CURRENT ASABE STANDARDS PROJECTS

March 29, 2021

The following projects to develop new ASABE standards and to revise existing ASABE standards are being undertaken by various ASABE committees shown below. Updates can be found at the following link:

ES-310, Agricultural Lighting Group	
*X344.5	Lighting Systems for Agricultural Facilities
	Correction of recommendation that is leading to over lighting of Dairy housing and vegetable sorting facilities.
ES-311, Electromagnetic Radiation Application for Plants	
X644	Performance Measures of Electromagnetic Radiation Systems for Plants
	This standard is intended to establish appropriate performance criteria of optical radiation devices designed for horticultural applications and installed systems that use such devices. This standard recommends minimum and advanced criteria (including specific values where appropriate). This standard provides plant spectral response characteristics. This standard also provides methodologies to compare the plant growth and energy performance between alternative devices and installed systems when applied to diverse horticultural operations.
MS-23/2/1, Environment within Agricultural Vehicle Enclosures	
*X613-2.2	Tractors and self-propelled machinery for agriculture—Air quality systems for cabs—Part 2: Cab & HVAC design
	Development work done by NIOSH scientists have found issues with the wording of this part of the standard in several sections; therefore it is proposed to review the verbiage and resolve any issues.
MS-23/4, Tractors	
*X24347:2019	Agricultural vehicles — Mechanical connections between towed and towing vehicles — Dimensions of ball-type coupling device (80 mm)
	Align ASABE adoption with 2019 version of ISO 24347.
MS-23/4/1, Agricultural Equipment Braking	
*X648-4.1	Agricultural Field Equipment Braking — Part 4: Requirements for Towed Vehicles
	Revision to specific clauses to eliminate conflicts between those clauses and other information in the standard.
*X648-5.1	Agricultural Field Equipment Braking — Part 5: Requirements for the Interface between Towing Vehicle and Towed Vehicles
	Revision to clarify compatibility information for low speed/high mass towed vehicles. Additional revision to match simulator performance with EU Regulations.
MS-23/6, Application Systems and US TAG for ISO/TC 23/SC 6	
*X327.5	Terminology & Definitions for Application of Crop or Forestry Production & Protection Agents
	3.22 and 3.23 are titled same but define two different concepts. The examples in 3.23 all happen to be 'median' droplet sizes, but this ‘0.5’ fraction is only one special instance of droplet diameter when defining cumulative distribution. S572 references Dv0.5, etc, but never uses the term Volume Median Diameter. Volume Median Diameter is a critical concept, frequently used as a shorthand for nozzle classification. It should have its own definition rather than being one example within another, miss-titled definition.

MS-23/6/3, Dry Materials Application	
X660	Procedure for Evaluating the Distribution Uniformity for Large Granular Broadcast Applicators
	Standard that is specifically for wide spread pattern testing of dry fertilizer spreader, for units that can spread >18.3 m (60').
MS-23/6/5, Anhydrous Ammonia Application Equipment	
*X620.1	Safety for Anhydrous Ammonia Application Equipment
	Incorporate more detail regarding hoses and hitches
MS-23/7/3, Cotton Engineering	
*X582.1	Cotton Gins - Method of Utilizing Emission Factors in Determining Emission Parameters
	State Air Pollution Regulatory Agencies (SAPRAs) limit the amount of PM emitted by cotton gins through a permitting process that establishes the allowable emission rate for gins in their respective states. Permits are typically the responsibility of "permit engineers" in the SAPRAs. The Texas Natural Resource Conservation Commission (TNRCC), SAPRA, for Texas has employed a number of Ag Engineering Grads as permit engineers. However, most other states do not have Ag Engineers on their staffs as permit engineers. Hence, the cotton ginning industry in most other states, are permitted by SAPRA engineers from other engineering disciplines who have little or no knowledge of the cotton ginning process which makes it difficult to perform the engineering calculations necessary to permit the gin. The differences in permits allowable emission rates between states is significant, primarily due to engineering. This standard will standardize the engineering practice associated with air permits for cotton gins. SAPRA permit engineers, consulting engineers hired by the cotton ginning industry and the industry will benefit from this engineering practice standard.
*X615.2	Cotton Module Cover Material Performance
	Major revision to add performance specifications for module covers used on cylindrical modules that are now the predominate seed cotton storage method in the U.S.
MS-49, Crop Production Systems, Machinery, and Logistics	
*X497.8	Agricultural Machinery Management Data
	Update coefficients for some machines in Tables 1-3.
X658	Test methods of Metered Seed Systems for Precision Single Seed Drill Performance
	Develop a test standard that utilizes modern testing techniques to evaluate both the accuracy or monitoring systems and row unit's seed placement of a precision air seeder or planter.
MS-54, Precision Agriculture	
*X579.2	Yield Monitor Field Test Engineering Procedure
	Standard lacks rigor in performing weight accuracy tests. For example: if minimum block length were used to perform weight accuracy tests, a total of about 20 bushels of corn would be harvested with a 12 row head at 200bu/acre. Unload cleanout and scale accuracy should be considered when performing weight accuracy tests. For weight accuracy tests on a combine, the minimum harvest should be somewhere around 1/3 grain tank.
X611	Standard for Mapping Yield and Associated Data
	Develop a standard to improve the processing and utilization of data files containing geospatial yield, moisture content (MC), and quality data with respect to information content, units, and interoperability between different software products and measurement systems. Standard will cover the issues of data acquisition, data processing, and data representation in map form.

