IOWA SEED ASSOCIATION

NEWS BULLETIN

Journal of ISA News & Updates
April 2018

Annual Golf Tournament : Join ISA on June 27

The annual ISA Golf Tournament is right around the corner! Our four-person "best shot" tournaments usually mean low scores and a lot of fun. You can register as an individual and we will place you in a foursome, OR you can make your own and register as a team.

Golfer registration is $90 per player. Registrations must be received by Wednesday, June 20, 2018. Sponsorship opportunities are available. For open sponsor slots please contact the ISA office for details.

More information and to download golfer registration online http://iowaseed.org/golf/.

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Details of the Day

Location:
Veenker Memorial Golf Course
2916 Veenker Dr. Ames, IA 50011

10:30 AM
Golfer Check-in

11:00 AM
Lunch

12:00 PM
Shotgun Start

Award ceremony and light snacks will follow immediately after the completion of golf.

ISU 2018 Seed Short Course

ISU Short Courses and Workshop begin at 8:00 am each day of class and conclude at 5:00 pm. Registration is from 8:00-8:30 am on the first day of each session.

Germination Week - $350 | Class: April 23-26; Exam: April 27

Participants will gain experience evaluating seedlings of 16 species (crops, vegetables, flowers grasses, etc.) from the warm germination test plus work with cold tests, accelerated aging, tests for biotech traits (herbicide bioassay, immunoassay), tetrazolium and more. A popular and unique highlight of the week is a three hour session of moving between stations for hands-on work in the Germination lab.

Purity Week - $350 | Class: April 30-May 3, Exam: May 4

The emphasis of the week will be on seed identification through working with samples, advice from instructors, and use of electronic and hard copy references. Participants will have the opportunity to work with a variety of species of seeds: with up to 32 species of seeds, grasses, legumes, cereals plus weed species present in some of the samples. Hands-on activities also include using seed blowers, mechanical dividers, seed counters and a moisture meter. Lectures will be interactive and will include the AOSA Rules for Testing Seeds, uniform blowing procedure, multiple unit procedure, tolerances, varietal purity, sampling and coated unit procedures.

Tetrazolium Workshop - $300 | Class: August 14-15

Examines principles of Tetrazolium (TZ) testing, including seed physiology, why seeds stain, factors affecting staining, evaluation of TZ tests, uses for TZ information, and how the TZ test relates to other tests. Participants will gain hands-on-experience preparing and evaluating TZ texts on several different species of seeds. Individual training is available by request on August 16.

Click here for the full brochure

Register for Seed Testing Short courses or workshops

Because this is a hands-on learning situation, enrollment is limited. Registration is on a first-come, fees-paid basis.

Seed Academy Offers On-Site Workshops

The Seed Academy is offering an on-site Seed Tech Week in May with mix of hands-on, demonstration & lecture. You can select training specific to your area of interest or attend all three.

Seed Tech Week Overview

Seed Tech Week is three part course designed for new and experienced seed technologists. It is also an excellent preparation workshop for candidates who plan to take the registered or certified seed technologist test.

Benefits - Three 1 1/2 day training sessions

- Seed Purity
- Genetic Purity
- Seed Viability

More information is available on their website http://seedacademyonline.com, 605-692-2758, or email jody.bultman@SoDakLabs.com. Select courses offered January - December. On-site location 236 32nd Ave. Brookings, SD 57006. Online courses available.

IOWA SEED ASSOCIATION

Secretary Perdue Issues USDA Statement on Plant Breeding Innovation

U.S. Secretary of Agriculture Sonny Perdue issued a statement providing clarification on the U.S. Department of Agriculture's (USDA) oversight of plants produced through innovative new breeding techniques which include techniques called genome editing. Under its biotechnology regulations, USDA does not regulate or have any plans to regulate plants that could otherwise have been developed through traditional breeding techniques as long as they are not plant pests or developed using plant pests. This includes a set of new techniques that are increasingly being used by plant breeders to produce new plant varieties that are indistinguishable from those developed through traditional breeding methods.

Read Full Statement by USDA

ASTA Talking Points: USDA Policy Statement on Gene Editing

What does the guidance mean?

- We're pleased that USDA's guidance recognizes plant breeders' long track record of safety and quality.
- Specifically, the guidance clarifies and reaffirms the agency's existing policy that if products of gene editing are similar to or indistinguishable from products obtained through more traditional plant breeding they should be treated in the same way from a policy perspective.
- We look forward to continuing conversations with the Administration to ensure sound policy that fosters continued innovation and promotes the movement of seed and other agricultural products around world.

Is it safe?

- Yes! In consideration of the long history of safety associated with traditional plant breeding, gene edited plant products that are similar to or indistinguishable from products obtained through traditional plant breeding methods pose no greater plant risk than their counterparts developed through those traditional breeding techniques, or those arising in nature.

What is gene editing?

- Today, with an increased understanding of genetics, the capability to sequence plant genomes and the ability to link a specific gene to a specific characteristic, plant scientists are able to improve plants more precisely and efficiently than ever before.
- Evolving methods like gene editing allow us to work within a plant's own gene pool—without the introduction of foreign DNA—to achieve the same end-result that could be achieved through more traditional plant breeding methods, but in a more targeted way.
- This added precision allows scientists to forgo multiple cycles of plant selection from a population of thousands of individual plants and move to testing elite lines sooner.

Why is this policy important?

