UCONN EXTENSION

Vegetable Pest Alert

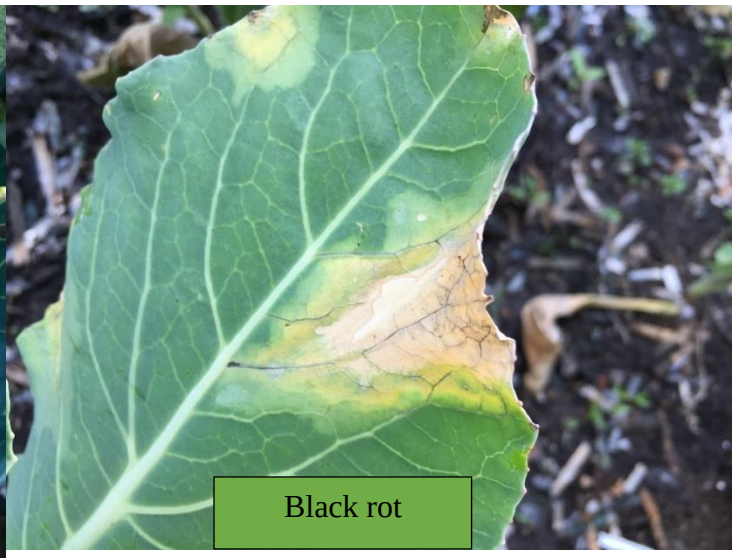
August 30, 2024

What to be on the lookout for…

Black rot and Alternaria in crucifers

As the weather becomes more conducive to disease development, we're seeing a rise in the incidence and severity of Alternaria and black rot in crucifers. As the air temperature cools at night, the relative humidity rises, often reaching the dew point, leading to dew formation on plant surfaces. This moisture fosters the development of fungal and bacterial diseases.
When irrigation is needed, do it in the morning. Avoid overhead irrigation if possible. Control weeds, especially those in the family Brassicaceae. Avoid working in fields when foliage is wet. Promptly incorporate plant debris after harvest, or mow if tillage is not possible in late fall crops.


Alternaria leaf spot


Black rot

Varieties differ in susceptibility to Alternaria. Blues F1 napa cabbage and Mighty Hybrid Brussel's sprout have less susceptibility to Alternaria leaf spots, but other than that not much is available for Alternaria resistant brassica crop varieties. On the other hand, there are more options available for black rot resistant/tolerant brassica crop varieties. Some examples are Report and Passat for late season cabbage varieties, and Belstar F1 broccoli. Disease resistant vegetable crop varieties is a great resource from Cornell on disease resistant vegetable crop varieties. Our New England Vegetable Management Guide also has such information in its Crop Sections.

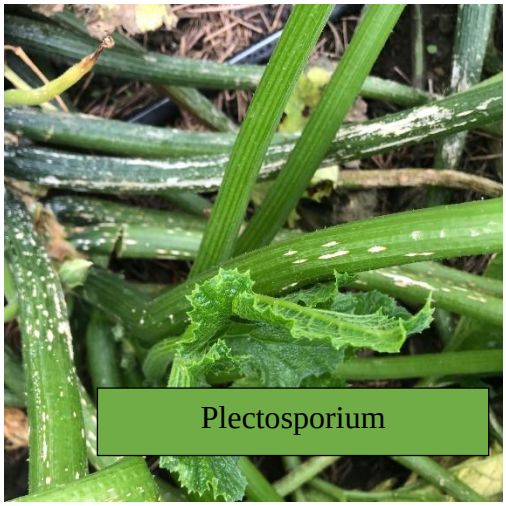
As both of these diseases may be seedborne, start with certified disease-free seed or treat seed with hot water (for future seasons). Practice a 3-year crop rotation with all brassica crops. Use proper plant and row spacing to ensure good air circulation.

Fungicides are ineffective once the crop is infected with black rot. However, use of fungicides such as Howler and Regalia that induce plant resistance mechanisms preventatively will help. These fungicides and others such as Double Nickel, Oso can control the spread of Alternaria. Other labeled fungicides for these diseases are listed here.

