



Grape disease management reminders, 16 June 2022

VCE Virtual Vineyard Meeting Series

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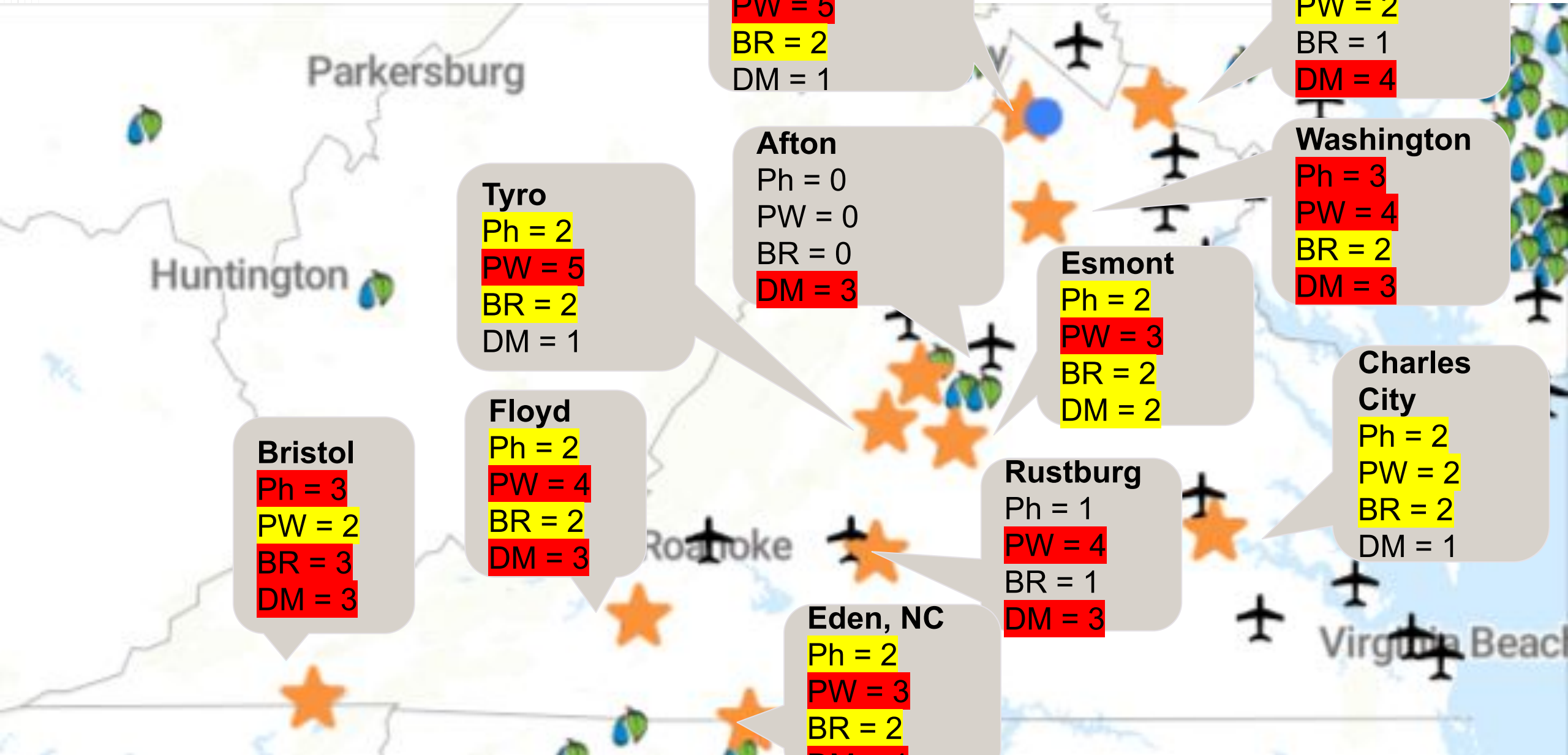




