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Marketing and Regulatory Programs

Agricultural Marketing Service

Livestock and Seed Program

Items of Interest in Seed

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EDITOR'S NOTES

In the Report of the Commissioner of Agriculture for the Year 1862, an ingenious writer says this:

> "Agriculture is an art—man the artist. The soil is his laboratory; manures and seeds his raw material; animal strength and machinery his power; air, heat, and moisture his agents; and grain, roots, fruits, and forage his products. Agriculture is also a science, teaching the artist the best modes of improving and fitting up his laboratory; instructing him in the properties and economical use of his raw material; teaching him how best to apply his power and profit by his agents, thereby enabling him greatly to abridge his labors and multiply his products."

Although 144 years have passed since the Commissioner of Agriculture presented his report to President Abraham Lincoln and to Congress on January 1, 1863, it is striking to note how little has changed regarding the importance of science in the field of agriculture.

This issue of the Items of Interest in Seed (IOI) includes three scientific articles written by Seed Regulatory and Testing Branch (SRTB) botanists relating to seed purity: "Role of the Seed Coat in Determining Seed Purity in the Cucurbitaceae" by Ernest Allen, "Monogerm and Multigerm Beets: Pure Seed Definitions" by Charlene Burton, and "Detection of Fungal Bodies in Bahiagrass Seeds" by Todd Erickson. In addition, there are several articles about Federal Seed Act regulatory activity, including Seed Marketing Specialist Roger Burton's article, "The Federal Seed Act -- Section 501 -- Title V -- Sale of Uncertified Seed of Protected Varieties.

The SRTB hopes you will enjoy Seed Marketing Specialist Jeri Irwin's new column called "Seed Segments." Ms. Irwin had the opportunity to interview Noxious Weed Specialist Becky Azama of the Hawaii Department of Agriculture regarding the daily challenges and responsibilities the Chemical/Mechanical Control Section faces in containing or eradicating agricultural pests, inspecting and testing seed, as well as other responsibilities. It is an interesting new addition to the IOI.

Please let me know if you have suggestions for topics to be covered in the future by sending an e-mail to linda.vanderhoof@usda.gov.

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

Linda Vanderhoof
IOI Editor

DR. CRAIG MORRIS NAMED DEPUTY ADMINISTRATOR OF USDA AGRICULTURAL MARKETING SERVICE, LIVESTOCK AND SEED PROGRAM

On May 16, 2007, the U.S. Department of Agriculture's Agricultural Marketing Service (AMS) announced the selection of Craig A. Morris, Ph.D., as the new Deputy Administrator of AMS Livestock and Seed Program.

"I am pleased to announce the appointment of Dr. Morris to head the AMS Livestock and Seed Program," said AMS Administrator Lloyd Day. "His varied background and proven abilities in various leadership positions make him an ideal choice for this important post."

The AMS Livestock and Seed Program is headquartered in Washington, DC, and maintains offices throughout the United States to serve the agricultural community and industry. The major functions performed by the Livestock and Seed Program are as follows: meat grading and certification services; livestock, meat, and grain market news services; voluntary, user-fee, audit-based programs that are available to suppliers of agricultural products and services; and seed regulatory and testing activities. The program also purchases meat and fish for Federal feeding programs, oversees research and promotion programs, and develops standards and purchase specifications for livestock and meat products.

Morris has spent his entire professional career as part of the meat and poultry industries. Prior to his appointment to this position, since 2004, he served as the Deputy Administrator of AMS Poultry Programs and, before that, as Associate Deputy Administrator heading the Agency's services for the chicken, turkey, egg, and rabbit industries. Earlier work experience includes several positions within AMS Livestock and Seed Program in Washington, DC.

Apart from government service, Morris served as Assistant Vice President of Food Safety for Future Beef Operations, LLC, in Arkansas City, KS, and as the Manager of Scientific and Technical Affairs for the American Meat Institute in Washington, DC.

Morris was born in St. Louis County, MO, and spent part of his childhood growing up in suburban Dallas and Houston, TX. He received his Bachelor of Science degree with Distinction in Animal Science from Iowa State University and served as a Regent's Graduate Fellow while earning his Doctorate in Animal Science from Texas A&M University. He and his wife have two sons and reside in Fairfax Station, VA.

For information regarding this article, contact AMS Public Affairs Office at (202) 720-8998; http://www.ams.usda.gov/news.

FALL TRUENESS-TO-VARIETY OVERVIEW

Trueness-to-variety (TTV) field testing is conducted to determine if seed lots are properly labeled for variety, which is required by the Federal Seed Act (FSA) and State seed laws. The primary focus of this testing is to identify seed lots which bear the wrong variety name on the label or which have significant levels of off-type plants within the lot. It is not the goal of this program to identify varieties, i.e., to say that a specific seed lot is definitely a specific variety. Such identification is difficult and sometimes impossible. Furthermore, it is not the goal of this testing program to make comparisons between varieties for yield, suitability, or any other quality. Therefore, TTV field tests are designed differently than yield or suitability tests.

The field testing is conducted by crop experts at State universities and State departments of agriculture in cooperation with the Seed Regulatory and Testing Branch (SRTB). Seed samples are obtained by State inspectors and SRTB staff as part of routine State and Federal seed inspection programs. SRTB staff logs, sorts, and ships the samples to the test sites. Then, crop specialists organize, plant, and cultivate the test samples. Together, SRTB personnel and State seed control officials take notes and determine whether the seed lot is properly labeled for variety. Interested seed industry professionals and others are often invited to observe the plots first-hand. If a seed lot is judged to be mislabeled in apparent violation of the FSA, the case is

referred to SRTB seed marketing specialists for investigation of company labeling and shipping records concerning the lot. If the records support the test findings, the company involved may be cited with a violation of the FSA and/or State seed laws. Penalty actions range from warnings to monetary penalties.

This year, about 900 total TTV samples were planted: cucumbers at Southern University and A&M College, Baton Rouge, LA; soybeans at University of Minnesota, Rosemont, MN; cabbage at North Carolina State University, Jackson Springs, NC and watermelons at Salisbury, NC; soybeans at Clemson University, Clemson, SC; melons at Texas Department of Agriculture, Giddings, TX; and soybeans at Virginia Department of Agriculture and Consumer Services, Richmond, VA.

The SRTB would like to thank the seed control programs in Arizona, Arkansas, Delaware, Georgia, Illinois, Kentucky, Louisiana, Maryland, Michigan, Minnesota, Mississippi, Missouri, New Mexico, New York, Ohio, Oklahoma, Pennsylvania, South Dakota, Texas, Utah, Virginia, and West Virginia for participation in the TTV program. Once the TTV results have been compiled, participating States will be notified of any mislabeling.

This fall, SRTB will grow tall fescue and collards at the Sandhills Research Station, Jackson Springs, NC, and winter small grains at the Piedmont Research Station, Salisbury, NC. If any State seed control program wishes to submit samples to the TTV program, please contact Agronomist Mike Lovelace at (704) 810-7261; mike.lovelace@usda.gov.

NEW LOAN PROCEDURE FOR THE ASSOCIATION OF OFFICIAL SEED ANALYSTS MASTER CALIBRATION SAMPLES

A change in the Association of Official Seed Analysts (AOSA) calibration procedure for uniform blowing went into effect on October 1, 2006. (See article in the October 2006 issue of the Items of Interest in Seed.) The uniform blowing procedure makes use of a mechanical blower to separate pure seed from inert in certain grass seed kinds. Calibration is necessary to determine the proper gate setting of the blower to produce the optimum blowing point for a particular species. The new method requires measurement of air velocity (equivalent air velocity or EAV) at that gate setting. Master Calibration Samples (MCS's), available on a loan-only basis from the USDA Seed Regulatory and Testing Branch (SRTB), must be used for the calibration. An anemometer must be used to determine air velocity.

Forms and additional information about the equipment and procedure are located on the AOSA Web site. (Go to www.aosaseed.com and click on resources.) It is helpful to read the current version of AOSA Handbook No. 24, *The Uniform Blowing Procedure,* prior to using the new calibration procedure for the first time.

