IOWA STATE UNIVERSITY
Extension and Outreach

CROP UPDATE

Iowa State University Extension Information for Southeast Iowa
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FREEZE

Sorghum and Sudangrass

Temperatures in the upper 20s are forecast for much of the area this weekend, which may be the first fall freeze for some. Most concerns with the first fall frost deal with managing sorghum species including sudangrass. When these species are injured with the frost, the plant tissue releases prussic acid for a few days, which can be toxic to livestock. If plants are only partially killed, which is likely with a light frost, new shoots may start to grow which have more concentrated levels of prussic acid. Livestock should be removed immediately if a frost occurs and kept out for 5-6 days. If new shoots develop, livestock should be removed until the shoots are the appropriate height to graze (18-20 inches for sudangrass and 24-30 inches for sorghum-sudan), or until 5-6 days after a hard freeze which kills all shoots completely. For more information on managing sorghum species in the fall, see Steve Barnhart's article at http://www.extension.iastate.edu/CropNews/2011/0912barnhart.htm.

Alfalfa

Because of the concerns with sorghum species, there is the false believe that alfalfa also becomes toxic with the first fall freeze. Alfalfa does not become toxic with the freezing temperatures, but there is a slightly greater risk of bloat, so the standard bloat prevention practices should be used (ie don't turn hungry cattle out into an alfalfa field where they might gorge themselves on the lush alfalfa).

Because of the shortage of hay this year there will be the temptation to try to get a last cutting of alfalfa this fall. Alfalfa has been under a lot of stress with the drought, which makes the fall rest period even more important this year. Temperatures in the upper 20s will not stop alfalfa growth, with more growth likely in the next week to 10 days. It's best to wait until after a killing freeze (mid 20s) or until about mid-October to try to take another cutting of alfalfa to minimize the stress on the plants going into the winter.

DROUGHT

CORN

Root & Stalk Lodging

It's amazing that there are fields yielding 200 bu/A and more with the heat and drought we have seen this summer. There are also fields yielding less than 50 bu/A and everything in between. Harvest has been made more difficult by the lodging that is common this year. It's important to look to see whether the lodging is stalk lodging or root lodging. One thing that is causing some of the poor yields is severe rootworm damage in some of the corn on corn. Some of the Bt genetics is not performing as well as in the past. Rootworm damage is much more apparent this year with the moisture shortage. Growers need to consider not only crop rotation, but Bt genetics rotation to try to reduce the problem with corn rootworm resistance. See Aaron Gasman's article for more information at http://www.extension.iastate.edu/CropNews/2012/0824gassmannhodgson.htm.

Ear Rots & Aflatoxin

I have not heard of widespread problems with ear rots and alfatoxin in the past couple of weeks, but there are some problems showing up even in "good" corn fields. Corn fields should continue to be checked for ear rot problems and those fields targeted for harvest first. The sooner the corn is dried down in the bin, the faster the mold growth and aflatoxin production is stopped. Aflatoxin production is greatest when the grain is 18-20% moisture, so harvesting before it gets down to 20% would be best. However, be sure to have the corn checked in the field by the insurance agent if you suspect a problem with aflatoxin. Once it's in the bin it's too late for insurance to get involved. Aspergillus flavis is an olive green mold. Just because the mold is present does not necessarily mean the toxin is present. For a photo of Aspergillus ear rot and additional information on this subject, go to: http://www.extension.iastate.edu/CropNews/2012/0801robertson.htm. ISU Extension has a publication that explains sampling, testing and interpretation for

aflatoxin. Go to: http://www.extension.iastate.edu/sites/www.extension.iastate.edu/files/www/PM1800.pdf. A recent article by Charles Hurburgh on alfatoxin and grain storage can be found at http://www.extension.iastate.edu/CropNews/2012/0927hurburgh.htm.

SOYBEAN

Green Stem Syndrome

I've been hearing that soybean yields are also quite variable, although yields in the 50s are common. Spots in fields that may drown out in the wet years may be yielding 70+ this year. One problem that is quite widespread is that stems are remaining green even when soybeans are testing less than 10% moisture, which is resulting in a lot of shattering. This green stem phenomenon tends to occur when the soybeans are under stress during pod fill, which certainly would have been the case this year. Usually there is also a yield loss associated with this, because it occurs when there are less pods and less beans to fill, resulting in the plant having photosynthates "left over" causing the stems to remain green even after the beans have filled completely and are mature. Green stem syndrome can be induced in plants by removing half of the pods at R6 (full seed size). The freeze this weekend may help some to dry the stems down, but it's better not to wait for these stems to mature because of the increased shatter risk. Fields can be harvested where stems are still green, although it is more difficult, requiring more power and there may be increased problems with plugging. To address combine issues for drought affected corn and soybean crops, see Mark Hanna's article at: http://www.extension.iastate.edu/CropNews/2012/0808hanna.htm. There is some extensive information on the green stem syndrome at this Virginia Tech website: http://pubs.ext.vt.edu/2912/2912-1430/2912-1430.html.

FOR YOUR CALENDAR

Integrated Crop Management Conference
November 28-29
Ames

Details will be posted at: http://www.aep.iastate.edu/icm/homepage.html

Ag Chemical Dealer Update
December 5
9:00 a.m. to 4:00 p.m.
Highlander Clarion in Iowa City

Details will be posted at http://www.aep.iastate.edu/

Crop Advantage Series
January 30
Highlander Clarion in Iowa City
Featuring Craig Johnson, Meteorologist & Executive Director of Iowa Academy of Sciences

Details will be posted at http://www.aep.iastate.edu/cas/homepage.html