Current / past conditions



5/18-5/25/2022



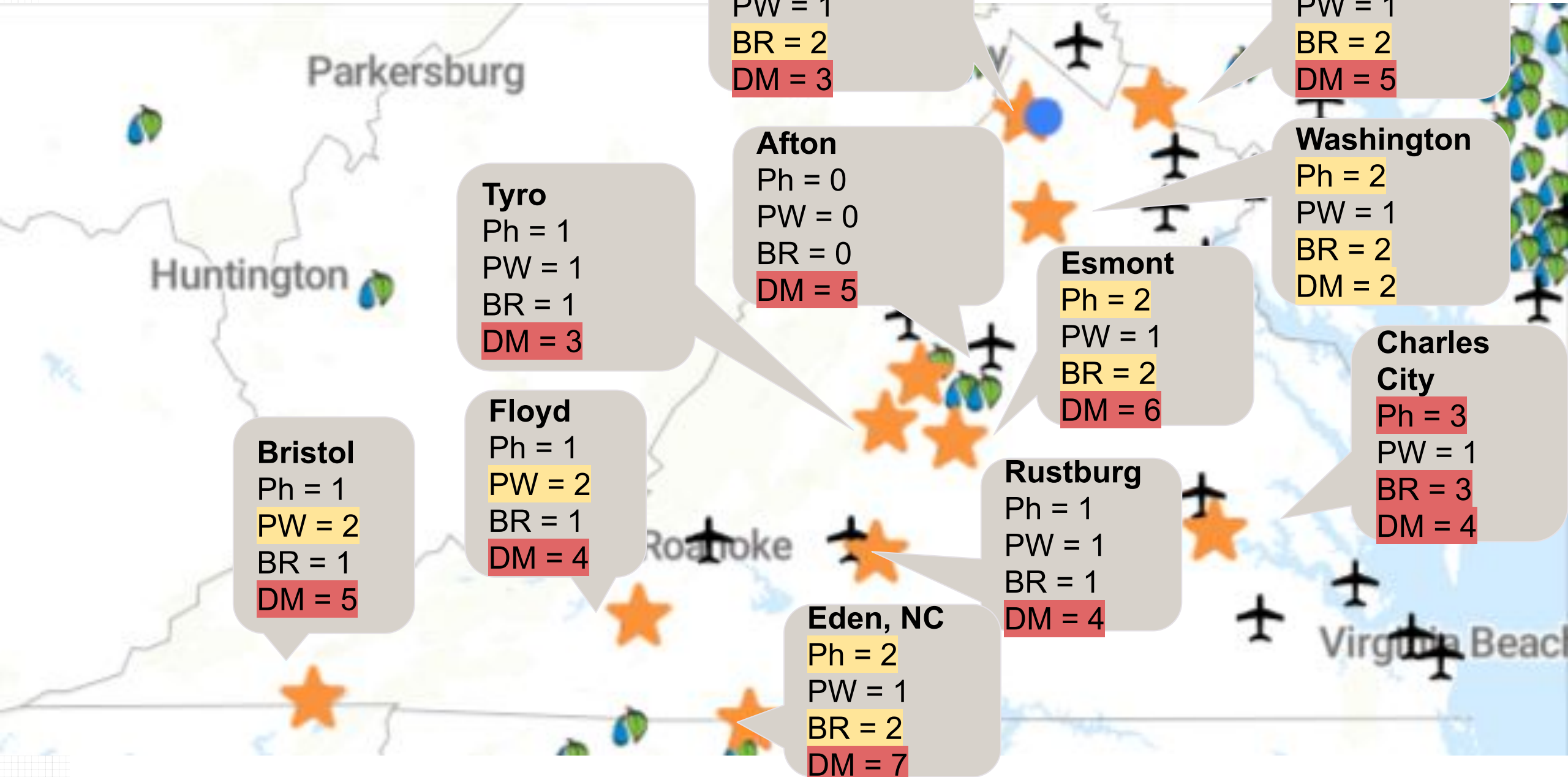
Parkersburg

Huntington

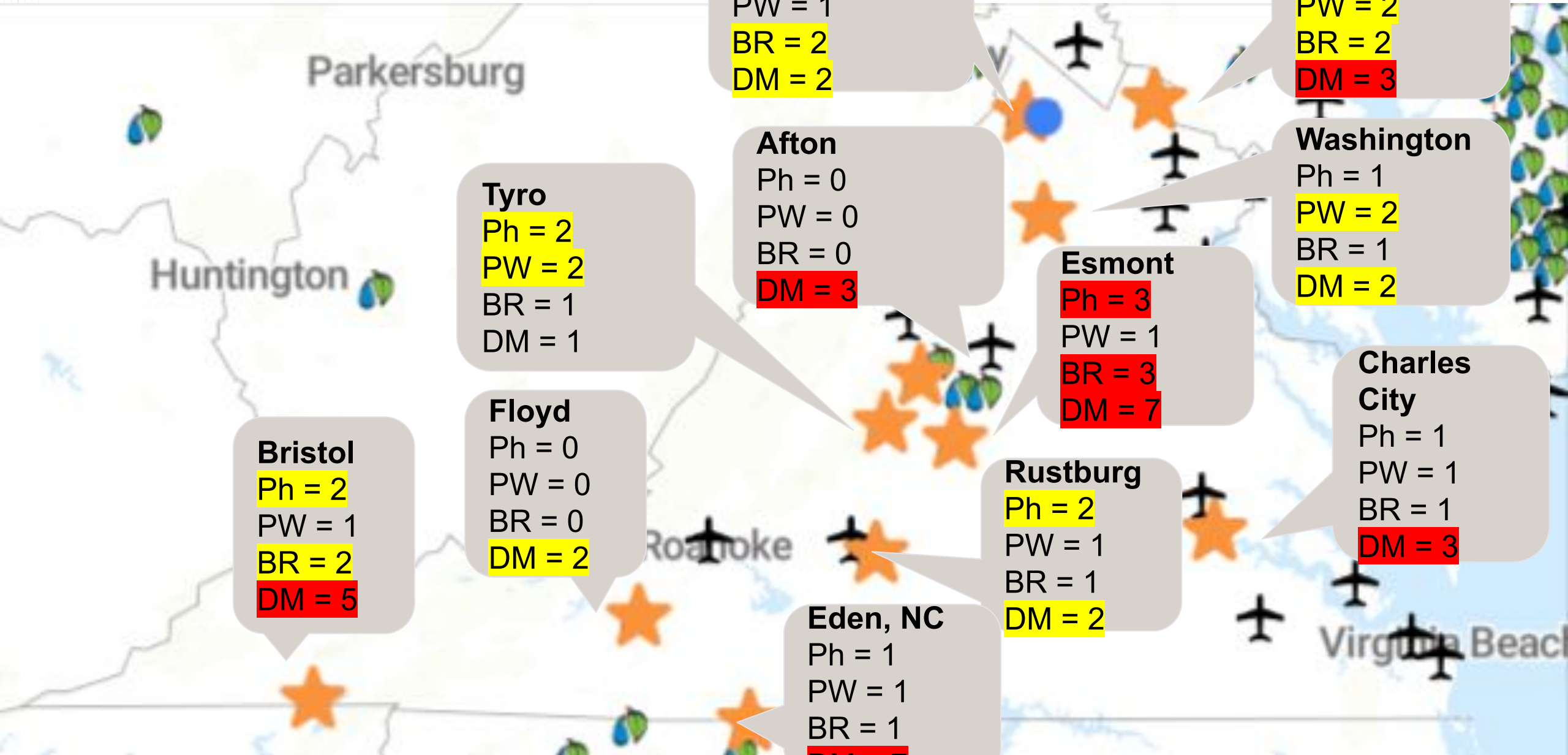
Roanoke

Virginia Beach

5/25-6/1/2022



6/1-6/8/2022



Winchester
Ph = 2
PW = 1
BR = 2
DM = 2

Leesburg
Ph = 2
PW = 2
BR = 2
DM = 3

Washington
