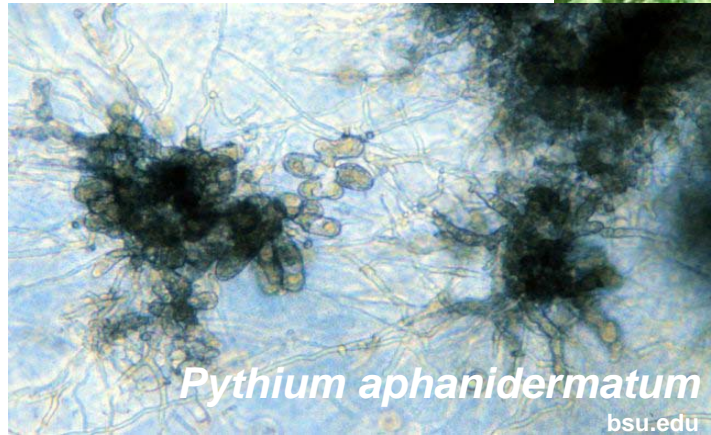
Bacterial soft rot



Bulb mite on onion

Irrigation

- Amount of irrigation



- Allowing foliage to dry between irrigations
- Higher beds in heavier soils for good drainage

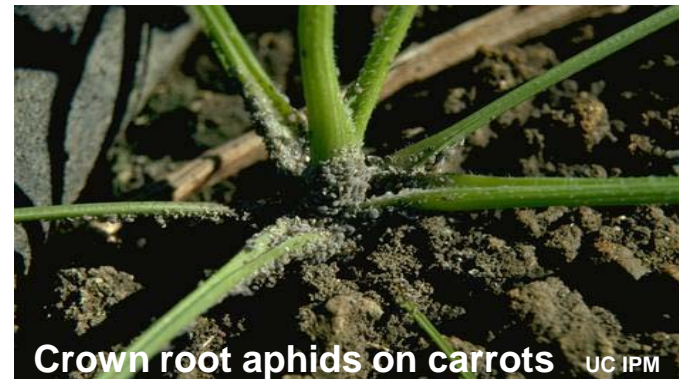


Planting

- Quality seeds and transplants
- Plant beds
- Location
- Time

Sanitation

- Removal of weeds and crop residue
 - Broad mites and aphids on peppers and crown root aphids in carrots
 - Thrips in tomatoes and peppers after harvesting radicchio
- Sanitation of the field equipment
 - Basal rot transmitted through contaminated equipment



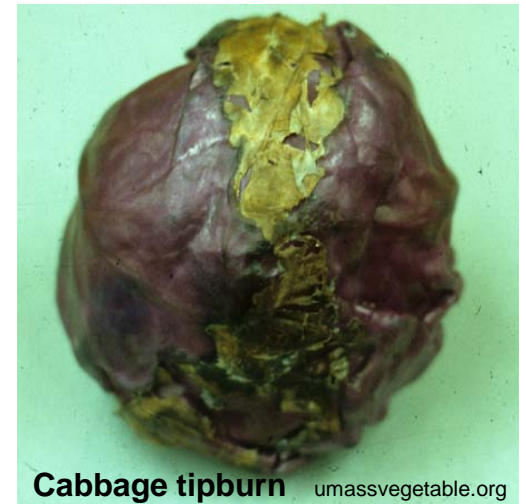
Soil amendment

- Amend soil to maintain optimal conditions required for the crop
 - Club root of broccoli
 - Colorado potato beetle



Nutrition

- Abiotic disorders
- Attract pests and promote weed growth
- Weaker plants more susceptible to pests and diseases



Conclusions

- Simple cultural practices can have major impact on diseases and pests
- Choose the practices best suited for the situation

Thank you

Questions?