Illinois Seed News
July - September Third Quarter, 2010

CEO Report

by Dennis Thompson, CEO • dthompson@ilcrop.com

Professionals & Professional Organizations

It was a privilege to deliver the Welcome Address at the 85th Joint Annual Meeting of AOSA and SCST in St. Louis. The Association of Official Seed Analysts (AOSA) was holding its 100th annual meeting while the Society of Commercial Seed Technologists (SCST) conducted its 87th annual meeting. The 200 persons in attendance represented a "brain trust".

Seed testing rules established by AOSA serve to underpin the technical services provided the vibrant US seed industry by company, commercial, academic and certification agency laboratories that comprise the SCST professional organization. IL Crop proudly supports SCST and highly encourages our staff members to participate in testing referees, educational seminars, technical workshops and to serve in various leadership roles within SCST.

SCST offers career path development opportunities to the many dedicated women and men who work tirelessly in the industry's seed laboratories. The best known and longest established credential is the Registered Seed Technologist (RST) which focuses upon vigor and varietal evaluation. With the advent of biotechnology and a growing interest in establishing genetic purity levels the Registered Genetic Technologist (RGT) credential was established. While the RST and RGT are the highest credential in their respective disciplines, each has established benchmark credential categories. Attainment of the various benchmark credentials provides our staff professional development opportunities.

I am extremely proud of IL Crop team members who have achieved various levels of credentials through SCST as well as their departmental co-workers who have supported their efforts.

Matt Raymond
Certified Genetic Technologist (CGT)

Doug Miller
Registered Genetic Technologist (RGT)

Tammy Hobbs
Registered Seed Technologist (RST)

Steve Beals
Registered Seed Technologist (RST)

Gary Cook
Registered Seed Technologist (RST)

Addressing the 85th Joint AOSA/ SCST Annual Meeting was especially meaningful in that the IL Crop team was really involved and quite visible at the professional meeting.

Doug Miller
President of SCST

Steve Beals
Planning Committee Chairman

Tammy Hobbs
IL Crop Exhibit Coordinator

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Calendar of Events

July 5, 2010
4th of July Observed
Office Closed

August 8-11, 2010
AOSCA Annual Meeting
Niagra Falls, NY
Web: aosca.org

August 19, 2010
U of I Agronomy Day
Champaign, IL
Web: agronomyday.cropsci.illinois.edu

In This Issue


Seed Lab News

by Gary Cook, Seed Lab Director • gcook@ilcrop.com

Illinois State Seed Law Change

The Illinois State Seed Law was amended as of late last summer (August 13, 2009). The germination period for labeling cool season grasses (cool weather grasses) has been lengthened from 12 months to 15 months exclusive of the calendar month in which the test was completed, immediately prior to sale, exposure for sale, or offering for sale or transportation unless the seed is in hermetically sealed packages or containers. (Illinois State Seed Law: 505 ILCS 110/5 (2)). A sell by date was also legislated, meeting the same criteria as the germination date. (Illinois State Seed Law: 505 ILCS 110/4.2b)

The lengthening of the germination test date period will help defray some costs associated with grass seed sales due to frequency of relabeling. If the seed is being sold in other states, their state laws need to be met as well as the Federal Seed Act Regulations.

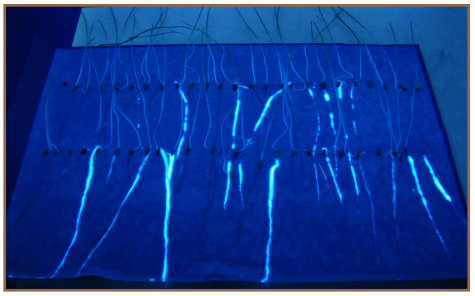
Grass Seed Testing

One needs to be aware of the factors that can reduce viability of grass seed lots. Even though most seed lots will still have acceptable germination results after a few years of storage this cannot automatically assumed to be so, even after relatively short storage times. Steps need to be taken before, during and after storage as well as during transport to assure the consumer is receiving high quality seed. Several factors are involved in the deterioration of grass seeds vigor and vitality. High temperature and humidity are primary enemies of high quality seed. Seed needs to be stored in cool dry conditions during all seasons of the year, but particularly during the summer months. Rodent and other pest control measures are necessary to maintain seed lot integrity and avoiding possible chemical injury due to close proximity to stored pesticides is a must particularly for the more sensitive grass seeds. ASTA published a booklet in 2008 titled "Retailers Guide for Proper Handling & Storage of Lawn Seed Products". This booklet is available for download and makes a handy reference for storage as well as labeling of grass seed products. I would however check the dates listed for relabeling due to the changes in state seed laws since 2008.