Ph = 1
PW = 2
BR = 1
DM = 2

Charles City
Ph = 1
PW = 1
BR = 1
DM = 3

Esmont
Ph = 3
PW = 1
BR = 3
DM = 7

Afton
Ph = 0
PW = 0
BR = 0
DM = 3

Rustburg
Ph = 2
PW = 1
BR = 1
DM = 2

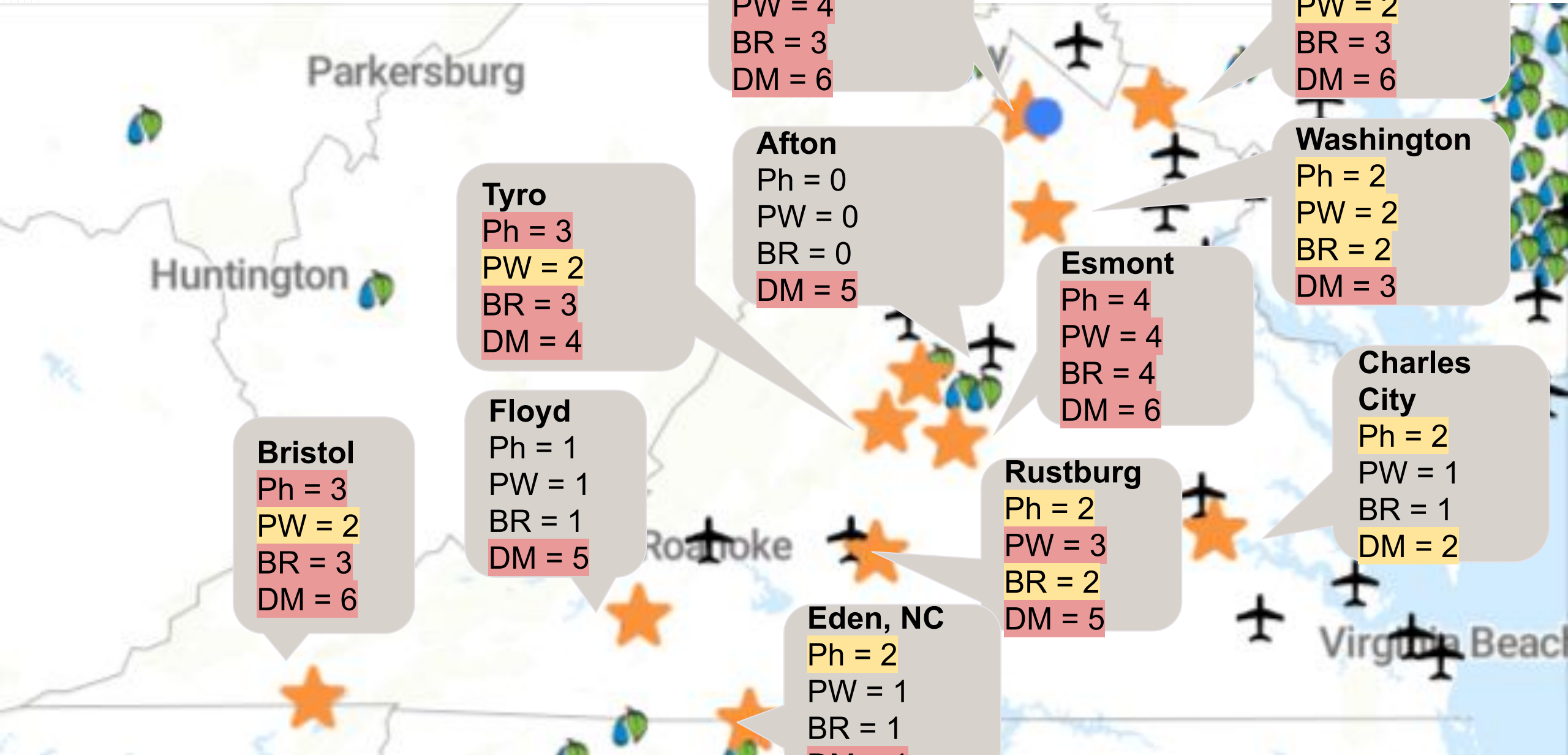
Eden, NC
Ph = 1
PW = 1
BR = 1
DM = 7

Tyro
Ph = 2
PW = 2
BR = 1
DM = 1

Floyd
Ph = 0
PW = 0
BR = 0
DM = 2

Bristol
Ph = 2
PW = 1
BR = 2
DM = 5

6/8-6/15/2022





Up coming target diseases

Canopy management is a critical component of disease management

- It will open the canopy to reduce moisture, and increase sunlight penetration, and increase fungicide coverage!





