



Seed Regulatory and Testing Division

ITEMS OF INTEREST IN SEED

October 2015

www.ams.usda.gov/seed



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FEDERAL SEED ACT CASES SETTLED

The Federal Seed Act (FSA) regulates the interstate shipment of agricultural and vegetable seeds. The FSA requires that seed shipped in interstate commerce be 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. The FSA helps promote uniformity among the state laws and fair competition within the seed trade.

The following cases were settled administratively under the FSA between March 9th, and September 2, 2013. Under the administrative settlement procedure, the Seed Regulatory and Testing Division and the firms agreed to settle the cases, for the amount specified, with the firms neither admitting nor denying the charges. Official News Releases on each of these cases are accessible on the following Web site under the "Latest Releases" link:

<http://www.ams.usda.gov/news/newsrel.htm>.

Buchheit, Inc., Perryville, MO, has paid \$3,600 for cases involving five seed shipments to Kentucky. Seed regulatory officials in Kentucky cooperated in the initial sampling and inspection. The alleged violations, while not the same for all shipments, were:

- False labeling of germination, pure seed, other crop seed, and weed seed percentages and variety name;
- Failure to label the presence of noxious-weed seeds; and
- Failure to keep required records.

Green Thumb Commodities, Inc., Oldham, SD, has paid \$2,700 for cases involving four seed shipments to Texas. Seed regulatory officials in Texas cooperated in the initial sampling and inspection. The alleged violations, while not the same for all shipments, were:

- False labeling of pure seed, inert matter, and other crop seed percentages;
- Failure to label the presence of noxious-weed seeds;
- Failure to test for germination within the prescribed time prior to shipment; and
- Failure to keep required records.

Mountain View Seeds, Ltd., Salem, OR, has paid \$1,050 for cases involving three seed shipments to Georgia, Illinois, Indiana, and Missouri. The shipment to Illinois was subsequently shipped to Indiana where the seed was officially sampled. Seed regulatory officials in Georgia, Indiana, and Missouri cooperated in the initial sampling and inspection. The alleged violations, while not the same for all shipments, were:

- False labeling of pure seed and germination percentages.

Pennington Seed, Inc., Madison, GA, has paid \$19,500 for cases involving 17 grass seed mixtures and tall fescue seed shipments to Georgia, Indiana, Kentucky, Texas, and Virginia. Portions of the shipments to Indiana, Texas, and Virginia were subsequently shipped to Kentucky, New Mexico, and Pennsylvania where the seed was officially sampled. Seed regulatory officials in Georgia, Kentucky, New Mexico, Pennsylvania, and Texas cooperated in the initial sampling and inspection. The alleged violations, while not the same for all shipments, were:

- False labeling of pure seed, other crop seed, and germination percentages, test date, variety name, and kind name;
- Failure to label the presence of noxious-weed seeds (undesirable grass seeds); and
- Failure to keep required records.

ProSeeds Marketing, Inc., Jefferson, OR, has paid \$2,475 for cases involving three seed shipments to Maryland, Minnesota, and Pennsylvania. Seed regulatory officials in Maryland, Minnesota, and Pennsylvania cooperated in the initial sampling and inspection. The alleged violations, while not the same for all shipments, were:

- False labeling of pure seed and other crop seed percentages, variety name, and test date.

Southern States Cooperative, Inc., Richmond, VA, has paid \$1,350 for cases involving two seed shipments to Georgia. Seed regulatory officials in Georgia cooperated in the initial sampling and inspection. The alleged violations were:

- False labeling of pure seed and inert matter percentages; and
- Advertising a brand name as a variety name.

FALL TRUENESS-TO-VARIETY OVERVIEW

Each year the Seed Regulatory and Testing Division (SRTD) conducts trueness-to-variety (TTV) field tests to determine if seed lots are properly labeled for variety as required by the Federal Seed Act and State seed laws. Field testing is conducted by crop experts at State universities and State departments of agriculture in cooperation with SRTD. SRTD relies on State seed control programs to submit samples for inclusion in the TTV tests.

This summer, the SRTD conducted TTV tests on watermelons at Alcorn State University, Lorman, MS; sweet corn at Clemson University, Clemson, SC; and pumpkins at Piedmont Research Station, Salisbury, NC. This fall, the SRTD will be conducting TTV trials on tall fescue at Clemson University, Clemson, SC, for evaluations in 2013.

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

For information regarding this article, please contact Seed Marketing Specialist Kevin Robinson at (704) 810-7264; kevin.robinson2@ams.usda.gov.

TRUENESS-TO-VARIETY (TTV) TEST FOR TALL FESCUE VARIETIES

The Seed Regulatory and Testing Division (SRTD) conducted 191 trueness-to-variety (TTV) tall fescue grow-outs on various varieties during the 2012/2013 growing season. Tall fescue is a popular grass grown widely throughout the United States. It is also a vigorous perennial bunch grass that tolerates both wet and dry soil conditions.

