United States Department of Agriculture

Marketing and Regulatory Programs

Agricultural Marketing Service

Livestock and Seed Program

Items of Interest in Seed Control

Summer/Fall 2003

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ANNUAL MEETING OF THE ASSOCIATION OF OFFICIAL SEED ANALYSTS

Botanist Pattsy Jackson represented the Seed Regulatory and Testing Branch (SRTB) at the joint annual meeting of the Association of Official Seed Analysts (AOSA) and Society of Commercial Seed Technologists (SCST) held in Seattle, WA, June 7-10, 2003. The main focus of the meeting was harmonization of testing procedures between AOSA and International Seed Testing Association (ISTA).

At the AOSA/SCST banquet, SRTB Laboratory Supervisor Susan Maxon received an honorary SCST membership in recognition of her exemplary work in the seed industry.

Twelve AOSA rule proposals were considered, of which eight passed. The proposals along with supporting evidence were published in the February issue of "The Seed Technologist Newsletter." Two of the new rules add drawings with captions for seedling evaluation in two flower seed families (proposals 1 and 2). A paired germination test was added for two *Pinus* spp. (proposal 3). Evaluation of split coleoptiles in seedlings of cereal species was amended and is now harmonized with ISTA seedling evaluation of these kinds (proposal 4). Rounding rules were added for germination tests (proposal 5). Purity and germination test procedures were added for a new kind, *Puccinellia distans*, weeping alkaligrass (proposal 10). The pure seed definition for *Lolium* spp., *Festuca arundinacea*, and *F. pratensis* was changed to require the caryopsis to be at least one third the length of the palea to be classified as pure seed; this is now harmonized with ISTA (proposal 11b). Finally, an alternative method for endophyte testing was adopted (proposal 12). These amendments to the AOSA Rules become effective October 1, 2003. Although the Federal Seed Act regulations cannot automatically incorporate these rule changes, the Seed Regulatory and Testing Branch would take these changes into consideration in any enforcement action.

Immediately following the close of the AOSA/SCST Meeting, the ISTA purity workshop was conducted June 10-12, 2003. Botanist Pattsy Jackson represented the SRTB at the workshop. The workshop focused on identification of species, ISTA accreditation, and harmonization between AOSA and ISTA.

For information regarding this article contact Botanist Pattsy Jackson (704) 810-8883; (pattsy.jackson@usda.gov).

EXTRAORDINARY MEETING OF THE INTERNATIONAL SEED TESTING ASSOCIATION

Laboratory Supervisor Susan Maxon served as the U.S. voting delegate to the 2nd Extraordinary Meeting of the International Seed Testing Association (ISTA) held June 30-July 3, 2003, in Zurich, Switzerland. She also attended the one-day ISTA auditors meeting on June 29. Other participants from the United States included Dr. Michael Sussman (molecular biologist, USDA, AMS, Science and Technology Program, Gastonia, NC), Sharon Davidson (AgriSeed Testing), Doris Dixon (Monsanto), and DaNell Jamieson (Ball Helix).

One hundred twenty participants attended the meeting from 44 countries, including 39 voting delegates. Representatives present from several related organizations included:

- Organization for Economic Cooperation and Development (OECD),
- International Seed Trade Federation (ISF),
- Asia – Pacific Seed Association (APSA),
- Society of Commercial Seed Technologists (SCST),

- International Society of Seed Technologists (ISST).

Agenda items included: consideration of voting rights and "GM" testing in seeds; discussion of authorization rights to issue ISTA Certificates; and consideration and adoption of proposed rule changes for testing seeds.

Several proposals for amendments to the International Rules for Seed Testing were reviewed then adopted with unanimous or near unanimous votes. Proposals regarding Seed Health Testing Methods and moisture content were withdrawn for further work by the respective technical committees. The proposal regarding the uniform blowing method for purity of certain small-seeded Poa pratensis (Kentucky bluegrass) varieties was also withdrawn with a vote in favor of deferring a decision to next year's meeting. There was unanimous support for continued work to develop supporting data. A working group, including U.S. representation, will work to submit the revised proposal for next year to both ISTA and the Association of Official Seed Analysts (AOSA).

The ISTA GMO Task Force met for a one-day session prior to ISTA Extraordinary Meeting (on June 29, 2003) and in some short sessions during the Extraordinary Meeting. The GMO Task Force is organized into four working groups: The Strategy Working Group, the Rules Chapter Working Group, the Proficiency Test Working Group, and the Information Exchange Working Group. The Rules Chapter Working Group members suggested that the rules should not contain a separate chapter on testing for genetically engineered seeds. Instead they suggested that the chapter on cultivar purity be amended to include detection and identification of cultivar impurities. Rather than have methods or procedures for the detection of genetically engineered seeds, molecular methods would be described that could be used for any seed. This is a new direction that will have to be given further consideration, but it is a better approach in that it does not single out genetically engineered seed for different tests.

To provide a basis for the discussion on voting rights and governance, the ISTA Executive Committee distributed a paper entitled, "Vote in Principle to Change Voting Rights" on May 26, 2003. Under the current system, each member government's Designated Authority nominates one Designated Member to cast votes on its behalf. The Executive Committee put forward three options for consideration. The various options would assign votes differently to laboratories and differentiate voting on questions of governance and on technical questions (Rules for Testing Seeds). After much discussion regarding various aspects (such as legal and trade implications, financial questions, different membership categories, and proxy voting), the Executive Committee did not conduct a "vote in principle" but decided to take all the discussion points under advisement in formulating a proposed constitutional change for consideration at the next year's meeting.

The ISTA Executive Committee also put forward the discussion paper on "Authorization Rights to Issue Certificates." Under the present constitutional wording, each government's Designated Authority must give its agreement before ISTA accredited private and company laboratories can issue ISTA certificates. This is seen by some as a *de facto* veto right by the Designated Authority over a laboratory's issuance of ISTA certificates. In the United States it is the policy of the Designated Authority that no ISTA accredited laboratories issue ISTA certificates for agricultural or vegetable seed. This policy applies to both the government laboratory and private laboratories, to ensure that there is no discrimination against the private laboratories. Seed moves freely into and out of the United States without an ISTA certificate and does not seem to be impeded by this. Others view the ISTA certificate as a technical document only containing test results, with involvement of the Designated Authority as unnecessarily political.

