

Management of fruit rot diseases

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Cranberry Fruit Rot

- Field rot
- Storage rot



Field Rot



Small berries from trash pile



Early Rot – *Phyllosticta*



End Rot – *Fusicoccum*



Healthy

**Ripe Rot –
*Coleophoma***



Black Rot – *Allantophomopsis*



Miscellaneous Rot



Miscellaneous Rot



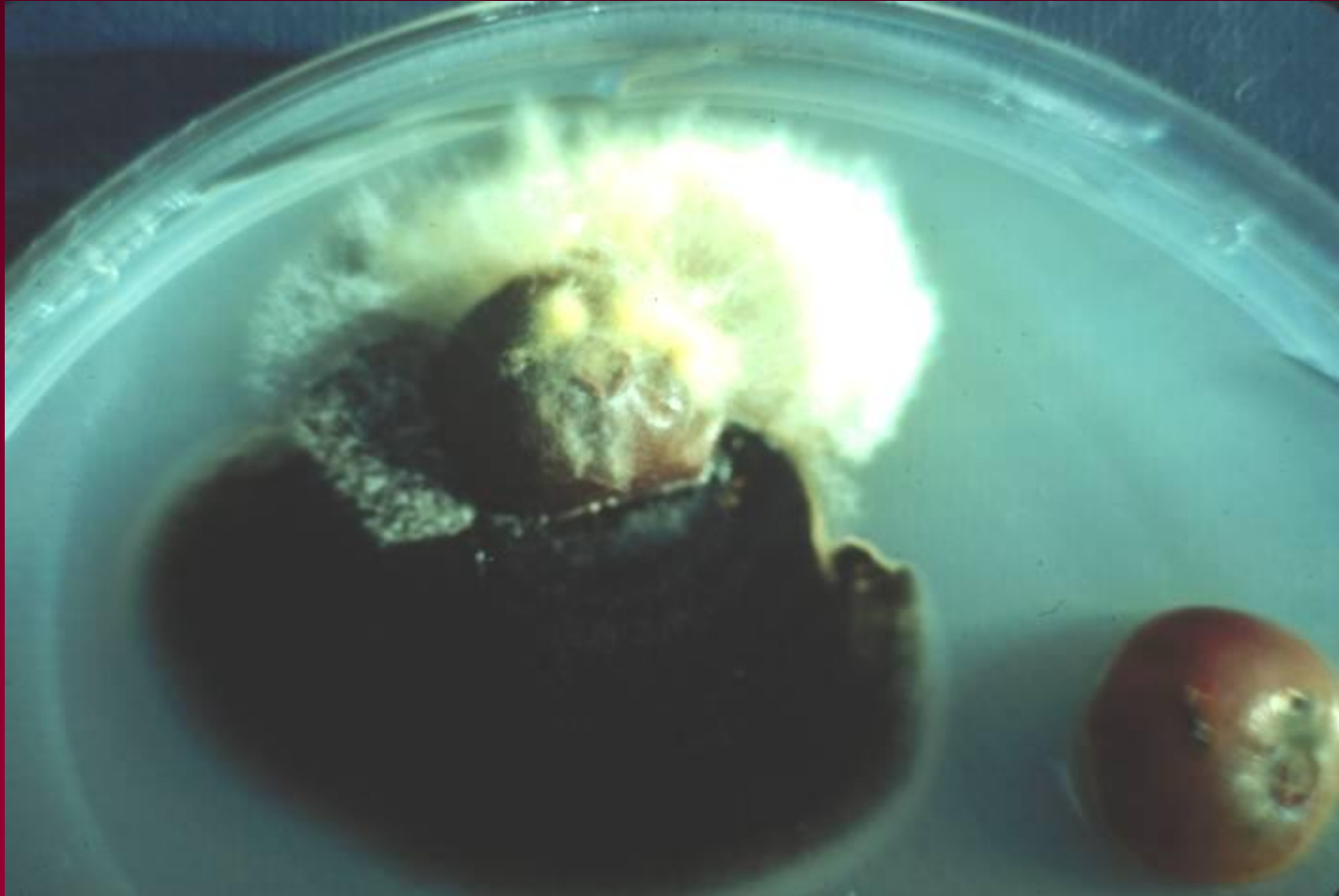
Rot vs. Scald



Scald from flood



Fusicoccum/Phyllosticta/Glomerella



Fungi which can cause fruit rot

- *Allantophomopsis***
- *Botryosphaeria*
- *Botrytis*
- *Coleophoma***
- *Colletotrichum*
- *Fusicoccum***
- *Penicillium*
- *Pestalotia*
- *Phomopsis***
- *Phyllosticta***
- *Physalospora***
- *Synchronoblastia*

Blossom Blast



Fruit Rot Management

- Fungicide applications
- Late water
- Vine pruning
- Trash removal
- Proper irrigation
- Resistant cultivars

Fungicides Registered – 2013 (U.S.)

- Dithane, Manzate, Penncozeb
- ManKocide
- Copper-Count-N, Champ, Kocide, Nu-Cop, 3 lb Copper Flowable, Nordox, Badge
- Bravo, Chloronil, Chlorothalonil, Echo, Equus
- Ferbam
- Abound
- Indar

Fungicides Registered – 2013 (Canada)

- Copper Oxychloride 50 WP
- Ferbam 76 WDG
- Topas 250 E (Cottonball)
- Propiconazole 250 E (Cottonball)
- Bravo 500, 720, Ultrex
- Folpan 50 WP, 80 WDG
- Funginex DC (Cottonball, only BC) ?

Full Bloom



Fruit Rot Management – conventional flooding

- Start fungicide applications at 5-15% open blooms
- Phenological plant development, not calendar date
- Protectant or eradicant/systemic material
