Missouri Crop Improvement Association
News and Notes

December - 2017 **Vol.13 – No. 12**

MCIA's News and Notes is designed to provide members and other interested individuals with information about MCIA programs and services, as well as timely access to information that impacts the seed industry and agriculture in general. Our format is structured to provide a brief introduction to topics of interest along with contact information or links to sources where you can obtain more detailed information. Many of the articles and items listed in this newsletter contain web addresses or hyperlinks by which you can obtain additional information. If you do not have internet access and would like additional information on any of the topics mentioned in this newsletter, please contact the MCIA office and we will forward you the information. Please feel free to contact the MCIA office if you have questions or suggestions for items to be included in future issues.

Season's Greetings and Best Wishes for a Joyous Holiday Season and Prosperous New Year from the Staff of the Missouri Crop Improvement Association

2017 Wheat Royalty Refunds

You may be eligible for a refund of royalties paid for wheat seed that you were unable to sell in 2017. In order to receive a refund, please return any unused tags/labels to the MCIA office no later than December 22 and indicate the number of tags/labels returned for each variety. ***MCIA will not count your tags and labels for you.*** Tags/labels received after the December 22 deadline ***will not*** be eligible to receive a credit.

REMINDER - any certified or quality assurance seed sold in loose bulk form should be accompanied by a bulk sales certificate. If you sold seed in loose bulk form without a certificate, please contact the MCIA office and request a bulk sales certificate request form so we can issue the proper documentation.

Soybean Quality Update and Testing Issues

As of December 8, the MCIA seed lab has completed germination testing on 882 samples from the 2017 crop with an average germination of 90.21%, which is 100 samples less and 3.50% below the same reporting period in 2016. While soybean germination percentages started out excellent right after harvest we are noting significantly lower germinations with production harvested after October 20 from the northern 2/3 of the state and October 30 from the southern 1/3 of the state that went through several cycles of weathering prior to harvest.

Early harvested soybean seed coats seem to be strong and intact and disease is only present at low levels, if at all. Later harvested soybeans have noticeably lower visual quality and visible shriveling/cracking of the seed coats with discoloration and oblong shaped seeds. Moisture levels seem to be good for early harvested seed but are running significantly lower for later harvested seed and the incidence of mechanical damage is higher than we noted at a similar date in 2016. Based on our observations with samples tested to date, the normal towel germination test is matching up well in comparison with results from treated and germination tests for early harvested seed and running slightly lower for later harvested seed. As would be expected, vigor test (accelerated aging) results are much higher across the board for early harvested production but quite a bit lower for later harvested production.

We are also seeing more phomopsis (pod & stem blight) and molds on samples than we would expect to see under normal conditions. For those producers that have preliminary samples showing lower than expected germination results, MCIA's seed testing lab offers optional sand germination and lab treated germination services. In some instances, sand germination testing can show improved results in samples with light seed borne infections and no mechanical damage. Treated germination testing can show the response of a sample to testing with a standard fungicide treatment. MCIA is currently using a treatment package of CruiserMaxx + Vibrance. Please feel free to contact the MCIA seed testing lab if you have questions or would like to discuss testing options for your 2017 soybean seed production.

Vigor Testing for Soybeans

There are basically two types of vigor tests for soybean, namely a cold test or an accelerated aging test. Based on past experience, MCIA believes the accelerated aging test is a more reliable tool for measuring vigor and predicting storability for soybeans than a cold test. We offer the accelerated aging test in house and can accommodate requests for cold tests through one of our partnerships with other seed testing labs.

Accelerated aging tests should be conducted in conjunction with and compared to the results from a normal warm germination exam. High vigor lots should not exhibit more than a 5-10% spread between the 2 tests. Spreads over 10% indicate that the vigor level is dropping and the higher the spread, the lower the vigor. Please contact the MCIA office if you have questions or would like to discuss vigor testing in greater detail.

Variety Testing Performance Results

Results from the University of Missouri's 2017 performance testing for corn and soybean are available via the internet at http://varietytesting.missouri.edu/ and may also be accessed via a link on MCIA's web site (http://mocrop.org) . Preliminary results are usually posted as soon as a location is harvested but keep in mind they are only preliminary results until all data has been checked and verified. Please contact the MCIA office if you would like to receive a printed copy of the2017 results when they become available.

2017 Spring Seed Directory

A copy of the Missouri Spring Seed Directory will be posted to the MCIA web site shortly after the first of the year. In the interim, please contact the MCIA office if you have questions regarding the availability of any particular type and/or variety of soybeans.

MCIA Holiday Office Hours

The MCIA office will be closed on the following days during the upcoming holidays.

December 22	December 25	December 26	January 1

Sampling, Testing, Labeling and Tolerances: How they Relate

Larry Nees, Seed Administrator, Office of Indiana State Chemist

Seed testing and labeling are two mainstays mandated by law and a part of being in the seed business in this country. Our state and federal laws establish minimum labeling requirements to express seed quality and place responsibilities on the seedsman to have appropriate tests performed on each seed lot to determine the quality of seed products destined for distribution to customers.

Sampling is a very important factor in determining the quality of individual seed lots. Obtaining a representative sample of a seed lot, regardless of lot size, is always a challenge. And sample size has an impact on representative testing. If an entire seed lot could be tested its true value would definitely be ascertained. However, this is neither feasible nor ordinarily possible! Thus, in seed testing the quality of the lot must be determined from a sample that represents the entire lot but yet is small enough to allow for efficient testing by trained staff. Established sampling protocols take this into consideration to minimize variation.