The next meeting will be the 27th ISTA Congress to be held in Budapest, Hungary, May 13-24, 2004. In the years between the triennial congresses, ISTA will hold annual meetings, either in Zurich (near the ISTA Secretariat) or hosted by an ISTA member.

For information regarding this article contact Laboratory Supervisor Susan Maxon (704) 810-8877; (susan.maxon@usda.gov).

ASSOCIATION OF AMERICAN SEED CONTROL OFFICIALS MEETING

Seed Regulatory and Testing Branch (SRTB) Chief Richard Payne and Seed Marketing Specialist Jeri Irwin attended the Association of American Seed Control Officials (AASCO) meeting, in San Diego, CA, July 26-31, 2003. The following allied organizations gave reports: Association of Official Seed Analysts (AOSA), Larry Nees (IN); Society of Commercial Seed Technologists (SCST), Tim Gutormson; American Seed Trade Association (ASTA), Leslie Cahill; Canadian Food Inspection Agency (CFIA), Luc Mougeot; Association of Official Seed Certifying Agencies (AOSCA), Greg Lowry; and U.S. Department of Agriculture (USDA), Richard Payne. Other affiliate meeting reports and preliminary committee reports were also given.

Martin Lemon of Monsanto Company reported on the effects biotechnology has on agriculture such as the need for fewer chemicals on crops and crops being resistant to drought or cold. Dr. Frederick J. (Chip) Sundstrom of the California Crop Improvement Association (CCIA) reported on California's Seed Biotechnology Center which offers several agricultural science and technology courses. For further information, please visit the University of California Extension Center's Web site at http://sbc.ucdavis.edu. Additionally, a panel of speakers, Larry Nees (IN), Leslie Cahill (ASTA), Tim Gutormson (SCST), Chip Sundstrom (CCIA), Martin Lemon of Monsanto Company, and David Svik (NE) discussed and answered questions on purity and GMO's.

Tim Tidwell (CA) reported on the facts about seed health to detect seed borne pathogens. This can be done by grow-out, blotter, agar, seed wash, serology (ELISA), molecular (DNA), or a combination thereof. The National Seed Health System (NSHS) is addressing some of the challenges that come with seed health testing such as a lack of standardized tests, no known test for certain pathogens, needed research, and shortage of laboratory and field inspectors. The Web site for the NSHS is http://www.seedhealth.org.

Roy Green (CA) reported on The National Organic Program Regulations and how a grower can become certified to grow and sell organic products. The following Web site http://www.cdfa.ca.gov/is/fvegc/organic.htm has information on organic products sold in California. It also has several related links such as the National Organic Standards and a Federal Organic Cost Share Application. Chip Sundstrom (CCIA) reported on facts and issues of organic seed certification. Some examples are: treated seeds cannot be used; stakes cannot be treated; all equipment must be certified; and all products must be removed from a warehouse if it is going to be fumigated. The National Organic Program Web site http://www.ams.usda.gov/nop lists the standards as well as certifying agents, consumer information, procedures and State information.

Jim Riva, Chief, Audit, Review, and Compliance Branch, USDA's Agricultural Marketing Service, reported on the proposed Process Verification Program for seed. This is a voluntary program in which providers of services such as certification for varietal purity, sampling, and testing can apply for to become accredited to International Operating Standards (ISO) by USDA for the services they provide. To become an approved service provider, an agency or company must

submit a quality assurance plan and pass an on-site audit by the Livestock and Seed Program's Audit Review and Compliance Branch. This enables a company that uses approved service providers to market their seed as USDA Process Verified. This tells the consumer that the seed was produced, sampled, and tested through an ISO based quality system. The following Web site has contact information and more about the program http://www.ams.usda.gov/lsg/lsarc.htm. A panel of speakers, George Hansen of the Snow Seed Company, Deborah Sadler of Terra Organics, Chip Sundstrom (CCIA), Jim Riva (USDA), and Ray Green (CA) discussed and answered questions about organic seed.

The RUSSL proposal that changes the word "process or processing" to "condition or conditioning" was adopted. There were no objections to the proposal. You can review the latest copy of RUSSL at AASCO's Web site http://seedcontrol.org.

A member of ASTA's vegetable and flower seed committee spoke to AASCO about industry's concerns over the packet seed labeling changes in RUSSL. Now that many States are starting to adopt these changes into their seed laws, there is concern about duel labeling, seed packet inventories, limited time frame for these companies to change their printing processes, and so on. This was the reason for the survey Joe Garvey sent out before the meeting in an effort to anticipate their concerns. Joe Garvey was asked to write an article for ASTA's upcoming newsletter addressing these concerns. This article will appear in AASCO's newsletter. AASCO is urging all members to offer a "grandfathering" period and allow the new labeling format in their States.

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

Association of Seed Control Officials of the Northeastern States

The Association of Seed Control Officials of the Northeastern States (ASCONES) met with the Southern Seed Control Officials Association (SSCOA) for the regional meetings held July 29, 2003. Members in attendance were Roger Burton (MD), Joe Garvey (PA), Jeri Irwin (USDA), and Richard Payne (USDA). Next year's AASCO meeting will be held in Ottawa, Canada. Although Canada Food Inspection Agency (CFIA) is concerned over the potential lack of attendance there, AASCO is doing everything possible to keep costs down. It will be closer to ASCONES territory so hopefully ASCONES will get to meet in Canada.

The Atlantic Seed Association (ASA) is holding their annual meeting October 19-21, 2003, in Norfolk, VA. Joe Garvey was asked to speak to their members about AASCO and cover the latest developments on those States that have started adopting the RUSSL amendments from 2001. The ASA has been most supportive to ASCONES over their long association.

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We want to thank ASCONES President Joe Garvey for submitting information for this and other reports.

