Prune Tree Killers!

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University of California Cooperative Extension (UCCE) Orchards Advisors

- **Cytospora and Bacterial canker** (Milliron & Niederholzer)

- **Prune Brown Line and Phytophthora and** (Ott)

- **Phellinus wood rot and gophers** (Wheeler-Dykes)

Latest from UCCE orchard farm advisors...

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Phellinus Wood Rot in Prunes

Prune Bloom Weather

Cytospora in Prune

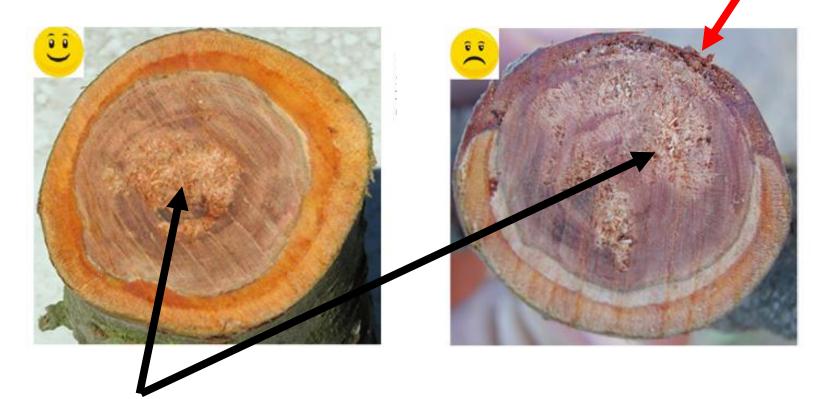**Nitrogen Part 9: Prune**

Interested in growing prunes?
Caution...

What's a canker?

Canker of the bark

Heart rot (NOT a canker of the bark)

Flagging of a
branch girdled
by **Cytospora**
leucostoma

Dieback of
scaffold branches
caused by
**bacterial
canker**

Canker

Canker

UC Statewide IPM Project
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Cytospora canker: more Identification

Pycnidia on dead wood: white pimple-like spore producing structures

Gumming cankers associated with pruning wounds

Cytospora

Biology:
- Classic vs. latent infections

Management:
- **Cultural** – reduce: stress, inoculum, & spread
- pruning/shaker thinning timing

- **Chemical** – more than post-pruning?
- Young trees or replants?

Advantages & Disadvantages of Mechanical Pruning

Good cut. Clean, healthy bark all around the cut.

Bad cut. Bark dead & collapsed, in top half of the cut.

Bad cut. Darkened, dead bark on the top half of cut.
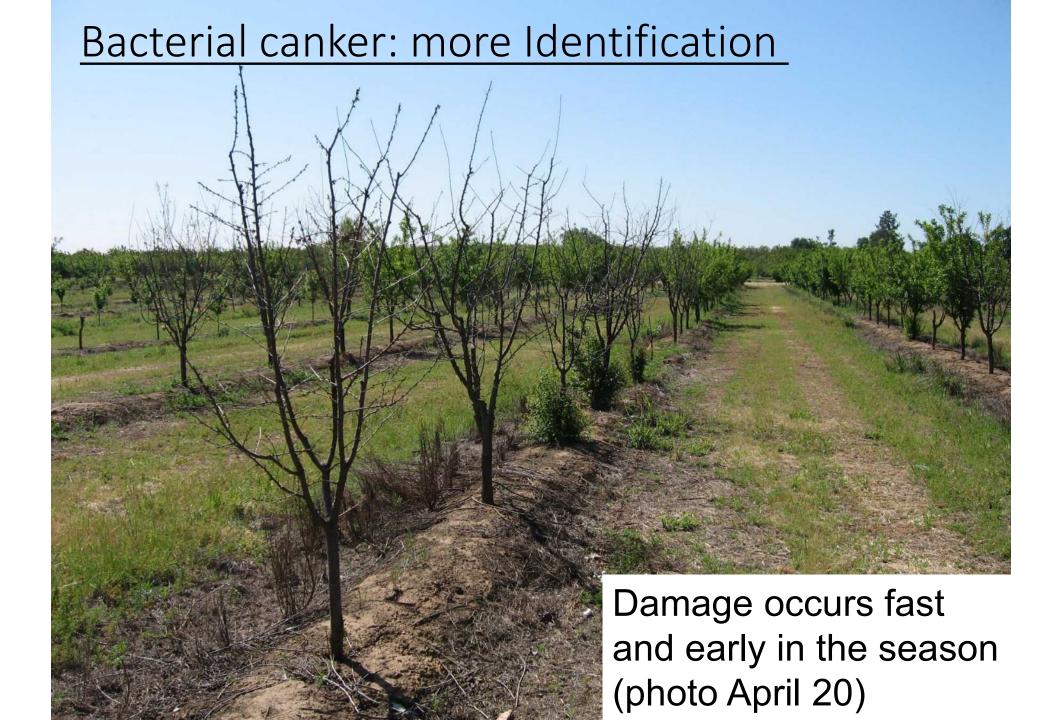

Bad cut. One quarter of bark is bad. That's too much.

