



Seed Regulatory and Testing Division

# ITEMS OF INTEREST IN SEED

2020

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*“Obstacles don’t have to stop you. If you run into a wall, don’t turn around and give up. Figure out how to climb it, go through it, or work around it.”*

– Michael Jordan

## EDITOR’S NOTES



Seed testing is essential. The laboratory staff at Seed Regulatory Testing Division is working full time and ready to help! We are accepting service samples and are happy to assist State laboratories. Our staff is practicing new social distancing techniques by altering schedules, moving desks and of course wearing our masks!

Featured in the 2020 edition of Items of Interest in Seed is an article describing different Dodder species found in alfalfa (page 5) and a write-up of testing Kentucky 31 Tall Fescue variety (page 3). As you may have noticed, the meeting reviews are limited this year due to

cancellations or moving to virtual meetings. This includes our annual seed school and the joint AOSA/ SCST and ASTA meeting. We hope to get to see everyone again next year!

As always, please let me know if you have suggestions for future topics by sending an email to [Elizabeth.Stewart1@usda.gov](mailto:Elizabeth.Stewart1@usda.gov).

On behalf of the SRTD staff, I hope you enjoy these articles and continue to find them informative.

Elizabeth Stewart  
IOI Editor

## **KENTUCKY 31 TALL FESCUE IN TRUENESS-TO-VARIETY TRIALS**

Kentucky 31 was first recognized as an ecotype by farmers in 1931, when they observed that the qualities of this grass included good pasture and erosion control. In 1942, it was released by the Kentucky Agricultural Experimental Station and in 1945 it was registered in Kentucky's seed certification program as a cultivar. In 1969, it was determined that Kentucky 31 had the ability to grow in shade if there is enough moisture and nutrients in the soil, a desirable quality in grasses. Not only was Kentucky 31 the best performing variety under shade, it was also high quality in full sunlight conditions.

Tall fescue is native in Europe, but the cultivar Kentucky 31 has dominated the grass industry in the United States due to its vigor and herbivore tolerance which is a result of endophyte symbiosis. The pressure from grazing animals has promoted Kentucky 31 to be predominantly positive to endophytes, which has given it the advantage of being able to establish and compete with native grasses. While this symbiosis benefits the grass, it has a negative effect in the grazing animals' due to toxicity that this endophyte causes in the grass. Efforts have been made to select grasses without the endophyte or introduce an endophyte to Kentucky 31 that won't promote toxicity.

While the endophyte positive Kentucky 31 can have negative effects on cattle, the expectations are to promote Kentucky 31 that is endophyte free or with introduced endophytes that will not produce toxins. The historical benefits of Kentucky 31 are far more important to the grass industry: it adapts well to a variety of soils and climates, it tolerates grazing and when free of endophytes can be highly beneficial for grazing animals.

Kentucky 31 is spread across the United States in over 35 million acres, making it a relevant commodity in our economy and agricultural development. The USDA AMS is responsible of making sure this variety is traded between States with full compliance of the Federal Seed Act.

SRTD has been doing trueness-to-variety (TTV) trials for Kentucky 31 and other tall fescue varieties, including most recently in 2013, 2018, and 2019.

Since planting practices vary by State and plant hardiness zones, it's important to consider all conditions that affect growth in cool season grasses when planning field trials. The 2019 North Carolina tall fescue trials were located in Zone 8A. Both direct seeded and transplanted trials established well. Over winter, the growth slowed as expected but did not affect results. The trials were completed in May.

SRTD TTV trials require rigorous data recording based on phenotypical characteristics. For tall fescue, as well as with other crops, it is important to use photographs, color charts, and measuring tools that will provide exact notes to determine the presence of off types in the sample. Tall fescue varieties include turf-types and forage types, Kentucky 31 being bigger and lighter colored than turf-types. Kentucky 31 is generally fast growing, has wide leaf blades and has a distinguishable light green color. It grows in clumps and can be easily located when planted with other grasses, see image below. Tall fescue can have a short membranous ligule or lack it, usually with short auricle and often with small hairs around it. Its venation is marked across the wide blade.



Clump of KY 31 Tall Fescue



Up close image to show auricle and wide blade

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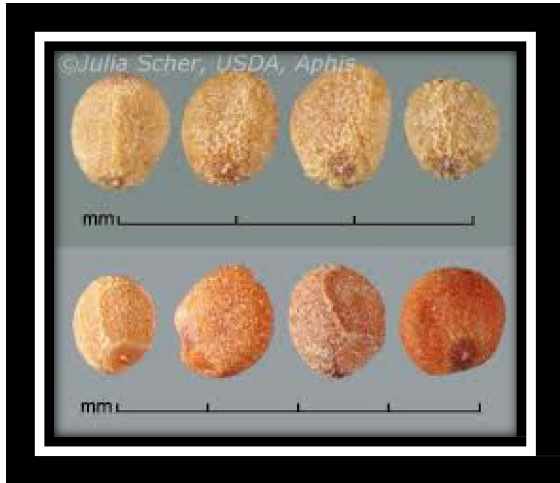
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## COMMON DODDER SPECIES FOUND IN ALFALFA



*Cuscuta* spp.



