

Department of Agriculture (USDA) Fiscal Year 2024 Agency Report

1. Please provide a summary of your agency's activities undertaken to carry out the provisions of OMB Circular A-119, "Federal Participation in the Development and Use of Voluntary Consensus Standards and in Conformity Assessment Activities" and the National Technology Transfer and Advance Act (NTTAA). The summary should contain a link to the agency's standards-specific website(s) where information about your agency's standards and conformity assessment related activities are available.

The Agricultural Marketing Service (AMS) provides grading services, and price and volume reporting for a range of commodities including cotton, dairy, specialty crops, livestock, poultry, seed, tobacco, and grain. AMS supports these services by maintaining commodity quality standards on its website at <https://www.ams.usda.gov/>. The grade standards provide a common language of trade between buyers and sellers and are voluntarily used by the supply chain to promote orderly and efficient trade of agricultural products. AMS grading services certify products according to these standards or to contract terms. In addition, AMS purchases a variety of food products for market support, Federal nutrition assistance, and international food aid programs. These purchases provide food for those in need and help stabilize agricultural commodity prices by balancing supply and demand. Fresh and processed food purchased under these programs includes fruits and vegetables, nut products, beef and pork, poultry and egg products, fish, dairy products, grain products, and oilseed products. To support the procurement process, AMS maintains a series of purchase specifications on its website at <https://www.ams.usda.gov/commodity-procurement> that are used by contractors to produce and deliver food products and by graders and inspectors within the U.S. Department of Agriculture (USDA) to determine product acceptability. If purchase specifications require laboratory analyses, only official standard analytical methods are used.

USDA also offers voluntary, independent food safety audits of specialty crops suppliers throughout the production and supply chain. USDA's Good Agricultural Practices (GAP) and Good Handling Practices (GHP) audits verify that fresh fruits, vegetables, and nut products are produced, packed, handled, and stored in the safest manner possible to minimize risks of microbial food safety hazards. USDA GAP and GHP audits verify adherence to the recommendation in the U.S. Food and Drug Administration's (FDA) Guide to Minimize Microbial Food Safety Hazards for Fresh Fruits and Vegetables and industry-recognized food safety practices. In FY 2024, USDA's Specialty Crops Program (SCP) and its licensed auditors performed more than 4,200 food safety audits (primarily GAP and GHP audits) on more than 100 different commodities in 50 states, Puerto Rico and Canada.

Other USDA audit services focus on Good Manufacturing Practice (GMP), which verify adherence to FDA's GMP regulations: current (CFR Title 21 Part 110) and staggered effective dates from 2016 to 2018 (CFR Title 21 Part 117); Hazard Analysis Critical Control Points (HACCP), based on FDA's Guide to Minimize Microbial Food Safety Hazards of Fresh-cut Fruits and Vegetables and the HACCP principles established by the National Advisory Committee On Microbiological Criteria for Foods; food defense protocols, based on FDA's Food Producers, Processors, and Transporters: Food Security Preventive Measures Guidance; and traceability procedures.

The USDA Specialty Crops Program (SCP) serves as the United States representative on multiple [Codex Alimentarius Commission \(Codex\)](#) committees. Codex standards help ensure fair trade practices in the food trade and the trading of safe food internationally. SCP activities relating to Codex include:

- Committee on Processed Fruits and Vegetables (CCPFV): SCP chairs this committee. In FY 2024, though the CCPFV was adjourned, proposals were made to develop new standards and to review an existing one. The general standard for fruit juices and nectars was amended.
- [Committee on Fresh Fruits and Vegetables \(CCFFV\)](#): In FY 2024, SCP participated in electronic working groups developing new standards for fresh curry leaves and fresh dates.
- [Codex Committee on Spices and Culinary Herbs \(CCSCH\)](#): In FY 2024, SCP successfully led the development of the first group standard for spices derived from dried fruits and berries, allspice, juniper and star anise, which was submitted for formal adoption. New standards for dried turmeric and small cardamom were adopted. The U.S. delegation is leading the development of the standard for vanilla, which was advanced to Step 5 - submission of the proposed draft standard through the Secretariat to the Executive Committee for critical review and to the Commission for adoption as a draft standard.
- Codex International Outreach: SCP continuously undertakes outreach activities to maintain technical relationships on Codex standards and issues with foreign countries. In all three Codex commodity committees, SCP leads the working groups that select the priority commodities to be standardized.

