



Pest e-alerts



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Greenbugs and Bird Cherry-Oat Aphids in Wheat: Decisions.....

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Heath Sanders reports of some wheat fields infested with bird cherry-oat aphids. I have seen low levels of greenbugs in some of our demonstration plots as well. The decision to control aphids is especially important right now so a producer can decide to add an insecticide with their top-dress fertilizer. Greenbug infestations results in visible injury to the plants, but bird cherry-oat aphid infestations do not produce visible damage and may go unnoticed.

Bird cherry-oat aphid



Greenbug



My suggestion is to scout the field beforehand to determine if there are GROWING numbers of either aphid that could be of concern. While scouting, keep track of *Lysiphlebus* mummies. Glance n' Go accounts for aphid parasitism from *Lysiphlebus* wasps. If 5-10% of bird-cherry oat aphids are mummies, more than 90% of the rest are also parasitized, and control is probably not warranted.

Lysiphlebus mummies



If greenbugs are present, use **Glance n' Go** to scout. At current prices of \$3.00 or \$4.00 per bushel, and control costs of \$4.00 to \$10.00 per acre, you should select the spring **Glance n' Go** forms on this link: <http://entopl.okstate.edu/gbweb/spring%20glance%20n%20go3.htm> using the following guidelines:

Control Costs:	Crop Value	Spring Glance n' Go Form
\$4 per acre	\$3/bushel	3 greenbugs per tiller
\$5 per acre	\$3/bushel	3 greenbugs per tiller
\$6 per acre	\$3/bushel	4 greenbugs per tiller
\$8 per acre	\$3/bushel	5 greenbugs per tiller
\$10 per acre	\$3/bushel	6 greenbugs per tiller
\$4 per acre	\$4/bushel	2 greenbugs per tiller
\$5 per acre	\$4/bushel	2 greenbugs per tiller
\$6 per acre	\$4/bushel	3 greenbugs per tiller
\$8 per acre	\$4/bushel	4 greenbugs per tiller
\$10 per acre	\$4/bushel	5 greenbugs per tiller

If aphids are mostly bird cherry-oat aphids, count the number of aphids on each of 25 randomly selected tillers across a zigzag transect of the field and note mummy activity. Unpublished research provided by Dr. Kris Giles (OSU) and Dr. Norm Elliott (USDA-ARS) combined with studies on spring wheat from the Dakotas and Minnesota indicate that 20-40 BCOA per tiller causes 5-9% yield loss before wheat reaches the boot stage. My suggestions: if BCOA numbers average 10-20 per tiller, figure on a 5% loss, if 20-40 per tiller, figure a 7% loss, and if BCOA aphids are more than 40 per tiller, figure a 9% loss.

Estimate APHIDS PER TILLER _____/tiller = Total # aphids _____/25 tillers
 Estimate CROP VALUE \$_____/acre = Expected yield _____bushels/acre X \$_____/bushel
 Calculate CONTROL COSTS \$_____/acre = Insecticide \$_____/acre + Application \$_____/Acre

PREVENTABLE LOSS \$_____/acre = Crop value \$_____ X _____loss from aphids/tiller .

If PREVENTABLE LOSS IS **GREATER THAN** CONTROL COSTS
 If PREVENTABLE LOSS IS **LESS THAN** CONTROL COSTS

TREAT
DON'T TREAT

Here is a Table of Preventable Loss estimates for bird cherry-oat aphids for expected yields of 30 to 50 bushels per acre, expected wheat prices of \$3.00, \$3.50, and \$4.00 per bushel, and bird cherry-oat aphid numbers of 10-20, 20 to 40, and over 40 per tiller.

Expected Yield (Bushels/Acre)	Expected Price (\$ per bushel)	Crop Value (\$ per acre)	Preventable Loss from BCO Aphids (\$ per acre)		
			10-20 aphids/plant	20-40 aphids/plant	More than 40/plant
30	\$3.00	\$90.00	\$4.50	\$6.30	\$8.10
35	\$3.00	\$105.00	\$5.25	\$7.35	\$9.45
40	\$3.00	\$120.00	\$6.00	\$8.40	\$10.80
45	\$3.00	\$135.00	\$6.75	\$9.45	\$12.15
50	\$3.00	\$150.00	\$7.50	\$10.50	\$13.50
30	\$3.50	\$105.00	\$5.25	\$7.35	\$9.45
35	\$3.50	\$122.50	\$6.13	\$8.58	\$11.03
40	\$3.50	\$140.00	\$7.00	\$9.80	\$12.60
45	\$3.50	\$157.50	\$7.88	\$11.30	\$14.18
50	\$3.50	\$175.00	\$8.75	\$12.25	\$15.75
30	\$4.00	\$120.00	\$6.00	\$8.40	\$10.80
35	\$4.00	\$140.00	\$7.00	\$9.80	\$12.60
40	\$4.00	\$160.00	\$8.00	\$11.20	\$14.40
45	\$4.00	\$180.00	\$9.00	\$12.60	\$16.20
50	\$4.00	\$200.00	\$10.00	\$14.00	\$18.00

Check [CR-7194](#), “Management of Insect and Mite Pests in Small Grains” for registered insecticides, application rates, and grazing/harvest waiting periods. It can be obtained from any Oklahoma County Extension Office, or found at the OSU Extra Website at <http://pods.dasnr.okstate.edu/docushare/dsweb/Get/Document-2601/CR-7194web2008.pdf>

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