The primary test conducted on grass for viability is the standard germination test as specified by the Association of Official Seed Analysts (AOSA) Rules for Testing Seeds. Additional tests for vigor or viability can also be conducted. Purities also must be conducted to develop component percentages prior to labeling. Certain crop kinds require additional testing due to possibility of mixtures such as the fluorescence test for Annual and Perennial Ryegrass.

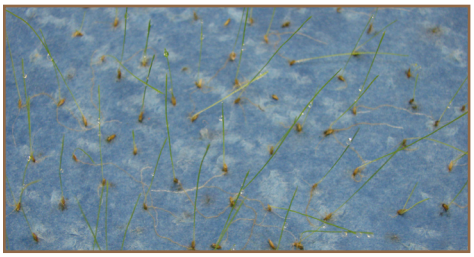
For the corn and soybean evaluation process, two analysts evaluate the sample to help prevent analyst evaluation error. The readings are then recorded on a germination card and taken into IL Crop's Tag and Records Department. Here the information is entered into the computer system and test results are instantly available on the IL Crop website. The IL Crop Report of Analysis is then printed and a copy is mailed to customers if requested.

Care should be taken to avoid some stop sales due to tolerance and labeling problems. The most common problems found by state testing laboratories are germination out of tolerance, mislabeled or not labeled noxious weed seeds, and grass mixture components not correctly



Ryegrass Flourescense Test

Ryegrass Germination



Kentucky Bluegrass Seed Germination Test

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Field Services News

by Doug Miller, Field Services Director • dmiller@ilcrop.com

Value vs Cost

Regardless of who does the actual work, field inspection and quality control programs do cost money. Everyone has stiff competition and every penny counts. No one wants to spend money on something their competition does not. But what is a third party field inspection worth?

For those who have had to monetarily "fix" mistakes, the value of field inspections is immeasurable. Mistakes such as incorrect varieties, varietal mixtures and similar problems may be relatively rare. But it takes a constant vigil to guard against them. Our inspectors have identified incorrect varieties and lines based on all of the typical characteristics provided by breeders. From hilum color to silk color, our inspectors have caught errors before they have become problems.

And what is a third party review of your quality system worth? From simple audits to consulting projects IL Crop has assisted multi-nationals and family businesses with a fresh set of eyes and a different perspective on issues facing producers. Our auditors have identified gaps in quality systems and our consultants have helped design national stewardship plans. The old cliché of "failing to plan is planning to fail" is true. Not stewarding and reviewing your plan is also "planning to fail." Simple questions that go unasked and inadvertent gaps in your system can create some of your biggest problems.

Remember that quality control is a nice way of saying "we measure our process by looking here and testing there." Here and there you get a snap shot or solid estimate of what will happen to your product once it has been planted in your client's field. To be of value you need the best assessment and best snap shots available within a system that lets you confidently and profitably bring a product to market. We know the value of our services outweigh the cost. Our field services and quality management capabilities are diverse and flexible, ready to support you in any or all phases of your operation.

The ultimate value for your company should always outweigh the dollar amount spent. Problems that arise from faulty or poorly implemented internal field inspection, conditioning and sampling plans cost more than many will readily admit. Don't wait until your completion can measure how much your quality system is really costing you. Contact us for a free initial consultation. Doug Miller, Business Development Director 217-377-3409.

2010 Inspector Training

The first installment of inspector training for the 2010 season was presented at the Noel Ag Center, Parkland College, June 16th. This year's training included a visit from Nancy Pataky, Director of the University of Illinois Plant Clinic. Nancy presented our standard APS (American Phytopathological Society) image library adding details such as key diagnostic features and symptoms that mimic or make diagnosis difficult. She also brought tissue samples for the inspectors to study and demonstrated how to obtain and submit a sample for a definitive diagnosis. The inspectors and staff are very appreciative of her excellent training.