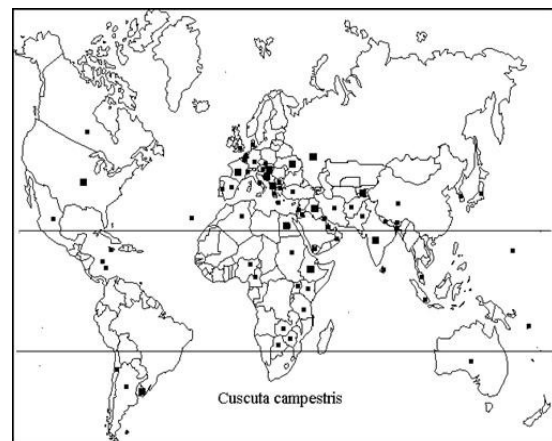
Distribution of *Cuscuta* spp., [fs.fed.us](http://fs.fed.us)

### General Facts

Dodder is a parasitic weed and its shape is determined by the number of seeds in the capsule. Dodder is succulent and embeds sucker like structures (haustoria) into the stem of its host plant. It emerges as a rootless, leafless stem and depends on the food reserve stored in a host seed such as alfalfa for immediate survival. Once it infests an alfalfa field, it can be a problem for several years. The methods of control are short-lived and ineffective. The 3 most common dodder species found in alfalfa are mentioned below.



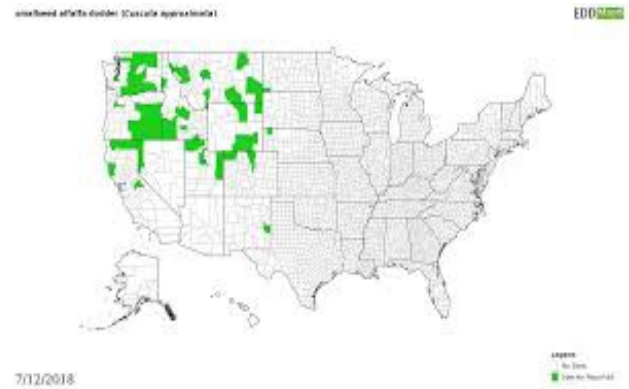
*Cuscuta campestris* (field dodder) is tan in color, has a finely granular surface, irregular shape, and rounded on one side.



Distribution of *Cuscuta campestris*, [bioone.org](http://bioone.org)



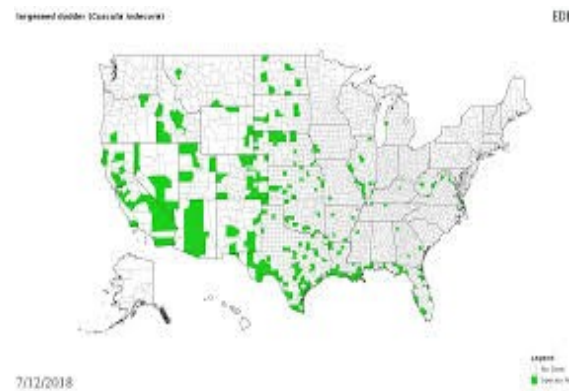
*Cuscuta planiflora* (small-seed dodder) is approximately 1mm in length, uniformly oblong, distinctly angled and uniformly yellowish or with slight brownish tinge. The surface texture tends to have reticulations.



Distribution of *Cuscuta planiflora*, [eddmaps.org](http://eddmaps.org)



*Cuscuta indecora* (large-seed dodder) is the only dodder species in the high desert region of the U.S. It is 1.5 mm or longer, mostly broader than long, and not sharply angled. The color is not uniform it can appear to be light grayish brown or reddish to dark brown. The scar area is slightly sunken and has a short slit in the depression at the center and can be coarsely scurfy, bordering on reticulations.



Distribution of *Cuscuta indecora*, [invasive.org](http://invasive.org)

## REFERENCES

Pictures: U.S. National Seed Herbarium [photographed by Steve Hurst\*]  
USDA Agriculture Handbook No. 30, Queensland weed seeds 1983.  
Article: 'Dodder control in alfalfa' pg. 30; California Agriculture, Volume 43, Number 4

For information regarding this article, contact Botanist Anitra Walker (704) 810-7269;  
[Anitra.Walker@usda.gov](mailto:Anitra.Walker@usda.gov).

