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## NEW CALL-IN NUMBER FOR AG TALK TUESDAY SESSIONS

Have instant access to UI ag faculty and other attendees remotely during the Ag Talk Tuesday sessions. You can simply call a phone number to join the meeting, or you can click on the Zoom link below (the needed software will automatically download when you start or join your first Zoom meeting) to ask any questions you have or to share your observations with how crops are progressing and what current issues appear to be in your region.

Call-in: (669) 900-6833

Zoom link: <https://uidaho.zoom.us/j/349427773>

## PLANT PATHOLOGY UPDATE

### Wheat and Barley Stripe rust

Growing conditions for wheat and barley are very good with cool and rainy weather, which is also excellent for the development of certain diseases, stripe rust in particular. Overall, stripe rust in Oregon and Washington state are lower than in previous years (Dr. Xianming Chen), but higher in northern California (Dr. Mark Lundy, UC Davis). Depending on weather patterns, stripe rust may be an issue for late planted spring wheat, but currently there is no reason to apply fungicides in most winter wheat varieties. As we move into heading for winter wheat, you should consider application of protective fungicides for stripe rust susceptible varieties such as Brundage. I will send out a stripe rust alert as soon as I know stripe rust is present in the eastern Oregon – southwest Idaho production areas (downwind from our production area) or northern Utah. Other disease issues

include soilborne root disease pathogens, and Rhizoctonia is widespread in fields where wheat was planted following wheat and is severe where green bridge conditions existed. I also expect take-all to start showing up due to the wetter-than-average spring conditions. The disease will show first in replant wheat. Report stripe rust if you find it, noting the variety, location and severity if you have that information.

[Juliet Marshall](#)

Cereals Agronomist and Plant Pathologist

## WEEDS UPDATE

### Cation Exchange Capacity and Herbicides

Cation exchange capacity (CEC) and how herbicides are affected. A high CEC can mean the soil has clay and organic matter. Clay surfaces are negatively charged and can adsorb positively charged compounds including fertilizer and herbicides. Negatively charged herbicides are repelled by the

negative charges on clay. Since they are not absorbed to the clay, these herbicides are in the soil-water solution available for uptake by weeds (and crops). Depending upon soil type, excess rainfall can result in these herbicides leaching out of the weed-seed germination zone (approx top two inches of soil).

Herbicides with a positive charge can be adsorbed to the negatively charged clay. If the herbicides are tightly bound then they may not get into the soil-water solution which means that they are not available to be taken up by the weeds for control. It's possible these herbicides can eventually desorb during the season or not until the following season i.e. carryover into the next crop.

### Hairy Nightshade impacts yield, harbors potato pests

Hairy nightshade is one of the biggest weed challenges we face. Densities as low as 1 hairy nightshade per meter row present during the period from potato emergence to 3 weeks later can cause yield and quality losses of 5% or more in non-competitive potato varieties, such as Russet Norkotah or even potatoes being grown for seed which often do not close relatively quickly.

Hairy nightshade is a reservoir for PVY as well as a host to insect vectors such as green peach aphid. Therefore, in addition to early-season control needed because hairy nightshade is competing with the potatoes resulting in yield loss, if this weed is present mid- to late-season, presence and spread of diseases such as PVY can occur.

### Herbicide injury in potatoes

If Matrix is applied postemergence to potatoes during cool cloudy weather, some mottling-yellow might appear on the leaves. Potato plant growth is slowed during such conditions and metabolism to a non-herbicidal compound is also slowed. This mottling symptom can sometimes be mistaken for the mosaic which might appear when the plant is infected with PVY. Once the weather becomes warmer with sunshine, then the plant can metabolize the herbicide and symptoms are no longer visible. The same will most likely not occur if PVY is causing the mottling.

[Pamela J.S. Hutchinson](#)

Potato Cropping Systems Weed Scientist

## ENTOMOLOGY UPDATE

Entomological components of the discussion at the Ag Talk Tuesday meeting on 22 May 2019 focused on potato psyllids / zebra chip disease and on aphid vectors of Potato virus Y.

### Potato psyllid / Lso monitoring project

Zebra chip disease (ZC) is associated with the bacterium "Candidatus Liberibacter solanacearum" (Lso) and transmitted by the potato psyllid (*Bactericera cockerelli*). This disease, which causes striped necrotic patterns in affected tubers was first found in the Pacific Northwest during 2011. We've been monitoring the insects and testing them for the presence of the bacterium in Idaho potato fields since 2012 and posting weekly updates that growers and crop consultants use to make management decisions.

Following the recommendations from our ZC Advisory Group last August, our monitoring plan this year (pending funding from Idaho Potato Commission) is limited exclusively to yellow sticky trap sampling using 4 sticky traps per field at all sites. Industry support with deploying and retrieving traps is expected to continue. In addition, we plan to limit monitoring to about 10 to 12 weeks during the season (starting later and ending earlier than usual). Moreover, psyllid samples from each site each week will be pooled for Lso testing. Monitoring during 2012 to 2018 showed that psyllid abundance is typically quite low during May through June. Therefore, we expect to begin sampling during the first week of July. Weekly sampling would end during early to mid-September.

Our monitoring program does not specifically cover fields that are planned for export to Korea. To assist with the monitoring requirements in such fields, the Entomology program at University of Idaho in Kimberly is offering psyllid identification as a fee-for-service arrangement. For a per-trap fee, we can supply the yellow sticky trap system that you then deploy, retrieve, and return to us in Kimberly each week. We will identify and count any potato psyllids and send them to the University of Idaho diagnostics lab in Parma to test for the presence of the ZC bacterium (this testing requires a separate fee). We can then provide you with a weekly report of our findings. If you are interested in these services, please contact Erik Wenninger's program at UI in Kimberly.