SCP serves as the United States representative on multiple [United Nations Economic Commission for Europe \(UNECE\)](#) committees. UNECE is a voluntary international standards development organization. SCP activities relating to UNECE include:

- UNECE Specialized Section on [Standardization of Fresh Fruits and Vegetables](#) (SSSFFV): In FY 2024, SCP participated in the development of new standards for sweet potatoes, updating lists of citrus varieties, and revising the standards for pears, headed cabbage, summer squash/zucchini, garlic, and leafy vegetables.
- UNECE Specialized Section on [Standardization of Dry and Dried Produce](#) (SSSDDP): SCP is vice chair and heads the U.S. delegation to the annual meeting. In FY 2024, the delegation led the revision of standards for almond kernels, blanched almond kernels and in-shell almonds, dried tomatoes, in-shell walnuts, and dates. Work on the development of explanatory posters for dried melons, raw in-shell peanuts, roasted in-shell peanuts, raw peanut kernels, and roasted peanut kernels is ongoing.
- UNECE Outreach: SCP conducted international outreach to government and industry officials to build support for U.S. positions related to fresh, dry, and dried produce standards being addressed by the UNECE.

In FY 2024, SCP coordinated conformity assessment activities with private sector technical standards activities and conformity assessment activities, with the goal of eliminating unnecessary duplication and complexity in the development and promulgation of conformity assessment requirements and measures by modernizing the U.S. standards for grades of in-shell pecans to reflect the industries' current processing capabilities. SCP worked closely with industry to ensure that the updates to the standards accurately reflect current industry practices. SCP published the proposed revisions in the Federal Register, received limited comments, and moved forward with the [Final Rule to revise the standard](#).

The USDA National Organic Program (NOP) did not use any Government Unique Standards In lieu of Voluntary Consensus Standards in FY 2024. NOP also did not participate in any Voluntary Consensus Standards Activities during FY 2024.

The program continues to use the following Voluntary Consensus Standards. These are incorporated by reference in the USDA organic regulations at 7 CFR 205.3:

1. ASTM D5988-12 ("ASTM D5988"), "Standard Test Method for Determining Aerobic Biodegradation of Plastic Materials in Soil," approved May 1, 2012.
2. ASTM D6400-12 ("ASTM D6400"), "Standard Specification for Labeling of Plastics Designed to be Aerobically Composted in Municipal or Industrial Facilities," approved May 15, 2012.
3. ASTM D6866-12 ("ASTM D6866"), "Standard Test Methods for Determining the Biobased Content of Solid, Liquid, and Gaseous Samples Using Radiocarbon Analysis," approved April 1, 2012.
4. ASTM D6868-11 ("ASTM D6868"), "Standard Specification for Labeling of End Items that Incorporate Plastics and Polymers as Coatings or Additives with Paper and Other Substrates Designed to be Aerobically Composted in Municipal or Industrial Facilities," approved February 1, 2011.
5. EN 13432:2000: E ("EN 13432"), September 2000, "Requirements for packaging recoverable through composting and biodegradation - Test scheme and evaluation criteria for the final acceptance of packaging."
6. EN 14995:2006: E ("EN 14995"), December 2006, "Plastics - Evaluation of compostability - Test scheme and specifications."
7. ISO 17088:2012(E), ("ISO 17088"), "Specifications for compostable plastics," June 1, 2012.
8. ISO 17556:2012(E) ("ISO 17556"), "Plastics—Determination of the ultimate aerobic biodegradability of plastic materials in soil by measuring the measuring the oxygen demand in a respirometer or the amount of carbon dioxide evolved," August 15, 2012.

