

# Illinois Crop Improvement Association, Inc.

Annual Report to the Membership

Fiscal Year 2018-2019



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ISO/IEC 17025:2005 Accredited Laboratories



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## Heads-Up

Doug Miller  
Chief Executive Officer

During the past year the Puerto Rico farm business continued its recovery and added additional crops and services. Sunflower growouts returned in a big way, after taking a year off due to Hurricane Maria, helping the bottom line significantly. Spring grains, such as wheat and rye, also returned. Mung beans and dry beans were added as new crops. While the majority of our customers continue to be from North America and South America we have also added clients from Europe.

In Champaign the Seed Lab also continued to add to its list of crops tested. From Alfalfa to Zucchini the seed lab now tests over eight-hundred (800) kinds and operates throughout the year. The greenhouse temporarily broke its seasonal pattern by conducting a soybean crossing project during the summer of 2018. November 2018 to March 2019 was also one of the busiest on record for the greenhouse. Much of the greenhouse's increase in business is attributed to new soybean traits and a spike in adventitious presence testing where molecular techniques were not yet available.

The Identity Preserved Grain Lab experienced a compressed season due to harvest delays in 2018. The lab again served as a provider for the US Grains Council's Corn Harvest Quality Report and the Corn Export Cargo Quality Report. Chemical composition, physical characteristics, mycotoxin and related services for breeders, merchandisers and processors were provided in a timely fashion despite the delayed harvest. Other activities this past year included providing check samples for evaluating a digital grain analysis app. While only marginally successful we do see the need for repeatable, storable and shareable assessments for physical

characteristics in the grain trade.

The number of acres for inspection declined again and corn acres for inspection were the lowest in recent memory. Soybean acres represented the majority of income for the field inspection program in 2018. The field inspection program continues to be accredited under the National Seed Health System for phytosanitary field inspection of several crops in Illinois and Puerto Rico. Specialty crops and programs include certification of rice and warm season turf, as well as maintaining an MOU with the North American Invasive Species Management Association for Weed Free Forage and Gravel in Illinois. Industrial hemp became the hot topic over the past year and Illinois Crop promoted the use of AOSCA standards and related programs. Certification and QA standards for industrial hemp seed-production were made available to regulators and interested parties. Identity Preserved programs were also promoted as a means of maintaining the identity and purity of CBD production.

In conclusion this annual report serves as a “heads-up.” Our definition of “heads-up” is best described as showing alertness and perceptiveness towards change. During my youth “heads-up” meant a baseball, football, or similar object was heading my direction. My instincts and alertness determined whether I would catch it with my hands or with my face. Of course, no “heads-up” was given by my brother or my friends when dirt-clods, rotten apples and worse were thrown my direction. As the seed and grain industries continue to evolve, and the technology accelerates, the term “heads-up” applies to dodging “rotten apples” and quickly recognizing opportunities to catch. Staying relevant and solvent in today’s seed and grain industries requires everyone to help recognize and act on opportunities along with the wisdom to avoid unnecessary and inordinate risk. To effectively grow and serve the seed and grain industries we need you to be heads-up members of the Illinois Crop Improvement Association.

## No “Cure-All”

Steve Beals, Registered Seed Technologist  
Seed Lab Director

Germination results for the 2018 seed corn crop were excellent and in the range that we have been seeing over the past few years. Soybean germination results showed a significant amount of disease pressure (*Phomopsis*) due to the 2018 harvest conditions. Seed producers turned to fungicide seed treatments looking for a cure. As a result of testing various fungicide products and utilizing several testing methods, no “cure-all” was identified. Determining the best course of action was done on a lot by lot, case by case, basis. In some cases, where fungi were controlled by seed treatments, signs of mechanical damage were revealed as an additional complication. This year’s soybean seed quality challenges prompted Prairie Farmer Magazine to contact me for an interview to discuss the issues that we had seen in the lab. I was also contacted by RFD-TV for an interview which aired on Wednesday, February 6. I was truly honored to be interviewed and to have the opportunity to promote the IL Crop Improvement Seed Laboratory.

The IL Crop Seed Lab continues to grow in the number of samples and crop species tested during the past year. We anticipate the number of samples and species tested to grow over the next testing season. The IL Crop Seed Lab has been adding equipment and supplies as needed to handle increases in testing volume. The Seed Lab purchased a new Kolpak 8x8 walk in chamber in July 2018. We received the chamber mid-August and put it into service. This is our third 8x8 chamber in our fleet of walk in germination chambers. In December 2018, we purchased a used Kolpak 11x12 walk in cooler. We have the unit in the warehouse pending conversion completion. We expect to have the bigger chamber up and running mid-June 2019. This spring we were able to acquire a used VWR

water jacketed chamber that is used for Accelerated Aging and a commercial size refrigerator that will be used as a prechill chamber for samples that require prechilling prior to germination. The equipment additions will help us be prepared for additional samples as they arrive into the lab for testing.

