

CURRENT ASABE STANDARDS PROJECTS

April 11, 2019

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	
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	
*X619.1	X619.1, Safety for Tractor-Mounted, Boom-Type Post Hole Diggers
	Revise and update Normative references and clarify the drive shaft and connecting points guarding requirements.
MS-03/2, Farm Materials Handling and Transport	
*X317.1	Improving Safety on Enclosed Mobile Tanks for Transporting and Spreading Agricultural Liquids and Slurry
	Updated Normative references.

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	
X8759-1:2018,	Agricultural tractors — Front-mounted equipment — Part 1: Power take-off: Safety requirements and clearance zone around PTO
	Adopt updated version of the ISO standard. The earlier version of the standard, ISO 8759-1:1998, was replaced with 2018 versions of ISO 8759-1 and first editions of ISO 8759-3 and ISO 8759-4. Specifications for PTO Type 4 have been added. Dimensions for the tractor master shield and clearance zone have been updated. Dimensions of the protective device/tractor master shield and clearance have been presented in one figure. General specifications of the PTO and location requirements are now located in ISO 8759-3:2018. Specifications for three-point linkage is located in ISO 8759-4:2018. ISO 8759-1 adoption will maintain the deviation on using the PTO protective device (Master Shield) as a step.
X8759-3:2018	Agricultural tractors — Front-mounted equipment — Part 3: Power take-off: General specifications and location
	Adopt updated version of the ISO standard. The earlier version of the standard, ISO 8759-1:1998, was replaced with 2018 versions of ISO 8759-1 and first editions of ISO 8759-3 and ISO 8759-4. ISO 8759-3:2018 contains the general specifications of the PTO and location requirements that were in ISO 8759-1:1998.
X8759-4:2018,	Agricultural tractors — Front-mounted equipment — Part 4: Three-point linkage
	Adopt updated version of the ISO standard. The earlier version of the standard, ISO 8759-1:1998, was replaced with 2018 versions of ISO 8759-1 and first editions of ISO 8759-3 and ISO 8759-4. ISO 8759-4:2018 contains the specifications for three-point linkage that were in ISO 8759-1:1998.
X20383	Tractors and machinery for agriculture and forestry -- Speed Identification Sign (SIS)
	Identically adopt ISO 20383:2017 and withdraw ANSI/ASABE S584.3.
MS-23/4/1, Agricultural Equipment Braking	
*X365.9WD	Withdrawal of ANSI/ASAE S365.9, Braking System Test Procedures and Braking Performance Criteria for Agricultural Field Equipment
	Standard will be replaced with the proposed S648 standard series.
X648-1	Agricultural Field Equipment Braking Part 1: General Requirements
	Define terms and establish common requirements, minimum performance criteria and performance test procedures that are common to agricultural field equipment.
X648-2	Agricultural Field Equipment Braking Part 2: Requirements for Agricultural Tractors
	Establish specific requirements, minimum performance criteria and performance test procedures that are common to agricultural tractors when used in conjunction with proposed ANSI/ASABE S648.1.
X648-3	Agricultural Field Equipment Braking Part 3: Requirements for Self-Propelled and Special Self-Propelled Equipment

	Establish specific requirements, minimum performance criteria and performance test procedures that are common to self-propelled and special self-propelled agricultural equipment when used in conjunction with proposed ANSI/ASABE S648.1.
X648-4	Agricultural Field Equipment Braking Part 4: Requirements for Towed Equipment
	Define the minimum stopping requirements related to braking of towed agricultural field equipment hereafter referred to as towed vehicles when used in conjunction with proposed ANSI/ASABE S648-1.
X648-5	Agricultural Field Equipment Braking Part 5: Requirements for the Interface between Towing Equipment and Towed Equipment
	When used in conjunction with proposed ANSI/ASABE S648-1, defines the requirements for interfacing service and parking brakes on towing equipment with service and parking brakes on towed equipment.
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-23/4/3, Lighting and Marking	
*X279.18	Lighting and Marking of Agricultural Equipment on Highways
	This standard is being revised to provide an Illustrated Guide to help clarify the requirements of lights and reflectors and their locations required by this standard.
MS-23/4/5, Tractor Implement Interface/PTO	
*X431.4	2000-RPM Front and Mid PTO for Lawn and Garden Ride-on Tractors
	Expand the scope to include compact utility tractors. References will be updated and definitions added.
X638	Pintle Hitch for Agricultural Field Equipment
	Establish the requirements for pintle hitch components used in the transport of implements and bulk carrier equipment.
MS-23/6, Application Systems	
*X327.5	Terminology & Definitions for Application of Crop or Forestry Production & Protection Agents
	Revise droplet classifications.
MS-23/6/5, Anhydrous Ammonia 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 Devices
	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 Sensors
	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 Systems	
*X292.6	Uniform Terminology for Rural Waste Management
	Update of terminology.
*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-40/3, 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.