Downy mildew, powdery mildew, Plectosporium in cucurbits

Again, the weather is favorable for all of these, and I am seeing an increase in their occurrence. Even if the fruit has sized up and started to change color, it's important to maintain a healthy crop canopy until the fruit is fully mature and the rind has hardened, especially in pumpkins, to avoid sunscald.

All the cultural strategies that were discussed above would be applicable here as well. While fungicides information is provided here, I would like to reiterate that I would be happy to work with you one-on-one to customize your spray program.


Plectosporium

Squash vine borer on the fruit

Occasionally, larvae will bore into the fruit of hard squash and pumpkins, typically occurring when a second generation of moths lays eggs late in the summer. Thick-stemmed species, such as *Cucurbita pepo* (including summer squash, zucchini, and pumpkin) and *Cucurbita maxima* (e.g., Hubbard and Buttercup winter squashes), are preferred and most suitable for larval development. Pumpkins can sustain high infestations without significant yield reduction, and vining plants generally tolerate higher infestations better than bush-type plants. This is because vining plants root at the vine nodes, allowing them to survive despite having borers in the stem. In contrast, crops with thinner stems, such as Butternut squash, cucumber, and melon, are considered more resistant to this pest.

Basil downy mildew
I am seeing downy mildew in susceptible cultivars. Thanks to the breeders, disease resistant varieties are available. Here are some examples: https://nevegetable.org/crops/basil.


Basil downy mildew: yellow banding on upper leaf and Dark, downy sporulation on underside of leaf. See http://nevegetable.org/crops/disease-control-0 for management options.

When to Harvest Pumpkins and Squash

- Dark-skinned varieties like Hubbard, Acorn, and Kabocha should have a deep orange color on the side touching the soil. Butternut squash should have a duller, darker tan rind that is hard and resistant to thumbnail penetration. Spaghetti Squash: Harvest when the squash turns a yellowy-tan color. Handle gently to avoid damage. Pumpkins: Mature pumpkins have stiff, un-wobbly handles. This is a practical test of ripeness, usually reliable if disease pressure is low.
- Do not harvest squash that is wet from dew or recent rain to prevent pressure bruising.
- Cure squash in the field if weather permits, or in a warm, dry environment (70-80°F) with good air movement. This helps heal cuts and bruises.
- Store squash at 55-60°F with 50-70% relative humidity. Lower humidity can cause shriveling, while higher humidity favors decay.
- Prevent Chilling Injury: Avoid exposing squash to temperatures below 50°F. If moving from cold to warm environments, do so gradually to prevent condensation.
- Minimize Bruising: Avoid piling squash too high and handle with care during transport to reduce bruising and maintain quality.
- Chuck Bornt, CCE Eastern NY Commercial Horticulture has an article on this topic: https://stlawrence.cce.cornell.edu/resources/how-do-i-know-when-winter-squash-are-mature

Late summer and fall cover crops:

Late Summer-Seeded Cover Crops: Sown after an early-harvested vegetable crop and before frequent frosts (mid-August to mid-September), options include winter rye or oats for more fall growth. When there's enough growing time, annual ryegrass, forage radish, hairy vetch, and various Brassica cover crops can also be used.

Fall-Seeded Cover Crops: Hardy crops for winter soil protection and nitrogen scavenging include cereal rye, barley, oats, wheat, spelt, and triticale. Cereal rye is the most cold-tolerant, growing well into fall and winter. Oats and spring barley are not winter-hardy and provide a cover that can be easily incorporated in spring. Wheat, spelt, and triticale grow slower but are easier to incorporate in spring, with triticale producing more fall growth if sown earlier and spelt thriving in low nitrogen soils. Hairy vetch, the most winter-hardy legume, should be planted with small grains to boost biomass and nitrogen delivery. Increase seeding rates for late fall sowing to compensate for smaller plants over winter.

2024 New England Vegetable & Fruit Conference

December 17, 18, 19, 2024

Manchester,
New Hampshire
at the DoubleTree by Hilton Downtown

Conference website:
https://newenglandvfc.org/

Thanks for reading!
This report was prepared by Shuresh Ghimire, UConn Extension. All photos in this publication are credited to UConn Extension Vegetable Program unless otherwise noted.

Contact us with any vegetable production related questions!

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