Bloom

- Powdery mildew
- Downy mildew
- Black rot
- Botrytis
- Ripe rot



- Powdery mildew
- Downy mildew
- Black rot
- Ripe rot

Pre-bloom

- Powdery mildew
- Downy mildew
- Black rot



- Phomopsis
- Anthracnose

Bud break



Critical period timeline

Critical period

Up to 5-6 weeks after bloom

Berry touch

- Botrytis
- Ripe rot

- Downy on leaf

Veraison

- Ripe rot
- Bitter rot
- Sour rot
- Botrytis



Harvest

Botrytis management

- Timing: At bunch closure (the last opportunity to deliver fungicides inside of the cluster) and at veraison (spore availability)
- Canopy management is critical because the outbreak is often associated with a long wetness event.
- Injury management (**GBM**, Birds, PM) is also important



Botrytis Management

Preventative fungicide options

- Group 2: iprodione (Rovral/Meteor – resistance = low/mod risk),
- Group 7 (SDHI): boscalid (Endura), Luna Experience, Kenja, Miravis Prime (– resistance = high)
- Group 9: cyprodinil (Vanguard, Inspire super, Switch- resistance = mod)
- Group 12: cyprodinil + fludioxinil (Switch – resistance = mod)
- Group 17: fenhexamid (Elevate – resistance = unknown)
- Group 19: polyoxins (Oso, Ph-D – resistance = mod)
- Group M4: captan – fair activity, but it will be a good mixing partner!
- Group M1: copper (the same comment as above)
- Please rotate among different mode of action (FRAC) groups
- These fungicides were tested for curative activity in the lab. They had some efficacy within 12 hr of infection; however, it is a lab experiment using detached berries (i.e., I wouldn't risk your vines.)

Ripe rot chemical management

Timing of application

- Timing: at veraison and on (**modified based on a recent study**)
- Materials: MIX captan (M4) or a fixed copper (M1) with a QoI (Pristine, Flint, Abound, FRAC = 11), Rovral (2), Switch (9 + 12), or tebuconazole (3)
- If the risk of ripe rot is not high, using iprodione may be enough.



Bitter rot

- Timing: after veraison
- Materials: captan (M4) or a QoI fungicide (Abound, Flint, Pristine, Intuity, etc., FRAC = 11)
 - Copper (M1) seems to be not effective



Photo courtesy of Mike Ellis (OSU)

Note the characteristic concentric rings of black fructing bodies

Sour rot management

- Timing: ~ 15 Brix
- Current recommendation is **TWO** applications of an insecticide (to control fruit flies, e.g., Mustang MAXX) plus a general fungicide (e.g., Oxidate), 7 to 10 days apart
- If you don't have OxiDate (NC), Switch (9 + 12) also lists sour rot (suppression only), and other broad-spectrum fungicides such as captan (M4) and fixed copper (M1), probably have some efficacy too.
- We have tested Double nickel *plus* Oso (19), which worked very well.





Questions from growers



What if your previous spray was a while ago, and received rain?

- If your previous fungicide application was 12-14 days ago, then it is probably a good idea to add a phos acid, such as Prophyt or Phostrol, or Ridomil product for downy mildew, and add a DMI such as Rally or tebuconazole or a QoI such as Abound or Intuity or for black rot to your next spray.
 - Note: We no longer recommend the QoI for powdery mildew, so, a DMI may be better to protect your vines from both black rot and powdery mildew

We need to stop using mancozeb for early-season cultivars due to a 66-day PHI, what else can we spray?

- At this point, your primary target will be downy mildew. Copper (M1), Captan (M4), or Ziram (M3, 21-day PHI) will be the main product.
- You can also use Revus or Reason or Forum (40 – with known resistance risk in VA), Zampro (40+45), Ranman (21), or Prophyt (P07) to increase the efficacy of the main product. (All but Prophyt are protective materials, do not apply after the outbreak!)
 - Ridomil can be used too, but I prefer using them at the critical period
- Lifeguard is also known to be effective with downy mildew.

Why mancozeb has a 66-day PHI for grapes?