Insect Resistance Management (IRM) assessments have grown this year with the addition of more technology providers utilizing the AOSCA program. As in years past, Matt Raymond is leading the effort of managing the AOSCA IRM program. New this year is the use of laptops for reporting purposes. A separate training session was held at the office for inspectors with IRM duties and for dedicated IRM assessors. From inspecting fields to assessing stewardship practices we are confident that the Field Services' inspectors and staff are ready for another successful season of serving the seed industry.

Matt Raymond, Field Services Asst. Director conducts training on how to use the new IRM program





IPG Lab News

by John McKinney, IPG Lab Director • jmckinney@ilcrop.com

2009 Leaving Many Corn Handlers Stressed Out

The delayed harvest caused by the wet spring and late planting across much of the corn belt in 2009 may have appeared to have ceased to be an issue once corn growers finally harvested their fields. For many though, the rush to get the crop out of the field and avoid yield losses and winter weather meant grain quality suffered. In retrospect, many of the issues predicted to appear have done so. Storage managers, grain merchants and processors have been left to deal with significantly lower quality than desired, sometimes even in cases where contingency plans were in place. In particular, mold issues and stress cracks have been prevalent.

The modern harvest equipment used by many large farm operations was seen as a blessing to those finally able to get in their fields in December. For many growers, the current equipment allowed them to harvest significantly faster than they would have even ten years ago. Unfortunately, many of those operations did not also increase their on-farm dying capacity as well. With the circumstances of last fall, a number of corn growers either let their combines sit idle while the bottleneck at the dryer cleared, rushed the drying process by cranking up the air temperatures or didn't dry sufficiently. Many local elevators also felt the pressure and cut off their receiving early in the day to match their dryer capacity.

Any corn that was not sufficiently dried prior to storage became a potential haven for mold growth, especially species of Aspergillus and Penicillium. A. flavus, producer of aflatoxin, grows optimally on corn at 18% moisture and temperatures above 80' F. Any increase in physical damage due to more aggressive harvest techniques will also increase the growth rate. The cool wet growing conditions meant aflatoxin production in the field was not a likely concern, but warming spring and summer temperature and wet spots in bins hold the potential for A. flavus growth and aflatoxin production. Some Aspergillus and Penicillium species can grow on corn at moistures of 15-16%. Either of these may cause "blue-eye" mold, though Penicillium infection usually is seen in the field or early in storage. If observed after several months to a year of storage at 14.5% moisture, the cause is likely a species of Aspergillus.

Fusarium species, responsible for mycotoxins such as fumonisin, DON (vomitoxin), and zearlenone, can grow and produce some toxins in corn during storage if the moisture level is extremely high. This does not necessarily mean the toxins will be formed, though.

Stress cracks are very prevalent this year. Though I have discussed these previously in the Illinois Seed News (May-June 2003), this year certainly warrants a review of the subject. Stress cracks are internal fissures in the hard endosperm of a corn kernel. The pericarp of the kernel is not damaged, so the outward appearance of the kernel may be visibly unaffected. The cause of stress cracks is pressure build up due to large gradients of moisture content and temperature within the kernel's hard endosperm. The internal stresses are not able to build up as much in the soft, floury endosperm; food grade corn is more likely to be affected.

Stress cracks present in corn

The surest way to get large moisture and temperature gradients in a kernel is high-temperature drying. So while the corn dries faster, its suitability for food uses is severely reduced, while the susceptibility to mold damage increases. But high-temperature-drying is not a requirement for stress crack formation.

Over the past few years we have received hard endosperm corn samples from a growing region that has relatively warm temperatures consistently throughout the growing and harvest seasons. Rainfall is somewhat scarce, so irrigation is employed through maturity, then ended; drydown is fast, so stress cracks are common most years. This year that location had substantial rainfall during the drydown period.





Puerto Rico News

by Lizandro Perez, Station Manager • lperez@ilcrop.com

Greetings from the Caribbean

This is the time of the year that we use to perform preventive maintenance on all our equipment and facilities. It is also when most of our regular staff takes their vacations. In addition to maintenance, a room was constructed inside the main farm building to work with regulated seed and another smaller room was constructed for USDA APHIS inspectors to inspect regulated seeds.

