



SPUDSCOOP

7 September 2020

Welcome to Spud Scoop for the week ending on September 5, 2020. No late blight has been reported in ND, MN and MB. Congratulations to everyone in the potato industry in our area. Stay diligent with fungicide protection and scouting fields as harvest approaches. This week no late blight spores were found in the spore traps. Aphid numbers were down this week but they're still flying. Green peach aphids are more dispersed being found in 10 of 19 sites. Good luck with harvest as it gets into full swing.

Blightline

by Gary Secor

Welcome to the NDSU Potato Blightline for September 4, 2020. Congratulations to everyone in the potato industry in our area. We are approaching the final days of our field season and still no late blight has not been reported in ND, MN or MB. The rain and cooler temperatures are favorable for late blight infection and spread, so continue to scout fields, especially in areas that remain wet for longer periods, such as along shelterbelts and in low areas. If late blight is confirmed, an aggressive fungicide program will be necessary to manage the disease, especially for tuber infection that can cause soft rot problems in storage if present. Remember that late blight is a community disease and if late blight is present, inform your neighbors so you can manage late blight together. Send suspect late blight samples or photos to us for positive identification. Have a safe and enjoyable Labor Day weekend.

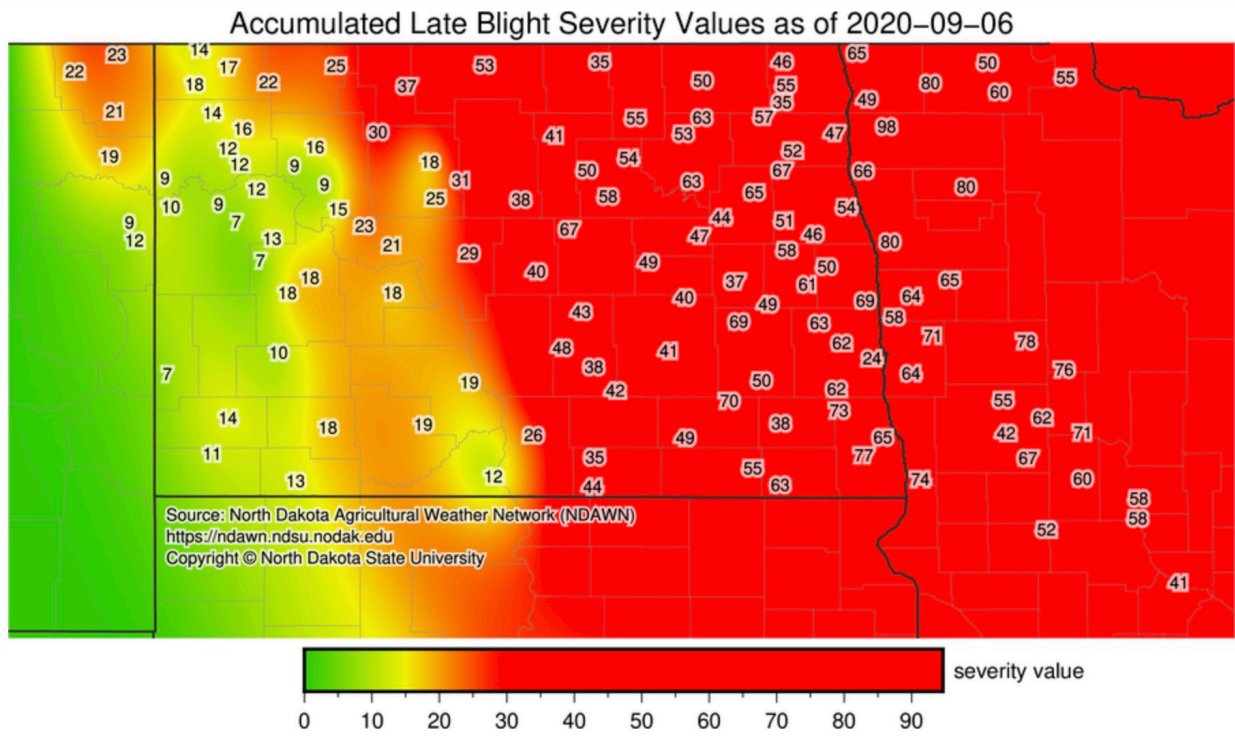


Figure 1. Late blight severity values as of September 6, 2020.