## SOYBEAN PUBESCENCE COLOR

Pubescence are the hairs present on the stem, leaves, and pods of the soybean plant. The pubescence color varies by variety. Most soybean varieties have light tawny, tawny, or gray colored pubescence. Soybean plant's pubescence color has no effect on the yield or other agronomic characteristics. According to the Federal Seed Act Regulations 201.34(d), the variety can be verified by pubescence characteristics. "The variety name shall represent a subdivision of a kind, which is characterized by growth, plant, fruit, seed, or other characters by which it can be differentiated from other sorts of the same kind."

The following pictures were taken during trueness-to-variety trials at Sandhills Research Station in Jackson Springs, North Carolina.



Light tawny pubescence color



Tawny Pubescence Color





Gray Pubescence Color

For information regarding this article, contact Seed Marketing Specialist Akhtar Kazmi (704) 810-8878; [Akhtar.Kazmi@usda.gov](mailto:Akhtar.Kazmi@usda.gov)

## **LOAN PROCEDURE FOR ASSOCIATION OF OFFICIAL SEED ANALYSTS MASTER CALIBRATION SAMPLES**

The uniform blowing procedure uses a mechanical blower to help separate pure seed from inert matter in certain kinds of grass seeds. Calibration is necessary to determine the proper gate setting of the blower in order to establish the optimum uniform blowing point for a particular species, which requires measurement of air velocity using an anemometer. Master Calibration Samples (MCS's) are available for loan from the USDA Seed Regulatory and Testing Division (SRTD) and must be used for the calibration.

Forms and additional information about the equipment and procedure are located on the AOSA/SCST Web site. (Go to [www.analyzeseed.com](http://www.analyzeseed.com) and click the resources tab.) It is helpful to read the current version of the AOSA Rules for Testing Seeds, Volume 2. prior to using the calibration procedure for the first time.

Requesting and Returning Master Calibration Samples:

- Request the MCS's from the SRTD laboratory by phone or e-mail
  - MCS Program Administration  
USDA AMS S&T SRTD  
801 Summit Crossing Place  
Suite C  
Gastonia, NC 28054
  - PHONE (704) 810-8870
  - [Charlene.Burton@usda.gov](mailto:Charlene.Burton@usda.gov)

- Include the following information with your request:
  - a signed and dated Loan Agreement Form for the Master Calibration Samples
  - MCS species available are Orchardgrass, Kentucky bluegrass and Pensacola bahiagrass
  - laboratory name
  - contact name
  - street address
  - phone number
  - e-mail address, if available
- Laboratories are notified if there is a waiting list at the time of a request and are contacted again when the samples are shipped. Whenever possible, samples are sent in the order requests are received.
- Upon receipt, a laboratory has five days, not counting the day of receipt, to calibrate and send samples back to SRTD. (Exceptions may be made if there is not a waiting list.)
- Copies of the *Guidelines for Users of Master Calibration Samples* and the *User's Data Sheet for Tracking Master Calibration Samples* will arrive with the MCS's. Read this information before calibrating the sample(s).
- Perform the calibration as instructed in AOSA Rules for Testing Seeds, Volume 2 and the *Guidelines for Users of Master Calibration Samples*. A Certified Seed Analyst (CSA), Registered Seed Technologist (RST), or person under the supervision of a CSA or RST should perform the calibration, taking care to follow the guidelines for **handling the samples and maintaining sample integrity**.
- Return the samples and the completed *User's Data Sheet for Tracking Master Calibration Samples* by traceable overnight service (UPS, FedEx, DHL, USPS Express, etc.). The return address information is included with the sample(s).
- There is no charge for borrowing the MCS's if the borrower follows all requirements in the *Loan Agreement for the Master Calibration Samples*, *Guidelines for Users of Master Calibration Samples* and the *MCS Borrower Responsibility Guidelines*.

Laboratories testing Kentucky bluegrass and orchardgrass under ISTA rules must purchase calibration samples from ISTA to calibrate their blowers. ISTA also requires the use of the anemometer when performing calibrations.

For information regarding this article, contact Botanist Charlene Burton (704) 810-8880; [Charlene.Burton@usda.gov](mailto:Charlene.Burton@usda.gov).

## NOXIOUS- WEED SEEDS SHOWCASE

Scientific Name	Common Name
<i>Alternanthera sessilis</i>	sessile joyweed

*Alternanthera sessilis* is in the Amaranthaceae family and can be found as a perennial or annual herb. It grows quickly and is highly invasive, similar to family member pigweed. It can grow in many types of conditions such as sandy to thick soils, waterlogged areas and drought areas. The plant can grow next to rivers or streams and as a weed in sorghum, corn and cotton fields. It spreads by seed which are light enough to be carried by the wind and can float in water. The plant also spreads by rooting at the stem nodes.