- Fresh fruit or processed fruit
- Mixture of different cultivars in the bed
- Stevens, Howes, Early Black, Ben Lear (most resistant to most susceptible)

**Do not
use a
fungicide at
less than the
registered
rate**

**Do not
use a spreader
sticker
(adjuvant) with
any formulation
of
chlorothalonil**

Late Water

The cranberry bed is
reflooded from mid-
April until mid-May

Fruit Rot Management – spring reflood/late water

- Start fungicide applications at 65-75% open blooms
- Fresh fruit or processed fruit
- Fewer applications necessary during the current year and the following year
- Bloom will be compressed into a shorter time period

Trash Pile



Fruiting bodies on leaf



Fruiting bodies on berry



**Sprinkler systems should
be run for 4-5 hours in
the early morning, not in
the evening**

Field Rot Resistance

- Beckwith
- Black Veil
- Early Red
- Foxboro Howes
- Holliston
- Howes
- Paradise Meadow
- Randall
- Shaw's Success
- Stankavich
- Stevens
- Wilcox

Storage Rot Resistance

- Bergman
- Black Veil
- Early Red
- Foxboro Howes
- Howes
- Matthews
- Paradise Meadow
- Perry Red
- Randall
- Shaw's Success
- Stankavich
- Stevens
- Vose's Pride
- Wilcox

New hybrid cultivars available

- Crimson Queen (NJ)
- Demoranville (NJ)
- Mullica Queen (NJ)
- Scarlet Knight (NJ)
- Grygleski (WI)
- BG (WI)
- HyRed (WI)
- Sundance (WI)

Leaf spot caused by fruit rot fungi in newly planted beds

- *Phyllosticta vaccinii*
- *Colletotrichum acutatum*
- *Phomopsis vaccinii*
- *Pestalotia* sp.







