

Virginia Potato Disease Advisory – 2011
Sponsored by the Virginia Irish Potato Board
May 20

This is the fourth Virginia Potato Disease Advisory for 2011. We want to thank the Virginia Irish Potato Board for funding the network of sensors and our weekly reports. Thanks to the VIPB and all the participating producers! In addition to our disease predictions, see below for a description of Potato Virus Y (PVY).

To date, recent conditions have not been conducive for late blight development, therefore Late Blight Disease Severity Values (DSV) have remained low. P-Day values are exceeding thresholds for fungicide treatment at 4 locations and are close in the other two. It is recommended that growers that have not applied fungicides should do so at this time. Early blight has not been reported on the Eastern Shore yet, therefore applications with protectant materials (either mancozeb or chlorothalonil) should be sufficient at this time. We are also finding some PVY scattered in fields of mainly Superior and Atlantic plantings. See the below description of symptomology observed with PVY.

Late Blight Prediction: Fungicide applications should be initiated once 18 DSV's have been accumulated for late blight. The threshold for late blight has reached at the ESAREC location only. However, late blight has not been reported in the Mid-Atlantic Region to date. I am not concerned about an outbreak of late blight at this time.

Early Blight Prediction: We use the program WISDOM to calculate P-Days, fungicide applications targeting early blight should be made when we reach 300 cumulative P-Days. We have surpassed this threshold at the 4 most southern locations and are close on the other two.

Late Blight Disease Severity Values (DSV) accumulated to date:

Location	Total DSV	Spray Recommendation
Horntown	8	None Recommended
New Church	8	None Recommended
Painter	20	<i>Protectant Recommended</i>
Birdsnest	11	None Recommended
Seaview	12	None Recommended
Kiptopeke	12	None Recommended

Early Blight P-Days accumulated to date:

Location	Total P-Days	Spray Recommendation
Horntown	292	<i>Protectant Recommended</i>
New Church	292	<i>Protectant Recommended</i>
Painter	306	<i>Protectant Recommended</i>
Birdsnest	301	<i>Protectant Recommended</i>
Seaview	328	<i>Protectant Recommended</i>
Kiptopeke	351	<i>Protectant Recommended</i>

Weekly Potato Disease Summary

Potato Virus Y (PVY)

Causal Organism: Potato Virus Y is a viral disease that is caused by strains of viruses in the Potyviridae. There are several strains of PVY, and PVY may combine with other viruses in the Potyviridae family to cause more significant damage and losses. The virus is most commonly vectored by aphids. Tubers from infected plants may also be infected with PVY. Therefore, seed piece transmission of PVY is common. Mechanical transmission of PVY, most typically on seed piece cutting equipment, is also possible.

Symptomology: Infected potato plants may be stunted and show leaf distortion (Figure 1). Leaves may appear crinkled, cupped, contain necrotic spots or purpling (Figure 2). The undersides of infected leaves may show a 'purpling' along leaf veins (Figure 3). To ensure that PVY is the problem, laboratory testing is needed to verify the virus' presence.

Control: Use foundation or certified seed pieces to ensure that you are not planting seed pieces that are 'heavily' infected with PVY. Aphid control is recommended, however, aphids are generally not a major problem in our area. Thus, most PVY-infected plants originate from seed pieces. Disinfecting seed piece cutting machinery routinely is recommended. We most commonly see PVY on the cultivars 'Atlantic' and 'Superior' on the Eastern Shore of Virginia. Removing infected plants from the field may slow plant-to-plant spread of PVY if done prior to the plant tops touching. Weed control measures should be implemented to reduce potential weeds that may harbor PVY (such as common lambsquarter and nightshades). Tomato plants may also be infected by PVY. However, the most prudent way to reduce levels of PVY is to purchase seed pieces that were low for PVY in testing.

Figure 1.



Figure 2.



Figure 3.



**If you have any questions please call: Bill Shockley – 757-678-7945 or
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