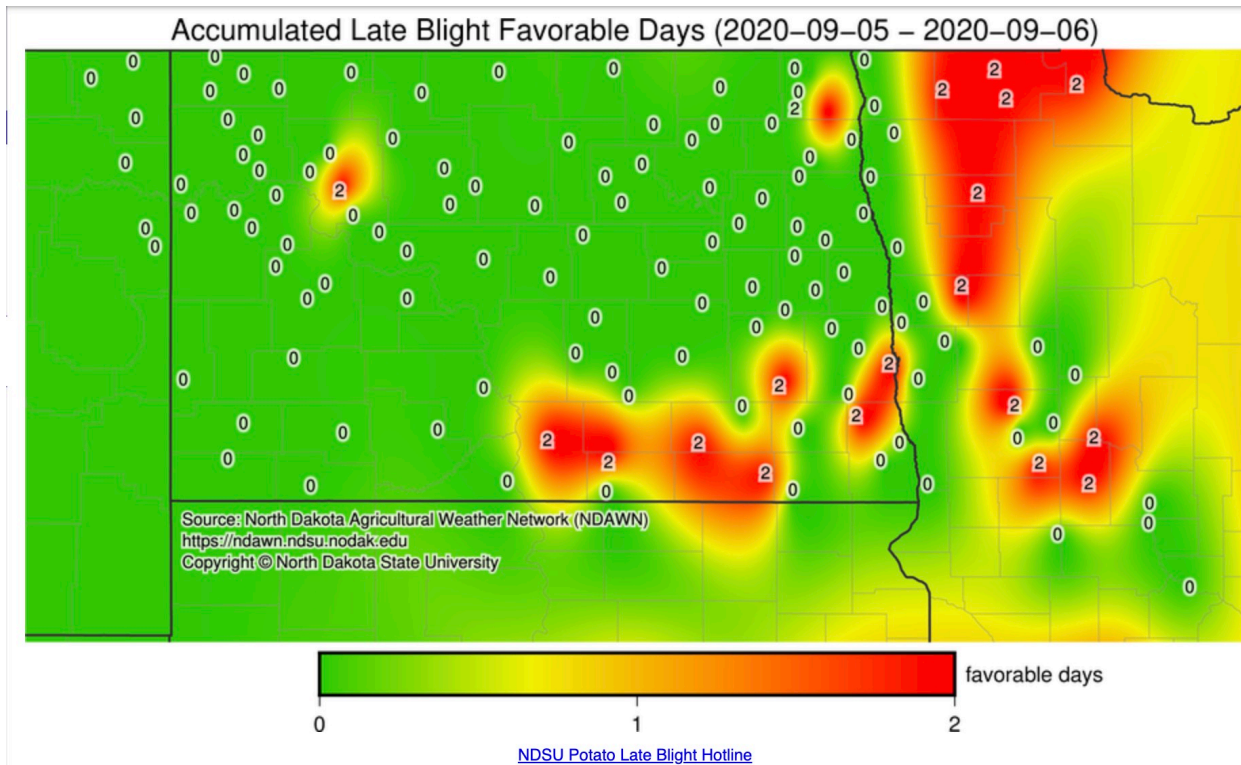


Figure 2. Accumulated late blight severity values in the past two days, September 5-6.