North Central States Seed Control Officials Association

The North Central States Seed Control Officials Association (NCSSCOA) held their annual meeting July 29. The following States and agencies were represented: Indiana, Kansas, Kentucky, Minnesota, Nebraska, North Dakota, Wisconsin, the Canada Food Inspection Agency (CFIA), and the Seed Regulatory and Testing Branch (SRTB).

State Reports were presented from those in attendance. The CFIA and SRTB also provided additional comments.

Several topics of interest were discussed, including Indiana Seed Contracts Law, handling complaints due to misuse of pesticides, new AOSA Rules for 2003, future AASCO meetings, and dues issues. Under new business, SCST President Tim Gutormson gave a short presentation on the issue of the voting process on AOSA Rules by each organization.

After considerable discussion regarding travel problems for many members due to budget cuts, the NCSSCOA voted to recommend to AASCO that a level of monetary support be provided to national Officers and Executive Board members if they are not able to get their agency support for travel to meetings. NCSSCOA also considered providing some monetary support for its NCSSCOA officers to attend the regional or national meeting if State budgets become as issue.

The Nominations Committee offered the names of David Svik (NE) for President and Greg Helmbrecht (WI) for Vice President for 2004-2005. The vote was unanimous. Both will also serve on the AASCO Executive Board.

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We want to thank NCSSCOA Acting Vice President David F. Svik for submitting information for this report.

Southern Seed Control Officials Association

The Southern Seed Control Officials Association met with the Association of Seed Control Officials of the Northeastern States for the July 29 regional meeting. Members in attendance were John Crayton (AL), Eric Gates (LA), and Mary Smith (AR). Other attendees were Bob Fuguitte (Dupont Crop Protection/Pioneer Hybrid), Bill Hanson (CFIA), Jeri Irwin (SRTB), Paul Johnson (Stoneville Pedigreed Seed Company), Janis Kieft (NK Lawn and Garden), Richard Payne (SRTB), and Vince Snyder (The Scotts Company).

John Crayton reported that Horsenettle, which stays dormant in the ground for 10 years, has recently been found in American joint vetch in Tennessee. He described it as a mini version of Tropical Soda Apple. It takes over pastures, is spread by deer, cattle, and turkey, will push through fences, and is resistant to many herbicides.

Mary Smith met with labelers concerning advertising varieties and brands. Most were unaware that most brand names were not varieties.

Safety issues were discussed on sampling seed in mini bulk boxes. Two of those issues were about the boxes and bags being unknowingly empty. Empty boxes can shift if they are stood upon. Air inside the bags will give the appearance that the bag is full, making it very hazardous to attempt standing on the bag.

Relabeling of expired test dates was discussed. Issues include the lot number not matching the test date and applying new complete labels over the old ones without checking the lot number.

Western Association of Seed Control Officials

Seed Regulatory and Testing Branch (SRTB) Chief Richard Payne attended the Western Association of Seed Control Officials (WASCO) meeting on June 29, 2003. Members in attendance were David Godfrey (CA), Umesh Kodira (CA), Larry Krum (MT), and Ron Pence (OR). Other attendees included Tim Gutormson (SCST), Luc Mougeot (CFIA), and Vince Snyder of The Scotts Company.

The use of the tetrazolium (TZ) test for labeling purposes was discussed. The Federal Seed Act (FSA) does not reference the TZ test as a valid test for labeling purposes. However, the SRTB has administratively allowed the TZ test to be used for labeling cool season grasses within three months of harvest, provided the results of the TZ test are supported by a valid germination test. This position was taken to allow freshly harvested cool season grass seed to be labeled and shipped in time for the fall market. The application TZ testing to test other kinds that have long germination test times and require dormancy breaking procedures was discussed.

Issues concerning evaluating 200 or 400 seeds with the TZ test were also discussed. It was noted that seed companies support TZ testing and often use it to help make decisions about seed lots. The SRTB would consider hosting a TZ testing some time in the future if there is sufficient interest.

Ron Pence (OR) stated that there is a move in the Oregon seed industry to adopt RUSSL into Oregon's State seed law. Others stated that their State seed law was either modeled after RUSSL or the FSA.

Various seed laboratory accreditation schemes, including ISO and ISTA, as well as progress on the AOSA/SCST accreditation efforts were discussed. Ron Pence reported on Oregon's Quality Management System, which is an ISO audit based system with USDA over site. Luc Mougeot discussed the laboratory accreditation requirements of the Canadian Food Inspection Agency. Concerns about seed stocks of traditional varieties being contaminated by genetically engineered varieties were discussed. It was pointed out that identity preserved (IP) programs would be a valuable tool to preserve the varietal purity of seed stocks, that include: documentation of land history; tests of seed source; equipment cleaning records; storage records; and inspection of storage facilities.

Vince Snyder of The Scotts Company reported that Scotts has been working with State seed programs to adopt a uniform test date of 15 months and a sell by statement for cool season grass seed. It was pointed out that it is important for seed companies in a State to promote this effort at the State level.

Tim Gutormson (SCST) discussed the SCST's concern about SCST members not being allowed to officially vote on AOSA rule proposals especially those proposals that pertain to methodology.

We want to thank Ronald R. Pence (OR) for submitting information for this report.

LABELING OTHER CROP SEED

There appears to be some confusion among seed company personnel about which seed should be included in the "other crop" category on the seed label. The confusion involves seeds that are the same kind as the labeled kind, but a variety other than the labeled variety. Sections 201.18 and 201.49 of the Federal Seed Act Regulations and Section 2.8 of the AOSA Rules for Testing Seeds clearly define other crop seed as both other kinds and other varieties of seed. This means that when labeling soybean seed, for example, seeds of both other kinds and other varieties must be considered as other crop seed. An exception would occur if a low percentage of variants are described and included in the varietal description. Seeds of these variants would be considered part of the labeled variety and therefore, pure seed. If the percentage of the other variety exceeds 5 percent, the name of the other variety and the percentage of pure seed and germination percentage of that variety must appear on the seed label.