At the fields, there are corn, soybean and sunflower plantings but the acreage is less when compared to acreage planted in winter. So far growing conditions are good with a low insect and disease pressure. A corn trial was also planted to do internal research where we will evaluate different pre-emergence and post-emergence herbicides for efficacy. Related to spraying, we are in conversations with Scott Bretthauer, University of Illinois for an update in spray tank cleaning methods. The purpose of our talks is to review cleaning procedures according to the type of pesticide formulation used. In the past we have used Scott's advice with excellent results.

Our stewardship program is moving forward. Irma Alvarado accepted a regular position with IL Crop as Assistant Quality Manager. On May 1, 2010 she became a regular staff member of the Puerto Rico winter farm team. This is what Irma said about her duties and commitment;

"Excellence through stewardship is a commitment for me. In my new role as Assistant Quality Manager for IL Crop I really feel engaged with the goals of the company assuring that all processes and procedures related to plant product integrity meet all the requirements established by law and by company protocol.

Since I initially began to work for IL Crop in January, I have recognized that one of the most important things in this job is to bring support where ever it is needed to promote team work as a standard practice in improving the quality of our procedures.

Irma Alvarado hired as our Assistant Quality Manager

The stewardship program involves all permanent employees and temporary personnel. It's just to make everyone conscience about the importance of our business and that we have to give the best of ourselves to keep customers satisfied and attract possible clients with our success.

Proper data collection and supervising various field activities such as: clean-out procedures; sampling; disposal of plant materials; harvest; and planting processes etc. are the more common tasks that are performed every day in the farm. We as a team have to assure that every process is done in the right way."

Next September 2010 is the fifth convention for the Puerto Rico Seed Research Association. The PRSRA is a non for profit organization whose main purpose is to deal with common agronomic and policy problems affecting the seed business on the island. Education is another important part of our mission. Most of the seed research businesses in Puerto Rico are part of the PRSRA. The convention is celebrated every two years and the main purposes are education and awareness of how important winter nurseries are for a successful breeding program.

IL Crop CEO Elected to ETS Board

Dennis Thompson, CEO of Illinois Crop Improvement Assoc, Inc., was elected to the board of directors of Excellence Through Stewardship® (ETS)

The mission of ETS is "To promote the responsible management of plant biotechnology, primarily by developing and encouraging implementation of product stewardship practices and by educating the public about those practices."

Thompson was elected to the board as a representative of emerging companies and third-party service providers. The board is comprised of thirteen members of companies representing the seed industry.

ISTA
ILLINOIS SEED TRADE ASSOCIATION

Illinois Seed Trade News
by Tom Newman, ISTA President • tnewman@wyffels.com

"Exciting and Educational"

It has been exciting and educational to serve as the President of the IL Seed Trade Association for 2009-2010. Many thanks go to Richard Denhart, our Executive Secretary, for providing the day to day management of our organization. Thanks should also go to the Board of Directors for their support and commitment to the seed industry. We appreciate the organizational assistance provided by Heather Chinn and the support of the IL Crop Improvement Association.

Thanks to your continued support, your Association is in excellent shape financially. One of the critical services provided to our members is our lobbying efforts in Springfield. Our lobbyist Mike McCreery, continues to inform, educate, and communicate to our legislators and their staff about seed industry concerns. We are happy to continue hearing his reports and perspective on legislative activities and its potential impact on us. Those who contribute to the voluntary legislative fund provide significant support to these lobbying efforts and we hope others see the benefit for this continuing service to the seed industry.

Congratulations to your new officers and Board of Directors for 2010-2011. President, Ron White; Vice President, Dave Tierney; Secretary, Dennis Brown; Treasurer, Phil Laymon; Past President, Tom Newman; Board Members, Doug Swartz and Rod Irwin.

2010 Honarary Member of the Illinois Seed Trade Association

The President of the IL Seed Trade Association has the option of identifying an individual for honorary membership in the Association at the annual meeting. This year I am happy to honor an individual who has been familiar to the seed industry in Illinois for about 30 years. This individual has worked on breeding corn and soybeans for disease resistance at the University of Illinois, but probably is more familiar to many of us in the seed business for his seed treatment research. Today I am happy to recognize Dr. Wayne Pedersen for honorary membership into the IL Seed Trade Association.

