

CURRENT ASABE STANDARDS PROJECTS

March 26, 2020

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:

<https://www.asabe.org/Publications-Standards/Standards-Development/National-Standards/Standards-Updates>

ES-238, Solid Biofuels and US TAG for ISO/TC 238	
X564	Methods for Determining Properties of Plant-Derived (Biomass) Combustible Solid Fuels
	The proposed standard will provide approved developed standard methods that are applicable to properties of solid fuels from biomass of plant origin used for direct combustion in stationary heat and power systems. Combustion (direct combustion) as defined by ANSI/ASABE S593 Standard (ASABE Standard 2006) is the thermal conversion of a carbon rich feedstock with oxidant (excess air) to produce primarily heat energy, carbon dioxide, water and ash. They range from simple home heating stoves and furnaces to medium and large industrial boilers for either heat only, or combined heat and power (CHP) generation. Solid fuels from biomass are usually upgraded via physical transformation into particulates (powders) or more energy densified form (pellets and briquettes) to facilitate fuel handling, feeding and efficient combustion. Biomass of plant origin considered in this proposal includes all primary, secondary and tertiary biomass of plant origin that was produced directly by photosynthesis (see definitions in ANSI/ASABE S593 Standard, ASABE Standard 2006). This excludes solid fuels from secondary and tertiary biomass that are not of plant origin such as cheese whey, livestock manure, animal fat/greases and municipal solid wastes (MSW). Standard terminologies and classification of solid fuels from biomass of plant origin; Physical property determination for solid fuels from biomass of plant origin; Chemical property determination for solid fuels from biomass of plant origin; Fuel quality, performance and reporting.
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.
ESH-03/2, Internal Standard Development	
*X575.3	Farm and Agricultural Injury Classification (FAIC) Code
	All of the draft files were not included in revision two ballots. Revision will add 3 annexes and one figure.
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-23/4/2, Agricultural Loaders	
*X583.2	Safety for Agricultural Front End Loaders
	Update references, many of them to undated references to point the user to the latest version; update the scope to match the updated reference terms; add a definition for quick attach loader (not to be confused with quick attach attachment); make the usage of “attachment” and “allowable attachment” consistent throughout the document.
MS-23/4/5, Tractor Implement Interface/PTO	
*X207.14	Operating Requirements for Tractors and Power Take-Off Driven Implements
	Update standard references. Correct, clarify and refine wording, acronyms, and abbreviations. Section 5 is intended to be considerations to prevent items 5.1-5.4 from happening, but the wording says to “conform to”. It is also a terribly long and confusing sentence, which is probably how the wording was missed. Normative reference to the OECD test codes should be moved to an informative section, as it is not used elsewhere in the document. Suggest changing many of the normative references to undated references to point the user to the most recent version.
*X331.7	Implement Power Take-Off Drive Shaft Specifications
	Update standard references. Correct, clarify and refine wording, acronyms, and abbreviations.
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-23/6/1, Liquid Materials Application	
*X572.3	Spray Nozzle Classification by Droplet Spectra
	Aligning droplet size table with ISO 25358, Crop Protection Equipment – Droplet size spectra from atomizers – Measurement and Classification.
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) which is the SAPRA for Texas has employed a number of Agricultural Engineering Graduates (Aggies) as permit engineers. However, most other states do not have Agricultural 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 the permit allowable emission rates between states is significant primarily due to engineering. The purpose of this standard is to 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.

MS-49, Crop Production Systems, Machinery, and Logistics	
*X497.8	Agricultural Machinery Management Data
	Update coefficients for some machines in Tables 1-3.
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-241, Sprinkler Irrigation	
*X436.2	Center Pivot and Lateral Move Irrigation Distribution Uniformity Test Procedure
	Update the standard to incorporate research findings regarding catch can sizing, dimensions and spacing where appropriate, add language to clarify and incorporate use of multiple rows of catch cans which has been a criticism of the standard and modify the standard to be more consistent with the International Standard where deemed appropriate, however harmonization with ISO standard is beyond the scope of this standard revision.
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-246, Turf & Landscape Irrigation	
X627	Weather-based Landscape Irrigation Control Systems
	To standardize a test that can be used to evaluate the performance characteristics of irrigation control devices that incorporate the use of sensors or programming technology that responds to real time environmental conditions to modify irrigation schedules as plant water requirements change based on factors that influence plant growth.

X633	Testing Protocol for Landscape Irrigation Soil Moisture-Based Control Technologies
	To standardize a test that can be used to evaluate the performance characteristics of soil moisture sensors in response to soil moisture changes. The standard will also provide a method to determine if the sensor bypasses scheduled irrigation at preset soil moisture values, if so equipped.
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	
*X412.2	Ladders, Cages, Walkways, and Stairs
	The current standard has not kept up with changes in the ANSI ladder standard, OSHA regulations and modern ladder requirements. Revise sections of the document that requires updates for other current standards. Revise drawings and illustrations.
*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-403, Milk and Dairy Facilities	
*X444.2	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.
X606	Properties and Relationships for Distillers Dried Grains with Solubles (DDGS)
	Physical and chemical property data are needed for the design of biorefinery facilities, structures, and unit processing operations. Additionally, these properties are necessary for end-users, such as livestock producers, and for developing value-added applications for the coproduct materials.
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	
*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.