Requesting and Returning Master Calibration Samples:

- Acquire an **anemometer** before requesting the MCS's. (See the current version of AOSA Handbook No. 24 for ordering information.)

- Request the MCS's from the SRTB laboratory by phone, fax, or e-mail
  - MCS Program Administrator
    USDA AMS LS SRTB
    801 Summit Crossing Place
    Suite C
    Gastonia, NC 28054
  - 704-810-8870
  - Fax 704-852-4189
  - sandy.dawson@usda.gov

- Include the following information with your request:
  - a signed and dated *Loan Agreement Form for the Master Calibration Samples* (Read this agreement carefully before signing.)
  - species (Orchardgrass and Kentucky bluegrass MCS's are available at this time.)
  - laboratory name
  - contact name
  - street address (FedEx does not accept Post Office Box numbers.)
  - phone number
  - fax number or 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 SRTB.

- 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.

- Perform the calibration as instructed in AOSA Handbook No. 24 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 completed *User's Data Sheet for Tracking Master Calibration Samples* by a traceable overnight service (FedEx, UPS, DHL, USPS Express, etc.).

- There is no charge for borrowing the MCS's if the borrower follows all requirements in the *Loan Agreement for the Master Calibration Samples*, but the borrower is responsible for paying return postage. The *Loan Agreement for the Master Calibration Samples*, the *Guidelines for Users of Master Calibration Samples*, and the *MCS Borrower Responsibility Guidelines* are posted on the AOSA Web site. Go to www.aosaseed.com and click on resources.

For information regarding this article, contact Botanist Sandy Dawson at (704) 810-7270; sandy.dawson@usda.gov.

For information about AOSA rules, see their Web site at http://aosaseed.com.

DO'S AND DON'TS WHEN SUBMITTING SAMPLES FOR SERVICE TESTING

Please DO:	Please DON'T:
Choose an envelope, package, or container that allows enough head space so as not to split seams.	Overstuff envelopes, packages, or containers to the brim with seed.
Include a separate sheet of paper, preferably on letterhead, that is readily available as a record for the file.	Put your instructions regarding testing, mailing, and quantity only on labeled seed bag or container.
Label seed with typed print or write with bold ink and legible handwriting.	Label seed with light ink on dark paper.
Submit samples slightly above minimum weight to insure adequate weight.	Submit samples that are too close to minimum weight.
Clearly state the type of tests needed for your customer and country of destination.	Assume we know which rules you want applied to testing of your sample.

For the appropriate quantity of submitted seed for service testing, see the table in the Questions and Answers article (p. 11).

For information regarding this article, contact Laboratory Secretary Susan Haney at (704) 810-8870; susan.haney@usda.gov.

THE FEDERAL SEED ACT – SECTION 501 – TITLE V – SALE OF UNCERTIFIED SEED OF PROTECTED VARIETIES

When a Plant Variety Protection Certificate indicates that seed of a particular variety is to be sold by variety name only as a class of certified seed, the variety then becomes subject to the provisions under Title V of the Federal Seed Act (FSA). Section 501 under Title V of the Federal Seed Act (FSA) states, "It shall be unlawful in the United States or in interstate or foreign commerce to sell or offer for sale or advertise, by variety name, seed not certified by an official seed certifying agency, when it is a variety for which a certificate of plant variety protection under the Plant Variety Protection Act specifies sale only as a class of certified seed: Provided, That seed from a certified lot may be labeled as to variety name when used in a mixture by, or with the approval, of the owners of the variety."

This means that a Title V variety must be a class of certified seed to be advertised or sold by variety name. Advertising or selling uncertified seed of a Title V variety by variety name is a violation of Section 501 of the FSA. This violation of the FSA applies to both intrastate and interstate advertising, sales, and shipments.

The Seed Regulatory and Testing Branch (SRTB) has received numerous inquiries this year related to the requirements for labeling mixtures containing one or more components that are Title V protected varieties. As indicated in Section 501 above, "…seed from a certified lot may be labeled as to variety name when used in a mixture by, or with the approval, of the owners of the variety." [Emphasis added.]

In addition, SRTB has been asked if there is a requirement to include the Plant Variety Protection comment—"Unauthorized Propagation Prohibited – To Be Sold by Variety Name Only as a Class of Certified Seed—U.S. Protected Variety" on the labeled mixture containing the Title V protected varieties. This question is normally referred to the Plant Variety Protection Office since the answer would fall under their jurisdiction. Currently there are no FSA labeling

requirements pertaining to statements indicating that a variety is also protected under Section 501 (Title V) of the FSA. However, it should be noted that Section 201.8 of the FSA Regulations Part 201 pertaining to the FSA states, "The label may contain information in addition to that required by the Act, provided such information is not misleading." Therefore, a statement such as the one above could be placed on a seed label, provided such a statement is truthful and not misleading.

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

THE ACCREDITED SEED SAMPLING PROGRAM

In cooperation with the Audit, Review, and Compliance (ARC) Branch of the Agricultural Marketing Service (AMS), Livestock and Seed Program, the Seed Regulatory and Testing Branch (SRTB) administers three ISO-based quality management programs—the Accredited Field Inspection Program, the Accredited Seed Sampling Program, and the Accredited Seed Laboratory Program—for providing accreditation to field inspectors, seed samplers, and seed testing laboratories. Of these, the Accredited Seed Sampling Program (ASSP) provides accreditation to seed samplers under the Process Verified Program (PVP) of AMS.

ASSP and other programs under the PVP provide agricultural suppliers with the ability to assure customers that they are capable of consistently providing quality products or services. A process verified system is audit-based in order to provide assurance that participants have created and implemented a quality management system (QMS) that complies with the program requirements.

Value of the ASSP

Becoming an accredited seed sampler or sampling entity under the ASSP can be of considerable value:

1. The establishment of a quality management system in conformity with a PVP enables customers to place greater dependence on the quality and consistency of sampling.

2. Accredited entities may have the potential to sample for the Accredited Seed Grader Program, the Organization for Economic Cooperation and Development (OECD) Seed Schemes, Accredited Seed Laboratories, the Animal and Plant Health Inspection Service, and USDA Seed Analysis Certificates.

3. If desired, the participant can use the USDA PVP logo and shield with ARC Branch approval.

4. The participant may also be listed as an approved sampler on the USDA Web site of sampling programs.

Characteristics of the ASSP

The program is funded by user-fees and is completely voluntary in that samplers or sampling entities are under no obligation to seek accreditation. Once accredited under the program, they may choose to leave it at any time.

USDA requires accreditation audits of the program every three years and the submission of an annual internal audit report prior to the anniversary date of the program approval. In these instances, the only costs to the participant are for the yearly desk review of the internal audit and for audits by AMS to determine whether the applicant has met or continues to meet the specified requirements. Also, since the typical participant will only be subject to an onsite audit every three years, the major costs to the participant will also occur on a three-year basis.

The basic objective of the ASSP—to improve the quality of sampling and consequently the quality of the sample—is attained in two ways. The ASSP encourages uniform procedures and methodology for sampling seed and tries to improve sampling operations by promoting quality management principles. Consequently, seed customers are provided with an additional assurance of consistent sampling quality which may lead to improvements in seed trade both domestically and globally.

The Process

How does the process for becoming an accredited sampler under the ASSP work?

1. The first step is to have in place, or create, a quality management system (QMS) which meets the requirements of the Accredited Seed Sampling Program and of the Process Verified Program as stated in the standard for that program, ARC 1001. If there is already a QMS in place, certified under the ISO 9001 standards, the process is slightly different than for an organization creating one from scratch. AMS, in effect, recognizes that a QMS under a valid ISO 9001 certificate satisfies many of the requirements of ARC 1001. In turn, this will have an effect on the length and breadth of the audit which AMS performs.

   While ISO 9001 meets many of the requirements of the Process Verified Program, it does not meet all of them. ARC 1001 has two additional areas not included in ISO 9001. The first of these involves the need for additional written procedures. ARC 1001 requires procedures for training, identification and traceability, receipt of product, and, if applicable, control of promotional material, specifically the USDA PVP logo and shield. If the organization does not intend to use the logo and shield, a simple statement to that effect negates the requirement for this procedure.