*Alternanthera sessilis*, Scher, 2015



*Alternanthera sessilis*, Scher, 2015

Scientific Name	Common names
<i>Asphodelus fistulosus</i>	onionweed

*Asphodelus fistulosus* is in the Asphodelaceae family and is an annual or perennial herb. It is found on roadsides, disturbed sites and rangelands and can withstand drought and sandy soils. In rangelands, livestock do not eat the plant so it can create dense patches and crowd out other species. The infestation can grow so thick it can lower nitrogen levels in soil. The plant spreads by seeds and are dispersed by wind, water and by attaching to animals.



*Asphodelus fistulosus*,  
USDA Plant Database, Steve Hurst

Scientific name:	Common name
<i>Carthamus oxyacanthus</i>	jeweled distaff thistle, wild safflower

*Carthamus oxyacanthus* is in the Asteraceae family and is an annual herb. Like other plants in this genus it is a tall spiny plant which is not eaten by livestock. This makes it easy to contaminate grazing fields. It is also commonly found in grain fields and can reduce yields. The plant differs from the safflower by its large spines on the leaves.



*Carthamus oxyacanthus*, Scher, 2015

#### References:

USDA, NRCS. 2020. The PLANTS Database (<http://plants.usda.gov>, 19 March 2020). National Plant Data Team, Greensboro, NC 27401-4901 USA

Reed, Clyde. *Economically Important Foreign Weeds - Potential Problems in the United States*. APHIS USDA, 1977.

Scher, J. L., et al. "Federal Noxious Weed Disseminules of the United States." 1 Apr. 2015, <http://idtools.org/id/fnw/index.php>.

For information regarding this article, contact Botanist Elizabeth Stewart (704) 810-8873; [Elizabeth.Stewart1@usda.gov](mailto:Elizabeth.Stewart1@usda.gov)

## LABELING COATED AND PELLETED VEGETABLE SEED

In recent years, the popularity of coated and pelleted seed has continued to grow within the seed industry, truck farmers and home gardeners. This is due, in part, to coated and pelleted seed having a more uniform size or shape. The additional weight makes it easier to plant even tiny seeds directly to the field using various types of seeders for sowing agricultural seed, grasses, and especially vegetable seeds. What does the Federal Seed Act (FSA) say about coated/pelletized vegetable seeds? How should coated vegetable seed be labeled?

The Regulations under the FSA are divided into two categories related to vegetable seed labeling: containers of one pound or less and containers of more than one pound.

Labeling requirements for vegetable seed packaged in containers of one pound or less are covered in Regulations sections 201.25 through 201.29 and are required to state the kind, variety, the word 'hybrid' (if in fact the seed is a hybrid) complete name and address of the interstate shipper or the AMS number along with the consignees full name and address. Containers of one pound or less are not required to have the germination percentage stated on



the label as long as the germination is equal to or exceeds the standard set forth in the FSA Regulations section 201.31. If the germination percentage is below the minimum standard, the words 'Below Standard' in no less than 8-point type need to be on the label in addition to the percentage of germination and the percentage of hard seed, if any.

Containers of more than one pound are required to have the kind, variety, the word "hybrid" (if in fact the seed is a hybrid), lot number or other identification, percentage of germination (exclusive of hard seed), the calendar month and year the germination test was completed, and the complete name and address of the interstate shipper or the AMS number along with the consignee's name and address on the label. Additionally, when there is hard seed present, the percentage of hard seed is required to be labeled separately from the germination percentage.

Seed companies are required to change the lot number and to conduct a new germination test when the seed has been treated or coated/pelleted. This is due to the complete records of the vegetable seed having to include records of variety, germination, lot number, treatment, and coating/pelletizing as required under Section 202 of the FSA.

For information regarding this article, contact Seed Marketing Specialist Lan Chi Trinh (704) 810-7272; [Lan-ChiN.Trinh@usda.gov](mailto:Lan-ChiN.Trinh@usda.gov).

## **AMS CODE DESIGNATION**

The Federal Seed Act (FSA) requires that the interstate shipper be identified on the label of all seed shipped in interstate commerce. There are two options available for fulfilling this FSA labeling requirement. The first option is for the interstate shipper (consignor) to place their full name and address on the label. The second option is for the interstate shipper (consignor) to label the seed with the full name and address of the company to whom they are selling the seed (consignee). When using this second option the consignor is responsible for including their Code Designation/AMS number on the label. The Code Designation/AMS number identifies the original interstate shipper and allows the receiving company to resell the seed without the necessity of relabeling the seed when it is received. The Code Designation/AMS number identifies an individual seed company and is issued by the Seed Regulatory and Testing Division upon request. All Code Designations/AMS numbers are treated as confidential information between the Seed Companies, Seed Regulatory and Testing Division, and Seed Regulatory Agencies within the U.S.

For information on this article or to acquire an Code Designation/AMS number, please email your company's full name, complete address, and name of contact person to Seed Marketing Specialist Kevin Robinson (704) 810-7264; [Kevin.Robinson2@usda.gov](mailto:Kevin.Robinson2@usda.gov).