USDA's Cotton & Tobacco Program utilizes ASTM environmental and laboratory cotton fiber testing standards to provide the methodology for the cotton classification process. In addition, physical and descriptive cotton classification standards for visual and instrument grading serve as the reference for all cotton classification measurements. The applicable websites are listed below:

<https://www.astm.org/>
<https://www.ams.usda.gov/grades-standards/cotton>
<https://www.astm.org/get-involved/technical-committees/committee-d13/subcommittee-d13#>

USDA's Livestock and Poultry Program's (LP) mission ensures that accurate and precise information is generated and available for the producers of U.S. meat and poultry products with respect to quality grading and marketing standards in support of both domestic and international trade. LP continues to coordinate its conformity assessment activities between the public and private sector with participation in consensus standard development bodies. LP still consistently uses government unique standards for the USDA grading and conformity system but continues to expand these into the voluntary consensus space with involvement of U.S. and international standard development organizations to promote efficiency and competitiveness for American farmers, producers, processors, handlers, wholesalers, warehousing companies, and retailers. In the U.S. there are over 500 meat, poultry and egg plants relying on LP for quality assessment. LP maintains several hundred in-house standards for this purpose and for coordinated product certification. Some of them have been in use for more than seventy-five years. LP also maintains Commercial Item Descriptions for hundreds of products that are procured through federal commodity purchase programs.

In 2024, the U.S. delegation to the UNECE Working Party on Agricultural Quality Standards, Specialized Section on the Standardization of Meat was led by LP staff members. UNECE's Specialized Section on Meat is a voluntary international standards development organization that focuses on developing global standards for egg, meat, and poultry products. The 2024 meeting of the Specialized Section was held in-person in Geneva Switzerland and provided opportunities to strengthen relations. In attendance were delegations from Australia, Germany, Italy, Malta, Namibia, Poland, Qatar, the Russian Federation, and the United States of America as well as representatives from several non-government organizations. These proceedings covered topics of discussion on proposed revisions to the standards for ovine and chicken meat carcasses and cuts, alignment of UNECE cut codes with the Harmonized Commodity Description and Coding System, the development of standards for eating quality, sustainable considerations in the meat sector, capacity building and promotion, and the election of officers. LP agreed to lead a working group that will propose revisions to the chicken meat standards during the 2025 session of the Specialized Section. A LP staff person was reelected as the chairperson of this organization during the meeting session. Additionally, LP holds the leadership position of vice chair of the United Nations Working Party on Agricultural Quality Standards.

LP serves on the ASTM International Committee F10 on Livestock, Meat, and Poultry Evaluation Systems, a committee of about 50 members representing industry associations, packing companies, instrument manufacturers, academia, and government agencies. The standards and activities overseen by this committee guide and influence LP's certified tender and instrument grading programs.

The USDA, Marketing and Regulatory Programs, AMS, Livestock and Poultry Program (USDA, MRP, AMS, LP) is the only USDA Agency involved in managing standard development voting and standard body guidance for the International Organization for Standardization (ISO). USDA, MRP, AMS, LP provides a conduit for representation to all other USDA and federal agencies and American stakeholders through the [American National Standards Institute \(ANSI\)](#) via technical advisory group administration of three ISO technical committees: [ISO technical committee \(TC\) 34 Food Products/subcommittee \(SC\) 5 Milk and milk products](#), [ISO TC 34/SC 6 Meat, Poultry, Eggs, Fish and their products](#) and [ISO TC 34/SC 17 Management systems for food safety](#). These three technical committees encompass 103 international standards bodies responsible for over 260 international standards many of which are used voluntarily or incorporated by reference in federal code and regulations. USDA, MRP, AMS, LP is responsible for the development of the US positions relative to standard development voting and standard body guidance for each of these committees.