Another exception involves labeling varieties of agricultural hybrids. Section 201.11a of the Federal Seed Act Regulations states in part, "The percentage that is hybrid shall be at least 95 percent of the percentage of pure seed shown"--. This means that when labeling seed of agricultural hybrids, such as corn, the percentage of pure seed is the percentage of corn seed. The seed can be labeled as "hybrid" without a clarifying statement provided at least 95 percent of the pure seed is hybrid seed of the labeled variety. In this case, out-crosses and selfs would be considered part of the pure seed, while other crop seed would consist of other kinds of seed. Section 201.11a allows a five percent "fudge factor" to account for unintended selfs and out-crosses during hybrid seed production.

Section 201.11a states that if the pure seed is less than 95 percent hybrid, but more than 75 percent hybrid, either the percentage of pure seed that is hybrid or the statement: "Contains from 75 percent to 95 percent hybrid seed" must be shown on the seed label. Seed cannot be labeled as hybrid if it is less than 75 percent hybrid.

For information regarding this article contact Chief Richard Payne (704) 810-8884; (richard.payne2@usda.gov).

FEDERAL SEED ACT VARIETAL LABELING ISSUES

During the past year, the Seed Regulatory and Testing Branch (SRTB) has received an increased number of varietal labeling complaints from State seed control programs for Federal Seed Act (FSA) action. Some of these complaints involved the change of a varietal name after the variety had entered channels of commerce. In some instances, seed shipped by a company in interstate commerce with one variety name (possibly an experimental designation) was renamed by that company when sold the following year. In other cases, seed purchased from a company as a designated variety was increased and then renamed by the purchasing company when offered for sale. Both of these instances constitute violations of Section 201.34(d)(2) of the FSA Regulations. Section 201.34(d)(2) states that the name of a new variety shall be the name given by the originator or discoverer of the variety and if the originator or discoverer of the new unnamed variety chooses not to name the variety, the name of the variety shall be the first name under which the seed is introduced into United States commerce. Once a variety is named, that name cannot be changed and must be used for that variety for as long as it is in existence.

Other varietal labeling complaints received by the SRTB involved the use of brand and variety names. Some of these complaints involved the advertisement and sale of seed as a brand with the same name that was previously used as a variety name. In some cases, seed with the varietal name in question was produced and certified for varietal purity by several State seed certification programs prior to the use of the same name as a brand. In other cases, the name of a variety protected under the Plant Variety Protection Act was used as a brand designation. The FSA does not regulate brands. However, Section 201.8 of the FSA regulations refers to labeling agricultural seeds and states, "The label may contain information in addition to that required by the Act, provided such information is not misleading." The use of an existing variety name as a brand name is considered misleading because the name implies a specific varietal content which may not be present. Also, Section 201.36b(e) of the FSA Regulations refers to advertising and includes the sentence, "Seed shall not be advertised under a trademark or brand name in any manner that may create the impression that the trademark or brand name is a variety name." The use of an existing variety name as a brand name creates the impression that the brand name is a variety name.

The brand and variety labeling situation is further complicated because often it is not clear from the seed label if the name is being used as a brand or a variety. In addition, in some instances, different representatives of the same seed company have provided conflicting information as to whether a certain name is a variety name or a brand name. These are some of the reasons that certain state seed control officials are proposing that a mandatory variety name registration system be established in the United States.

Information about naming varieties can be found on the SRTB website at http://www.ams.usda.gov/lsg/seed.htm

QUESTIONS AND ANSWERS

Q1) After seed is shipped from the original State to another State, is the germination test subject to the Federal Seed Act (FSA) or to the State law it is shipped into?

A1) Sections 201.22(a) and 201.30a of the FSA Regulations both address test date. Section 201.22(a) pertains to agricultural seed and Section 201.30a pertains to vegetable seed in containers of more than one pound. Both sections state in part "The label shall show the month and year in which the germination test was completed. No more than 5 calendar months shall have elapsed between the last day of the month in which the germination test was completed and the date of transportation or delivery for transportation in interstate commerce----." This means that if a germination test was completed in January, the test would be valid for interstate shipments through June. Also, the FSA only applies to seed when shipped in interstate commerce. Most States have a longer test date than the FSA. This allows the seed to be shipped in interstate commerce and have additional time to be sold in that particular State. There is an exception of 15 months from test date to shipment for 9 cool season grass kinds listed in section 201.22(c) of the FSA Regulations.

Q2) Is it permissible to predate a label or use an advance date for the required date of test on labeling for interstate shipment?

A2) Both Section 201.22(a) (agricultural seed) and Section 201.30a (vegetable seed in containers of more than one pound) of the FSA regulations require the label to show the month and year in which the germination test was completed. To label seed with the test date of certain month when the germination test was completed in an earlier month would be a violation of the FSA because the labeling is false. Section 201(d) of the FSA prohibits false labeling of seed shipped in interstate commerce.

Q3) Is seed shipped in interstate commerce for storage subject to the Federal Seed Act?

A3) Seed shipped by a company from a warehouse in one State to a warehouse in another State is considered to have been shipped in interstate commerce and therefore, subject to the FSA. Labeling seed shipped in interstate commerce in bulk or large quantities (20,000 pounds or more) for cleaning or processing is addressed in Section 201.34 of the FSA Regulations.

For information regarding this article contact Chief Richard Payne (704) 810-8884; (richard.payne2@usda.gov).

ADMINISTRATIVE CHANGES

May 4, 2003, SRTB Botanist Susan Maxon was hired as the new Laboratory Supervisor/Assistant Branch Chief. Maxon joined the Branch in 1976. The position of Laboratory Supervisor had been vacant for more than 3 years.

Linda Vanderhoof was hired as a Seed Marketing Specialist. Vanderhoof worked for the Branch from 1998 to 2003 starting in office automation then steadily progressing into new duties of increasing responsibilities. During the last year she assisted the Seed Marketing Specialists on Federal Seed Act case work. On May 18, 2003, Vanderhoof was hired as a Seed Marketing Specialist.

On June 16, 2003, Karen Sussman was hired as the Branch Secretary. Sussman came to us from private industry at Fort Dodge Animal Health, Fort Dodge, IA. Prior to that she was with USDA, ARS, Sugarbeet and Bean Research Unit, East Lansing, MI, where she was the Unit Secretary.

