

Lower Rolling Plains Pest Management News

Jones

Mitchell

Nolan

Scurry

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Wheat

I, recently, had a call about a problem in a wheat field. Plants were scattered throughout the field that looked like this picture of a wheat head. The plants were green up to the flag leaf, but heads were light tan to white and had died. Grain kernels within the head were not developing. These heads were easy to pull out of the leaf sheath of the flag leaf, just above the last node. Fortunately, there was no more than 1% of the plants showing these symptoms and yield loss was minimal. The culprit causing this damage is the **wheat stem maggot, *Meromyza Americana* Fitch**. This pest, probably, infested wheat plants last fall when the adult flies laid eggs in the new winter wheat crop. Maggots then overwinter in the lower parts of the wheat stem. Other hosts include barley, oats, rye, bluegrass, millet, timothy, and other native or introduced range grasses. These maggots pupate in early spring and adults emerge probably late April or early May. These adult flies lay another generation of eggs on leaves near the stem. Light green colored maggots (larvae) emerge and tunnel inside the stem above the upper most joint (Picture at the right). This feeding causes the dying and whitening of the head while the flag leaf and plant remains green. Another generation of maggots will develop on volunteer wheat and grasses during the summer and another cycle begins in the fall. Damage in the spring is generally inconsequential and rarely exceeds 1 to 2 percent of the heads. Chemical control is impractical because control costs are greater than the damage. The best management practices are to delay planting, following planting dates to avoid Hessian fly infestations, and to destroy volunteer wheat several weeks before plant.

The other problem in this field was caused by **loose smut** infecting the wheat heads (Pictures on page 2). The infected heads were a mass of black spores, but only a small percentage of heads were infected. With this disease yield reduction is proportional to the number of heads infested. This disease is seed borne, which means spores are blown to other wheat heads during flowering, infecting kernels that develop into seeds for planting next season. If kernels escape being infected during flowering, they can not become infected after one week from flowering. At this stage, infected kernels do not look any differently from non-infected kernels. So, these infected seeds are little time bombs that will develop smutty heads next season. If 1% of the





Loose smut of wheat. Note that the glumes and kernels are converted to smut spores.

heads are smutted this year, 10% to 15% of the seeds will be infected. Since several tillers are produced from a single plant, these tillers will also be infected causing heavier yield losses.

These spores do not survive in the soil and only live in the embryo of the seed. Therefore, management options are to plant disease-free seed. Seeds for planting will need to come from disease-free fields or should be treated with a fungicide that has systemic activity. Ohio State trials have shown seed treatments with fungicide products, such as Dividend[®] XL, Raxil[®] MD, Raxil[®] XT, provide excellent efficacy of loose smut. And, Vitavax[®] 200 provided good efficacy.

Cotton

With the increased costs for fertilizer, Roundup Ready Flex and Roundup Ready cotton seed, Roundup herbicide, diesel, and anything else needed for this growing season, there may be a tendency to skip putting out yellow herbicides to cut back on costs. Just a reminder, when producers in the Southeast strictly used glyphosate for weed control they developed problems with glyphosate resistant weeds. Preventing resistant weed development in West Texas has been partly due to the usage of yellow herbicides and other preemergence herbicides. If you have not already incorporated a trifluralin product, consider broadcasting Prowl[®] H20, Caparol[®], Diuron (Direx[®] or Karmex[®]), Dual Magnum[®], and Staple[®] at planting or preemergence. Many of these products should not be used on sandy or loamy sand soils. Good control of many annual broadleaf weeds and some grass weeds into the growing season may reduce the number of glyphosate applications. Without the usage of preemergence herbicides, a flush of weeds can germinate after each rain.

LOWER ROLLING PLAINS NEWSLETTER

The 2008 edition of the newsletter will be written weekly from June 15 through September and as needed the rest of the year. The newsletter provides information about insects, weeds, diseases, and crop management suggestions for cotton and other major crops in Jones, Mitchell, Nolan, and Scurry counties. The newsletter is available for free if sent by e-mail, but due to postage rates increasing the newsletter by mail will cost \$10.00 per year. Newsletters are, also, available at web sites for the Lower Rolling Plains IPM (<http://lrpipm.tamu.edu>), Texas Pest Management Association (<http://www.tpma.org>), and the Nolan County Extension office (<http://nolan-co.tamu.edu>). Please complete the enclosed subscription card and return to Ed Bynum, 100 E. Third St., Ste 305, Sweetwater, TX 79556.

IPM SCOUTING PROGRAM

I am beginning to organize the survey program for Jones, Mitchell, Nolan and Scurry Counties, which will include representative fields within each county. Scouting of these survey fields will be at no cost to the producer. If you would like to have one of your fields considered for this program, please call me at the office (325-236-9011), my mobile (325-660-1772), or fill out the attached newsletter subscription form.

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2008 Lower Rolling Plains IPM Newsletter

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IPM SCOUTING PROGRAM

If you are interested in having a field scouted this year, please provide a telephone number where I can call and visit with you: _____

Please place this form and check (if applicable) in a stamped envelope and return to:

**Ed Bynum
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