## **WARNING---APPARENT VIOLATION OF THE FEDERAL SEED ACT**

Warning letters can cover technical labeling issues such as incomplete kind or variety names. In all cases these warning letters will involve seed that has been shipped in interstate commerce and found to be in violation of one or more sections of the Federal Seed Act, the Regulations under the Act, or both.

This letter may be the first and only notice from the Seed Regulatory and Testing Division (SRTD) that a company receives informing them of a violation(s) of the Act. Receipt of a warning letter places the interstate shipper on notice that labeling issues exist with the seed lot in question. The letter indicates the nature of the violation(s) and cites the sections of the Act and the Regulations under the Act that are relevant to the violation(s). Warning letters complete the regulatory action taken by SRTD. Letters of warning remain in a company's history for five years. The company should make any necessary procedural corrections to prevent future violations.

For information regarding this article, contact Seed Marketing Specialist Rodney McNeace (704) 810-8879; [RodneyB.McNeace@usda.gov](mailto:RodneyB.McNeace@usda.gov)

## **UPCOMING CHANGES IN THE FEDERAL SEED ACT REGULATIONS**

From time to time, the Seed Regulatory and Testing Division (SRTD) finds it necessary to update the Regulations to reflect current industry standards and practices and to remove obsolete references. The Regulations were last updated in 2011. Over the past year, SRTD met with representatives from different organizations to discuss possible revisions to make the Regulations more reflective of current industry practices and updated testing methods. The changes include the revisions to seed labeling, testing, and certification requirements. Technological innovations and changing demands affect industry practices over time. To assure clear market communication about seeds, SRTD updated the list of seed kinds that are covered by the Regulations by adding and changing the scientific names to reflect the current nomenclature. Additionally, more seed kinds were added to the agricultural seed list under the Regulations. SRTD also further revised the definitions of other terms used in the Regulations to provide greater clarity for regulated entities. Such changes align regulatory language with terminology and nomenclature recognized by industry.

Seed testing methodology continues to evolve as new equipment and processes are developed. SRTD revised the testing section of the Regulations to ensure the requirements reflect methods and procedures that have been adopted in the industry and by SRTD. The new Regulations provide clarity for when the date of the final count of a germination test falls on a weekend or public holiday. Additionally, Multiple Unit Procedure requirements are removed for red fescue, chewing's fescue, and orchardgrass. These changes harmonize the Regulation testing procedures with other testing methods from different organizations around the world.

The Regulations provide specified qualification standards for certified seeds. Due to increasing demands for high-quality seed, SRTD revised the certification section by adding more seed kinds and its certification standard requirements to the Regulations. SRTD also further revised the language to provide more clarity for recertified Certified class seeds. The changes are necessary to recognize the current industry demands and remove contradictory or confusing language in the Regulations.

There are at least a billion pounds of seed moving across state lines every year in the United States. SRTD regulates the interstate shipment of agricultural and vegetable seeds through the Federal Seed Act and its Regulations. Many rules and regulations are no longer aligned with current industry practices due to technological innovations and changing demands. SRTD's

goals are to bring FSA Regulations up to date with testing methods, align with industry practices, and reduce unnecessary requirements, while continuing to promote uniformity among State seed laws and fair competition within seed trade.

For information regarding this article, contact Seed Marketing Specialist Lan Chi Trinh (704) 810-7272; [Lan-ChiN.Trinh@usda.gov](mailto:Lan-ChiN.Trinh@usda.gov) .

## **TRUENESS-TO-VARIETY (TTV) OVERVIEW**

The Seed Regulatory and Testing Division (SRTD) is responsible for enforcing the Federal Seed Act (FSA), a truth-in-labeling law that regulates the labeling of agricultural and vegetable seed shipped in interstate commerce. The FSA requires that seed shipped in interstate commerce is labeled with the correct variety name. Seed samples for testing are received from State departments of agriculture under cooperative agreements with AMS or purchased from seed companies. The samples are grown in field plots and compared to authentic samples or official descriptions of the labeled variety. Companies that mislabel seed are subject to letters of warning or monetary settlements.

Each year, SRTD conducts TTV field tests to determine if seed lots are properly labeled for variety, as required by the FSA and State seed laws. This year, SRTD has conducted its TTV field tests on watermelon at the Piedmont Research Station in Salisbury, North Carolina, and pepper at Sandhills Research Station, Jackson Springs, North Carolina during the spring of 2020. The pepper seedlings were grown in SRTD's greenhouse and were transplanted in the fields of Sandhills Research Station for further testing and evaluation.