   A second major difference between ARC 1001 and ISO 9001 is the requirement of the former for delineation of process verified points. Process verified points are specific requirements achieved through the implementation of a quality management system. They are, in effect, actions which add value to the product. One example might be a specific training procedure, perhaps unique to the organization, or at least of such value that it makes an improvement to some aspect of the stem that results in a more consistently representative sample.

2. Once an approved QMS is in place, the sampler or sampling entity submits LS Form-313 *Application for Service* to AMS (available on the ARC Web site, http://www.ams.usda.gov/lsg/arc/reqasl.htm). At the same time, a cover letter requesting accreditation under the specified program should be included. Finally, documentation of the QMS should also be provided.

3. ARC will first assess the process verified points to determine if they meet certain criteria, such as auditability and feasibility and are factual, value-adding, and within the scope of the program.

4. Once the process verified points have been accepted an auditor is assigned to perform a desk audit of the applicant's documentation.

5. An internal audit must also be supplied to the auditor prior to the on-site audit.

6. The last step is the on-site audit, during which applicants will be audited for compliance with the PVP and ASSP and for evidence of fulfilling the requirements of their QMS.

Responsibilities of the Program Participant

There are several responsibilities which are incumbent upon the accredited sampler or sampling entity.

1. The approved QMS must be maintained, and any significant changes to it must be relayed to AMS immediately.

2. Samplers must comply with all provisions of the ASSP and applicable elements of ARC Procedures 1001 and, consequently, should be familiar with the provisions of these documents.

3. Samplers are also accountable for sampling seed in accordance with the Association of American Seed Control Officials Handbook on Seed Sampling, OECD Authorization Guidelines, or the Federal Seed Act.

4. Sampling records must be maintained for a minimum of 5 years.

5. Internal audits must be conducted annually and the results supplied to AMS prior to the anniversary date of the accredited party's participation in the ASSP.

6. Samplers or sampling entities must participate in check-sampling of seed lots entered for official certification for OECD Seed Schemes (this is not applicable to seed lots sampled by approved automatic samplers).

Summary

In summary, the Accredited Seed Sampling Program involves a commitment of resources by the interested party. In the beginning, that commitment includes developing and implementing a quality management system that complies with the Process Verified Program. Upon accreditation, the participant commits to fulfilling the responsibilities that accompany acceptance into the program. However, the benefits of the ASSP can be of considerable value to the accredited entity. The potential opportunity to sample for various programs and laboratories can provide new avenues for sampling activity. The adoption of a QMS in compliance with the PVP may add further value by improving the sampling quality and the consistency of that quality. For information regarding this article, contact Seed Marketing Specialist Gene Wilson at (704) 810-8888; gene.wilson@usda.gov.

QUESTIONS AND ANSWERS

Labeling Seed Country of Origin

Q. Does the Federal Seed Act or other U.S. law require that the country of origin be printed on seed labels?

A. Section 201.14 of the Federal Seed Act (FSA) Regulations requires that alfalfa, red clover, white clover, and field corn (except for hybrid seed corn) shall be labeled to show origin. Section 101(10) of the FSA states, "The term 'origin' means the State, District of Columbia, Puerto Rico, or possession of the United States, or the foreign country, or designated portion thereof, where the seed was grown."

This means that alfalfa, red clover, white clover, and non-hybrid field corn must be labeled to indicate the state, or in the case of imported seed, the country in which the seed was grown. The FSA does not require other crops to be labeled according to origin.

Labeling Kidney Bean

Q. What is the standard germination and test information for kidney bean (*Phaseolus vulgaris*)?

A. The FSA Regulations categorize "kidney bean" as a field bean, and there are no germination standards for field bean. The FSA Regulations contain germination standards for vegetable seeds—including garden, lima, and runner bean—that must be met for sale in containers of one pound or less if the percent germination is not shown on the container. Since field beans do not fall under the category of vegetable seeds, kidney bean seed lots must bear all the same labeling that is required of agricultural seed, including percentage germination and test date. Some State Seed Certifying Agencies may have germination standards for kidney beans in their certification standards.

Changing Variety Name of Imported Seed

Q. Can the variety name of imported seed be changed?

A. If a foreign variety of seed is imported into the United States and the name is in the Roman alphabet, the name cannot be changed unless the name of the imported seed will cause a conflict with the name of an existing variety already being sold domestically. If the name of the imported variety will cause a conflict with the name of an existing variety being sold in the United States, the name of the imported variety must be changed prior to sale in the United States. If the imported variety is identified by an experimental designation (e.g., E123), the variety can be named prior to the first sale in the United States. However, if the variety is offered for sale in the United States with the experimental designation, the experimental designation becomes the variety name. In addition, letters and numbers are considered as part of the Roman alphabet; therefore, a variety name consisting of letters and numbers cannot be changed when imported into the United States for sale.

See section 201.34(d) of the FSA Regulations Part 201 or visit our Web site at http://www.ams.usda.gov/lsg/seed/factsabt.pdf for a copy of our publication "FACTS ABOUT: NAMING AND LABELING VARIETIES OF SEED."

For information regarding these questions and answers, contact Branch Chief Richard Payne at (704) 810-8884; richard.payne2@usda.gov.

Changing Lot Number

Q. When is it necessary to change a lot number?

A. A lot of seed is defined in 201.2(v) of the Federal Seed Act Regulations Part 201 as a definite quantity of seed identified by a lot number, with every portion or bag being uniform—within permitted tolerances—for the factors which appear in the labeling.

A lot number is the primary identifying tool on a label and is used for tracking a specific quantity of seed. The lot number should be unique to that specific lot or specific quantity of seed. The lot number should be changed anytime the seed in the lot is altered. Some examples are as follows:

- If the seed lot is blended with another lot;
- If coating material or seed treatment is added to an existing lot;
- If the lot is reconditioned resulting in a change in seed quality; or
- If a lot is subdivided into portions that are no longer uniform because of treatment, conditioning, different storage conditions, or other factors.

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

Submitted Quantities for Service Testing

Q. For service testing, how much seed do I need to submit for purity and germination tests; noxious-weed seed test; or moisture test according to International Seed Testing Association (ISTA) Rules?

A. See chart below.

KIND	PURITY & GERMINATION	NOXIOUS[1/]	MOISTURE[2/]
Alfalfa	5 grams	50 grams	50 grams
Bahiagrass	7 grams	70 grams	50 grams
Bean, garden	700 grams	1,000 grams	100 grams
Bean, lima or runner	1,000 grams	1,000 grams	100 grams
Beet	50 grams	500 grams	50 grams
Bermudagrass	1 gram	10 grams	50 grams
Broccoli & Cabbage	10 grams	100 grams	50 grams
Carrot	3 grams	30 grams	50 grams
Cauliflower	10 grams	100 grams	50 grams
Celery	1 gram	10 grams	50 grams

Continued from previous page.

KIND	PURITY & GERMINATION	NOXIOUS[1/]	MOISTURE[2/]
Corn	900 grams	1,000 grams	100 grams
Cowpea	400 grams	1,000 grams	50 grams
Cucumber	70 grams	150 grams	50 grams
Eggplant	15 grams	150 grams	50 grams
Kale & Kohlrabi	10 grams	100 grams	50 grams
Leek	7 grams	70 grams	50 grams
Lettuce	3 grams	30 grams	50 grams
Muskmelon	70 grams	150 grams	50 grams
Okra	140 grams	1,000 grams	50 grams
Onion	8 grams	80 grams	50 grams
Panicgrass, blue	2 grams	20 grams	50 grams
Parsley	4 grams	40 grams	50 grams
Pea	900 grams	1,000 grams	100 grams
Pepper	15 grams	150 grams	50 grams
Radish	30 grams	300 grams	50 grams
Ryegrass	6 grams	60 grams	50 grams
Sorghum	90 grams	900 grams	100 grams
Sorghum-Sudangrass	30 grams	300 grams	100 grams
Sudangrass	25 grams	250 grams	100 grams
Soybean	500 grams	1,000 grams	100 grams
Spinach	25 grams	250 grams	50 grams
Squash & Pumpkin	700 grams	1,000 grams	50 grams
Tomato	7 grams	15 grams	50 grams
Turnip	7 grams	70 grams	50 grams
Watermelon	250 grams	1,000 grams	100 grams

1/ Quantities for noxious-weed seed exam include sufficient seed for purity and germination.
2/ Quantity for moisture testing must be submitted in a separate moisture-proof container to comply with ISTA rules.