[Erik Wenninger](#)  
Entomologist

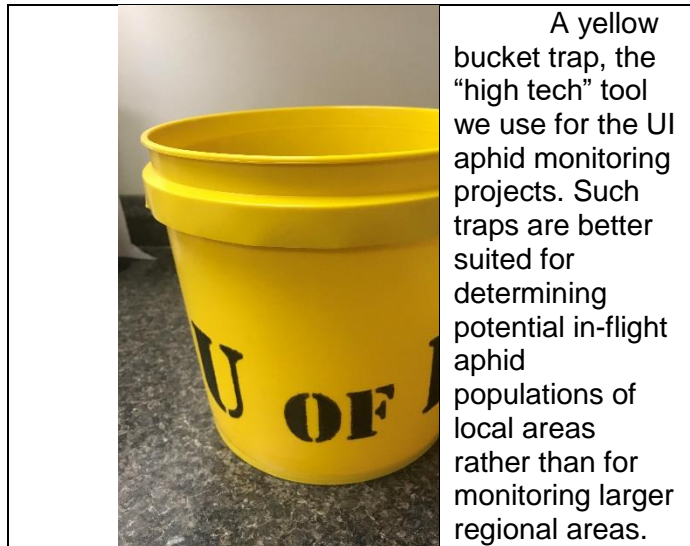
### Aphid monitoring for PVY management

The Extension Seed Potato Team and the Entomology team have two different aphid trapping projects that are being deployed in a seed growing area this year. You may notice yellow 2-gallon or 5-gallon buckets near potato fields, in seed potato growing areas and also in commercial areas. These yellow buckets are actually very low-tech tools for catching aphids. The idea is to fill the bucket with water, add a drop of dish soap to break the surface tension, then wait for airborne aphids that are attracted to the yellow color to land in the bucket. We add a small amount of copper sulfate (a component of readily available products off the shelf; it inhibits fungal and bacterial growth in the water and it is poisonous), so don't drink it! If you do see a yellow bucket, please don't disturb it – it could be an aphid trap.

The objective of the Entomology team, in collaboration with Alex Karasev and Nora Olsen, is to clarify the relationships among aphid species and virus strain incidence in aphids with PVY prevalence and virus strain incidence observed in the nearby seed crop. We plan to monitor aphid flights and identify aphids to species and type to strain any PVY observed. With multiple years and study sites observed, we hope to be able to predict timing of flights of the most important vector species. Though not designed as an Extension project that provides weekly updates, we expect to generate information on PVY risk that can be used in such a monitoring program in Idaho.

The Extension Seed Potato team's objectives, in collaboration with other UI faculty, the Idaho Crop Improvement Association, and the Idaho Potato Commission, are to monitor aphid flights throughout the growing season, identify the types of aphids that are present, determine if the aphids are carrying virus, and survey selected adjacent potato fields and other PVY reservoir plants (such as volunteer potatoes, cull piles, and weeds) for virus incidence. Ultimately, we hope to

characterize the relationships among number of aphids, types of aphids, amount of virus detected in aphids, and amount of virus detected in nearby potato crops. Each week starting in early June, members of our team will service 2-gallon bucket traps at selected sites by counting the total number of aphids that are caught in the traps and in some instances identifying what species are present. Samples will also be submitted to the UI Plant Diagnostic Lab at the Parma Research & Extension Center for molecular



A yellow bucket trap, the "high tech" tool we use for the UI aphid monitoring projects. Such traps are better suited for determining potential in-flight aphid populations of local areas rather than for monitoring larger regional areas.

analysis by Dr. James Woodhall and his team. Throughout the growing season, this information will be periodically disseminated to interested parties via email.

While the objectives of the two UI aphid projects differ, the information obtained from both projects are expected to be synergistic and help provide insight into managing the vexing problem of PVY. Please email Kasia Duellman at [kduellman@uidaho.edu](mailto:kduellman@uidaho.edu) if you would like to receive periodic updates on aphid numbers obtained from the UI aphid monitoring network.

[Erik Wenninger](#)

Entomologist

[Kasia Duellman](#)

Extension Seed Potato Pathologist

## REMAINING AG TALK TUESDAY SCHEDULE FOR 2019

Date	Location	Topics	Hosts
June 4	Idaho AgCredit 2883 ID-39 <b>American Falls</b>	Potato update Weed issues	Kasia Duellman Pam Hutchinson
June 18	No Ag Talk Tuesday		
July 2	Idaho AgCredit 1586 North 2 <sup>nd</sup> East <b>Rexburg</b>	Thrips/Diseases Potato update Weed update Small grains update	Jon Hogge Kasia Duellman Pam Hutchinson Juliet Marshall
July 16	Bonneville County Fairgrounds, Extension Classroom 7475 S 15 <sup>th</sup> E <b>Idaho Falls</b>	Bonneville county update Spore trap update Small grains harvest outlook Weed update	Ron Patterson Kasia Duellman Juliet Marshall Pam Hutchinson
August 6	Bannock County Extension Office 10560 Fairgrounds Rd <b>Pocatello</b>	Economics/cost of production/markets forecast Weed update	Ben Eborn Pam Hutchinson
August 20	Minnidoka County Extension Office (McGregor Center) 85 East Baseline Rd <b>Rupert</b>	Voles Utilizing Barn Owl Boxes to Manage Cover crops Aphid Monitoring, potato diseases Weed update	Jason Thomas Steve Hines Kasia Duellman Pam Hutchinson



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