Tall fescue seed samples were planted in the SRTD greenhouse at the end of August 2012. After eight weeks, the seedlings were transplanted to Piedmont Research Station in Salisbury, North Carolina. The transplant fields were planted 40 plants to a row. Plants were spaced one foot apart. Each row was two feet apart. Two duplicated fields were used for testing. The grow-outs were irrigated and treated with herbicides to control weeds as needed. Evaluations were conducted monthly with a final evaluation on June 12, 2013. Plants were evaluated based on visual confirmation of established tall fescue morphological characteristics which included plant height, heading, leaf color, and leaf texture. A comparison was made between the two duplicated fields at final evaluation.

Grow-out results indicated that five out of the 191 TTV test samples appeared to be off types. To verify grow-out results, SRTD ran IEF gel tests to compare banding patterns of the suspected off types and known checks. Fig. 1 shows that samples A, B, C, D, and E have different banding patterns than the control checks (Kentucky 31(K31) and Fawn fescue). These results support results of the grow-out that the test samples in question (A, B, C, D, and E) are not Kentucky 31 or Fawn tall fescue.

Fawn A B C D E K31

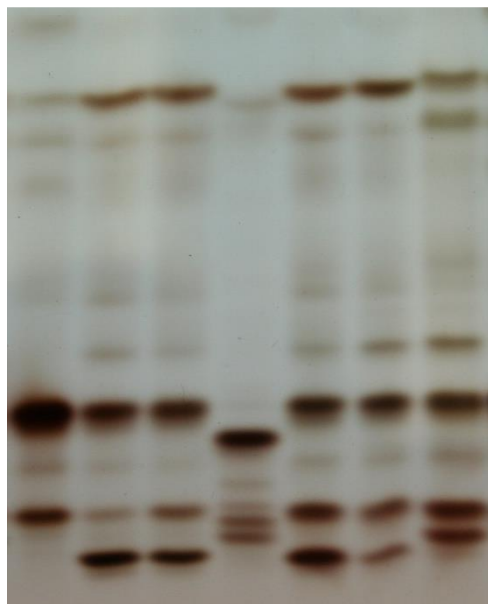


Figure 1.—Fawn and K31 (check samples)
A through E (test samples)

For information regarding this article, contact Plant Physiologist Dr. Yujia Wu at (704) 810-7267; yujia.wu@ams.usda.gov.

AMS NUMBER REQUESTS

The Seed Regulatory and Testing Division (SRTD) receive numerous requests for information regarding Agricultural Marketing Service (AMS) numbers and how to obtain them.

All interstate shippers of agricultural or vegetable seed in the United States are required to have an AMS number assigned to their company. To obtain an AMS number, please provide the company name, complete address, contact name, and any additional information such as telephone, fax number, or company web-address to jerry.irwin@ams.usda.gov or via fax to (704) 852-4109.

Assigned AMS numbers are confidential. Thus, the SRTD does not share this information with anyone outside of seed regulatory agencies.

Requests for misplaced or forgotten AMS numbers should be submitted by a company representative on company letterhead. The request must contain the complete name, address, and contact information of the person making the request. SRTD will not supply an AMS number over the phone.

For information regarding this article, please contact Seed Marketing Specialist Roger Burton at (704) 810-7265; roger.burton@ams.usda.gov.

2013 AG-DISCOVERY CAMP

Seed Regulatory and Testing Division (SRTD) Plant Pathologist Sandra Walker participated, as a presenter, at the Ag-Discovery science camp held on the campus of North Carolina State University, June 17-28, 2013. Ms. Walker taught a session that included hands-on experience conducting seed purity separations, seed identifications, and seed health tests. Approximately 20 high school students, from all across the United States, attended this year's camp.

Ag-Discovery Camp, sponsored by USDA Animal and Plant Health Inspection Service (APHIS), is held each summer on university campuses across the United States. Ag-Discovery is a science camp for high school students designed to expose them to potential careers in agriculture.

For more information on this article, please contact Plant Pathologist Sandra Walker at (704) 810-7268; sandra.walker@ams.usda.gov or www.aphis.usda.gov/agdiscovery.

ASSOCIATION OF AMERICAN SEED CONTROL OFFICIALS ANNUAL MEETING

Seed Regulatory and Testing Division (SRTD) Seed Marketing Specialists Roger Burton and Kevin Robinson attended the 27th Annual Meeting of the Association of American Seed Control Officials (AASCO), July 22-25, 2013, hosted by the Maryland Department of Agriculture in Annapolis, MD. Representatives of 17 State seed control programs, American Seed Trade Association (ASTA), Canadian Food Inspection Agency, and five seed company representatives attended the meeting.