NOTE: The figures above are from the 2007 edition of the *ISTA International Rules for Seed Testing* and are subject to updates.

FEDERAL SEED ACT CASES SETTLED

The following cases were settled administratively under the Federal Seed Act between March 15 and August 31, 2007. Under the administrative settlement procedure, the Seed Regulatory and Testing Branch and the firms agreed to settle the cases for the amount specified, with the firms neither admitting nor denying the charges. Official Program Announcements on each of these cases are accessible on the following Web site: http://www.ams.usda.gov/news/newsrel.htm.

Allied Seed, L.L.C., Nampa, ID, has paid $2,325 for a case involving three shipments of seed into Georgia, Kentucky, and New York. The alleged violations, while not the same for all shipments, were false labeling as to pure seed, other crop seed, weed seed percentages, and

test date; and failure to label the presence of noxious-weed seeds and to label as a mixture. Seed regulatory officials in Georgia, Kentucky, and New York cooperated in the initial sampling and inspection.

Barenbrug USA, Tangent, OR, has paid $8,100 for a case involving eight shipments of seed into Alabama, Indiana, Kentucky, Michigan, and Missouri. The alleged violations, while not the same for all shipments, were false labeling as to germination, pure seed, other crop seed, inert matter
percentages, test date, kind name, and origin; and failure to label the presence of noxious-weed seeds. Seed regulatory officials in Alabama, Indiana, Kentucky, Michigan, and Missouri cooperated in the initial sampling and inspection.

W. Atlee Burpee Company, Inc., Warminster, PA, has paid $4,025 for a case involving nine shipments of seed into Maryland, North Carolina, and Texas. The alleged violations, while not the same for all shipments, were false labeling as to variety and failure to keep a complete record of the seed. Seed regulatory officials in Texas cooperated in the initial sampling and inspection.

Jacklin Seed Company, Post Falls, ID, has paid $1,600 for a case involving four shipments of seed into Florida, Illinois, Missouri, and Nebraska. The shipment to Illinois was reshipped by another firm into Michigan where the seed was officially sampled. The alleged violations, while not the same for all shipments, were false labeling as to pure seed, inert matter, germination percentages, and test date. Seed regulatory officials in Florida, Michigan, Missouri, and Nebraska cooperated in the initial sampling and inspection.

Pennington Seed, Inc., Madison, GA, has paid $5,775 for a case involving nine shipments of seed into Georgia and Virginia. The alleged violations, while not the same for all shipments, were false labeling as to pure seed and other crop seed percentages, rate of occurrence of noxious-weed seeds, and test date; failure to label the presence of noxious-weed seeds; and shipping seed containing noxious-weed seeds in excess of State's limits. Seed regulatory officials in Georgia and Virginia cooperated in the initial sampling and inspection.

The Scotts Seed Company, Marysville, OH, has paid $1,600 for a case involving four shipments of seed into Georgia and Missouri. The alleged violation, for each shipment, was false labeling as to germination percentage. Seed regulatory officials in Georgia and Missouri cooperated in the initial sampling and inspection.

Smith Seed Services, Halsey, OR, has paid $2,025 for a case involving three shipments of seed into Ohio and Tennessee. The shipment to Tennessee was reshipped by another firm into Georgia, and the shipments into Ohio were reshipped into Georgia and Texas where the seed was officially sampled. The alleged violations, while not the same for all shipments, were false labeling as to pure seed and weed seed percentages and test date. Seed regulatory officials in Georgia and Texas cooperated in the initial sampling and inspection.

RYEGRASS FLUORESCENCE LIST

The current ryegrass fluorescence list by the National Grass Variety Review Board is available on the following Web site: http://www.oscs.orst.edu/publications/specialreports/vfl.pdf

PLANT VARIETY PROTECTION CERTIFICATE STATUS

Check the status of certification and search for expired certificates by accessing the Plant Variety Protection Office's Web site and entering their Public Access Database: http://www.ams.usda.gov/science/pvpo/PVPindex.htm.

SEED SEGMENTS by Jeri Irwin

A JOURNEY TO HAWAII

Have you ever wondered if your seed program was similar to other seed programs? Are some of your duties so unique that you feel no one can relate? The Seed Segments reporter helps you find answers to these questions by asking State agencies to share information about their daily challenges. Seed Marketing Specialist Jeri Irwin begins this journey by contacting the seed control official in Hawaii. Noxious Weed Specialist Becky Azama of the Chemical/Mechanical Control (C/M Control) Section, Plant Pest Control Branch, Plant Industry Division, Hawaii Department of Agriculture (HDOA) agreed to answer a few questions about their program.

What is the main function of the C/M Control Section?

The C/M Control Section is the counterpart to the Biological Control (BC) Section of the Plant Pest Control Branch. We are the hands-on crew after the agricultural plant pest enters the State; we try to contain or eradicate it. Because we are a small crew, we rely on the landowner or manager to take charge of their property, and we provide the technical advice and sometimes equipment, chemicals, and what limited manpower we have.

How many employees are in the C/M Control Section?

We have a staff of 12 statewide: 6 noxious weed specialists, 1 plant pest technician, and 5 general laborers. We can recruit assistance from the BC Section and the rest of HDOA, plus other agencies if we need and the agencies are willing.

What types of seed activities are performed in your program?

Our section conducts routine surveys of agricultural and vegetable seed vendors to ensure the quality and proper labeling of seeds sold to consumers. We examine samples of seed lots entering the United States from foreign ports under an agreement with USDA's Animal and Plant Health Inspection Service. Seed lots containing prohibited noxious-weed seeds or seeds of quarantine status are refused entry into U.S. commerce.

We conduct germination tests on vegetable and agricultural seed lots to ensure that minimum germination standards under the Hawaii Seed Rules are met. Our laboratory also performs tests for Hawaii seed distributors, upon request, to ensure compliance with the Hawaii Seed Rules.

Besides seed inspection, tests, and regulatory matters, we keep busy with duties that come under the Noxious Weed Control Law and Rules.

The Agricultural Marketing Service (AMS) has a Cooperative Agreement with each of the 50 States which provides for mutual assistance and cooperation between the State agency and AMS in the enforcement of the interstate provisions of the Federal Seed Act. How does the C/M Control Section benefit from this Cooperative Agreement?

The training given by the Seed Regulatory and Testing Branch has been beneficial to the C/M Control Section because we are physically remote and far away from other regulatory agencies. It is a good opportunity for us to be trained by professionals and to talk shop with others who share our field of study.

What projects are the C/M Control Staff involved in?

On Oahu and Maui, we are surveying for and helping some nurseries deal with the stinging nettle caterpillar. The stinging nettle caterpillar attacks palms, grasses, and other monocots but luckily it has not been found on corn. Hawaii's corn industry has grown steadily in the last 10 years; they harvested 6.2 million pounds of seed last year.

We are also involved in projects such as examining bee samples for varroa mites and working with pest control operators with procedures to kill infested hives and getting pesticides licensed in Hawaii to use against the mites; finding chemicals that work against the erythrina gall wasp for either contact kill or systemic insecticides on the trees; removing salvinia weed from the State's largest body of fresh water; and controlling the coqui frog, little fire ants, and weeds such as fireweed, fountain grass, long thorn kiawe, and more.

What unique challenges does your program face?

Since many pests and diseases have become established in Hawaii, it is a challenge to prevent moving pests and diseases to other islands in the State. The Department's survey entomologist posts a "New Pest Advisory" on our Web site (http://www.hawaii.gov/hdoa) which shows individuals how they can help reduce the spread of agricultural plant pests by becoming aware of their signs and symptoms.

