Santa Barbara County
Agricultural Commissioner

Plant Pest and Disease Diagnostic Services

Plant Pathology
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Entomology
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Plant Pest and Disease Diagnostic Services

*Plant Pests Only*

Arthropods and Mollusks

Pathogens and Nematodes

Weeds

*spiders, structural pests OK*
Type of fungus growing about 30 ft. from tree. Fungus has grown closer to tree at times, but I think the shape was like this 🍄.
Pest Exclusion

- Enforcement of federal, foreign and domestic plant pest quarantines
- California state exterior and interior quarantines
- County restrictions and ordinances
The Goal of Exclusion:
Regulations based on **BIOLOGY**

The Politics of Exclusion:
Some regulations used as **ECONOMIC EMBARGOES**
ENTRY STATUS vs. PEST RISK

Entries:
- Conservative
- Liberal

PEST RISK:
- Low
- High

Axes:
- Politics
- Economics
- Biology
Phytosanitary Certification –
Shipments for *export* must be certified as meeting the pest exclusion requirements of other countries and states, and accompanying documents are prepared stating the commodity is free of specific pests of quarantine concern.
Phytosanitary Certification of Seed

- obligated to fulfill the official requirements of states and countries buying California-grown seed
- make inspections as necessary to meet the requirements of the importing state or country.
Santa Barbara County
Seed Crops 2011

Beans = Flowers = Vegetables

2,094 acres – unchanged over 20 yrs

Valued at $9.6M
PQ program is concerned only with diseases that are *seed-borne* – Some diseases on the list are common in our area, some are rarely seen, and some are never seen.

Presence of pathogens must be confirmed by lab analysis.
PQ Seed Program

Growers select seed production sites in areas where pathogens
• are not present
• the environmental conditions do not favor disease development
Following inspection protocols provides for a minimum 95% confidence level in detecting an infection level of 0.1% in the field.

Beans need three inspections:
1st – seedling
2nd – mature vines with green pods
3rd – windrow
Bean Anthracnose

Colletotricum lindemuthianum

- Infects stems, leaves and pods
- Needs cool, moist climate
- Mainly on the underside of leaf and veins turn brick red
Bean Halo Blight

*Pseudomonas syringae* pv. *Phaseolicola*

- Infects leaves and pods
- Cool and humid conditions
- Seed is shriveled, yields low
Bean Common or Fuscous Blight

*Xanthomonas campestris* pv. *phaseoli*

- No resistant varieties
- Needs high humidity for epidemic
Bean Common Mosaic Virus

- Potyvirus spread by seed and aphids
- Necrotic strains not known to occur in CA
Ascochyta fabae

- Leaf and pod spots
- Rapid disease development in cool, wet weather
Broad Bean Stain Virus
• Not known to occur in USA

Broad Bean True Mosaic Virus
Mystery Potyvirus

Seed borne????
Brassicas - Alternaria Leaf spot/Head rot

*Alternaria brassicae* and *brassicicola*

- Surface or internal
- Concentric rings and a shot-hole effect
Mycosphaerella brassicicola

- Mainly on brussels sprouts
- May or may not be seed borne
Black leg, Phoma leaf spot & canker

*Phoma lingam*

- Usually found as stem lesions at soil line but can also be leaf spots
Bacterial Blight: *Pseudomonas syringae pv alisalensis*
Bacterial Leaf Spot: *Pseudomonas syringae pv maculicola*
- Problem for greenhouse transplants
Black Rot

*Xanthomonas campestris pv campestris*

- Can cause severe damage
- Weeds are important reservoirs
Cucurbits - Bacterial fruit blotch

*Acidovorax avenae subsp. Citrulli*
- Watermelons only
**Scab**

*Cladosporium cucumerinum*

- Cukes, pumpkins and summer squash
- Wet and humid conditions
Anthracnose

*Colletotrichum orbiculare*
- Mostly seedless watermelons
- Warm, humid conditions
Didymella bryoniae
• Mainly a tropical disease but found on watermelons in CA
Fusarium Diseases

Fusarium oxysporum (wilt)
Fusarium solani f.sp. cucurbitae (crown and foot rot)
Angular Leaf Spot

*Pseudomonas syringae pv. Lachrymans*

- Most common on cucumbers but other melons too
- Leaves look tattered as sections drop out
Cucumber mosaic virus

- Aphid transmitted and *Maybe* seed-borne
- Very wide host range
Squash mosaic virus

Vectored by the spotted cucumber beetle (*Diabrotica*)
Tobacco ringspot virus
Zucchini yellow mosaic virus

- Vectored by many species of aphid, not seed borne
Disease of unknown etiology

- Watermelon seed crop
- Positive for Watermelon Mosaic virus but not known to cause these symptoms
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QUESTIONS

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