NRES-03, NRES Standards Oversight	
X643	Putting Green and Sports Field Design and Construction
	Design and construction of base layers of material for golf course putting greens and sports fields. It will not include specific discussions of construction techniques and methods, but will provide direction on slopes, drainage, soil/gravel/material types (performance factors, root zone mixtures, organic matter, etc.), and seed bed preparation.
NRES-244, Irrigation Management	
X632-2	Precision Agriculture Irrigation Language: Observations and Measurements
	This (X632-2) part of the standard series presents an object model and reference XML serialization schema to represent observations and measurements of relevance to agriculture in general, and irrigation in particular; it is an agriculture-specific implementation of the ISO 19156 Standard. 560 / 680 space limit.
NRES-245, Microirrigation	
*X405.2	Design and Installation of Microirrigation Systems
	This standard needs to be reviewed for consistency/accuracy in definitions, updating current terminology and practice, and updating any standards applicable to the practice.
NRES-27, Agricultural by-Products & Animal Mortality Management Systems	
*X403.5	Design of Anaerobic Lagoons for Animal Waste Management
	The project will involve reviewing all sections of the existing standard and proposing updates to definitions, laws and regulations, design criteria, etc. that are warranted since the revision of the Federal AFO/CAFO regulations. In particular, permit exemption criteria defined in the revised federal regulation for AFOs/CAFOs will be updated.
PAFS-20, Structures Group	
*X559.2	Design Requirements and Engineering Properties for Mechanically-Laminated Wood (Mechlam) Assemblies
	Update references and changes throughout standard as necessary. Coordinate with similar standards in other countries. The purpose of this Engineering Practice is to establish guidelines for designing and calculating allowable bending properties of mechanically laminated wood assemblies used as structural members.
PAFS-20/4, Bulk Solids Handling and Storage	
X636	Bulk Material Physical Properties
	To consolidate physical properties of bulk materials required for design of storage and handling facilities for bulk materials in one location.
X652	Wind Loads on Circular Grain Bins
	Wind loading guidance is needed for structural design of grain bins. Standard will provide wind loads on roof and walls of individual circular grain bins and wind loads on groups of grain bins.
PAFS-30, Plant Systems Group	
X653	Recommended Practice for Heating, Ventilation and Air Conditioning (HVAC) Products Used in Indoor Plant Growth and Development
	Provide recommendation and guidelines to calculate energy and performance characteristics for HVAC products used for indoor plant growth facilities and plant development in a controlled environment.

PAFS-40, Facilities and Systems Group	
*X270.6	Design of Ventilation Systems for Poultry and Livestock Shelters
	(1) Update heat and moisture production numbers and references in (current) Table 1; (2) Update the descriptions of ventilation system types for modern livestock production systems; (3) Demonstrate how Table 1 and specie-specific environmental needs influence the design for ventilation system types.
PAFS-403, Milk and Dairy Facilities	
*X444	Terminology and Recommendations for Freestall Dairy Housing, Freestall, Feed Bunks, and Feeding Fences
	Review recent North American and Western European research and recommendations for dairy cattle freestalls (cubicles) and feeding areas and modify standard as appropriate.
PRS-34/17, Food Safety Management	
X22000	Food safety management systems - Requirements for any organization in the food chain
	Adoption with deviation of the informative annexes of ISO 22000 for better clarification for use.
PRS-701, Physiochemical Properties of Biological Products	
*X241.5	Density, Specific Gravity, and Mass-Moisture Relationships of Grain for Storage
	Data has become dated. Data presented, including figures and tables, needs to be updated.
*X243.5	Thermal Properties of Grain and Grain Products
	Data has become dated. Data presented, including figures and tables, needs to be updated
*X245.7	Moisture Relationship of Plant Based Agricultural Products
	Editorial and formatting of equations for better presentation and accuracy is needed. Include determining the deviation of suggested values from contemporary information in literature or needed by the industry and suggesting recommended actions.
X631	Machine Vision Method of Forage or Biomass Particle Size and Size Distribution
	Establish alternative methods to determine size, projected area, and particle size distribution of any particulate material.
PRS-702, Crop & Feed Processing & Storage	
X657	Measurement and Rating of Hermetic Storage Bags – Specifications of Gas Barrier Liners
	The focus of this standard development project is on specifying the key engineering properties that will be the basis for measuring and rating hermeticity and strength of gas barrier liners.
*X248.4	Construction and Rating of Equipment for Drying Farm Crops
	Update based on comments from maintenance reviews, also align with relevant ISO standards
*X271.3	Psychrometric Data
	Evaluate and improve the explanation of the charts and equations and add better alternative charts and equations where appropriate.

*Projects to revise existing ASABE standard documents.