What are some of the more extraordinary duties that your program has dealt with?

We have chased after snails and prairie dogs in the past. The Hawaiian blind snake is the State's only land snake. However, because various snakes have entered the State, some of our staff have attended snake detection training.

The Seed Regulatory and Testing Branch thanks Becky Azama for submitting information for this article and for her patience throughout the development of this column. The Seed Segments reporter may contact you to share information about your seed program.

For information regarding this article, contact Seed Marketing Specialist Jeri Irwin at (704) 810-8878; jeri.irwin@usda.gov.

ROLE OF THE SEED COAT IN DETERMINING SEED PURITY IN THE CUCURBITACEAE

The seed testing rules of the Association of Official Seed Analysts (AOSA), the International Seed Testing Association, and the Federal Seed Act all require that seed fragments of most species be greater than 50 percent of the original size in order to be classified as pure seed.

However, variations in seed size and structure sometimes make it difficult to determine whether a piece of broken seed is greater than, less than, or equal to 50 percent of its original size. Analysts often have differing opinions about these variations. One cause of the confusion involves the seed coat and whether it contributes to the determination of seed size.

The definition of pure seed in the seed testing rules states that a seed in the Cucurbitaceae is considered pure seed as long as it is more than 50 percent of the original seed size "with or without the seed coat." This statement eliminates the seed coat from being a contributing factor in determining the proportionate size of the broken seed fragment. Therefore, a piece of broken seed in the Cucurbitaceae is considered pure seed if it is more than half its original size, even when the seed coat is partly or completely detached (fig. 1). Further, a broken seed less than fifty percent of its original size is inert regardless of the size of the attached seed coat (fig. 2). In this case, the seed proportion is determined by the embryonic axis and cotyledons; the seed coat has no bearing on seed size.

Misinterpretation of pure seed rules can lead to differences in results between analysts and between laboratories. Accurate analysis can improve uniformity and reduce the need for retests caused by misinterpretation.

For information regarding this article contact Botanist Ernest L. Allen (704) 810-8873; ernest.allen@usda.gov.

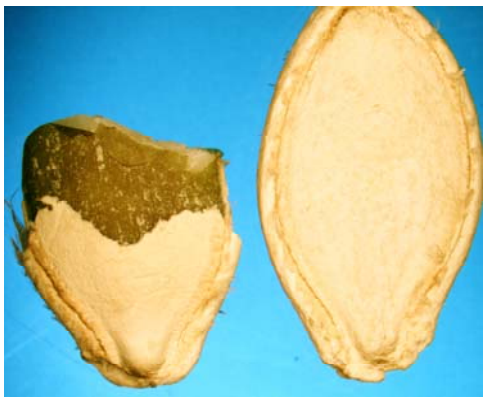

FIGURE 1.—*Cucurbita* (squash) pure seed.

FIGURE 2.—*Cucurbita* (squash) inert matter.

MONOGERM AND MULTIGERM BEETS: PURE SEED DEFINITIONS

A challenging beet seed sample for purity testing recently prompted a review of the rules regarding pure seed definitions. The pure seed definitions in the Association of Official Seed Analysts (AOSA) Rules for Testing Seeds and the Federal Seed Act (FSA) regulations include both monogerm (single-fruited) and multigerm (multi-fruited) beet seed. In order to apply these pure seed definitions properly, it is helpful to understand the development of the beet seed.

Hortus Third (1976, p. 160) describes how monogerm and multigerm beets are formed: "…fruit developing mostly from aggregates of two or more flowers cohering at the base and forming very irregular dry structures (the "seed" of commerce) with hardened, woody calyx." In monogerm beets, a single true seed is covered by a cap and embedded in this woody fruit (fig. 3).

Multigerm beets have two to several true seeds similarly embedded in the woody fruit and each covered with a cap (figs. 4 and 5). AOSA rules and FSA regulations define pure seed for beets as follows:

Current FSA regulations:

- 201.48 Kind or variety considered pure seed. (i) Seed units of beet and other Chenopodiaceae, and New Zealand spinach. Refer to section 201.47a(g) and section 201.51 (a)(6) for definitions of seed units and inert matter, respectively.
- 201.47a Seed unit. (g) "Seed balls" or portions thereof in multigerm beets, and fruits with accessory structures such as occur in other Chenopodiaceae and New Zealand spinach. For forage kochia refer to section 201.48 (j) and section 201.51 (a)(7).

- 201.51 Inert matter. (a)(6) Broken seed units of Chenopodiaceae and fruit portions or fragments of monogerm beets, New Zealand spinach, buffalograss, and families in which the seed unit is a dry indehiscent one-seeded fruit that visibly do not contain a seed. Refer to section 201.48(f), (g)(1), (i), and (j) for pure seed classification.

AOSA rules (2007):

- Section 2.7 Kind or cultivar considered pure seed.

  a. Immature or shriveled seeds, and seed units that are cracked or otherwise damaged.

  e. Pure seed unit (PSU) definitions - PSU Number 41:

  --Intact cluster of fruits, with accessory structures, whether or not a seed is present.

  --Broken fruit or cluster of fruits with accessory structures unless it is obvious no seed is present.

  --Seed with or without pericarp.

  --Piece of broken seed, with or without seed coat, larger than one-half the original size.

When these rules are followed step by step, they become more clear. First, it is necessary to determine if the fruit (monogerm) or fruit cluster (multigerm) is intact. Fruit or fruits with cap(s) are considered intact and therefore, pure seed units. (See fig. 4) Normally an intact fruit contains one seed, and, an intact fruit cluster contains more than one seed. As long as a fruit or fruit cluster has cap(s) in place, it is considered pure.

If the fruit or fruit cluster is broken (not intact), the fragment must be examined to determine if at least one intact fruit is present. (See fig. 5) The cap may or may not be present, as long as there is a seed present. In other words, a fragment with at least one cap present or one seed visible is a pure seed unit; broken units without these structures are inert matter. (See fig. 6)

The pure seed definitions in the AOSA Rules and FSA regulations for monogerm and multigerm beet seeds, although worded differently, are in agreement. The procedure for distinguishing between pure seed and inert matter in beet seeds is the same for both monogerm and multigerm fruits. Both require examination to determine the presence or absence of at least one individual seed. In the case of monogerm beets, it may be necessary to turn the fruit over so that the cap side is up. Multigerm beets are easier to roll across the purity board to examine for the presence of an intact cap or visible seed.

The Seed Regulatory and Testing Branch would like to thank Deborah J. Lionakis Meyer, Senior Seed Botanist with the California Department of Food and Agriculture and chair of the AOSA Purity Committee, for her contribution to this article.

Reference

Liberty Hyde Bailey Hortorium. 1976. Hortus Third: A Concise Dictionary of Plants Cultivated in the United States and Canada. Macmillan Publishing Co., Inc., New York.

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

Increments in the figures are in millimeters.

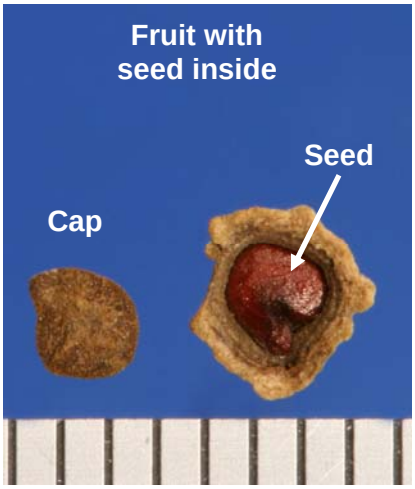

FIGURE 3.—Monogerm beet seed. Fruit with cap removed showing seed. The fruit and seed complex is pure seed. The loose cap is inert matter.

FIGURE 4.—Multigerm beet seeds. Two intact multi-fruited beet seeds. The seed unit on the left contains two individual seeds and the seed unit on the right contains three individual seeds. Both are pure seed.