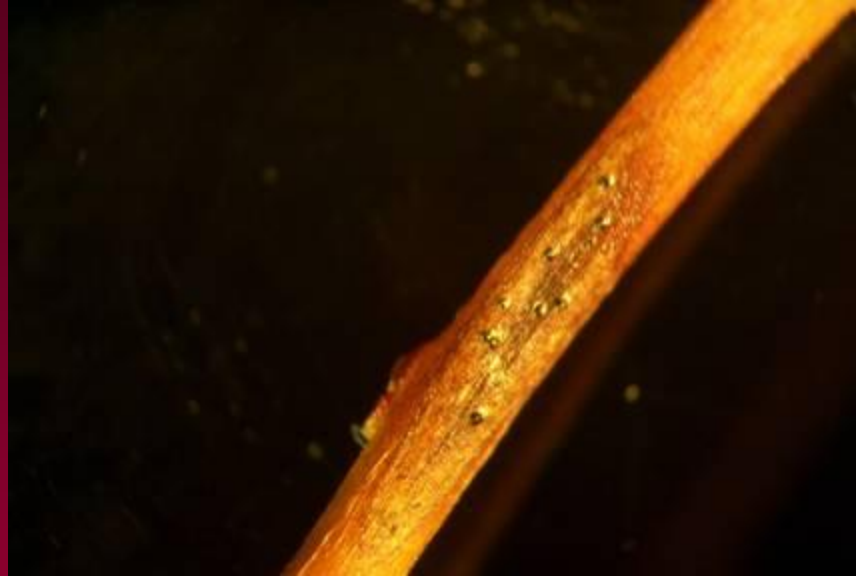
Fruiting bodies in leaf spot



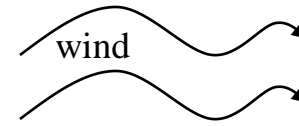
Early Rot



Stem lesion with fruiting bodies

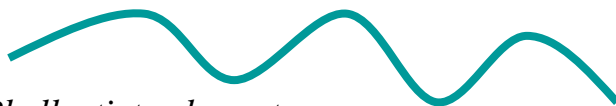
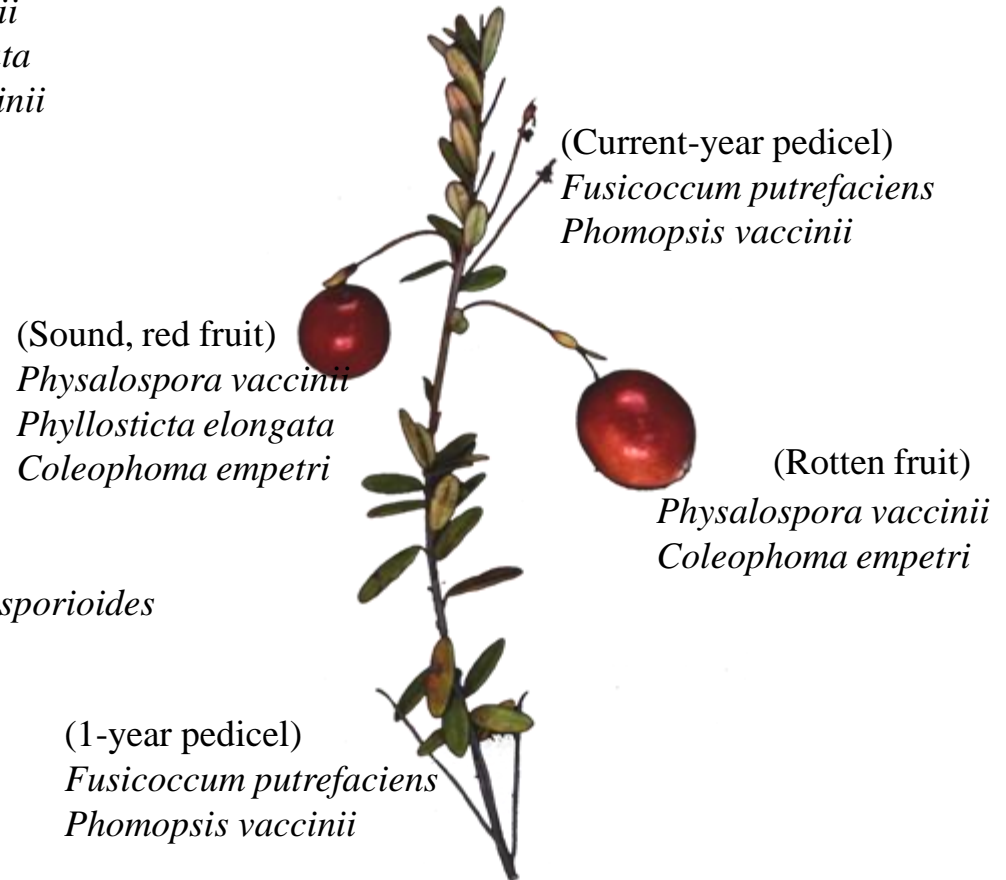
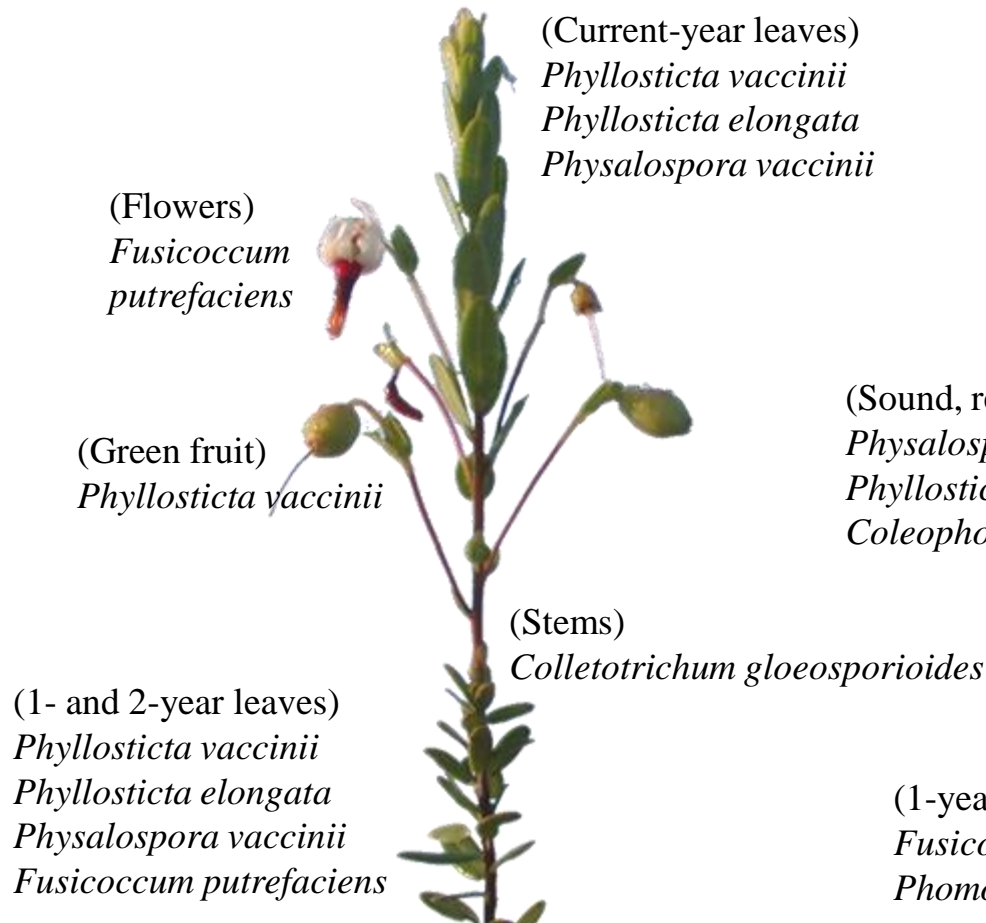


Where are the pathogens hiding?



wind

Phyllosticta elongata
Colletotrichum acutatum



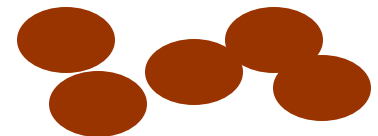
water

Phyllosticta elongata
Coleophoma empetri
Colletotrichum acutatum

(Duff--leaves)
Phyllosticta elongata
Coleophoma empetri
Colletotrichum gloeosporioides



(Duff--fruit)
Coleophoma empetri



Questions???

