

***Catching a flu this fall is not the only thing to worry about: Watch for barley yellow dwarf in winter cereals (aka. BYD)***

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***What is barley yellow dwarf?*** Barley yellow dwarf (BYD) is a cereal disease caused by a virus. After infection, plants may remain symptomless during the fall or have yellowing and reddening of leaf tips that characterize early stages of BYD infection. If the infection occurs early in the season (e.g. early planted winter cereals), there will be extensive yellowing, delayed growth, reduced seed quality, and reduced yield followed by significant economic loss. Often, symptoms show in the spring after winter cereals break dormancy.

***How does BYD virus spread?*** BYDV is only transmitted by cereal aphids, and the virus is active only in live green hosts. Cereals may become infected with strains of the barley yellow dwarf virus after feeding by aphids that carry and transmit BYDV. The virus gets into the plant system after aphids start to feed on plant sap. Bird Cherry-Oat aphid is one of the most efficient aphid vectors of BYDV and they are commonly present in Idaho. Adult bird cherry-oat aphids have a dark green appearance, while English Grain aphids, also vectors of BYDV, have lighter green coloration with darkened appendices (e.g. legs and antennae).

***Why one should be concerned this year?*** It's no secret that we are facing an unusually mild fall. Temperature fluctuations in central and eastern Idaho accompanied by high levels of moisture supports continued growth of volunteer cereals and alternate wild grassy hosts, and delivers an environmental signal that stimulates a population increase of cereal aphids. High populations of aphids and flights from green chopped corn have been reported from central and eastern Idaho in recent weeks. As late maturing corn is losing its attractiveness to aphids, or as forage corn is being cut, there is no shortage of volunteer and early-planted cereals in our harvested fields to welcome the prolonged stay of the wandering guests.

***What can we do?***

Do not plant your winter wheat/barley early. Consult your local extension office for planting date recommendations. If possible, plant after a killing frost that reduces the aphid population.

Eliminate volunteers and/or other "green bridges". If you look around and see fresh growth of grasses, including wheat and barley volunteer around your field, you may be looking at aphid and virus reservoirs. Remove these host plants and leave aphids without a sufficient food source and refuge to survive winter.

Use seed treatments if you are in a high-risk area where aphids are found in high numbers. Seed treatments provide a window of protection against aphids. However, also note that plants may still get infected with BYDV as aphids feed (especially as chemical efficacy starts

to fade away), and before the insecticide takes effect. Imidacloprid is an effective seed treatment that is currently available for cereal use, under different trade names.

***I planted two or three weeks ago – now what?***

Monitor fields with yellow sticky traps, or yellow pan traps, for aphids. Even if seed treatments were used, continuously inspect emerged plants for aphid presence to determine need for an additional foliar application of insecticides. Where seed treatment was applied, seedlings would be protected for 2 to 3 weeks post-emergence. Apply foliar sprays if high aphid populations are observed.

For more information, see the CIS 1210 available online:

<http://www.cals.uidaho.edu/edcomm/pdf/CIS/CIS1210.pdf>