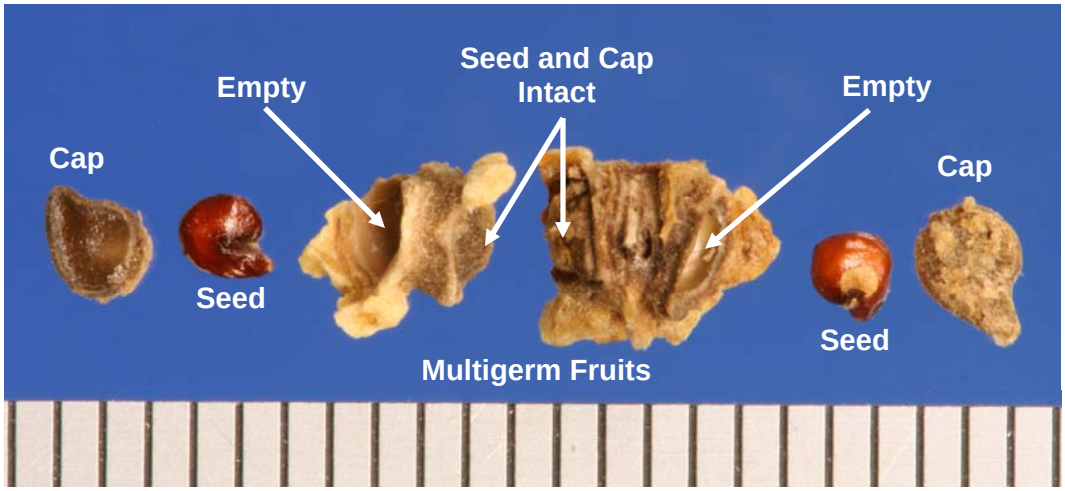

FIGURE 5.—Multigerm beet seed. Two broken multi-fruited beet seeds (center) are both missing a seed, but still contain at least one seed with a cap. Each of these multi-fruited beet seeds and the individual beet seeds are pure seed. The loose caps are considered inert matter.

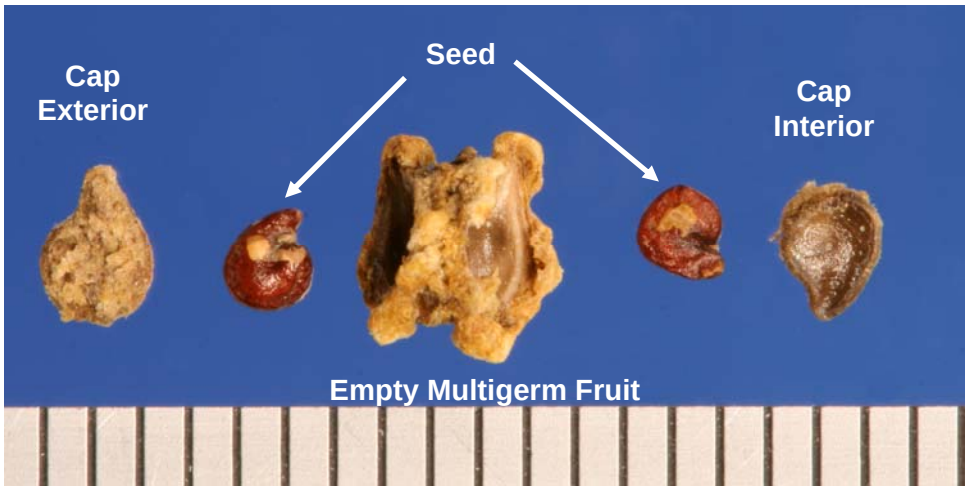

FIGURE 6.—Multigerm beet seed. A broken (empty) multi-fruited beet seed (center). This empty multi-fruited seed is inert. The individual beet seeds to the left and right of the fruit are pure seed. Loose caps are inert matter.

DETECTION OF FUNGAL BODIES IN BAHIAGRASS SEEDS

Both the Association of Official Seed Analysts (AOSA) rules and Federal Seed Act (FSA) regulations classify grass seed units with fungal bodies that are not entirely enclosed within the seed unit as inert matter. Bahiagrass seeds that have succumbed to fungal infestation often exhibit varying degrees of fungal body development, some more easy to detect than others. The challenge for the seed analyst is to determine in which of these seeds the fungal development is no longer contained entirely within the seed unit.

Fungi are a group of organisms that break down other organisms in order to obtain their sustenance. They generally consist of long, thread-like strands known as mycelia. Bahiagrass is often colonized by the ergot fungus (*Claviceps* sp.). As the ergot grows within the floret, it

may eventually devour the entire caryopsis. Pensacola bahiagrass is considered to be resistant to *Claviceps*. Other varieties of bahiagrass, such as Argentine, are known to be susceptible to fungal attack.

When determining whether a bahiagrass seed is pure or inert, the analyst may encounter seeds with varying degrees of fungal infestation. Large fungal growths can force apart the palea and lemma of a grass floret, leaving the fungal body clearly visible. Seeds in this condition are sometimes referred to as "gaping with ergot" and are classified as inert (fig. 7).

Some bahiagrass seeds may have a brownish, fuzzy growth around the rim separating the palea and lemma (fig. 8). This material could be mycelia or merely flower parts extruding from the floret; the analyst will need to determine if these seeds contain fungal bodies within the floret in order to classify them as pure or inert. Two methods are useful in determining whether fungal bodies are present within a closed bahiagrass seed. The first is the use of a diaphanoscope or transmitted light. Grass caryopses are translucent when viewed over light and have an amber color. Fungal bodies, however, are opaque and dark in color when viewed over light. The second method is the use of pressure. Using forceps, the analyst exerts a slight pressure on the lemma and draws the forceps along the length of the seed. If fungal bodies are present, the forceps should push through the lemma fairly easily and into the seed. If a healthy caryopsis is present, the forceps should not pierce the lemma. This method requires some practice to become proficient, and the analyst may wish to experiment with some of the bulk seed before attempting it on the purity. A second pair of forceps can help to keep the seed anchored in place. Also, the analyst must take care not to press too hard and inadvertently damage pure seed, especially if a germination test is required.

Detection of fungal bodies through one or both of these methods, combined with mycelia presence on the surface of the seed, indicates that the fungal body is no longer entirely enclosed within the seed unit, and the seed should be classified as inert. If there is no external evidence that fungal mycelia have grown out through the enclosing floret, then the seed must be classified as pure seed according to both AOSA rules and FSA regulations.

References

Alexopoulos, C.J. and C.W Mims. 1979. *Introductory Mycology*. John Wiley and Sons, New York.
Copeland, Lawrence O. and Miller B. McDonald. 2001. *Principles of Seed Science and Technology.* Kluwer Academic Publishers, Norwell, MA.
http://www.oregon.gov/ODA/PLANT/docs/pdf/Ergotmanual2.pdf
U.S. Department of Agriculture. 1952. *Testing Agricultural and Vegetable Seeds*. Agriculture Handbook No. 30. U.S. Government Printing Office, Washington D.C.

For information regarding this article contact Botanist Todd Erickson (704) 810-7266; todd.erickson@usda.gov.

Increments in the figures are in millimeters.