Lori Lauchner was hired in May 2019 as a Data Entry Clerk to start learning the process of sample check-in. Mary Jo Edmison, our current sample check-in clerk has plans of retirement in the near future. Lori moved to IL in 1991. She has held various positions throughout her career such as field Technician with Syngenta Seeds in Clinton, IL, Molokai, HI and Kauai, HI. She has also held administrative positions in personnel, retail, office, and property management. Lori worked part time in the IL Crop Greenhouse last fall. In her free time, Lori enjoys cooking, hiking, gardening, outdoor activities and most of all spending time with her family and grandchildren.

The Seed Lab currently has 11 full time employees. We have 3 Registered Seed Technologists, 4 Seed Analysts, 2 Seed Technicians, 2 Data Entry Clerks, and several part time employees.

In conclusion the Seed Lab strives to:

- provide customers with timely, accurate, and repeatable results.
- continually look for opportunities to improve laboratory efficiency.
- participate in meetings, workshops, webinars, and referees as they are available.

We appreciate your business and support.

## Acres and Traits

Matt Raymond, Registered Genetic Technologist  
Field Services Director

The Field Services department serves two different aspects of the seed industry, field inspections and trait testing. During the traditional crop growing season field inspections compose the majority of the services. Traditional inspections provide an assessment of the purity of the field that is used to help determine the quality of the crop, while phytosanitary inspections are performed to assess fields for diseases and are utilized for moving seed internationally. After harvest, the inspection season comes to an end and trait testing begins in the lab and greenhouse. The testing covers a wide range of methods that are used to assess the trait purity of seed lots or GMO contamination levels in grain and seed.

Covering the field inspections in the State of Illinois is no small task, with Illinois farms covering an estimated 27 million acres. IL Crop employed over 40 part time inspectors to cover the 67,000 plus acres of fields in Illinois that needed some type of inspection in 2018. Corn, soybean and phytosanitary inspections made up the bulk of the inspection work in 2018, with sweet corn, popcorn, wheat, oats, barley, rye, rice and a few other crops accounting for the rest.

In addition to the traditional certification and phytosanitary inspections duties inspectors also perform additional tasks as needed, such as taking official seed samples, conducting Insect Resistance Management (IRM) assessments, and performing weed free forage/mulch/gravel inspections. Many of our inspectors return year after year bringing decades of experience to the inspection programs. Currently 11 inspectors have over 10 years' field experience and of those, six have 20 years or more experience. Our senior inspector has been with IL Crop 47 years and when added up our inspectors have 331 years of combined experience.

The testing lab was extremely busy during 2018 and the

greenhouse has been filled to capacity throughout the entire testing season. Typically, testing in the greenhouse in the past has been herbicide traits such as glyphosate, glufosinate, sulfonylurea and imidazolinone, but the release of new soybean herbicide traits has expanded testing options and demand. Now included in herbicide trait testing in the greenhouse are the synthetic auxins Dicamba and 2,4-D and the HPPD inhibitor Isoxaflutole. In addition to the new herbicide tests, 2018 also saw a limited resurgence of sulfentrazone tolerance screenings on soybeans which is an older method for determining soybean response to residual preplant herbicides.

In addition to the herbicide trait testing in the greenhouse the trait lab also performed; insect resistance gene trait testing on corn using Enzyme Linked Immunosorbent Assays (ELISA), a soybean crossing project to maturity in the greenhouse, and non-GMO testing using lateral flow strip protein detection methods. The non-GMO testing done in 2018 encompassed mostly the major agronomic crops of corn and soybeans and a small amount of alfalfa, canola and hay. The non-GMO testing on hay was a new addition in 2018 per the request of a customer and is capable of detecting genetically modified alfalfa in dried hay samples. Total numbers of samples tested in Field Services for the greenhouse and lab for each crop in 2018 was: soybeans - 6,526 samples; corn - 1,031 samples; alfalfa - 18 samples; canola - 10 samples; and hay - 10 samples, for a combined total of 7,595 samples.

Between the greenhouse, lab and fields it takes a coordinated effort among all the staff working in a timely and successful manner. I am looking forward to another year of working with our excellent office, lab and field staff and eagerly anticipate seeing what the upcoming season will bring.

## Founder's Concept Continues

Doug Miller, CEO with  
Sandy Harrison, Identity Preserved Grain Lab Supervisor

The Identity Preserved Grain Lab experienced a compressed season due to harvest delays in 2018. Chemical composition, physical characteristics, mycotoxin and related services for breeders, merchandisers and processors were provided in a timely fashion despite the weather issues that delayed the delivery of samples. The lab again provided services in support of the US Grains Council's Corn Harvest Quality Report and the Corn Export Cargo Quality Report. Other activities this past year included providing check samples for evaluating a digital grain analysis app. While the digital application was only marginally successful in determining the grit to germ ratio in corn we do see the need for repeatable, storable and shareable assessments of physical characteristics in the grain trade. To that end the Illinois Corn Growers Association (ICGA) was approached regarding the further development of an existing digital grain analyzer. An RFP was submitted in 2018 and eventually rejected by the ICGA board. ICGA staff suggested that we ask the US Grains Council for a letter of support and resubmit the proposal. We worked with Centrec Consulting to obtain letters of support. Unfortunately the funding request was declined for a second time by the ICGA board.

