

Logan & Morgan Agriculture & Natural Resources Newsletter

The combined Logan & Morgan Ag and Natural Resources Staff provide this newsletter to provide upcoming events and news on current issues affecting agricultural businesses, rural land owners and urban landscape managers.



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2013 Calendar: (information provided in flyers or articles)

- June 11th Ranchers & Range land owners field day – Wray (flyer)
- June 12th 8:30 a.m. USDA-Ag Research Station field day at Akron
- June 12th, 17th, 18th, & 19th Colorado Wheat Field Days (flyer)
- August 20th – Dry Bean Field Day (details to be announced)

Area Colorado State Extension Websites:

- **Logan & Morgan Ag & Natural Resources:**
 - <http://www.extension.colostate.edu/morgan/crops/>
- **Logan Extension:** <http://extension.colostate.edu/logan>
- **Morgan Extension:** <http://extension.colostate.edu/morgan>
- **Golden Plains Area:** <http://goldenplains.colostate.edu/>
- **NE Colorado Range:** <http://range.colostate.edu/>
- **Colorado State Extension:** <http://www.ext.colostate.edu/>

Wheat Stem Sawfly – Bruce Bosley

If you see swarms of half inch long flying insects in or near wheat fields in northeastern Colorado you may be seeing wheat-stem sawflies. This insect has been swarming in wheat fields for the past week in selective fields in northeastern Colorado.

The wheat stem sawfly, long considered a severe pest of wheat in Montana and North Dakota, has now been found infesting wheat in many areas of Northern Colorado. In addition, Adult sawflies have been seen as far south as Cheyenne Wells. In the last three decades, it has become more abundant on winter wheat and spread into southeastern Wyoming and the Nebraska Panhandle. Colorado wheat growers should familiarize themselves with the sawfly's life cycle, damage and available management options.

The sawfly is the number one wheat pest in Montana, causing over \$25 million in losses each year. While it is unknown how important this pest will become in Colorado, it is important to be aware of and to



monitor the situation.

The wheat stem sawfly emerges in May when field temperatures exceed 50° F. The females are active for two to three weeks, placing egg singly in stems, just below the topmost node. Larvae develop in the stems and gradually work their way downwards, eating stem tissues as they go. When the stems begin to desiccate the larvae cut a V-shaped notch around the interior of the stem just above the crown and seal the stem just below the notch, creating a chamber where they remain until the following spring. The stem often breaks at this notch, which leads to the lodging losses.

Effective chemical controls are not available however; there

are several cultural controls that have proven effective at reducing, but not eliminating, infestations.

Tilling wheat fields after the harvest in the fall to loosen the stems and the soil around them maximizes exposure to adverse winter temperatures. Spring tillage buries the stubble and makes it difficult for adults to emerge. However, the advantages of controlling the sawfly with tillage are far outweighed by the benefits of reduced tillage.

Trap crops of other cereal grains, such as oats, barley, and rye, planted between the wheat crop and adjacent stubble also have been used. These crops are attractive sites for egg laying, but are not adequate for sawfly development.

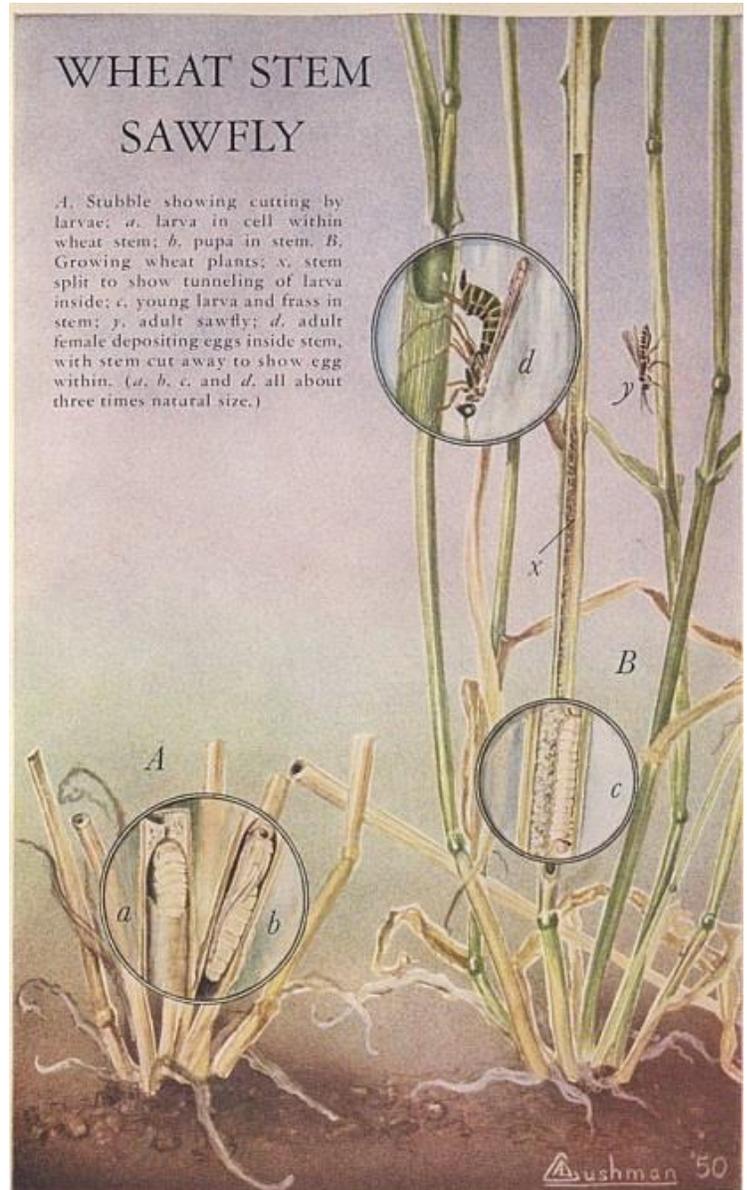
Planting wheat in larger blocks as opposed to narrow strips is another cultural practice that may reduce sawfly damage potential. This minimizes the amount of field border adjacent to stubble, which is the part of the crop most vulnerable to infestation.