FIGURE 7.—*Paspalum notatum* "gaping with ergot"

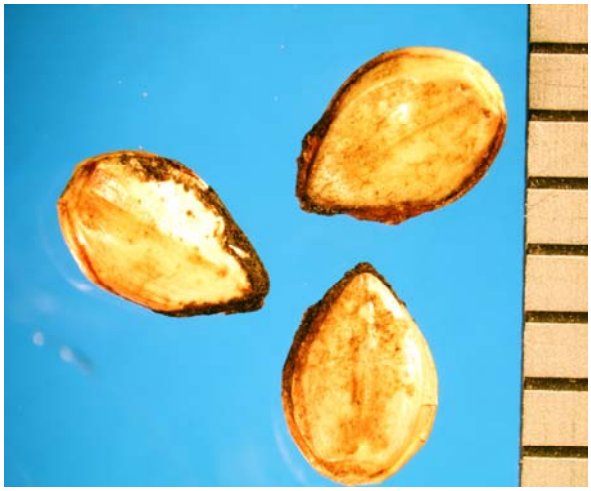

FIGURE 8.—Mycelia strands on *Paspalum notatum*

2007 FEDERAL SEED SCHOOLS IN GASTONIA, NC

The Seed Regulatory and Testing Branch (SRTB) hosted two 3½-day Federal Seed Schools this year in Gastonia, NC. The focus of both of these seed schools was purity testing and seed identification of similar crop and weed species. The agenda varied between the two sessions to fulfill participant requests. In addition to seed identification, topics included uniform blowing procedure, ryegrass fluorescence test, red and hard fescue fluorescence test, and an overview of quality management systems and accreditation. State and non-government laboratories were represented by seed personnel from all over the United States, including Hawaii. At the second session, Pennsylvania Department of Agriculture Seed Analyst Johnny Zook presented examples of digital images of seedlings from the Association of Official Seed Analysts virtual germination exam and a virtual seed identification referee with digital images of various species of *Bromus* that he had distributed throughout the northeastern region earlier this year.

The purpose of Federal Seed Schools is to promote uniformity in seed testing. This is accomplished by understanding and following current applicable seed testing rules, including recent changes. The Federal Seed Schools stress the importance of adhering to the seed testing rules in order to achieve as much uniformity as possible in test results between laboratories and seed analysts.

Each year SRTB provides at least two training sessions. Presentations cover a variety of topics of interest to seed analysts at various levels of experience.

For more information about upcoming seed schools, please contact Botanist Pattsy Jackson at pattsy.jackson@usda.gov or Laboratory Supervisor Susan Maxon at susan.maxon@usda.gov.

MEETING OF THE INTERNATIONAL SEED TESTING ASSOCIATION

Seed Regulatory and Testing Branch (SRTB) Assistant Chief/Laboratory Supervisor Susan Maxon served as the U.S. voting delegate to the 28th Congress of the International Seed Testing Association (ISTA), May 5-11, 2007, Iguassu Falls, Brazil. Participation at the ISTA Congress exceeded 1,000 registered attendees during the symposium, which was probably a record level of attendance for ISTA. Of the 72 ISTA member countries, 38 were represented by Designated Members entitled to vote at the Ordinary Meeting, exceeding the required quorum of 29. The ISTA Executive Committee also met on May 4 and 12. Susan Maxon was re-elected to serve on
the ISTA Executive Committee for the upcoming 3-year term. SRTB Plant Pathologist Sandra Walker's research on Fusarium detection in seeds of sorghum-sudangrass was accepted for the symposium poster session.

The SRTB is an accredited member laboratory of ISTA. In 2006 SRTB tested over 2,000 samples by ISTA's International Rules for Seed Testing, which facilitates exports for U.S. companies. Participation at the ISTA meetings helps ensure that U.S. seed interests are represented.

Representatives of invited organizations included:

- Merete Buus (OECD Seed Schemes)
- Anita Hall (Society of Commercial Seed Technologists)
- Michael Larinde (U.N. Food and Agriculture Organization)
- Bernard LeBuanec (International Seed Federation)
- Brent Turnipseed (Association of Official Seed Analysts)

Dr. Ivo Marcos Carraro, Executive Director of COODETEC, gave a keynote presentation on the seed industry in Brazil. There are about 300 seed testing laboratories in Brazil. Agribusiness in Brazil accounts for 28 percent of gross domestic product, 37 percent of jobs, and 44 percent of exports. Seed trade is valued at 3.5 billion Brazilian reals per year, with a potential estimated value of 6 billion reals per year.

Mr. Bernard LeBuanec gave a keynote address on changes in the global seed industry over the last 30 years. The 1970's was a period of consolidation in the seed industry due to acquisitions and mergers, which has continued to the present. In many cases, chemical companies made major investments in research and technology, resulting in a significant increase in the monetary value of seed trade. The top five seed companies now account for about 28 percent of the worldwide seed market. Mr. LeBuanec will retire from the International Seed Federation

at the end of this year.

Highlights of the business meeting:

- The membership approved the proposal to increase the annual dues by one percent.
- Changes to the Constitution were adopted as proposed in document 07/2007/OM.
- Twenty-eight rule proposals were considered, and twenty-six were accepted. Two proposals were withdrawn because amended wording in other proposals made them unnecessary. Most of the proposals were adopted with wording amended at the meeting. The rule changes will take effect January 1, 2008.
- The Ordinary Meeting was conducted according to Rules of Order, for the first time in the history of the organization.

ISTA GMO Task Force:

Norbert Leist, chairman of the ISTA GMO Task Force from 2001-2007, reported on accomplishments of the task force. The performance-based approach for testing for specified traits was adopted at the 2005 Annual Meeting and posted on the ISTA Web site in 2006. Eight proficiency test rounds have been conducted for detection of transgenic seeds at low levels of occurrence. Six laboratories have been accredited for specified trait testing by the performance-based approach. The U.S. delegate spoke about the need for proficiency tests aimed at other aspects of testing for specified traits within the scope of the Rules, such as testing for trait purity and specified traits not developed by genetic engineering (e.g., herbicide resistance traits based on Clearfield technology). The incoming chairman, Christoph Haldemann (Switzerland), is interested in pursuing this in the upcoming term. In conjunction with the 2008 ISTA Annual Meeting in Bologna, Italy, the ISTA GMO Task Force will hold a one-day Seminar on Testing for Specified Traits on June 16; preliminary topics include test method development, stacked genes, and units of measurement. Announcement of this seminar will be made in November 2007. Draft terms of reference for the task force for next triennium are to run the proficiency test program; check on and, if necessary, adapt the accreditation system for laboratories testing for specified traits by the performance-based approach; update the information platform on the ISTA Web site; and serve as a resource for GMO issues.

ISTA Executive Committee members for the 3-year term 2007-2010:

- President: Katalin Ertsey (Hungary)
- 1st Vice President: John Hampton (New Zealand)
- 2nd Vice President: Udo von Köcher (Germany)
- Members-at-Large:
    - Mary Chipili (Zambia)
    - Joel Lechappe (France)
    - Susan Maxon (U.S.)
    - Alison Powell (U.K.)
    - Jorge Rosales-King (Bolivia)
    - Masatoshi Sato (Japan)
    - Grethe Tarp (Denmark)
    - Rita Zecchinelli (Italy)

Dates and locations of next meetings:

- June 16-19, 2008, Bologna, Italy, ISTA Annual Meeting
- June 15-18, 2009, Zurich, Switzerland, ISTA Annual Meeting
- June 16-22, 2010, Cologne, Germany, 29th ISTA Congress

For information regarding this article, contact Assistant Branch Chief/Laboratory Supervisor Susan Maxon at (704) 810-8877; susan.maxon@usda.gov.

2007 ASSOCIATION OF OFFICIAL SEED ANALYSTS-SOCIETY OF COMMERCIAL SEED TECHNOLOGISTS ANNUAL MEETING

The 2007 annual meeting of the Association of Official Seed Analysts (AOSA) and Society of Commercial Seed Technologists (SCST) was held June 4-10, 2007, in Cody, WY. Several Seed Regulatory and Testing Branch (SRTB) staff members were presenters at workshops. Plant Pathologist Sandra Walker, Chairman of the Pathology Committee, conducted the pathology workshop; U.S. OECD Seed Schemes Program Manager Perry Bohn and Seed Marketing Specialist Gene Wilson presented the Canadian grader workshop; and Botanist Pattsy Jackson participated in both the Canadian grader and statistics workshops. The Seed Regulatory and Testing Branch is a member laboratory of the AOSA.

U.S. Seed Grader Workshop

Perry Bohn and Gene Wilson, representing USDA Agricultural Marketing Service (AMS), along with representatives from the Canadian Food Inspection Agency (CFIA), conducted an Accredited Seed Grader training and examination session. When final approval from CFIA is complete, this will allow accredited individuals working at Accredited Seed Laboratories (ASL) to function as seed graders and assign a Canadian pedigreed grade to seed destined for export to Canada. This seed can then be shipped directly to end users in Canada. Final approval of the program is anticipated in the near future. AMS representatives presented certificates of training to 11 individuals who successfully completed this first U.S. training and examination.