USDA, MRP, AMS, LP also provides voluntary staffing for executive management of [ISO TC 34/SC 16 Horizontal methods for molecular biomarker analysis](#). In this role USDA, MRP, AMS, LP provides oversight and support for all of this ISO committee's functions. The ANSI delegated host of ISO TC 34/SC 16 is the [American Oil Chemist's Society \(AOCS\)](#). [AMS refers to standards produced by this committee in guidance for testing methods](#). As a result of its management of ISO TC 34/SC 16, L&P also represents ISO agricultural biotechnology to the Codex Alimentarius Committee on Methods of Analysis and Sampling Interagency Meeting. Within ISO, USDA, MRP, AMS, LP is represented as experts in [ISO TC 34/ SC 9 Microbiology of the food chain](#), [ISO TC 34/SC 17 Management systems for food safety](#), [ISO/TC 212 Clinical laboratory testing and in vitro diagnostic test systems](#), [ISO/TC 255 Biogas](#), [ISO TC 215 Health Informatics](#), [ISO/TC 276 Biotechnology](#), ISO/TC 347 Data Driven Agri Food Systems, ISO/PC 343 Sustainable development goals management and recently as the elected co-convenor of a new committee, [ISO TC 34/SC 9/AHG 5](#) to brainstorm a one health approach to rapid biomolecular detection methods for antimicrobial, antibiotic and antiviral resistance genes in bacteria, viruses and fungi.

The USDA, MRP, AMS, LP participates in standards development for AOAC international and serves as a member of the AOAC international board of directors. The [AOAC International](#) was originally chartered in 1884 by the USDA and FDA to provide standard methods of analysis for foods and feed products. USDA, MRP, AMS, LP led the development of new AOAC standards for [next generation DNA sequencing, metagenomics and biothreat agent detection](#). USDA, MRP, AMS, LP also serves on the statistics board of AOAC, guiding appropriate statistical analytical applications for AOAC international method development.

USDA's Dairy Program (DP) administers and chairs the U.S. TAG to ISO for the [Technical Committee 34, Subcommittee 5 for Milk and Milk Products](#) (TC34/SC5). ANSI, the U.S. member body to ISO, relies on U.S. TAGs as national mirror committees to support the development of voluntary, consensus-based international standards used in the global marketplace. DP concurrently engages in and facilitates TC34/SC5 U.S. TAG activities to determine consensus positions from members representing all sectors of the U.S. dairy industry in the development, approval, reaffirmation, revision, and withdrawal of international ISO standards. Since the TAG was accredited in November 2019, it has provided the U.S. consensus position for approximately 211 voting events for ISO standards at various stages of development. DP organizes the U.S. delegation for ISO meeting attendance and oversees the nomination of experts to represent the U.S. on ISO technical committees. In November of 2024, members of the TAG representing the U.S. delegation participated in the 11th ISO TC34/SC5 meeting. Moreover, the TAG has nominated 17 U.S. experts to multiple technical working groups developing and/or revising ISO standards for the evaluation of milk and milk products.

Another part of DP's commitment to building and using voluntary consensus standards, is participation in U.S. TAGs associated with TC34/SC5, including the U.S. TAG for TC34 for Food Products and the U.S. TAG for TC34/SC9 for Microbiology. Participation and facilitation of U.S. TAG activities in support of international standards allows DP to have a direct role in the development and use of voluntary consensus standards.

Although the Codex Committee on Milk and Milk Products is adjourned *sine die*, DP was very engaged and active in participating in multiple Codex committees impacting the trade of milk and milk products including the following: Codex Committee on Fats and Oils (CCFO), Codex Committee on Food Import and Export Inspection and Certification Systems (CCFICS), Codex Committee on Food Additives (CCFA) and Codex Committee on Methods of Analysis and Sampling (CCMAS).

Relevant Websites:

- ISO: <https://www.iso.org/about-us.html>
- ANSI Accredited U.S. TAG Listing: <https://www.ansi.org/iso/ansi-activities/us-tags>
- ISO TC34/SC5 for Milk and Milk Products: <https://www.iso.org/committee/47878.html>
- ISO TC34 for Food Products: <https://www.iso.org/committee/47858.html>
- ISO TC34/SC9 for Microbiology: <https://www.iso.org/committee/47920.html>

USDA's Fair Trade Practices Program (FTPP), Packers and Stockyards Division (PSD) participated in Voluntary Consensus Standards Activities during FY 2024. PSD enforces regulation 201.71(a) promulgated under the Packers and Stockyards Act. The regulation includes Section 5.59, "Electronic Livestock, Meat, and Poultry Evaluation Systems and/or Devices," of the National Institute of Standards and Technology (NIST) Handbook 44 (2013). The rule became effective and enforceable on June 30, 2014. No amendments to the regulation have been made since this date.