Cytospora canker   vs.   bacterial canker
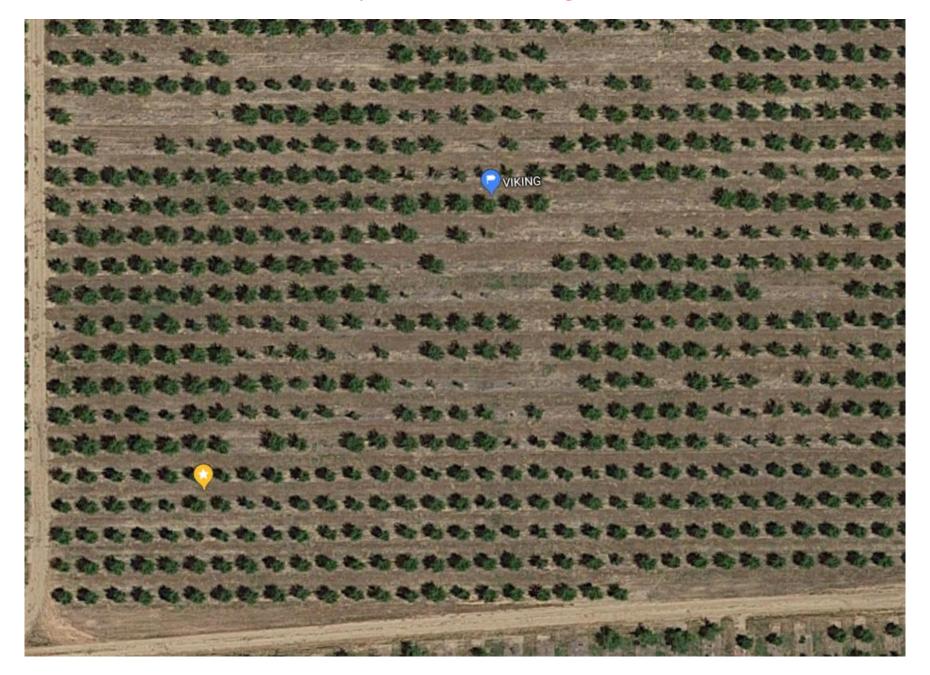
Sunken canker
(active margin- see arrow)

Reddish flecking at canker
margin / sour smell

Bacterial canker: more Identification

Damage occurs fast and early in the season (photo April 20)

Plum rootstock genetics: Very sensitive to ring nematode (bacterial canker)

Even **fumigation** doesn't necessarily do a great job of **ring nematode** (bacterial canker) control

Five Practices to Help Prevent Bacterial Canker

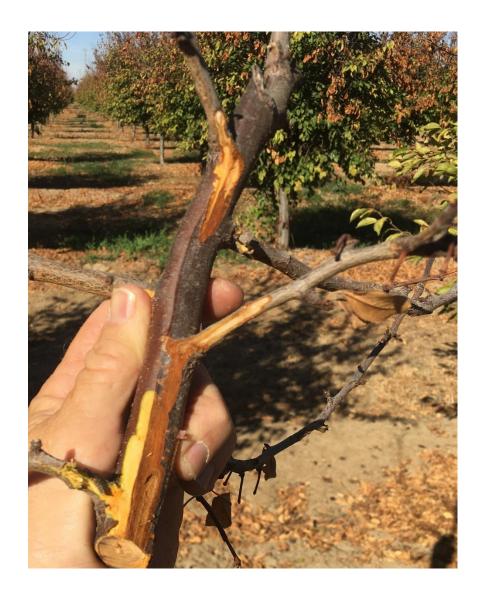**Pre-plant**

- Rootstock selection

- Soil Prep

- Fumigation

Post-plant

- Reduce stress

- N applications: urea, CAN-17, triple 16

Not specific to a single disease: Disconnect between roots and canopy

Brownline

Bacterial Canker

Phytophthora

Gophers

What are we dealing with?
We have to go deeper

Peel away the bark:

Brownline

Phytophthora

What is Prune Brownline?

Caused by Tomato Ringspot Virus (ToRSV) transmitted by dagger nematodes (*Xiphinema* species)

Resistant
Scion

Graft union

Susceptible
Rootstock

What is Prune Brownline?

Virus-infected nematode feeds on roots of susceptible rootstock

Resistant Scion

Graft union

Susceptible Rootstock

What is Prune Brownline?

Virus spreads up the trunk
and reaches the graft union

Resistant
Scion
Graft union

Susceptible
Rootstock