Additional information on the U.S. Seed Grader Accreditation and future training opportunities is located at http://www.ams.usda.gov/lsg/seed/Seedgrader.htm or by contacting U.S. OECD Seed Schemes Program Manager Perry Bohn by phone at (704) 810-7262 or e-mail perry.bohn@usda.gov.

Accreditation Presentation at Seed Issues Forum

Perry Bohn and Gene Wilson had a poster presentation at the Seed Issues Forum of the AOSA-SCST meeting. They spoke to interested individuals about the AMS accreditation programs for seed. This forum was attended by over 200 individuals from seed companies and official laboratories. For more information on the Accredited Field Inspection Program, Accredited Seed Sampling Program (see Gene Wilson's article in this Items of Interest in Seed), or the Accredited Seed Laboratory Program, please visit the Web site at http://www.ams.usda.gov/lsg/seed.htm, or contact U.S. OECD Seed Schemes Program Manager Perry Bohn.

AOSA Rule Changes

Twenty-one rule proposals were submitted for acceptance and thirteen changes were adopted. These include changes to the species classification as crop or weed seed, changes in working weights, and changes in the pure seed unit (PSU) definition of several kinds. For some

species, the adopted AOSA rule may be different than the Federal Seed Act (FSA) regulations. When samples of these species are submitted to the SRTB as possible FSA violations, the difference in rules will be taken into consideration. Many of the AOSA rule changes pertain to species such as flower kinds that are not covered by the FSA; the FSA covers only agricultural and vegetable kinds. The SRTB plans to amend the FSA regulations in the coming year, and AOSA rule changes will be considered. AOSA rule changes go into effect October 1.
For more details on rule changes, go to the AOSA Web site at www.aosaseed.com. Pattsy Jackson is a member of the AOSA Rules Committee; for more information, contact Pattsy Jackson by phone at (704) 810-8881 or e-mail at pattsy.jackson@usda.gov.

AOSA Bylaw Changes

The AOSA membership adopted three bylaw changes, one of which enacts continuing education requirements for all AOSA certified seed analysts (CSA). The SCST has had continuing education requirements for several years. To maintain CSA status, each analyst must accumulate a minimum of five points every three years from the following continuing education categories:

(a) Three points maximum for verified meeting attendance: one point per day at an AOSA annual meeting, and a half point for any national, regional or local seed trade meeting.
(b) One point for individual participation in a referee test.
(c) One point for participation in a proficiency test.
(d) One point for each half day (3 hours) attendance at a workshop or seed school that comprises at least 50 percent hands-on material.
(e) Three points for each semester hour of college credit for completion of approved seed related courses, including distance-learning courses.
(f) Two points per day for individualized seed technology training from a CSA, SCST Registered, Certified, or Research member who receives prior approval by the AOSA Membership Chairperson.

The other two bylaw changes pertain to administrative details which do not directly influence seed testing procedures. Details of the AOSA bylaw proposals were published in the February 2007 issue of the Seed Technology Newsletter, available online at www.aosaseed.com.

ASSOCIATION OF AMERICAN SEED CONTROL OFFICIALS MEETING PRESENTATIONS

Seed Regulatory and Testing Branch (SRTB) Chief Richard Payne and Seed Marketing Specialists Jeri Irwin and Gene Wilson attended the 21st Annual Meeting of the Association of American Seed Control Officials (AASCO) in Saint Paul, MN, July 14-17, 2007. Representatives of 25 State seed control programs, the Canadian Food Inspection Agency, USDA Animal and Plant Health Inspection Service, affiliated organizations, seed companies, and others attended the meeting.

Richard Payne gave a presentation on suggested changes to the Federal Seed Act regulations at the general session and reported SRTB activities at the general session and to the North Central State Seed Control Officials Association. Gene Wilson gave a presentation on the Accredited Seed Sampling Program at the general session and reported SRTB activities to the Western Association of Seed Control Officials Association. Jeri Irwin reported SRTB activities to the Association of Seed Control Officials of the Northeastern States and the Southern Seed Control Officials Association.

For information regarding this article, contact Seed Marketing Specialist Jeri Irwin at (704) 810-8878; jeri.irwin@usda.gov.

2007 ASSOCIATION OF OFFICIAL SEED CERTIFYING AGENCIES ANNUAL MEETING

U.S. Organization for Economic Cooperation and Development (OECD) Seed Schemes Program Manager Perry Bohn represented the Seed Regulatory and Testing Branch (SRTB) at the Annual Meeting of the Association of Official Seed Certifying Agencies (AOSCA) in Tunica, MS, July 22-25, 2007. The meeting consisted of many presentations from agricultural seed interests and included reports from AOSCA regional meetings.

Over the course of the meeting, Mr. Bohn gave three presentations. During the opening seminar, he gave a general overview of current issues and activities within Agricultural Marketing Service and the SRTB, including proposed changes to the Federal Seed Act regulations. He also led a two hour training session addressing changes and improvements in the U.S. OECD Seed Schemes Program. During the AOSCA Advisory Committee meeting, he reviewed SRTB activities.

The AOSCA and OECD Seed Schemes representative from Chile met with Mr. Bohn to discuss testing requirements of seed shipped between the United States and Chile. This is one example of the ongoing work of the OECD Seed Schemes to facilitate the import and export of seeds.

The meeting was informative and beneficial due to the excellent attendance and participation of AOSCA members, seed company representatives, and other affiliates.

For information regarding this article, contact U.S. OECD Seed Schemes Program Manager Perry Bohn at (704) 810-7262; perry.bohn@usda.gov.

CALENDAR OF EVENTS

Northeast Seed Analysts Workshop (NESAW) Harrisburg, PA	October 3-4, 2007
International Seed Testing Association (ISTA) Executive Committee and Technical Committee Chairs Bassersdorf, Switzerland	October 29-31, 2007
American Society of Agronomy (ASA), Crop Science Society of America (CSSA), and Soil Science Society of America (SSSA) 2007 International Annual Meetings New Orleans, LA	November 4-8, 2007
American Seed Trade Association (ASTA) Corn & Sorghum and Soybean Research Conference Chicago, IL	December 4-6, 2007
Weed Science Society of America (WSSA) Annual Meeting Chicago, IL	February 4-7, 2008
International Seed Testing Association (ISTA) Executive Committee Meeting (Mid–Year) Bassersdorf, Switzerland	February 11-14, 2008
Association of Official Seed Analysts (AOSA) and Society of Commercial Seed Technologists (SCST) Annual Meeting Saint Paul, MN	June 6-11, 2008
International Seed Testing Association (ISTA) Executive Committee Meeting Bologna, Italy	June 15 and 20, 2008
International Seed Testing Association (ISTA) Annual Meeting Bologna, Italy	June 16-19, 2008
American Seed Trade Association (ASTA) 125th Annual Convention Kissimmee, FL	June 21-25, 2008
Organization for Economic Cooperation and Development (OECD) Seed Schemes Annual Meeting Chicago, IL	June 29-July 3, 2008

Association of Official Seed Certifying Agencies (AOSCA) Annual Meeting Quebec City, Canada	July 14-18, 2008
American Phytopathological Society Annual Meeting Minneapolis, MN	July 26-30, 2008
American Society of Plant Biologists (ASPB) Annual Meeting Merida, Mexico	July 27- August 2, 2008
Association of American Seed Control Officials (AASCO) Annual Meeting Nashville, TN	August 6-9, 2008
Federal Seed Schools	**TBD**
FSA Seed Inspector Training	**TBD**

Seed Regulatory and Testing Branch (SRTB)-sponsored training is shown in **bold**.

For further information regarding the Calendar of Events contact Branch Secretary Winston Robinson at (704) 810-8871; winston.robinson@usda.gov

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"I ask not for a larger garden,
but for finer seeds."

Russell H. Conwell
(Founder of Temple University, 1843-1925)

(Contributed by Seed Regulatory and Testing Branch Botanist Sandy Dawson)