Additionally, SRTD will also plant an estimated 150 samples of tall fescue at both locations. SRTD will grow tall fescue seedlings in the greenhouse during the month of September 2020. The seedlings will then be transplanted in the fields of Piedmont and Sandhills Research Stations during the month of November 2020 for further evaluation in the spring of 2021. SRTD has also conducted electrophoresis tests on Kentucky 31 tall fescue samples to identify those that have different banding patterns when compared with Kentucky 31 foundation seed check samples.

SRTD will plant lettuce in the greenhouse for TTV testing and evaluation. Approximately 70 samples of lettuce will be tested during FY20-21.

SRTD would like to thank the States which participated in the TTV program. Once results and information have been compiled, participating States will be notified of any mislabeling.

If there are any questions concerning the TTV program or directions for submitting samples, please contact Agronomist Laura Berrios-Ortiz (704) 810-8870; [Laura.BerriosOrtiz@usda.gov](mailto:Laura.BerriosOrtiz@usda.gov), and Seed Marketing Specialist Akhtar A. Kazmi (704) 810-8878; [Akhtar.Kazmi@usda.gov](mailto:Akhtar.Kazmi@usda.gov).

## **FEDERAL SEED ACT CASES SETTLED**

The Federal Seed Act (FSA) provides authority for the regulation of the interstate shipments of agricultural and vegetable seeds. The FSA requires that seed shipped in interstate commerce are labeled with certain information necessary for the seed buyer to make an informed choice. The labeling information and any advertisements pertaining to the seed must be truthful. Between September 1, 2019, and August 31, 2020, a total of 36 seed companies paid \$92,925 to settle alleged violations of the FSA.

For specific information regarding these violations, please visit <https://www.ams.usda.gov/rules-regulations/fsa> then [Filing a Complaint](#) and [View a list of settled FSA Cases](#). USDA's Agricultural Marketing Service (AMS) administers the FSA by leveraging its resources with State departments of agriculture. These investigations were a result of joint efforts with seed regulatory officials in Arkansas, Florida, Georgia, Indiana, Kansas, Kentucky, Maryland, Missouri, North Carolina, Pennsylvania, Tennessee, Texas, Utah, and Virginia. By working collaboratively with State partners, Seed Regulatory and Testing Division helps promote uniformity among State seed laws and fair competition within the seed trade through the enforcement of the FSA.

For information regarding this article, contact Seed Marketing Specialist Kevin Robinson (704) 810-7264; [Kevin.Robinson2@ams.usda.gov](mailto:Kevin.Robinson2@ams.usda.gov)

## **COOPERATIVE AGREEMENTS**

The Seed Regulatory and Testing Division is pleased to announce that all 50 State Cooperative Agreements have been renewed. The Cooperative Agreements are between the USDA Agricultural Marketing Service and each of the 50 States. The Cooperative Agreement objective is to administer the provisions of the Federal Seed Act involving interstate shipments of seed into the States of cooperating agency. The process is performed every 5 years and takes several months to complete. We appreciate the assistance, of the State Seed Control Officials, in getting these renewed and we look forward to our continued working relationship with each of the 50 State agencies.

For information regarding this article, contact Seed Marketing Specialist Kevin Robinson (704) 810-7264; [Kevin.Robinson2@usda.gov](mailto:Kevin.Robinson2@usda.gov)

## **OECD SEED SCHEMES 2020**

The Organization for Economic Cooperation and Development (OECD) Seed Schemes is an international agreement involving 61 countries for the purpose of promoting the use of high-quality seed around the world through the establishment of harmonized standards for certified seed moving in international trade. The Seed Schemes was first established in 1958 and became part of OECD in 1961. The United States has been a participant since the early days. USDA Agricultural Marketing Service serves as the National Designated Authority (NDA), representing the U.S. to the Seed Schemes and coordinating the OECD Seed Schemes



activities performed by the 30 Seed Certification Agencies (SCA) through cooperative agreements.

#### 2020 Annual Meeting Outcomes:

Due to travel restrictions for almost all participants, the in-person annual meeting was cancelled. Ad Hoc Working Groups (AHWG) meet via Zoom during the month of May. The annual meeting was conducted in 2-hour sessions on June 17 and 18, 2020, over Zoom. Given the unusual virtual format of the 2020 Annual Meeting, time for discussion on specific items was limited to presentations by the Secretariat, recommendations from the January 2020 Technical Working Group (TWG) meeting and progress reports from the AHWGs distributed to delegates prior to the meeting. Instead of the usual in-person consensus to adopt changes to Rules & Regulations, approvals were accomplished through a written procedure whereby, changes were distributed to NDAs for approval. This process was completed on July 24, 2020. Pending confirmation by the Committee on Agriculture (CoAg) and the OECD Council, the following items will go into effect on January 1, 2021:

- Require serial numbers, or a unique identifying code, on each OECD label as a method to make counterfeiting labels more difficult.
- The Terms of Reference for the AHWG on Biochemical and Molecular Techniques were updated to focus the future work of the group on genetic techniques that may be useful in making varietal purity and identity decisions. The group will continue to work on updating information on more conventional biochemical tests as needed.
- Delegates approved the Seed Schemes communication strategy and a few other annually required housekeeping items.