Overall the Identity Preserved Grain Lab had a good year working with merchandisers, breeders, researchers, university staff and industry stakeholders. A broad range of interests are served by the lab. All have a common interest in assessing the composition and processing characteristics of oilseeds and grains. This is exactly why the IPG Lab was established just over 30 years ago. Measuring the various characteristics of corn, soybeans, wheat and other crops for customers was the founding concept for the lab.

The lab continues to offer services that identify exceptional processing and performance characteristics for applications such as dry milling, wet milling, oilseed crushing, feed production and more. Concurrently today's rapid progression of new genetics, attributes and technologies requires more data than ever before. Data drives decisions; from breeding to commercialization to end-use. Illinois Crop's IPG Lab provides research and independent validation services for evaluating the attributes and enhancements of breeding materials, processing methods and production systems. The lab is unique among seed certification agencies and carries the concept of identity and quality from seed through the farm to the end user. The big picture, ranging from grain sales to national quality reports, relies on the details generated by the Identity Preserved Grain Lab.

Illinois Crop Improvement would like to thank Centrec Consulting and the Champaign-Danville Grain Inspection (CDGI) for their continued leadership and collaboration. CDGI is the official grain inspection service provider for east-central Illinois as designated by USDA's Federal Grain Inspection Service (FGIS). Centrec Consulting has been contracted over the years by the US Grains Council for its quality reports that support and open export markets for corn. The services and sub-contracts are an important part of the grain quality efforts aimed towards improving export markets and domestic processors.

## Road to Recovery

Lizandro Perez  
Puerto Rico Station Manager

2018-19 was a good season for the farm. In terms of weather no storms affected the island. While part of the island had abnormally dry weather or moderate drought we received what we needed in the way of rains by late May. Most of the farm's available acreage was planted. New crops and new projects were also planted and a couple of new clients started using our farm services. New crops included mung beans and cowpeas. New projects were sorghum growouts and sunflower nursery requiring emasculation.

For corn we planted nurseries, isolations and growouts. This was the first year for longer rows with the same amount of seed per row for corn growouts. Results were less double plants and better seed spacing. Alleyways were shorter but did not cause much of an inconvenience. Feedback from clients was excellent and we are going to incorporate our longer rows for all corn growout plantings. Sorghum services included nurseries, isolations and growouts. Both fertile and sterile sorghum growout entries were planted. The client graciously provided us the necessary training to read both sterile and fertile entries. We now have farm personnel capable of doing sorghum growout readings. Soybean projects included crossing blocks, generation advances, growouts and increases. New for this year was a soybean crossing block inside insect proof cages. The main reason for the cages was control of white flies and subsequently preventing virus infections destroying susceptible plants. Inside the cages we had healthy plants with good pollen. Cages are something we can offer our clients for materials susceptible to carlavirus.

Sunflower nursery and growouts were a big part of the

farm work this past season. One of the nurseries was for emasculation. Emasculation, removing the male flower parts, is something we have not done in the past but a crew was trained and the nursery was a success. Sunflower growouts for confection types and oil types were also evaluated this season. Other crops planted were dry beans, barley, peanuts, tobacco and wheat.

PRABIA, INC (Puerto Rico Agricultural Biotechnology Industry Association) and IRAC (Insect Resistance Action Committee) provided a three days training for its members regarding measures to extend the useful life of insecticides in Puerto Rico. Attendees from IL Crop were our farm manager Emmanuel Lasalle and our intern Marilys Rivera. The purpose of this initiative is to establish and maintain fall armyworm colonies by county to evaluate for insecticide resistance. One of the goals is to determine if there are resistance regions. The “windows insecticide initiative” involves the use of different modes of action on a two month window of rotation. The program continues to operate on PRABIA, INC members' farms.

New equipment was also added including a Hagie DTS10 that was bought in November of 2018. All tractors, harvest and threshing equipment served us well. Facilities repairs to the damage caused by Hurricane Maria in 2017 continue on the farm and in our communities. We are looking forward to another season of winter services. We appreciate your business and support.

## Illinois Crop Quality Policy

The Illinois Crop Improvement Association, Inc.  
is dedicated to providing superior  
laboratory testing service to customers by:

- ◆ implementing good professional practices,
- ◆ requiring that all laboratory personnel familiarize themselves with the quality documentation and implement the policies and procedures in their work and
- ◆ continually improving our quality system.



Illinois Crop Improvement Association, Inc.

## Puerto Rico Winter Farm Quality Policy

The Illinois Crop Improvement Association, Inc.  
in Juana Diaz, Puerto Rico is committed to:

- ❖ adhering to all regulatory and stewardship requirements and
- ❖ maintaining a high-level of quality and strong customer service within an environment that has safety as a first priority, is focused on the customers, and fosters continual improvement.



Illinois Crop Improvement Association, Inc.

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