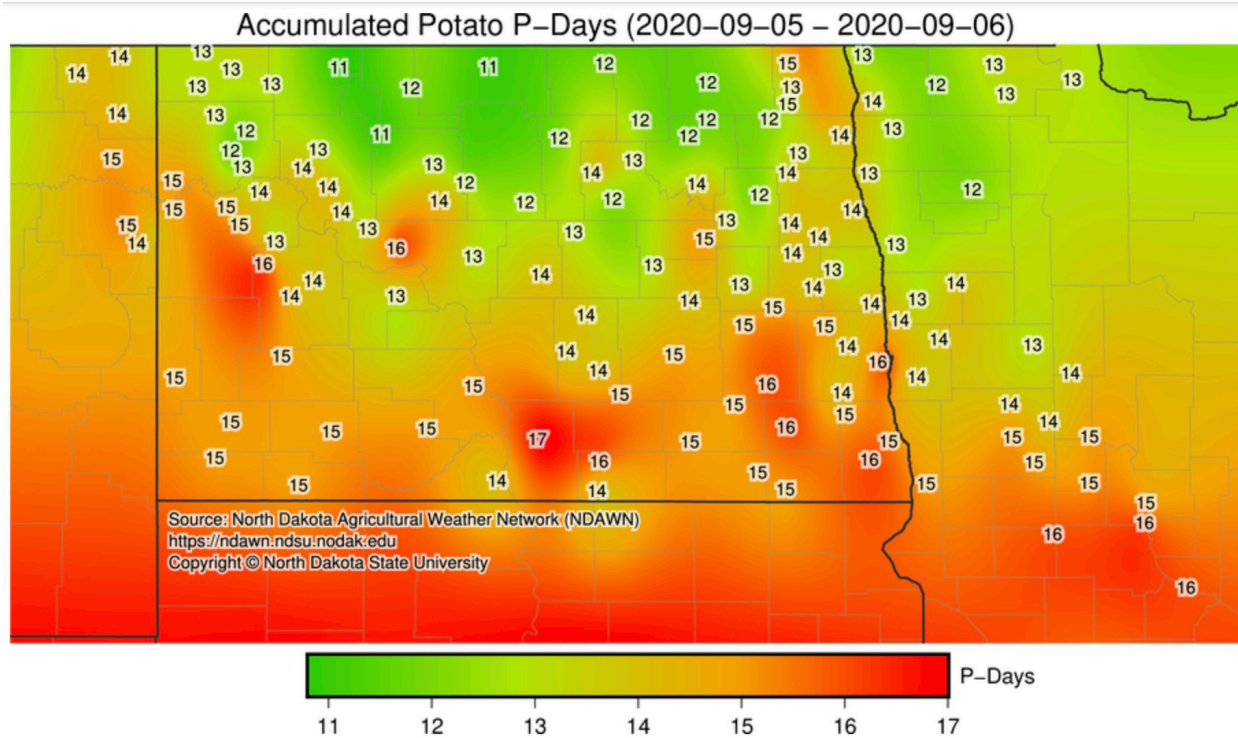


Figure 3. Early blight P-day values accumulated in the past two days, September 5-6.

Potato Late Blight Spore Trapping Network

Trap catches from August 24-30, 2020

By Andy Robinson and Julie Pasche

This is the eightieth reporting period for 2020. This report contains 27 sites reporting for the week of August 24-30. The PCR assays to detect late blight spores were conducted in the lab of Dr. Julie Pasche at the NDSU Plant Pathology department. Late blight spore DNA was not found at any locations this week. As the legend in the map indicates, green dots indicate no late blight spores recovered and the gray dots indicate sites not reporting.