On September 22, 2003, Dr. Richard Glick was hired as the new Plant Physiologist. Rich came to us from Winston-Salem State University where he was an Assistant Professor in the Department of Life Sciences. Before working at Winston-Salem State he was a Research Associate at Penn State University, Michigan State University, and the University of California. His duties will include developing protein electrophoresis procedures for use in distinguishing varieties.

On October 6, 2003, Dr. Michael Lovelace joined the Branch. Mike comes to us from Fayetteville, AR. He will serve as SRTB's new Agronomist. His duties will include developing assays for detecting herbicide resistance in seed and developing controlled growth tests for distinguishing varieties.

We are very pleased to welcome our new staff members. Contact information for all our staff members follows.

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

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FEDERAL SEED ACT CASE SETTLED

The following case was settled administratively under the Federal Seed Act between April 1 and September 30, 2003. Under the administrative settlement procedure, the Seed Regulatory and Testing Branch and the firm agreed to settle the case for the amount specified, with the firm neither admitting nor denying the charges:

- Texas Oklahoma Production Company, Enid, OK, has paid $2,575 for a case involving five seed shipments. The alleged violations, while not the same for all shipments, were false labeling as to variety name, pure seed and germination percentage, noxious-weed seed; failure to show the name, kind, and variety accompanied by the percentage or the name of the kind accompanied by the words "Variety Not Stated" and the percentage, germination percentage and test date; shipping seed containing prohibited noxious-weed seeds; and failure to keep required records. Seed regulatory officials in Georgia, Oklahoma, and Texas cooperated in the initial sampling and inspection.

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

RYEGRASS FLUORESCENCE LIST

The current ryegrass fluorescence list by the National Grass Variety Review Board (NGVRB) can now be accessed on the following Web site:
http://www.oscs.orst.edu/publications/specialreports/VFL22703List.pdf

Issued and Expired Plant Variety Protection Certificates

PLANT VARIETY PROTECTION CERTIFICATES
(**Issued** from April 4, 2003 - October 15, 2003)

KIND VARIETY	APPLICANT	TITLE V (GEN.)	1994 PVPA
ASTER, CHINA			
Serenade Blue-Tipped White	Sakata Seed Corporation		Y
Serenade Carmine	Sakata Seed Corporation		Y
Serenade Light Blue	Sakata Seed Corporation		Y
Serenade Rose	Sakata Seed Corporation		Y
Serenade Rose-Tipped White	Sakata Seed Corporation		Y
Serenade Scarlet	Sakata Seed Corporation		Y
BARLEY			
Bestford	Western Plant Breeders, Inc.		Y
IdaGold II	Coors Brewing Company	Y (*)	Y
Price	Virginia Tech Intellectual Properties, Inc.	Y (3)	Y
BEAN, FIELD			
BigHorn	Idaho Seed Bean Company	Y (2)	Y
Shiny Crow	Colorado State University	Y (3)	Y
BEAN, GARDEN			
Astun	Syngenta Seeds, Inc. - Vegetables		Y
Dusky	Syngenta Seeds, Inc. - Vegetables		Y
Thoroughbred	Seminis Vegetable Seeds, Inc.		Y
BLUEGRASS, KENTUCKY			
Dragon	ProSeeds Marketing, Inc.		Y
CELERY			
ADS-7	A. Duda & Sons, Inc.		Y
ADS-8	A. Duda & Sons, Inc.		Y
CORN, FIELD			
CI9805	The J.C. Robinson Seed Company		Y
JCR503	The J.C. Robinson Seed Company		Y
NP2167	Syngenta Seeds, Inc.		Y
NP2174	Syngenta Seeds, Inc.		Y
NP2213	Syngenta Seeds, Inc.		Y
PH36E	Pioneer Hi-Bred International, Inc.		Y
CORN, FIELD			
PH3AV	Pioneer Hi-Bred International, Inc.		Y
PH3PV	Pioneer Hi-Bred International, Inc.		Y
PH48F	Pioneer Hi-Bred International, Inc.		Y
PH4GP	Pioneer Hi-Bred International, Inc.		Y
PH4V6	Pioneer Hi-Bred International, Inc.		Y
PH581	Pioneer Hi-Bred International, Inc.		Y
PH5DR	Pioneer Hi-Bred International, Inc.		Y
PH5TG	Pioneer Hi-Bred International, Inc.		Y
PH5W4	Pioneer Hi-Bred International, Inc.		Y
PH5WB	Pioneer Hi-Bred International, Inc.		Y
PH6JM	Pioneer Hi-Bred International, Inc.		Y
PH6KW	Pioneer Hi-Bred International, Inc.		Y
PH6ME	Pioneer Hi-Bred International, Inc.		Y
PH6WG	Pioneer Hi-Bred International, Inc.		Y
PH6WR	Pioneer Hi-Bred International, Inc.		Y
PH726	Pioneer Hi-Bred International, Inc.		Y
PH76B	Pioneer Hi-Bred International, Inc.		Y
PH77V	Pioneer Hi-Bred International, Inc.		Y
PH7CH	Pioneer Hi-Bred International, Inc.		Y
PH7CP	Pioneer Hi-Bred International, Inc.		Y

