



Botrytis canker tomato

# VT Vegetable and Berry Annual Meeting

Capitol Plaza,  
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**Winter cutworm-Hand pick at night, Bt early, Spinosad for contact when small or Bait-Seduce (Spinosad) or Sluggo plus (Fe phosphide and Spinosad)**



Cladosporium-high tunnel spinach, fall/winter, cool/wet >80% RH conditions down to 41F, OW crop residue, seed borne



G. Higgins, UMASS

# Cladosporium management

- Till under infected crops, hard to rescue once infected
- Hot water seed trt- 40 C/104°F for 10 minutes eliminated Cladosporium and did not impair germination. <https://ag.umass.edu/services/hot-water-seed-treatment>
- Soak seed in Chlorine bleach for 10 minutes in a 1.2% sodium hypochlorite (NaOCl) solution.
- Use drip irrigation on sunny days so that foliage will dry quickly.
- Manage row covers and ventilation so moisture does not build up. Do not cover when wet.
- Variation in susceptibility in spinach varieties: Cladosporium-Resistant cultivars-Winter Bloomsdale more resistant than Ozark or Fall Green



# Spinach Downy Mildew



**Race specific resistance. Excellent.**

**Races detected in northeast recently:**

**12, 13, 14 (most cases), 15, 16, 17, novel**

**Images cf. Teresa Rusinek, Cornell**

# Spinach Downy Mildew: Race specific resistance. Excellent.

19  
Races  
so far



## Corvair

Organic (F1) Spinach Seed

Product ID: 2571G

Organic all-season spinach

Very dark green, uniform, round leaves. Slow bolting plants for baby and full size. High resistance to downy mildew races 1-11, 13, 15, 16, 18. USDA Certified Organic. Avg. 44,700 seeds/lb. Packet: 1,000 seeds.

**Races 1 - 11, 13, 15, 16, 18**

**Races 1 - 19; 10 IR**



## Sunangel

(F1) Spinach Seed

Product ID: 4542

Heavily savoyed DMR spinach for spring, fall, and winter.

A good balance of speed, dark color, savoy, and bolt tolerance for ample harvests through most of the year. More uniform and upright than Emperor, with a less cupped leaf. High resistance to downy mildew races 1-9, 11-19 and intermediate resistance to race 10; intermediate resistance to white rust. Avg. 25,500 seeds/lb. Packet: 1,000 seeds.

# Spinach Downy Mildew:

**Race specific resistance. Excellent.**

19 Races so far



## Auroch (F1) Spinach Seed

Product ID: 4056

Fast growing, upright variety for the winter tunnel.

Very tall plants with very long stems. Leaves are dark green, very heavy, smooth, and flat with elongated oval shape. Suitable for picking at all growth stages. Performs best in fall, winter, and early spring. High resistance to downy mildew races 1–12, 14–16, 19. Avg. 38,900 seeds/lb. Packet: 1,000 seeds.

**Races 1 - 12, 14 - 16, 19**

**Grow more than one variety!**

**Once infected, no rescue, till under. Rotate out for 2 years.**

**Relative humidity and leaf wetness- avoid row covering wet leaves**

**Preventively: Labeled products: copper, Actinovate, Double Nickel, LifeGard, Regalia, Oxidate, Trilogy, and Zonix.**

**March flies**-live and feed on decaying vegetable matter, dung and roots of grasses and vegetables, and sometimes they can be abundant.



4.22 in high tunnel

# Earwigs?



Hide in daytime  
Strip leaves, leaving midrib

# Blueberry-severe dieback in early summer-several growers in all part of the state



# Botryosphaeria stem blight-infects lots of woody plants



Typically a southern disease-NC, FL, NJ

Weak pathogen infects woody stems and then remains dormant until some form of stress occurs. (NJ) Stressors include (this may be an incomplete list):

- Winter damage which is especially prevalent when late season N applications keep the plants from going dormant
- Drought damage especially during the growing season
- Salt damage (along roads where salt trucks drive)
- Insect chewing especially stem borers/termites
- Summer pruning
- Over bearing

VT- cold temps in 2021 plus warm temps in May??