Using solid-stemmed winter wheat cultivars is perhaps the most effective control. In areas where the sawfly is a recent arrival, wheat breeding programs are beginning to focus on incorporation of the solid stem characteristic into adapted varieties, using both conventional selection and linked DNA markers.

The program at Colorado State University also has initiated a long term research into novel methods for making the wheat plant less attractive to the sawfly.

If you observe damage or suspect the presence of wheat stem sawfly in fields, please contact me or your local Extension agent.

Dr. Frank Peairs, CSU Field Crops Entomologist has developed a fact sheet: *Wheat Stem Sawfly; A new pest of Colorado wheat* - www.ext.colostate.edu/pubs/insect/05612.html.



What Causes Purple Corn – Ron Meyer

Purple corn is not a new phenomenon. It has been observed over the years in many inbred and hybrid lines all over the world. Wild corn found growing in the cool mountain regions of Peru and Mexico is often purple.

Purple seedling color results from the expression of genes for anthocyanin pigment formation. Several plants have similar genes. For example, red maples have red leaves in the spring, but other maple varieties have green leaves. Similarly, most cabbage is green, but there is also red cabbage. The differences between the varieties-corn, maple, or cabbage-include the genes for pigment production. That trait, along with other traits you do not see, is inherited in the hybrid or variety.



Most of the corn grown in the United States contains five of eight genes required to produce the purple color. The other three genes are present in certain hybrids, and some of these genes are cold sensitive. When exposed to cool temperatures, they induce purpling in the young plants. Nighttime air temperatures in the 40s when day temperatures are in the 60s are often adequate to trigger purpling.

These temperature-sensitive genes are only expressed in seedlings prior to the six-leaf stage. Since there are likely to be early spring cold temperatures somewhere each year, hybrids with the eight genes for pigment formation will probably produce some purple seedlings each spring.

Purple pigments can accumulate in mature plants as well, but pigmentation then results from the action of different genes. Corn breeders often use hybrids with the genes for purple leaves and husks as plot markers in yield tests.

Yield differences have not been observed due to leaf purpling characteristics.

Source: Pioneer Agronomy Library; www.pioneer.com

Ranchers and Range Land Owners Field Day Julie Elliot – USDA, NRCS – Wray (See flyer)

Livestock owners, managers and land owners are invited to attend an informative Ranchers Field Day on Tuesday, June 11. We will meet for the field day at Dwight and Nancy Rockwell's headquarters just west of Wray, Colorado. Registration, coffee and rolls will begin at 8:30 a.m. at the ranch headquarters. The field day will begin at 9 a.m. and end by 3 p.m.

Plants tell us a lot about how much the drought has affected them, but only if we know how to read them. Once we know what to look for and what we should ignore, we can make decisions that are more informed.

Attendees will learn how the drought of 2012 has affected the plants found on both sandy and hard ground sites. The group will learn how to look at the plants to judge the health of our own rangeland. Most significantly, we will hear what decisions need to be made and what actions should be taken to protect our ground.

Pat Reece will be our instructor. He has over 30 years of experience working with ranchers and the climatic extremes of the high plains. Pat's combined research, extension and consulting experiences will provide unique insight for dealing with drought. He is a great speaker who gives information we can all understand, take home and use.

If you are leasing rangeland for your cattle, you are encouraged to bring the property owner. If you are a property owner, you are encouraged to bring your lessee. Both of you will gain valuable information from this field day to help you develop a win-win drought management strategy. Young aspiring ranchers are particularly invited to attend.

Grazing management this year is crucial to keeping our rangelands intact. We do not want stories about blowing rangeland in this area.

For more information or to save a lunch, contact the Yuma County Conservation District in Wray, CO, by Tuesday, June 4. Please call 970-332-3173 ext.3 or go to the Yuma County Conservation District website at www.ycconservation.com. You may also email julie.elliott@co.usda.gov. There is no registration fee. Late registrations and walk-ins are welcome, but will not be guaranteed lunch.

To get to Rockwell's, go west of Wray 8 miles or east of Eckley 6 miles on Hwy 34 to County Road Z. Turn south and drive 2¾ miles to a lane on the east side. Follow the lane to the shop. There will be signs.