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CORN, FIELD			
W60028	The J.C. Robinson Seed Company		Y
COTTON			
DP 410 B	D&PL Technology Holding Corporation		Y
DP 425 RR	Deltapine Seed, A Division of Delta and Pine Land Company		Y
DP 436 RR	D&PL Technology Holding Corporation		Y
DP 458 B/RR	D&PL Technology Holding Corporation		Y
DP 50B	D&PL Technology Holding Corporation		Y
DP 5111	D&PL Technology Holding Corporation		Y
DP 5557	D&PL Technology Holding Corporation		Y
DP 655 B/RR	D&PL Technology Holding Corporation		Y
DP 688 B/RR	D&PL Technology Holding Corporation		Y
DP 90B	D&P Technology Holding Corporation		Y
DP 90RR	D&PL Technology Holding Corporation		Y
PM 1218 BG/RR	Louisiana Agricultural Experiment Station		Y
PM 2192 BG	D&PL Technology Holding Corporation		Y
PM 2280 BG/RR	D&PL Technology Holding Corporation		Y
PM 2320 RR	D&PL Technology Holding Corporation		Y
FESCUE, HARD			
Osprey	Seed Research of Oregon		Y
FESCUE, TALL			
Durango	Pure Seed Testing, Inc.		Y
Matador	Pure Seed Testing, Inc.		Y
LETTUCE			
BEN HUR	Progeny Advanced Genetics, Inc.	Y (*)	Y
Big Ben	Pybas Vegetable Seed Co. Inc.		Y
Caesar	Progeny Advanced Genetics, Inc.		Y
Danenberg 66	Progeny Advanced Genetics, Inc.		Y
Gladiator	Enza Zaden de Enkhuizer Zaadhandel B.V.		Y
Green Lightning	Progeny Advanced Genetics, Inc.		Y
Hallmark	Paragon Seed, Inc.		Y
Hallmark W	Paragon Seed, Inc.		Y
Hearts Delight	Enza Zaden de Enkhuizer Zaadhandel B.V.		Y
King Henry	Progeny Advanced Genetics, Inc.		Y
PX 105	Progeny Advanced Genetics, Inc.		Y
Red Rage	Pybas Vegetable Seed Company, Inc and Douglas Peters		Y
Seville	Seminis Vegetable Seeds, Inc.		Y
MUSKMELON			
PM24	Abbott & Cobb, Inc.		Y
WS24	Abbott & Cobb, Inc.		Y
ONION			
Baja Verde	Seminis Vegetable Seeds, Inc.		Y
Green Banner	Seminis Vegetable Seeds, Inc.		Y
NuMex Crimson	New Mexico State University Agricultural Experiment Station	Y (3)	Y
NuMex Solano	New Mexico State University Agricultural Experiment Station	Y (3)	Y

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PEA			
Marias	Crites-Moscow Growers, Inc.		Y
Para	Pure Line Seeds, Inc.		Y
Stanton	Syngenta Seeds, Inc.		Y
Sugar Loaf	Syngenta Seeds, Inc.		Y
Topps	Pure Line Seeds, Inc. Upper Valley Seed Company	Y (*)	Y
PEA, FIELD			
Bluebird	Cebeco Seeds B.V.	Y (3)	Y
Cebeco Eclipse	Cebeco Seeds B.V.	Y (3)	Y
Stratus	Cebeco Seeds B.V.	Y (3)	Y
SW Circus	Svalof Weibull AB	Y (3)	Y
Topeka	Cebeco Seeds B.V.	Y (3)	Y
PEANUT			
NemaTAM	Texas Agricultural Experiment Station	Y (3)	Y
POTATO			
Sirius	SAKA-RAGIS Pflanzenzucht GbR		Y
PUMPKIN			
Mini Treat	Seminis Vegetable Seeds, Inc.		Y
RICE			
AB3004	Busch Agricultural Resources, Inc.		Y
Cadet	Texas Agricultural Experiment Station/ USDA-ARS	Y (3)	Y
Calmati-201	California Cooperative Rice Research Foundation, Inc.	Y (3)	Y
Jacinto	Texas Agricultural Experiment Station/ USDA-ARS	Y (3)	Y
RYEGRASS, ANNUAL			
Tachimusha	Snow Brand Seed Company		Y
RYEGRASS, PERENNIAL			
Brightstar II	Pure Seed Testing, Inc.		Y
Catalina	Pure Seed Testing, Inc.		Y
RYEGRASS, PERENNIAL			
Chaparral	Pure Seed Testing, Inc.		Y
Charger II	Pure Seed Testing, Inc.		Y
Citation III	Pure Seed Testing, Inc.		Y
Manhattan 3	Pure Seed Testing, Inc.		Y
Omega 3	Pure Seed Testing, Inc.		Y
Palmer III	KRB Seed Company, LLC		Y
Penguin	Seed Research of Oregon		Y
Pennant II	ProSeeds Marketing, Inc.		Y
Prelude III	ProSeeds Marketing, Inc.		Y
Premier II	Barenbrug Holland B.V.		Y
Repell III	ProSeeds Marketing, Inc.		Y
Roadrunner	Pure Seed Testing, Inc.		Y
Sonata	Pure Seed Testing, Inc.		Y
Stardance	Pure Seed Testing, Inc.		Y
SAFFLOWER			
Montola 2004	Montana State University	Y (*)	Y
SORGHUM			
PH40AZE	Pioneer Hi-Bred International, Inc.		Y
PH83WVV	Pioneer Hi-Bred International, Inc.		Y
PHO85ZJFE	Pioneer Hi-Bred International, Inc.		Y
PHU80MJ	Pioneer Hi-Bred International, Inc.		Y
SOYBEAN			
0006245	Monsanto Technology LLC		Y
0011824	Monsanto Technology LLC		Y
0025340	Monsanto Technology LLC		Y
0033405	Monsanto Technology LLC		Y
0049431	Monsanto Technology LLC		Y
0053381	Monsanto Technology LLC		Y
0088401	First Line Seeds Ltd.		Y
0096004	Monsanto Technology LLC		Y
0096008	Monsanto Technology LLC		Y
0096838	Monsanto Technology LLC		Y
0103321	Monsanto Technology LLC		Y
0149928	Monsanto Technology LLC		Y
0151167	Monsanto Technology LLC		Y