Testing that's required by seed laws should be done by skilled analysts trained to evaluate seed quality using uniform procedures and guidelines. Testing protocols utilized should be those established by national and/or international organizations that promote testing uniformity. Using uniform and accepted procedures helps to minimize testing variation between laboratories and analysts.

Labeling requirements established by law set the minimum labeling factors representing the basic seed quality of each lot of seed sold. The labeler has the freedom to set label claims for the required quality factors. Claims should be truthful and accurate based on tests conducted on the seed. Since claims for purity and germination are considered "minimum" claims, the labeler should avoid using an exact test result as a claim. It's almost impossible to duplicate test results through repeated testing of the same sample or by testing additional samples of the same lot. Consequently, it's wise for a labeler to allow himself a bit of a cushion to account for variability in sampling and testing.

Tolerances – what are they, why do we have them, and how should they be utilized? These are utilized to account for the expected variation that occurs in sampling and testing. Perhaps we should call them "permitted analytical variation" when used to compare test results from different laboratories, or results from different subsamples of the same sample, or comparing one analyst to another. A guarantee for a particular component of seed quality should never be made based on an assumed "tolerance".

TOLERANCES SHOULD NEVER BE USED FOR THE PURPOSE OF PERMITTING LABELING TO SHOW HIGHER QUALITY THAN IS ACTUALLY FOUND BY THE TEST! There is no "labeling tolerance"!

(Reprinted with permission from the Indiana Crop Improvement Association Newsletter)

Missouri Crop Production *(Source: Missouri Ag Statistics Service)*

Corn harvested area is forecast at 3.25 million acres, down 7% from 2016. Based on October 1 conditions, yield is forecast at 172 bu/ac, up 9 bu/ac from 2016. Production is forecast at 559 million bushels, 2% below 2016. If realized, this would be the second highest yield and third highest production on record.

Soybean harvested area is forecast at 5.92 million acres, up 7% from 2016. Based on October 1 conditions, yield is forecast at 49 bu/ac, unchanged from 2016. Production is forecast at 290 million bushels, up 7% from 2016 and the highest production level on record.

Cotton harvested area is forecast at 297,000 acres, up 12% from 2016. Yield is forecast at 1,220 lbs/ac, up 19% from 2016 and the highest yield on record if realized. Production is forecast at 755,000 bales (480 lb.) up 33% from 2016.

Rice harvested area is forecast at 160,000 acres, down 31% from 2016. Based on October 1 conditions, yield is forecast at a record 7,100 lbs/ac, up 450 lbs/ac from 2016. Production is forecast at 11.4 million cwt, down 26% from 2016.

Winter wheat harvested area is estimated at 540,000 acres, down 5% from 2016. Yield is estimated at 68 bu/ac, down 2 bu/ac from 2016. Production is estimated at 36.7 million busheld, down 8% from 2016.

Oat harvested area in 2017 was 13,000 acres, down 6,000 acres from 2016. Yield is estimated at 65 bu/ac, up 5 bu/ac from 2016. Production is estimated at 845,000 bushels, 26% below 2016.

Links to Items of Interest

New Cash Rental Survey Shows Some Downward Trends	http://extension.missouri.edu/n/2903
Tapping Sorghum's Genetic Potential	http://www.seedtoday.com/info/ST_articles.html?ID=161578
Collaborative Sorghum Investment Aims to Boost Sorghum Demand and Value	http://www.seedtoday.com/info/ST_articles.html?ID=161998
Bayer-Monsanto Deal Seen from a European Perspective	http://www.seedtoday.com/info/ST_articles.html?ID=161508
ASTA Statement on Competition in the Seed Industry	http://www.seedtoday.com/info/ST_articles.html?ID=161603
Renovation White Clover Released by Noble Foundation and UGA	http://www.seedtoday.com/info/ST_articles.html?ID=161685
Alternative Dwarf Wheat Genes Show Promise	http://www.grainnet.com/info/ST_articles.html?ID=161534
Bayer Considers Letting Go of the Monsanto Name	http://fortune.com/2016/09/20/bayer-monsanto-name/
ISU Project Finds Prairie Strips Yield Big Environmental Benefits	https://www.news.iastate.edu/news/2017/10/03/strips10years
Who Owns Who: A Farmers Guide to Seed Company Mergers & Acquisitions	http://news.agropages.com/News/NewsDetail---23917.htm
Calyxt Advances Herbicide-Tolerant Wheat and Improved Oil Canola to Phase 1	http://news.agropages.com/News/NewsDetail---23780.htm
U.S. DOE Awards Danforth Center $16 Million to Enhance Sorghum for Bioenergy	http://www.greencarcongress.com/2017/10/20171010-sorghum.html
Behind the Monsanto Deal, Doubts About the GMO Revolution	http://www.wsj.com/articles/behind-the-monsanto-deal-doubts-about-the-gmo-revolution-1473880429
Purdue Research Shows Cover Crops Increase Destruction of Weed Seed in Fields	https://phys.org/news/2017-09-crops-destruction-weed-seed-fields.html

Calendar

December 14	MO-AG Convention	Columbia, MO
December 14-15	MU Crop Management Conference	Columbia, MO
January 13-16	Southern Seed Association Annual Convention	New Orleans, LA
February 5-9	ISU Seed Business Management Short Course	Ames, IA
February 6-8	Corn Belt Seed Conference	Indianapolis, IN
February 8	MCIA Winter Board of Directors Meeting	Columbia, MO
February 27 – March 1	2018 Commodity Classic	Anaheim, CA

Happy Holidays