Pest e-alerts

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What to Do With Harlequin Bugs in Canola?

Tom Royer, Extension Entomologist

Josh Bushong sent some pictures of a canola field infested with harlequin bugs. As canola becomes a more established crop, some "canola-loving specialists" that don't show up right away will begin to become more numerous. One such pest is the harlequin bug. Harlequin bugs are well known among gardeners and commercial vegetable growers because they are pests of brassica crops such as broccoli, cabbage, collards and cauliflower. In any case, canola growers need to be aware of its appetite for canola pods as well.

Harlequin bugs are black, shield-shaped stink bugs with orange, red or yellow markings and measure 3/8 inches. The eggs are less than 1/16 inch, barrel-shaped, light gray to pale yellow with two black bands, one at the top and the other near the bottom. Immature bugs are similar to the adult in coloration but are smaller and wingless.

Harlequin bugs overwinter as adults in plant debris and emerge in late April through May in Oklahoma. Females begin depositing eggs on the undersides of leaves about 2 weeks after emergence. Eggs are laid in double-row clusters, and one female can produce 150 eggs. Eggs hatch from 5 to 20 days depending on temperature. Nymphs develop through 5 instars before becoming adults and go through three or four generations per year.

Harlequin bugs have piercing/sucking mouthparts that they use to extract sap from leaves, stems and developing canola pods. Symptoms of feeding injury include irregular cloudy whitish spots around the feeding site.

No economic thresholds are established for this pest. A decision to spray should be made after taking some counts in several areas of the field. My best "guess" is to treat if counts exceed 2-3 bugs. On the bright side, harlequin bugs seem to be most numerous along field borders, so border sprays are an option.

The selection of an insecticide should be made both on cost and pre-harvest interval (PHI). If canola is close to harvest, avoid insecticides with a long PHI. Current recommendations for control of harlequin bugs in canola are listed on page 161 of E-832 "2015 OSU Extension Agents' Handbook of Insect, Plant Disease, and Weed Control" or CR-7667, Management of Insect and Mite Pests in Canola.

Wheat Disease Update

Bob Hunger, Extension Wheat Pathologist

Dr. Jeff Edwards (Small Grains Extn Agronomist) and I spent Tuesday and Wednesday in the OK panhandle at variety trial field days located near Keyes (Cimarron Co.), Balko, and Hooker (both in Texas Co.). A significant number of wheat fields were in a condition I have not seen before (at least not to this extent). These fields had small islands of wheat that was at milk (approaching soft dough) surrounded by large areas of greener tillers that ranged from just prior to flowering to initiation of kernel formation. This condition resulted from the drought during this past fall, winter, and early spring, which lasted until mid-April followed by the cool and wet weather since mid-April. Much of the wheat in these fields was shut down by the drought but there also were isolated pockets of wheat that more or less made it through the drought. As cool temperatures and moisture became prominent in mid-April, the areas hit hard by drought recovered and sent up secondary tillers that are now green and less mature than the "islands" of wheat that made it through the drought. Hence there is 2-3 weeks difference in maturity between different areas within the same field. In some fields there are only a few "islands" of secondary wheat, but in other fields the secondary wheat predominates with only "islands" of more mature wheat. How this will play out over the next month will have a great deal to do with the weather. Dr. Edwards feels that if cool weather continues, the secondary tillers stand a chance of making wheat. However, if hot (>90 F), dry and windy weather enters the picture, the secondary tillers likely will not finish.

As in down-state in Oklahoma, stripe rust was prevalent at all locations with leaf rust present on varieties such as Greer and Jackpot that have excellent stripe rust resistance but are susceptible to leaf rust.

Damage from wheat streak mosaic (WSM) also was evident, but in the fields where the variety trials were located incidence was low and damage minimal. However, from samples we have continued to receive from the panhandle there must also be fields that have been significantly impacted by WSM.

We also visited one field (an irrigated circle) where we thought black chaff may be involved, but this appears to be more a case of physiological leaf spotting than bacteria. Isolation and testing are being started today. Other samples received from north-central OK last week where black chaff is suspected to be involved are still being evaluated. However, as indicated last week head darkening is definitely more common down-state than it is in the panhandle.

Nebraska: Dr. Stephen Wegulo (Extn Plant Pathologist); University of Nebraska; 28-May-2015: "Yesterday I looked at wheat fields in southern Nebraska along the Highway 4 corridor (about 20 miles north of the Kansas border) from southeast to southwest. Incidence of stripe rust was 100% in all fields that were not sprayed and severity was very high in fields with susceptible varieties (>75% and close to 100% in a couple of fields I looked at - that is, the entire foliage in the whole field, not just some leaves). Many fields looked spectacularly yellow due to stripe rust. Weather conditions continue to be favorable to the disease. Growth stage ranged from flowering to beginning of ripening. Other diseases were completely overshadowed by stripe rust. I saw one head with Fusarium head blight in a state variety trial in the southeast."

Dr. Richard Grantham - Director, Plant Disease and Insect Diagnostic Laboratory

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