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SOYBEAN			
0203314	Monsanto Technology LLC		Y
1465003	D&PL Technology Holding Corp.		Y
7085005	D&PL Technology Holding Corporation		Y
90M90	Pioneer Hi-Bred International, Inc.		Y
91M10	Pioneer Hi-Bred International, Inc.		Y
91M40	Pioneer Hi-Bred International, Inc.		Y
91M50	Pioneer Hi-Bred International, Inc.		Y
91M90	Pioneer Hi-Bred International, Inc.		Y
92M00	Pioneer Hi-Bred International, Inc.		Y
92M10	Pioneer Hi-Bred International, Inc.		Y
92M30	Pioneer Hi-Bred International, Inc.		Y
92M31	Pioneer Hi-Bred International, Inc.		Y
92M50	Pioneer Hi-Bred International, Inc.		Y
92M70	Pioneer Hi-Bred International, Inc.		Y
92M71	Pioneer Hi-Bred International, Inc.		Y
92M72	Pioneer Hi-Bred International, Inc.		Y
92M80	Pioneer Hi-Bred International, Inc.		Y
93M40	Pioneer Hi-Bred International, Inc.		Y
93M41	Pioneer Hi-Bred International, Inc.		Y
93M60	Pioneer Hi-Bred International, Inc.		Y
SOYBEAN			
93M80	Pioneer Hi-Bred International, Inc.		Y
93M90	Pioneer Hi-Bred International, Inc.		Y
93M91	Pioneer Hi-Bred International, Inc.		Y
94M40	Pioneer Hi-Bred International, Inc.		Y
94M41	Pioneer Hi-Bred International, Inc.		Y
94M70	Pioneer Hi-Bred International, Inc.		Y
A2869	Monsanto Technology LLC		Y
Boggs	University of Georgia Research Foundation, Inc. (UGARF)	Y (2)	Y
DP 5354	D&PL Technology Holding Corp.		Y
DP 5634 RR	D&PL Technology Holding Corp.		Y
DP 5806 RR	D&PL Technology Holding Corp.		Y
DP 5960 RR	D&PL Technology Holding Corp.		Y
DP 6200 RR	D&PL Technology Holding Corp.		Y
DP 6880 RR	D&PL Technology Holding Corp.		Y
DP 7375 RR	D&PL Technology Holding Corp.		Y
DP 7731	D&PL Technology Holding Corp.		Y
Nannonatto	NDSU Research Foundation	Y (3)	Y
Nornatto	NDSU Research Foundation	Y (3)	Y
S25-D3	Syngenta Seeds, Inc.		Y
SD1081RR	South Dakota Agricultural Experiment Station	Y (*)	Y
SE71112	Monsanto Technology LLC		Y
SE73206	Monsanto Technology LLC		Y

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SOYBEAN			
SE73224	Monsanto Technology LLC		Y
SE90345	Monsanto Technology LLC		Y
SG 567 RR	D&PL Technology Holding Corp		Y
SG 597 RR	D&PL Technology Holding Corp.		Y
SG 617 RR	D&PL Technology Holding Corp.		Y
SG 678 RR	D&PL Technology Holding Corp.		Y
SG 708 RR	D&PL Technology Holding Corp.		Y
SN71173	Monsanto Technology LLC		Y
SN74232	Monsanto Technology LLC		Y
SN76208	Monsanto Technology LLC		Y
SN79525	Monsanto Technology LLC		Y
SN79553	Monsanto Technology LLC		Y
SN79582	Asgrow Seed Company LLC		Y
SN79596	Asgrow Seed Company LLC		Y
SN79624	Asgrow Seed Company LLC		Y
SN82691	Monsanto Technology LLC		Y
SN83211	Monsanto Technology LLC		Y
SN83541	First Line Seeds Ltd.		Y
Spink	South Dakota Agricultural Experiment Station	Y (*)	Y
SW84112	Monsanto Technology LLC		Y
SW90702	Monsanto Technology LLC		Y
SY32157	Asgrow Seed Company LLC		Y
SQUASH			
One BallF	Hollar & Company Inc.		Y
SUNFLOWER			
D0030QM	Pioneer Hi-Bred International, Inc.		Y
D968VQM	Pioneer Hi-Bred International, Inc.		Y
PHA307	Pioneer Hi-Bred International, Inc.		Y
PHA345	Pioneer Hi-Bred International, Inc.		Y
TOBACCO			
CU 263	South Carolina Agricultural Experiment Station	Y (3)	Y
NC 2000	North Carolina State University	Y (2)	Y
NC 72	North Carolina Agriculture Research Service	Y (1)	Y
NC 92-2770-40	North Carolina Agriculture Research Service		Y
SPEIGHT 168	Speight Seed Farms, Inc.	Y (2)	Y
Speight 179	Speight Seed Farms, Inc.	Y (2)	Y
SPEIGHT NF3	Speight Seed Farms, Inc.	Y (2)	Y
Vector 21-41	North Carolina State University		Y
TOBACCO (F1)			
NC 71	North Carolina Agriculture Research Service	Y (1)	Y
TRITICALE			
2115	Resource Seeds, Inc.		Y
2205	Resource Seeds, Inc.		Y
308	Resource Seeds, Inc.		Y
WATERMELON			
SP-1	Syngenta Seeds, Inc.		Y
WHEAT, COMMON			
38206	Virginia Tech Intellectual Properties, Inc.		Y
AGS 2485	University of Georgia Research Foundation, Inc. (UGARF)and Florida Agricultural Experiment Station (FAES)		Y
Alturas	University of Idaho	Y (3)	Y
AP401 CL	AgriPro Wheat, a business unit of Advanta U.S.A. Inc.	Y (*)	Y

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WHEAT, COMMON			
AP502 CL	Agripro Wheat, a business unit of Advanta USA	Y (*)	Y
Briggs	South Dakota Agricultural Experiment Station	Y (*)	Y
Brundage 96	University of Idaho and Idaho Agricultural Experiment Station	Y (3)	Y
Coker 9295	Syngenta Seeds, Inc.	Y (3)	Y
Explorer	Montana Agricultural Experiment Station	Y (3)	Y
Harding	South Dakota Agricultural Experiment Station	Y (*)	Y
McCormick	Virginia Tech Intellectual Properties, Inc.	Y (2)	Y
Moreland	University of Idaho	Y (3)	Y
Pat	University of Arkansas Agricultural Experiment Station	Y (2)	Y
Pearl	Virginia Tech Intellectual Properties, Inc.	Y (2)	Y
Richland	Cornell Research Foundation, Inc.	Y (2)	Y
Tribute	Virginia Tech Intellectual Properties, Inc.	Y (2)	Y
WHEAT, DURUM			
Dilse	NDSU Research Foundation	Y (3)	Y
MATT	Arizona Plant Breeders, Inc.	Y (3)	Y
Pierce	NDSU Research Foundation	Y (3)	Y