Handbook 44 references consensus standards established by ASTM International Committee F10 on Livestock, Meat, and Poultry Evaluation Systems, a committee made up of members representing industry associations, packing companies, instrument manufacturers, academia, and government agencies.

ASTM Committee F10 on Livestock, Meat and Poultry Evaluation was formed in 2001. The ASTM Committee, with a membership of approximately 50, currently has jurisdiction over five standards, published in the Annual Book of ASTM Standards, Volume 15.12. F10 has five technical subcommittees that maintain jurisdiction over these standards.

REFERENCE DOCUMENTS

1. Electronic Livestock, Meat, and Poultry Evaluation Systems and/or Devices Section 5.59. *Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices*. NIST Handbook 44, 2013.
2. Standard Practice for User Requirements for Livestock, Meat, and Poultry Evaluation Devices or Systems. American Society for Testing Materials (ASTM) International Standard F 2341.
3. Standard Specification for Design and Construction of Composition or Quality Constituent Measuring Devices or Systems. ASTM International Standard F 2342.
4. Standard Test Method for Livestock, Meat, and Poultry Evaluation Devices. ASTM International Standard F 2343.

NOTE: Standards can be obtained by contacting www.ASTM.org.

FTPP's Food Disclosure and Labeling Division (FDLD) also participates in review of ISO and Codex Alimentarius Standards. FDLD provides guidance referencing such standards to comply with Mandatory Country of Origin Labeling (COOL) and the National Bioengineered Food Disclosure Standard (NBFDS).

FDLD, as part of the oversight of the NBFDS, in 2020, published guidance on testing and validation of processes for regulated entities to satisfy the recordkeeping requirements of the regulation. Guidance on testing suggests the use of validated methods accepted by ISO, Codex Alimentarius, or AOAC International.

These recommendations include:

1. ISO/TS 16393:2019, "Molecular biomarker analysis — Determination of the performance characteristics of qualitative measurement methods and validation of methods," published February 2019.
2. ISO/IEC 17025:2017, "Testing and Calibration Laboratories," corrected version published in March 2018.
3. ISO/ 24276:2006, "Foodstuffs — Methods of analysis for the detection of genetically modified organisms and derived products — General requirements and definitions," published in February 2006; last reviewed and confirmed in 2020.
4. ISO 21568:2003, "Foodstuffs — Methods of analysis for the detection of genetically modified organisms and derived products," published in February 2003.
5. ISO 21569:2005, "Foodstuffs — Methods of analysis for the detection of genetically modified organisms and derived products — Qualitative nucleic acid based methods," published

AMENDMENT 1 in April 2013; last reviewed and confirmed in 2020.

6. ISO/TS 21569-8:2025, "Horizontal methods for molecular biomarker analysis — Methods of analysis for the detection of genetically modified organisms and derived products; Part 8: DNA extraction from alfalfa seeds and real-time PCR based detection methods for genetically modified alfalfa events J101, J163 and KK179," published in April 2025.
7. ISO 21570:2005, "Foodstuffs — Methods of analysis for the detection of genetically modified organisms and derived products — Quantitative nucleic acid based methods," published AMENDMENT 1 in April 2013; last reviewed and confirmed in 2020.
8. ISO 21571:2005, "Foodstuffs — Methods of analysis for the detection of genetically modified organisms and derived products — Nucleic acid extraction," published in February 2005; last reviewed and confirmed in 2020.
9. ISO 11781:2025 Molecular biomarker analysis — Requirements and guidance for single-laboratory validation of qualitative real-time polymerase chain reaction (PCR) methods.

The guidance provides examples of acceptable methods for regulated entities that wish to demonstrate that their products do not contain bioengineered ingredients. These well-established methods would satisfy recordkeeping requirements under the NBFDS.