#### Ongoing discussions to be continued by Ad Hoc and Technical Working Groups

- The AHWG on mixtures will continue to work on the proposal to eliminate mixture rules from the individual schemes and instead establish one set of common rules governing the mixtures of certified seed.
- The AHWG on new seed production techniques will continue to work on general guidelines for development of certification standards for novel seed production systems under the schemes, with the goal of presenting those for approval at the 2021 annual meeting. The proposal from New Zealand regarding a F1 Hybrid *Lolium* production system may be reconsidered in 2021. Development of this system was another casualty of the pandemic, as travel restrictions hampered the ability of the developers and NDAs to conduct some of the necessary work.
- The AHWG on Intervention Processes after Certification continues to revise their proposed rules changes on the process of maintaining integrity of certified seed lots that are later opened to accomplish treatment, pelleting, or other processes. In the course of AHWG discussions during the past 3 years, the AHWG has identified several sections in the rules that either need to be updated or could be removed to reduce duplication or conflicting language.

As of the 2020 annual meeting, current members of the Seed Schemes Bureau are Chair Kristiina Digryte (Estonia), Vice Chair Mona El-Kasier (Egypt), Past-Chair Pedro Lavignolle (Argentina). Eddie Goldschaag (South Africa) stepped down from the Bureau after 6 years of service to the Seed Schemes.

U.S. OECD Seed Schemes Program Manager Steve Malone, Ph.D. represented the U.S. at the OECD Seed Schemes, AHWG & TWG meetings held January 27-31 in Milan, Italy. Due to the COVID-19 global pandemic, the 2020 Annual Meeting was held virtually on June 18-19. The AHWGs were conducted virtually during May and early June. Chi Trinh, Seed Marketing Specialist and OECD Seed Schemes Assistant also participated in the Annual Meeting. Alan Galbreth, retired CEO of Indiana Crop Improvement Association, represented the American Seed Trade Association (ASTA) at the January meetings. Dr. David Stimpson from Oregon State University represented ASTA on the virtual annual meetings. The Association of Official Seed Analysts (AOSA) was represented by Dr. Dan Curry, also from Oregon State University for both meetings.

The next meeting of the Technical Working Group is scheduled for January 25-28, 2021, at the OECD Headquarters Conference Center in Paris, France. The 2021 annual meeting is scheduled for June 7-11, 2021, in Tallinn, Estonia.

#### U.S. Program Assessment Fees:

The assessment fee schedule set on July 1, 2019, will continue through June 30, 2021. The current fees are 15 cents per hundredweight for all species, except corn which is assessed at 26 cents per hundredweight. Program revenue and expenses will be reviewed this fall and announced in December 2020 whether an increase will be necessary effective July 1, 2021, and the details of any changes.

For information regarding this article, contact Steve Malone (704) 810-8888; [Stephen.Malone@usda.gov](mailto:Stephen.Malone@usda.gov). For more information on the OECD Seed Schemes, go to <http://www.ams.usda.gov/rules-regulations/fsa/oecd-schemes> or <http://www.oecd.org>.

#### **2020 NORTHEAST SEED ANALYST WORKSHOP (NESAW)**

The 2020 Northeast Seed Analyst Workshop was held in Harrisburg, Pennsylvania on March 5<sup>th</sup> and 6<sup>th</sup> at the Pennsylvania Department of Agriculture. Approximately 16 analysts from five States; Delaware, Ohio, Pennsylvania, Virginia and North Carolina, participated in this workshop.

The workshop was led by Nishit Patel, Seed Laboratory Supervisor of the Pennsylvania Seed Laboratory and Johnny Zook, Seed Program Supervisor also of the Pennsylvania Seed Laboratory. The material was presented by Nishit Patel, Johnny Zook, Botanists Charlene Burton, Laboratory Supervisor Todd Erickson (SRTD), Seed Marketing Specialist Chi Trihn (SRTD) and Leigh Wiltison-Combs from the Plant Variety Protection Office in Washington, DC.

The presentations included information pertaining to the combined Association of Official Seed Analysts/Society of Commercial Seed Technologists consolidated exam to become a Certified Seed Analyst or Registered Seed Technologist. The various topics consisted of hands on seed identification both individual seed and seed separations, seed structures, seedling evaluation, germination and dormancy, calculation of perennial ryegrass, multiple unit procedure,

determining purity/noxious weight on coated seeds, classification of crop and weed seeds and information regarding plant variety protection.

For information regarding this article, contact Botanist Charlene Burton (704)-810-8880; [Charlene.Burton@usda.gov](mailto:Charlene.Burton@usda.gov).