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BARLEY			
Apex	Cebeco Zaden B.V.	Y (3)	
Bellona	Cebeco Zaden B.V.	Y (3)	
Bridger-82	Advanta USA, Inc.	Y (3)	
Columbia	Western Plant Breeders, Inc.	Y (*)	
Poco	Germain's Seeds, Inc.	Y (3)	
Premier	Busch Agricultural Resources, Inc.	Y (3)	
WestBred 501	Western Plant Breeders, Inc.	Y (*)	
WestBred Gustoe	Western Plant Breeders, Inc.	Y (*)	
BEAN, FIELD			
C-20	Michigan Agricultural Experiment Station	Y (1)	
Garnet	Novartis Seeds, Inc.		
Pilgrim	Wilbur-Ellis Company	Y (3)	
BEAN, GARDEN			
Bush Kentucky Wonder 125	Novartis Seeds, Inc.		
Ovation	Royal Sluis B.V.		
BERMUDAGRASS			
Guymon	Oklahoma Agricultural Experiment Station and USDA-ARS	Y (2)	
CAULIFLOWER			
Senator	Rijk Zwaan Zaadteelt en Zaadhandel B.V.		
Triton	Rijk Zwaan Zaadteelt en Zaadhandel B.V.		
CELERY			
James Abe	Bud Antle, Inc.		
CORN, FIELD			
G80	Pioneer Hi-Bred International, Inc.		
LH82	Holden's Foundation Seeds, Inc.		
LETTUCE			
Golden Bibb	Scattini Seeds, Inc.		
OKRA			
Cajun Queen	Sunseeds Company		
PEA			
Alpine	Novartis Seeds, Inc.		
Bemol	Seminis Vegetable Seeds, Inc.		
Elegance	Seminis Vegetable Seeds, Inc.		
Envy	Seminis Vegetable Seeds, Inc.		
Menuet	Seminis Vegetable Seeds, Inc.		
Now	Seminis Vegetable Seeds, Inc.		
Payload	Seminis Vegetable Seeds, Inc.		
Rampart	Seminis Vegetable Seeds, Inc.		
Trek	Seminis Vegetable Seeds, Inc.		
Vulcan	Seminis Vegetable Seeds, Inc.		
PEA, FIELD			
Ricardo	Cebeco Zaden B.V.	Y (3)	
PUMPKIN			
Bushkin	W. Atlee Burpee Company		
RYEGRASS, PERENNIAL			
Citation II	Pure Seed Testing, Inc.		
Cowboy	Pure Seed Testing, Inc.		
Delray	NK Lawn and Garden Company		
Omega II	Pure Seed Testing, Inc.		
SOYBEAN			
9271	Pioneer Hi-Bred International, Inc.		
9292	Pioneer Hi-Bred International, Inc.		
9441	Pioneer Hi-Bred International, Inc.		
A2522	Asgrow Seed Company		

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SOYBEAN			
A3420	Asgrow Seed Company		
A5980	Asgrow Seed Company		
A6242	Asgrow Seed Company		
A6381	Asgrow Seed Company		
Century 84	Ohio Agricultural Research and Development Center, Ohio State University	Y (*)	
Coker 425	Novartis Seeds, Inc.	Y (3)	
Coker 485	Novartis Seeds, Inc.	Y (3)	
Dawson	Minnesota Agricultural Experiment Station	Y (*)	
EPPS	Dr. E. E. Hartwig, USDA	Y (3)	
GK-67	Agratech Seeds Inc.	Y (3)	
HT5203	Stanford Seed Company	Y (1)	
J-72	The Lubrizol Corporation		
J-8389	The Lubrizol Corporation		
Johnston	North Carolina Agricultural Experiment Station	Y (3)	
Keller	Purdue University Agricultural Experiment Station	Y (3)	
Leflore	Mississippi Agricultural and Forestry Experiment Station and USDA-ARS	Y (3)	
Miami	Purdue University Agricultural Experiment Station	Y (3)	
Ozzie	Minnesota Agricultural Experiment Station	Y (3)	
Pershing	Curators of the University of Missouri	Y (3)	
RA-405	Novartis Seeds, Inc.		
RA-452	Novartis Seeds, Inc.		
S27-10	Novartis Seeds, Inc.		
S39-93	Novartis Seeds, Inc.		
S42-40	Novartis Seeds, Inc.		
S45-01	Novartis Seeds, Inc.	Y (*)	
SOYBEAN			
Winchester	Purdue University Agricultural Experiment Station	Y (3)	
Young	North Carolina Agricultural Research Service	Y (3)	
Zane	Ohio Agricultural Research and Development Center, Ohio State University	Y (*)	
SQUASH			
Swan White Table Queen	Swan Health Farms and Cattle Company, Inc.		
TOMATO			
Easy Harvest	Campbell Soup Company, Campbell Institute for Research and Technology		
Easy Winner	Campbell Soup Company, Campbell Institute for Research and Technology		
Indiana 812	Purdue University Agricultural Experiment Station		
Peto 343	Seminis Vegetable Seeds, Inc.		
Peto 460	Seminis Vegetable Seeds, Inc.		
Rio Colorado	Seminis Vegetable Seeds, Inc.		
WHEAT, COMMON			
Blazer	Agripro Seeds, Inc.	Y (3)	
Coker 916	Novartis Seeds, Inc.	Y (3)	
Erik	Agripro Seeds, Inc.	Y (3)	
Fillmore	Purdue University Agricultural Experiment Station and USDA-ARS	Y (3)	
Magnum	Agripro Seeds, Inc.	Y (3)	
Marshall	Minnesota Agricultural Experiment Station	Y (3)	

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WHEAT, COMMON			
Meggie	Agripro Seeds, Inc.	Y (3)	
Mustang	Agripro Seeds, Inc.	Y (3)	
RAM	Agripro Seeds, Inc.	Y (3)	
Success	Agripro Seeds, Inc.	Y (3)	
Wrangler	Agripro Seeds, Inc.	Y (3)	

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