The FDLD staff represents the USDA as a member of the U.S. TAG to the ISO Technical Committee ISO/TC276 for Biotechnology. The committee works closely with related committees to identify standardization needs and gaps and collaborate with other organizations to avoid duplications and overlapping standardization activities. FDLD staff participated in the following working groups:

- ISO/TC276/WG6 - Biotechnology — General requirements for nucleic acid- and protein-based bio-devices.
- ISO/TC276/WG3 - Analytical methods, changed to a subcommittee: ISO/TC276/SC1 Analytical methods. The scope of the new SC would be the same as that of WG3, and there would initially be three working groups within the SC: gene delivery, cell characterization, and nucleic acids characterization.
- ISO/TC276 WG4 – Bioprocessing, requirements for sample containers for storing biological materials in biobanks.

Also, the FDLD staff represents the USDA as a member of the ANSI/ISO Technical Committee 34 Food Products/(TC 34) Standardization in the field of human and animal foodstuffs, covering the food chain from primary production to consumption, as well as animal and vegetable propagation materials but not limited to, terminology, sampling, methods of test and analysis, product specifications, food and feed safety and quality management and requirements for packaging, storage, and transportation. The Subcommittee 16 (SC 16) standardization of biomolecular testing methods applies to foods, feeds, seeds, and other propagules of food and feed crops, including methods that analyze nucleic acids [e.g., polymerase chain reaction (PCR), genotypic analysis and sequencing], proteins [e.g., enzyme-linked immunosorbent assay (ELISA)], and other suitable methods—finally, the variety of identification and detection of plant pathogens. FDLD staff participated in the following working groups:

- ISO/TC 34/SC 16/WG 9 "Subsampling of seeds and grains
- ISO/TC 34/SC 16/WG 10 "Rapid nucleic acid amplification methods"
- ISO/TC 34/SC 16/WG14 – Genetically engineered content detection and quantification.
- ISO/TC 34/SC 16/WG15 – Single laboratory validation of qualitative real-time PCR.

FDLD Staff review and provide comments and feedback to Codex Alimentarius circular letters pertinent

to their expertise and regulatory responsibilities. Most frequently comments are provided on initiatives within the Codex Committee on Food Labeling (CCFL) and Codex Committee on Nutrition and Foods for Special Dietary Uses (CCNFSDU).

The Federal Grain Inspection Service (FGIS) works in cooperation with National Conference of Weights and Measures (NCWM) by serving as the testing laboratory for grain analyzers seeking National Type Evaluation Program (NTEP) certification. The FGIS laboratory is located at the National Grain Center in Kansas City, Missouri and serves as the sole NTEP laboratory for evaluation of grain analyzer devices. These devices are evaluated for measurements of moisture, protein, oil, and test weight per bushel according to the requirements outlined in NCWM Publication 14. Other device types evaluated under the NTEP program include a range of weighing and measuring instruments that include, but are not limited to, scales, grain analyzers, liquid-measuring devices, dry volume containers, odometers, taximeters, and timing devices. Specifications, tolerances, and requirements for each device can be found in the NIST Handbook 44.

The NTEP is a verification program administered by the NCWM to ensure measurement devices are manufactured in accordance with U.S. standards. Standards, policies, and test procedures are developed by industry and technical experts who meet annually to maintain consensus. Devices maintaining an active NTEP Certificate of Conformance are deemed metrologically equivalent according to these standards and are authorized for establishing cost in commercial trade applications. Authorization is dependent on individual state laws and can vary across U.S. states. Related Websites:

<https://www.ncwm.com/ntep-about>

<https://www.ncwm.com/grain-sector>

FGIS serves as the United States representative on two [Codex Alimentarius Commission \(Codex\)](#) committees. Codex standards help ensure fair trade practices in the food trade and the trading of safe food internationally. FGIS activities relating to Codex include:

- [Committee on Cereals, Pulses, and Legumes \(CCCPL\)](#): FGIS is an alternate delegate to this committee. The committee had been adjourned sine die since 2020, until it was reactivated in 2024 to consider a group standard for millet grains. FGIS will provide assistance and leadership to this committee as it evaluates these standards in FY 2025.
- [Committee on Methods of Analysis and Sampling \(CCMAS\)](#): In FY 2024, FGIS served as the alternate delegate to this committee. FGIS assisted in the review and endorsement of analytical methods and for cereals, pulses, and legumes.