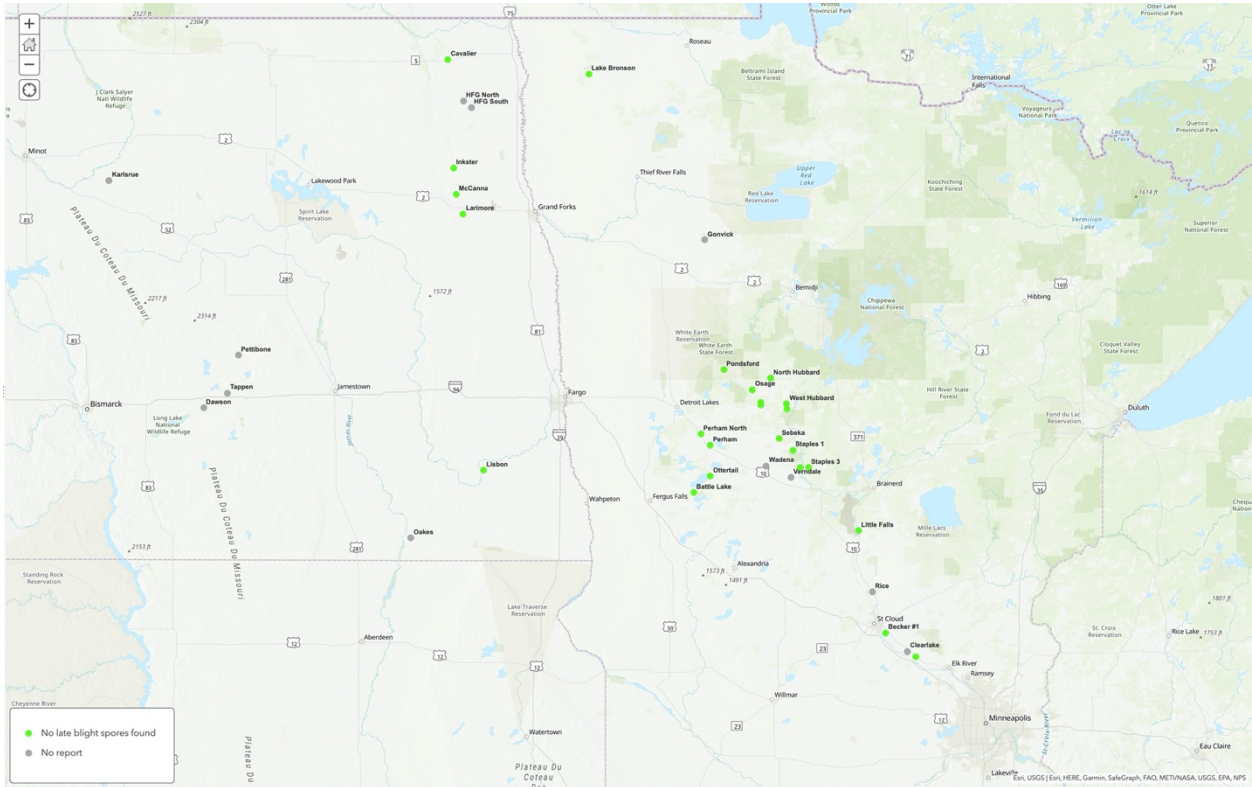


Figure 4. Results of late blight spore traps during the week of August 24-30, 2020.

Thank you to the Northern Plains Potato Growers Association, Minnesota Area II Potato Council, J.R. Simplot Company, Cavendish, R.D. Offutt Farms, Syngenta, Sipcam, Bayer Crop Science, BASF, UPL USA, Corteva, and Nufarm for supporting this effort.

Aphid Alert

by Ian MacRae

Trap Catches Identified to September 04, 2020.

Aphid vector numbers were down this week, with increasing numbers of fields being vine-killed, fewer sites are reporting. The number of vector aphids recovered to this point in 2019 was only 2/3 of what we've captured in 2020. Consequently, as can be seen in the map and tables below, the regional PVY Vector Risk Index is higher in 2020 than it was this time last year. The numbers of certain species varies a bit this year, we've recovered fewer English grain aphids, but far more corn leaf aphids; the numbers of green peach aphids are very similar to last year but from different locations. Green peach aphids seem to be more dispersed this year, 10 of the 19 sites have recovered this species (which is the most efficient vector of PVY).

Importantly, this was the highest capture of green peach aphids we've seen so far this year. Soybean aphid captures were up this week; we've stated to experience cooler evenings and flights to buckthorn may well make up some of these numbers. Thistle aphid numbers were up this week, potato aphids and small grain aphids are still well represented in the trap captures while damson-hop and cannabis aphids have decreased this week.

While many fields have already vine-killed, it's obviously important if you have green plants still in the field to be managing aphid vectors. Much of our within-field transmission of PVY probably occurs later in the season.

If you have a field where Colorado Potato Beetle aren't being controlled by insecticides, please let us know. We'd like to get samples of that population to test for insecticide resistance. Contact Ian MacRae at 218-280-9887.

As always, keep on scouting!

Scouting for aphids in potatoes:

- Select leaves from the lower to mid canopy. Start at the edge of the field.
- Lower, older leaves will have more established colonies and aphids prefer the balance of nutrients found here; aphids are rarely found on leaves in the upper canopy.
- Avoid leaves on the ground or in contact with the soil.
- In seed potatoes there is only a threshold for PLRV (10 aphids/100 leaves), reactive application of insecticides an effective control for PVY.
- The use of feeding suppressing insecticides, such as pymetrozine (Fulfill®) or flonicamid (Beleaf®) and refined crop oils, such as Aphoil and JMS Stylet Oil, at or prior to field colonization by aphids may reduce the transmission of PVY within fields. Some other insecticides, such as clothianidin (Belay®), imidacloprid (Admire Pro® or Provado®), and spirotetramat (Movento®), have also been demonstrated to reduce the transmission of PVY.
- In table stock potatoes, a treatment threshold of 30 aphids /100 leaves should deter yield loss due to aphid feeding.

The PVY Risk Index Index

Not all species of aphid are equally efficient at transmitting PVY, some are better than others (green peach being the most efficient vector of PVY). So, the total number of aphids in a trap don't necessarily reflect just how much vector pressure there is at that location. The PVY Vector Risk Index compares aphid numbers, incorporating their relative vector efficiency compared to the Queen of PVY vectors (green peach aphid!). Using averaged reference comparisons from the literature, we multiply the number of each aphid species captured by its efficiency compared to Green Peach Aphid to more accurately depict risk posed by the species being trapped. We then sum the totals. The PVY-VRI values are presented on the tables below but also on maps comparing current cumulative risk to the total risk from the sample sites of last year (to compare with your local winter grow out results).

Check out all the trap data at:
aphidalert.blogspot.com

Cumulative PVY Vector Risk Index to September 04, 2020.



Cumulative PVY Vector Risk Index to September 01, 2019 season (for comparison)