- The recently released guidance provides much-needed clarification to breeding programs, and will help ensure that US agriculture remains at the forefront of innovation and maintains its leadership role globally.
- Public and private sector plant-scientists around the world are investing in a great deal of research using newer methods like gene editing across a wide variety of crops—with exciting potential for farmers, consumers and the environment.
- In order for these benefits to be fully realized, and widely adopted across breeding programs of all sizes and sectors, developers need clear, science-based, policy direction.

What's Behind the Label on a Bag of Seed?

The seed label, or tag as it is often referred, is like the inside jacket of a novel. It tells you everything that's important about your bag of seed. The United States is frequently cited as one of the most reliable producers of food in the world. One of the reasons for that is because we have some of the most stringent seed laws in the world. The seed label reflects those laws. Strong seed laws provide the means to ensure plant breeder's rights, encourage biodiversity, and greater opportunity for financial success by the grower community. Of course, the ultimate benefit is the consumer.

When you look at a seed label you'll see a lot of numbers. But on closer look, all of those numbers are significant. The Federal Seed Act and all state seed laws require a seed label, although they vary slightly in their requirements. Most of these laws were created over 80 years ago and variances have evolved, but they generally all have the same means to an end. Some of the notations on a label are obvious, some not so much. **Here's what most states require on a seed label and what each item means:**

- Product name: the brand name and/or species name, so the consumer knows what they are getting
- Pure seed: percentage by weight of the desired seed(s) based on the entire contents of the bag
- Other crops seed: percentage by weight of seeds not considered weed. If the amount is over 5% (generally) then those species are considered Pure Seed and are to be listed by name. In some cases those species present at 5% or less may also be listed as Pure Seed if so desired by the seller.
- Weed seed: the percentage by weight of weed seeds unless they are considered restricted noxious weed seeds by law where the seed will be sold. If they are restricted noxious weed seeds, then they must be listed individually by name and are limited to the amount in the state law (usually around 0.25%). (NOTE: prohibited noxious weed seeds are not allowed at all)
- Inert matter: the percentage by weight of whatever is in the package that doesn't grow (i.e. broken seed that are half or less what was originally there, seed coats, insects, etc.).
- Address: the contact information for the company providing the seed
- Origin: state where the seed was grown
- Lot number: a unique number so that the seed can be traced to its origin
- Test date: month and date that this lot was tested. The date of the standard germination test must be listed, even if it is different from the dates of other tests done.
- Germination: the percentage of seed in the bag that is expected to grow (based on a lab test)
- Treatment: coatings generally used to enhance germination, protect the seed, or assist in growth
- Other items deemed necessary by the state, as this list is not all-inclusive.

The seed label is generally backed up by a test from a seed lab. It is required that the person from a seed lab signing the report of analysis be certified in testing or that the person conducting the testing be certified. Certification is in purity testing which includes conducting the mechanical purity test & the noxious weed seed exam and also in germination testing. The Association of Official Seed Analysts (AOSA, which is composed of state, federal, university and some crop improvement labs) and the Society of Commercial Seed Technologists (which is composed of analysts from

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cont... What's Behind the Label on a Bag of Seed?

seed companies, private labs, crop improvement labs and some AOSA labs) jointly give certification exams. A person must provide evidence of training (related college courses; workshops and training within their lab) and experience to qualify to take the exams.

A person passing both exams becomes a Registered Seed Technologist (RST) and is able to sign and put their seal on reports of analysis. Certified analysts must show evidence of continuing education & proficiency testing to remain in good standing.

Seed labs can conduct more than 50 distinct types of tests. A number of these are not used to provide information for the label, but rather provide supporting information (such as vigor) to the seed company.

Many states require testing for the label to be done according to the AOSA Rules for Testing Seeds and seed produced in one state and sold in another must meet the requirements of the Federal Seed Act and its regulations. Others don't list the AOSA Rules. A mechanical purity test is done on approximately 2,500 seeds, while a noxious weed exam is approximately 25,000 seeds.

Seeds aren't counted out, but rather a table in the Rules lists the required weight for more than 700 species of seed. Some seeds are easy to identify, but others (example: Quackgrass from Western Wheatgrass) take a highly trained person with good eyes and a lot of patience. The standard (or warm) germination test is conducted under conditions considered ideal and so its results are likely the maximum germination rate of that seed.

It must be remembered that fields (gardens, etc.) vary in soil type, fertility, fungal & insect population, environmental conditions, etc. and so the germination percentage or the result of a vigor test may or may not match field emergence. Vigor of a seedling isn't considered in the germination test, but rather that the parts of a seedling are present and not badly damaged mechanically or by fungi or insects.

Volume four of the AOSA Rules provides information on how to classify seedlings as normal or abnormal according to the species of seed. Also determined in the germination test is the percentage of dead seed, dormant seed (those that take up moisture, but don't grow) and hard seeds (certain types of seeds that can have a seed coat that doesn't allow water to penetrate until later).

As you can tell, there is more to a bag of seed than meets the eye. However, a grower can find out all they need to know by studying the seed bag label. And then, like reading a novel, they'll know the rest of the story.

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Iowa Seed Association Reminders & Events

- June 27, 2018 — ISA Golf Tournament, Veenker Memorial Golf Course, Ames, IA
  Beverage Cart Sponsored by: GreenLeaf
- August 2018 — Agribusiness Showcase & Conference - Summer Workshop, IA
- February 13, 2019 — ISA Seed Forum & Annual Meeting, Des Moines, IA

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