- The US EPA determines PHIs to ensure consumable produce does not have unsafe pesticide residues.
- One of criteria to determine a PHI is called tolerance, which is a safe level of pesticide residue.
 - How much of the pesticide, or breakdown product of the pesticide, is a safe level in the fruit or vegetable.
- So, my assumption is that mancozeb on tomatoes (6-day PHI) does not last as long as on grapes...

Howler fungicide

- Howler is a new biological control agent with *Pseudomonas chlororaphis* strain AFS009
- It lists many disease on the label; however, I could not find many data on grapes, other than some data on Botrytis.
- I am testing for ripe rot, and will check its efficacy on downy and powdery at the end of the season.
 - I will report my results at one of my disease management workshops.

Resources

- Blog: grapepathology.blogspot.com
 - My slides will be available
 - You can find links to VCE Pest Management Guides and other guides on the blog
 - Twitter and Facebook (@grapepathology and GrapePathVATech - but please do not use Twitter or Facebook to ask questions)
- GrapeIPM.org
 - Pesticide management/planning/reporting tool, please give it a try. It has been a time saver for me!
- Email: nita24@vt.edu
- [If you email me via SMS \(text\) or Google hangout, please state your name.](#)

Downy mildew and powdery mildew outbreak?

- If you observe either downy mildew or powdery mildew despite your sprays, please contact Dr. Anton Baudoin for further testing for fungicide resistance.
- Anton Baudoin
417 Price Hall (0331), 170 Drillfield Drive
School of Plant and Environmental Sciences
Virginia Tech, Blacksburg, VA 24061
Email: abaudoin@vt.edu
Phone: 540-231-5757
Cell: 540-808-6345



Potential labor resources from VCE and VA Employment Commission

Foreign Labor Certification

Cindy Webb, Program Manager

419 N. Cameron St.

Winchester, VA 22601

Cell: (540) 431-9296

Cynthia.webb@vec.virginia.gov

Jesus I Diaz.

Agriculture and Foreign Labor
Specialist.

Virginia Employment Commission

419 N Cameron St, Second Floor

Winchester VA 22601

540-722-3420 (Office)

540-398-9784 (Cell)

Jesus.diaz@vec.virginia.gov



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VEC Agriculture and Foreign Labor Certification Staff

[View a map of the Agricultural Services Areas throughout the state >](#)

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EASTERN SHORE

Luis Echevarria, Ag & Foreign Labor Specialist

For Employers...

[Agricultural Services Home](#)

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[U.S. and VA Labor Laws](#)

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Veterans Success Stories

Agricultural Labor

The Virginia Employment Commission's Agricultural Labor Program is organized under the VEC's Workforce Services Division and also includes the Foreign Labor Certification Program.

The VEC provides three major ways for Ag Employers to recruit workers.

1. As with any business in the Commonwealth, the VEC can place a local job order in our [Virginia Workforce Connection](#) system to recruit applicants in the surrounding area. This VAWC is designed to be self service, however our Farm Placement Specialists can assist you in entering your job order and will help you utilize the recruitment features of the system.
2. Our Farm Placement Staff can also assist you with using the Dept. of Labor's [Agricultural Recruitment System](#). Under the ARS system, Agricultural Employers can recruit and have applicants referred from within Virginia and from other states if needed. The Wagner-Peyser Act provides authority for the ARS and its regulatory provisions can be found at [20 CFR 653.500 - 653.503](#).
3. If after using the first two options there is still a labor shortage, you can use the [H-2A temporary agricultural program](#). The H-2A program allows Ag Employers to bring nonimmigrant foreign workers into the country to perform agricultural labor on a seasonal basis. The Employer must prove that "there are not sufficient able, willing, and qualified U.S. workers available to perform the temporary and seasonal agricultural employment for which nonimmigrant foreign workers are being requested; and that employment of H-2A workers will not adversely affect the wages and working conditions of similarly employed U.S. workers".

Our Farm Placement Staff are available to come to your business and discuss these options that are available to you. Using the link below will let you see which Farm Placement Specialist covers your county.

[Map of Workforce Center Areas for Agricultural Services](#) >

Notice to Unemployment Insurance Claimants – Unemployment claim filing and weekly requests for payment are no longer available on this site. Please go to the VEC website <https://www.vec.virginia.gov/unemployed> to request these services.



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