USDA's Science and Technology Program, Seed Regulatory and Testing Division (SRTD) serves as the United States Designated Member/Authority for the Organization for Economic Cooperation and Development (OECD) Seed Schemes and the International Seed Testing Association (ISTA). These international organizations develop standards and policies that affect the movement of seed in international markets. These organizations are made up of member governments that make decisions based on the best interest of their seed industries. Each year, international government representatives submit proposals that are voted on at annual meetings. As the Designated Member, SRTD is responsible for casting the U.S. vote. Prior to the annual meetings, SRTD collects input from relevant domestic stakeholders and develops the U.S. position for each proposal. The final standard or policy approved becomes the new requirement for international seed shipments.

The OECD Seed Schemes (<https://www.ams.usda.gov/rules-regulations/fsa/oecd-schemes>) promotes

the use of internationally standardized and certified agricultural seed. OECD certified seed is produced and officially controlled according to agreed-upon standards in participating countries. OECD Seed Schemes labels are recognized worldwide and are required for certified seed imports into many countries. The United States meets OECD certification standards for and participates in the following crop groupings: Grasses and Legumes Crucifers and other Oil or Fiber Species; Cereals; Fodder Beets and Sugar Beets; Maize; and Sorghum seed schemes.

The ISTA (<https://www.seedtest.org/en/>) produces internationally agreed rules for seed sampling and testing, accredits laboratories, promotes research, provides international seed analysis certificates and training, and disseminates knowledge in seed science and technology. This facilitates seed trading nationally and internationally and contributes to food security. ISTA maintains a one-country one-vote policy which reduces the impact of the countries investing most in international seed trade. As the most valuable seed market in the world, AMS is constantly looking for ways to boost the U.S. voice in the interests of the American seed sector. In 2024, AMS served as Vice President of the organization and will become the organizations President in 2025. This will allow AMS to shape the strategic direction of the organization ensuring proposed rules and policies affecting seed trade do not hamper U.S. exports.

USDA's Science and Technology Program, Plant Variety Protection Office (PVPO) serves as the United States representative on the International Union for the Protection of New Varieties of Plants (UPOV; <https://www.upov.int/portal/index.html.en>). UPOV is a division of the World Intellectual Property Organization (WIPO) of the United Nations. The mission of UPOV is to provide and promote an effective system of plant variety protection, with the aim of encouraging the development of new varieties of plants, for the benefit of society. The International Convention for the Protection of New Varieties of Plants (UPOV Convention) provides the basis for member countries to encourage plant breeding by granting breeders of new plant varieties intellectual property rights, known as the breeder's rights or Plant Variety Protection (PVP) in the US. The breeder's rights are granted by the individual member (country) of the UPOV Convention.

The UPOV develops Test Guidelines (TGs) for grow-out trials and characterization of most species of plants. These documents ensure standardized procedures are followed for the protection of new varieties of plants. PVPO has adopted UPOV TGs for 240 crops covering 400 species. This ensures alignment of the US standards for PVP with the other 80 countries that are members of UPOV.

PVPO participated in the UPOV Technical Working Party (TWP) meetings for agricultural, fruit, ornamental, and vegetable crops. In FY 2024, the TGs for more than 45 crops were revised. PVPO held stakeholder meetings prior to the TWP meetings to solicit input and feedback concerning crops of interest. The TGs that were updated in 2024 were for the following: eggplant, garlic, ginger, parsley, asparagus, cucumber, lettuce, corn, pea, ginkgo, leucanthemum, lotus, magnolia, poinsettia, Zantedeschia, aloe, carnation, grain amaranth, bentgrass, bermudagrass, Festulolium, fodder beet, hemp, mung bean, sugar cane, zoysia grass, Argania, goji, guava, hazelnut, Japanese pear, Japanese plum, and passion fruit.