At the general session, Roger Burton gave account of 2012 Federal Seed Act (FSA) activities. He also reported FSA activities at the North Central Seed Control Officials Association regional meeting. Kevin Robinson reported FSA activities at a combined regional meeting of the Southern Seed Control Officials and the Northeast Seed Control Officials.

Other discussions included:

- The importance of color coating Refuge in the Bag (RIB) seed and how it has benefited the industry; and
- Proposed Amendment to the Recommended Uniform State Seed Law (RUSL) from the current statement: "A relabeling may not occur more than one time" to "Relabeling may not occur after 30 months from the original test date."

The following announcements were made:

- The 28th annual meeting tentatively will be held July 2014 in Denver, Colorado; dates for the meeting are being discussed.
- The current AASCO officers are:
 - President John Heaton (CA)
 - First Vice President Steve Malone (MN)
 - Second Vice President Jim Drews (MD)
 - Treasurer Greg Helmbrecht (WI)
 - Secretary Larry Nees (IN)

For more information about AASCO, go to www.seedcontrol.org.

For information regarding this article, please contact Seed Marketing Specialist Kevin Robinson at (704) 810-7264; kevin.robinson2@ams.usda.gov.

2013 SEED ANALYST TRAINING WORKSHOPS IN GASTONIA, NC

The Seed Regulatory and Testing Division (SRTD) held a Seed Identification workshop in Gastonia, NC, on August 5-7, 2013. Nine participants, representing six State seed laboratories and one private company took part in the workshop. The focus of the workshop was on purity and identification of similar crop and weed species, with emphasis on identification of noxious-weed seed. In addition to learning new skills and acquiring new information, participants were able to discuss specific issues, problems, and solutions with other analysts. Other topics included seed structures, pure seed units, and grass mixture separations. The workshop was largely hands-on using seed study sets.

Photo by Matthew Arthen, USDA, AMS



Seed ID Workshop participants, L to R front row: Ernest Allen (SRTD Deputy Director and Laboratory Supervisor), Chase Mowry, SGS-Brookings, South Dakota, Sandra Walker (SRTD Plant Pathologist), Patsy Jackson (SRTD instructor), Lan Chi Trinh, Pennsylvania Seed Laboratory, Ben Alkire, Indiana State Seed Laboratory, Dr. Yujia Wu (SRTD Plant Physiologist), Dr. Fawad Shah (SRTD Director). **Seed ID Workshop participants, L to R back row:** Janet Riggle, Louisiana Department of Agriculture and Forestry, Charlene Burton (SRTD instructor), Valerie Spencer, Louisiana Department of Agriculture and Forestry, Travis Hill, Florida Department of Agriculture and Consumer Services (Seed Laboratory), Candace Rushing, Mississippi Department of Agriculture, Anitra Walker (SRTD instructor), Sydney Carden, Mississippi Department of Agriculture, Todd Erickson (SRTD instructor), Sam Banks, Minnesota Department of Agriculture.

It is the Mission of the SRTD to promote uniformity in seed laws and fair competition within the seed industry. These goals are accomplished in part by enforcing the interstate commerce provisions (truthful marketing of seed) of the Federal Seed Act. This effort is supported by State seed control programs through authorization provided by cooperative agreements between the States and the USDA's Agricultural Marketing Service. SRTD Biannual (usually in May and August) workshops, offered to State and other seed industry personnel, also further these goals by promoting uniformity in seed testing and by fostering greater compliance with State and Federal seed-labeling laws.

For more information about this article, please contact Botanist Charlene Burton at (704) 810-8880; charlene.burton@ams.usda.gov.

MONITORING GERMINATION CHAMBERS ACCORDING TO QUALITY MANAGEMENT SYSTEM REQUIREMENTS

Many seed testing labs are developing Quality Management Systems and are becoming certified either through the International Organization for Standardization (ISO), the USDA's Accredited Seed Laboratory program (ASL), and/or the International Seed Testing Association (ISTA) standards. All these standards have requirements for monitoring equipment. One of the most important pieces of equipment used by seed testing laboratories is the germination chamber. This article compares ISO 9001 and ASL requirements for monitoring germination chambers. It also details how these standards are applied in ISTA, Association of Official Seed Analysts (AOSA), and Federal Seed Act (FSA) rules and regulations.

ISO 9001:2008 7.6(a) states, "measuring equipment shall be calibrated or verified, or both, at specified intervals, or prior to use, against measurement standards traceable to international or national measurement standards; where no such standards exist, the basis used for calibration or verification shall be recorded." The wording for the ASL requirement is essentially the same. Thus, for a laboratory to be accredited to one of these standards, it must have in its quality documentation a procedure stating how often and in what manner the germination chambers will be monitored.

