

Practical Tools for Disease Management

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Disease Triangle – susceptible host, disease organism present, and favorable conditions

Susceptible Host

- Diseases are continually adapting and plant breeders are trying to keep up
- First step is growing resistant varieties – usually hybrids

Presence of Disease Organism

- Does it require a living host or does it persist for or years?
- Air borne or water borne? How mobile – feet or international
- Does it arrive annually?
- Be aware of “green bridges” from season to season crop to crop



days

or

Favorable conditions

- Slow growing crops.
- Ideal combination of temperature and humidity
- Persistence of that “window” - hours or days or weeks
- Lack of diversity – in crops and in the soil
- No plant defenses aroused before arrival - IAR or SAR – induced or systemic acquired resistance
- No spray program – new choices appear each month

“Have you considered installing a dehumidifier?”

Cultural Tips

- Understand control mechanisms to avoid wasted time
- In structures
 - Steep glazing or anti-condensation film to reduce “rain” inside the structure
 - Evening drying with heat and fans
 - Grafting for soil disease resistance when crop rotation is limited
- Trigger immune responses – aspirin, regalia, serenade, actiguard, compost tea?
- Limit wetted period – drip best but overhead only briefly and early
- Sell your problems – baby greens before the spots show up or the bug eggs hatch
- Grow dark produce – who would know if an Arkansas Black apple has sooty blotch?
- Because it may work in the arid west or north, does not mean it will work in cool and humid WNC

Links

<http://livingwebfarms.org/multimedia/videos/complete-hands-on-workshops/organic-disease-control/>

Pat Battle at Living Web

<https://www.carolinafarmstewards.org/wp-content/uploads/2012/12/1-Colucci-Organic-Disease-Management.pdf>

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