## **INTERNATIONAL SEED TESTING ASSOCIATION 2020 MEETING**

Due to the coronavirus pandemic, the Ordinary General Meeting (OGM) which was originally scheduled to be held in Verona, Italy was canceled. A virtual meeting took its place to cover essential elements of ISTA's mission, which included voting on the 2021 ISTA rules. As the ISTA Rules Chair, SRTD Director Ernest Allen participated in two virtual ISTA meetings.

The first meeting held on May 19, 2020, was led by Mr. Allen. It was an open discussion focused on proposals for the 2021 rules. It was attended by more than 150 seed professionals in over 48 countries. This meeting allowed scientists and other stakeholders to scrutinize the proposals and give feedback to the authors.

The second meeting, held on May 28, 2020, followed the usual format of the OGM. This meeting did not include a discussion of the rules. However, it did include updates on proposals modified as a result of the open Rules Committee meeting held on May 19<sup>th</sup>. Since this meeting was virtual, member countries did not vote during the session. Instead, ballots were mailed from the ISTA Secretariat to the Designated Authority on record for each country. Mr. Allen served as the voting delegate on behalf of the USDA Agricultural Marketing Service, the United States Designated Authority to ISTA.

On June 17, 2020, the ISTA Secretariat reported voting results from rules proposals submitted during the virtual 2020 OGM. ISTA designated members voted on documents OGM20-05 and OGM20-06: proposed changes to the ISTA International Rules for Seed Testing 2021 edition and the associated method validation reports. Official counts revealed that the 48 designated members participating in voting met quorate requirements as specified in Article 11 of the Articles of the International Seed Testing Association.

Excluding 10 editorial changes, there were a total of 16 proposals submitted to the members for vote. All proposals were approved by the membership in addition to all editorial changes. The approved changes will become effective on January 1, 2021. Noteworthy changes for the 2021 edition includes removal of 20<=>30 temperature option for the germination of *Brassica napus*; modifying the wording in chapter 9 to improve clarity on when a laboratory "must" perform an action, versus when a laboratory "should" perform an action; and the removal of several species from table 3A that are no longer being traded.

### **Summary of approved ISTA Rules proposals:**

- A.1. Editorial corrections
- C.3.1 Revision of Table 3A
- C.4.1 Complete test (update to definition)
- C.4.2 Reduced test (update to definition)
- C.5.1 Germination method for *Brassica napus* (update to temperature options)
- C.5.2 Precision of light for germination tests (clarifies LED usage within ISTA rules)

- C.5.3 Reporting results
- C.5.4 Change in the germination evaluation of roots for *Helianthus annuus* to allow secondary roots
- C.7.1 Sample and subsample size (updates to the current method)
- C.7.2 Identification Criteria (7-007 Detection of *Alternaria linicola*, *Botrytis cinerea*, and *Colletotrichum lini* in *Linum usitatissimum*)
- C.7.3 Safety precautions (safety considerations when using Ethidium bromide)
- C.9.1 Changes to the use of “must”, “should” and “may”
- C.9.2 Containers for Moisture Testing in Chapter 9
- C.9.3 Use of mesh instead of meshes
- C.9.4 Clarification of working sample
- C.9.5 Moisture method for *Carica papaya*
- C.15.1 Clarification of the assessment of radicle emergence for *Zea mays* and *Triticum aestivum* subsp. *aestivum* in the radicle emergence test

2021 ISTA meeting is scheduled for May 31 to June 3, 2021, in Cairo, Egypt.

For more information regarding this article, contact SRTD Director Ernest Allen (704) 810-8884; [Ernest.Allen@usda.gov](mailto:Ernest.Allen@usda.gov).



## CALENDAR OF EVENTS

Event	Date
ASTA Farm and Lawn Seed Conference Kansas City, MO	November 3, 2020
Organization for Economic Cooperation and Development (OECD) Seed Schemes Technical Working Group Meetings Milan, Italy	January 25-28, 2021
American Seed Trade Association (ASTA) Vegetable and Flower Seed Conference Orlando, FL	January 29- February 2, 2021
Association of Official Seed Analysts/ Society of Commercial Seed Technologist (AOSA/ SCST) Annual Meeting Saskatoon, Canada	June 11-17, 2021
Organization for Economic Cooperation and Development (OECD) Seed Schemes Annual Meeting Tallinn, Estonia	June 7-11, 2021
American Seed Trade Association (ASTA) Policy and Leadership Development Conference Washington D.C	June 19- 23, 2021
Association of Official Seed Certifying Agencies (AOSCA) Annual Meeting	TBD
International Seed Testing Association (ISTA) Annual Meeting Cairo, Egypt	May 31 – June 3, 2021
SRTD Seed School Gastonia, NC	August 2021
ASTA Corn Soybean & Sorghum (CSS) Conference Chicago, IL	December 9 - 12, 2021

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