When deciding how often to monitor chambers, laboratory management should consider the guidelines or rules they are most often testing by and any recommendations of the chamber manufacturer. AOSA and FSA do not provide guidelines for how often a chamber should be monitored. The ISTA Handbook on Seedling Evaluation (A5.2.4) gives the following guidance: "For constant temperature equipment at least three readings should be recorded per day at regular pre-set times. If records show that the equipment is stable in terms of temperature with variations of less than 1.0°C between readings the recording frequency can be reduced to once per day. However, if there is any indication of a change in performance recording frequency should be increased." In addition, "Where records show that a piece of apparatus is stable, with day to day variations of less than 1.0°C, measures to take readings at weekends and public holidays are not required. Where apparatus is unstable, with day to day variations greater than 1.0°C, measures to take readings at weekends and public holidays are required." Thus, a laboratory procedure requiring daily temperature monitoring would satisfy the ISO and ASL requirements of verification against an international (ISTA) standard. However, if the chamber has different day and night temperatures, then two measurements should be made daily to capture both of these temperature settings.

The other element which must be included in the laboratory monitoring procedure is how the chamber temperatures will be checked. Thermometers are the most common measuring device

used, although electronic data loggers can be used as well. Again, ISO and ASL require that these thermometers be calibrated against national or international standards. One way to meet this requirement is to purchase thermometers that have been calibrated by a professional organization such as the National Institute of Standards and Technology (NIST). Alternately, if a number of thermometers are being used, a single NIST thermometer could be purchased and the other thermometers calibrated against it. Finally, the ISTA Handbook on Seedling Evaluation indicates that thermometers can be verified by placing them in a zero degree ice bath. Whether using an external thermometer or ice bath, ISTA recommends that any thermometer that differs by more than 0.5°C from the control be removed from service.

The ISTA Rules state that chambers should not deviate by more than 2 degrees from their set point. AOSA Rules indicate that this variation should not be more than 1 degree. Any thermometer used should be divided into units smaller than the acceptable variation. In other words, units of 0.5°C are desirable.

Finally, ISO and ASL require that records of equipment monitoring be kept. The daily temperature monitoring should be recorded and these records stored in a designated location. Records should be stored so as to prevent deterioration or alteration, but should be accessible to necessary personnel such as managers or auditors.

For more information on this article, please contact Todd Erickson at (704) 810-7266. todd.erickson@ams.usda.gov

References

ISTA Handbook on Seedling Evaluation, Third Edition. 2013. Bassersdorf, Switzerland.

AOSA Rules for Testing Seeds. 2013. Ithaca, NY.

RYEGRASS FLUORESCENCE LIST

The Association of Official Seed Certifying Agencies (AOSCA) revises its report of the Variety Fluorescence Levels Recognized by the AOSCA National Grass Ryegrass Review Board twice a year. Click on the Grass National Variety Review Board section of the Web site (<http://www.aosca.org/VarietyReviewBoards/Grass/Grass.html>), and then click on the link for the National Perennial Ryegrass Variety Fluorescence Report to view the most current list.

PLANT VARIETY PROTECTION CERTIFICATE STATUS

The Plant Variety Protection Office (PVPO) posts a public version of the Certificate Status Database. Visit the [PVPO Certificate Status Database](#) to check the status of certification or to search for expired certificates. To view PVPO's list of U.S. protected varieties, visit [PVPO List of U.S. Protected Varieties](#). It may take time for the list to open due to its large size. The PVPO updates these public access databases monthly or as time permits.

CALENDAR OF EVENTS

American Seed Trade Association (ASTA) Corn & Sorghum and Soybean Seed Research Conference Chicago, IL	December 10-13, 2013
American Seed Trade Association (ASTA) Vegetable & Flower Seed Conference Monterey, CA	January 25-29, 2014
Organization for Economic Cooperation and Development (OECD) Seed Schemes Technical Working Group Meeting Edinburgh, United Kingdom	January 2014
Association of Official Seed Analysts (AOSA/SCST) Annual Meeting Fargo, ND	June 1-5, 2014
Organization for Economic Cooperation and Development (OECD) Seed Schemes Working Group and Annual Meeting Zagreb, Croatia	June 9-13, 2014
International Seed Testing Association (ISTA) Congress and Annual Meeting Edinburgh, United Kingdom	June 16-19, 2014
American Seed Trade Association (ASTA) 131 th Annual Convention Indianapolis, IN	June 11-14, 2014
Association of Official Seed Certifying Agencies (AOSCA) Annual Meeting Ashville, NC	June 22-25, 2014
American Association of Seed Control Officials (AASCO) Annual Meeting Denver, CO (tentative)	July 2014

Seed Regulatory and Testing Division sponsored training schedule to be determined.

For further information, please visit organization Web sites.

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