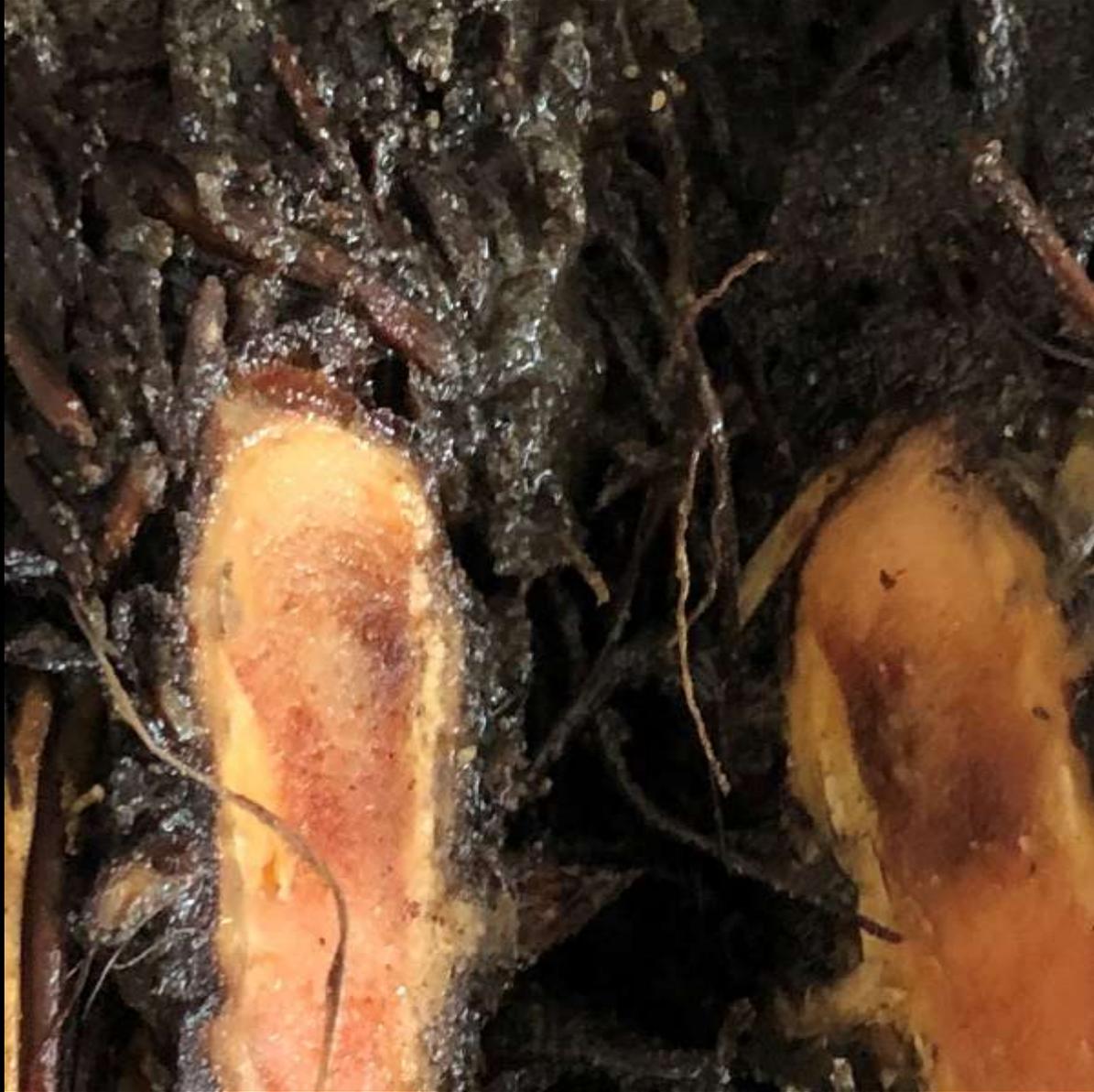
Tomato or tobacco ringspot virus-Patriot Hungry? Interveinal yellowing/ high pH/iron deficiency,



# Blueberry witch's broom-alt host balsam fir



# Winter injury strawberry



## Broad mite -high tunnel pepper



# Waxy translucent garlic-High temps at harvest



Heat damage-50% of crop following 90 F  
under shade



Fall broccoli-Brown beading -heat, Alternaria, soft rotting  
bacteria





## Touchstone beet

Middle of the root damage suggests growth check mid-season that led to crack and Fusarium

NY saw lot of this with dry conditions mid-season leading to pear-shaped roots

# Tomato Northern root knot nematode



- Small nematode, 1/10 size of pinhead
- Causes stunting and wilting, poor vigor
- Patchy in soils
- Live in soil enter roots, release chemicals that cause enlarged galls
- Females live in roots in galls
- Survive as eggs in soil
- Crop rotation/cover crops