

It's time to monitor pest problems in the field

Written by Assefa Gebre-Amlak, Regional Extension Specialist, Colorado State University Extension

According to CSU plant pathologist, reports of stripe rust are coming in from the southwestern and west central parts of Kansas. The cool and wet weather over the past few weeks may have increased the infection of rust spores. Scouting fields along the Kansas borders for stripe rust is recommended.

Stripe rust often starts in small hot spots in the field but it may not always be possible to determine if stripe rust is present by walking a few feet and taking a peek at only one spot in the field. Scan the entire field and look for areas that look off color (yellow to orange). For effective fungicides to control stripe rust and other fungal diseases visit www.nocopestalert.org.

There are reports of brown wheat mite in southeastern Colorado including Kit Carson and Prowers counties. Brown wheat mite is a pest of small grains and in Colorado it is most common on drought stressed winter wheat in the eastern Plains. It feeds on plant sap during the day and spends the night in the soil. The mites are quickly reduced by driving rains of 1/3 inch or more.

Because of the sporadic nature of brown wheat mite, chemical control is the only effective option. The economic threshold is not well defined but at least several hundred mites per row-foot in the early spring will justify chemical treatment. The decision to treat is difficult since the mite is associated with drought stress. If it rains, mite population levels will be significantly reduced regardless of treatment.

There has been no report of Russian wheat aphid presence in winter wheat so far. It was also undetected in wheat scouting in southeastern Colorado recently. For chemical control of the Russian wheat aphids on susceptible varieties of wheat, the following economic threshold levels used at different crop stages.

—Regrowth to early booting: 5-10 percent damaged and infested tillers.

—Early booting to flowering: 10-20 percent damaged and infested tillers.

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—After flowering: more than 20 percent damaged and infested tillers.

Alfalfa: alfalfa weevil is the most destructive insect pest of alfalfa in Colorado. Both larvae and adults feed on alfalfa; the larval stage is the damaging stage, lowering yield and quality.

Timing of sampling for weevil is determined by calculating degree days in the field. Development of this insect increases at a nearly constant rate as the temperature rises above 48 F degrees (9 C). Degree days need to be determined after March 1 for each 24-hour period in which temperatures exceeded 48 degrees (daily degree days = $\text{daily max} + \text{min} / 2 - 48$).

Using this technique, sampling should begin when 148 degree days have accumulated.

In the northern region of Colorado, the majority of alfalfa producing counties has already accumulated the amounts of degree days indicated above. Therefore it is encouraged that producers start scouting for alfalfa weevil now.

Third and fourth instar larvae cause most of the economic damage; therefore it is important to estimate weevil density before the damaging instars develop. Plant tip damage is readily visible at this time if a heavy infestation is present. Folded leaves must be opened to detect lighter infestations that may develop into an economically important infestation.

If larvae are detected during a minimum of 10-minute initial search in any field, a sample survey should be conducted in each field to determine if the infestation is likely to cause economic damage.

A non-insecticide control measure for alfalfa weevil is an early first harvest if economic infestation is not detected until late in the growth of the first cutting. Harvesting alfalfa in an immature stage provides good control of the larvae for the first crop.

If the damage becomes unacceptable as harvest approaches, an early harvest or rescue

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insecticide treatment may be necessary. Insecticide applications and early harvesting are the most common growing management strategies.

Generally harvest or insecticide applications should happen before bloom if the weevils are present. Consider the waiting period before harvest for different insecticides. For effective insecticides on alfalfa weevil, check the High Plains IPM Guide at www.highplainsipm.org .

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