Dr. Petersen was raised near Grandin, North Dakota. He attended North Dakota State University with a psychology and science major intending to teach science, but after student teaching decided to change to studying plant pathology. His student work in the Plant Pathology Lab during his senior year provided the right background for the switch. He received both an M.S. Degree and Ph.D. Degree from North Dakota State University specializing in Fungal Genetics of Covered Smut of Barley. One of his accomplishments while there was creating a super-race of Covered Smut that could overcome some 17 genes for resistance in Barley. Dr. Petersen also had post-doc assignments at the University of Nebraska and Penn State University.

He arrived at the University of IL in 1980 as Assistant Professor in Plant Pathology. His assignment was breeding corn for disease resistance. He also conducted significant seed treatment research and is where he had much contact with the seed industry. In the early 1990's after discovering he had a corn pollen allergy, shifted breeding work to soybeans. After 25 years of work at the University of Illinois he retired in 2005. He was an advisor to 14 M.S. Degree students and 14 Ph.D. students. He also served on graduate committees of 162 advance degree students. He taught 6 different classes and was involved in the off-campus classes for advanced degree students.

In retirement, he is still a Plant Pathologist consulting with seed companies and chemical companies in plant pathology related areas. He feels he is still teaching plant pathology, but to a different audience. He enjoys the consulting work and arranges it around his retirement schedule of golfing and fishing.

It is my honor to recognize Dr. Wayne Pedersen as Honorary Member of the IL Seed Trade for 2010.

IL Crop News Continued.....

CEO Update

Professionals & Professional Organizations

(continued from page 1)

Matt Raymond
Exam Proctor

Dave Rambow
Examinee

Mary Jo Edmison
Registration

Susan Schmidt/Mary Jo Redmon
Attendee

Hannah Hudson
IL Crop Management Representative

Matt Raymond
Genetic Technology Proficiency Committee

Steve Beals/Tammy Hobbs
SCST Seed Library Committee Co-Chairs

IL Crop has a vested interest in promoting a strong AOSA/SCST relationship and we are proud to invest in our staff who "make it happen" for our seed industry clients.

Seed Lab Update

Grass Seed Testing

(continued from page 2)

proportioned. Records of seed lot conditioning and distribution need to be complete and accessible.

Any comments or questions about seed testing and seed quality issues, please contact myself or Steve Beals at the IL Crop office.

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Seed Lab Director
Email: gcook@ilcrop.com
Phone 217.359.4053

Steve Beals
Seed Lab Asst. Director
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IPG Lab News

2009 Leaving Many Corn Handlers Stressed Out

(continued from page 4)

This delay in the process resulted in extremely low stress crack levels, a rarity which is of high value this year.

Stress cracks are weaknesses in the structure of the kernel. Just as harder endosperm corn is preferred as it is less susceptible to breakage, low amounts of stress cracks are wanted. High amounts of breakage due to stress cracks lead to increased losses in cleaning and reduced flaking grit yield for dry millers. Stress cracks also upset the process balance in alkaline cooking. Water diffusion rates during cooking are increased because the structural gaps allow water to move rapidly throughout the kernel. Cooking times are substantially different from those of intact grain. This is being reported in practice this year.

Reminder: Inspection Application Due August 1st for Soybean (Certified/Registered/QA/Commercial)

IL Crop: New Website — WWW. ilcrop.com

We encourage you to take a look at IL Crop's new website. The format follows IL Crop's well received corporate brochure while retaining much of the trusted areas of the old site. The site is divided into three main areas based on our client's needs. The areas include Technology Developers, Producers and Quality Managers. Still available under the information section are Forms, Publications, Inspection Deadlines, News, Calendar, Links and Industry Bulletins. There is also a link to demo our web-results to see what our quick-view and printable reports look like. Our web-results also feature e-mail notification of samples received and new data postings. For those of you already using our free web results program, you now have the ability to search all crops using a lot number or view all crops within a chosen 3 month time frame. This new option lets you look up results without the need to specify crop/kind. This is most helpful to those who work with many seed kinds and prefer the ability to search by variety name, lot number or sample status. Small seed clients who want to quickly access data components for a blending operation will also find this feature handy. As always you can download your data and your data is never purged. IL Crop tests over 100 crop kinds, is ISO/IEC 17025:2005 Accredited, and works for producers, researchers and regulatory officials around the world.

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