

Rule Change Proposal - 11

Purpose: To add information to Volumes 1 and 2 pertaining to the acceptable condition of a sample to be tested using the Uniform Blowing Procedure.

Present rule and proposed rule:

VOLUME 1

3.6 Uniform blowing procedure

- d. **Procedures:** For samples with one kind of seed, the size of the samples to be blown shall be the same as that for a purity test except for blue grama and side-oats grama, which shall be divided into four approximately equal parts prior to blowing. Before blowing, extraneous material (e.g., large stems and leaf fragments, soil, stones, other non-plant material, and seeds of other species that might entangle the kind being tested) that will interfere with the blowing process should be removed (refer to Sec. 6.2 of AOSA Rules Volume 2). All seed kinds are to be blown for 3 minutes. After completing the blowing procedure, remove all weed and crop seeds from the light portion and add these to the weed or crop separation, as appropriate. The remainder of the light portion shall be considered inert matter. Remove all weed and crop seeds and other inert matter (stems, leaves, dirt) from the heavy portion and add these to the weed, crop or inert matter separations, as appropriate. The remainder of the heavy portion shall be considered pure seed. Add any extraneous inert material removed prior to blowing to the inert matter portion. If seeds of other crops and weeds were removed prior to blowing, these shall be added to the appropriate category.

When kinds listed in this section appear in mixtures, they shall be separated from other kinds by one of the two methods described in Sec. 6.9 of AOSA Rules Volume 2.

- (6) **Blue grama:** The equivalent air velocity value (m/s) for blue grama shall be used. To determine this value, first determine the optimum calibration point for Kentucky bluegrass using a standard calibration sample. The blower gate opening value for the optimum calibration point shall be multiplied by a factor of 1.157 to obtain the adjusted gate opening value for blue grama. The factor of 1.157 is restricted to the General-type seed blower, see sections 3.3 and 7.2 in AOSA Rules Volume 2. The blower gate shall be opened to the adjusted value and the equivalent air velocity value (m/s) shall be determined for blue grama. Before blowing, remove any extraneous material that will interfere with the blowing process ~~should be removed~~. The sample to be blown should be divided into four (4) approximately equal parts and each part blown separately.

Refer to AOSA Rules Volume 2 for required additional procedures to prevent bunching of the seeds during the blowing procedure.

- (7) **Side-oats grama:** The equivalent air velocity value (m/s) for side-oats grama shall be used. To determine this value, first determine the optimum calibration point for Kentucky bluegrass using a standard calibration sample. The blower gate opening value for the optimum calibration point shall be multiplied by a factor of 1.480 to obtain the adjusted gate opening value for side-oats grama. The factor of 1.480 is restricted to the General-type seed blower, see sections 3.3 and 7.2 in AOSA Rules Volume 2. The blower gate shall be opened to the adjusted value and the equivalent air velocity value (m/s) shall be determined for side-oats grama. Before blowing, remove any extraneous material that will interfere with the blowing process. ~~shall be removed.~~ The sample to be blown should be divided into four (4) approximately equal parts and each part blown separately.

Refer to AOSA Rules Volume 2 for required additional procedures to prevent bunching of the seeds during the blowing procedure.

VOLUME 2 (Formerly AOSA Handbook 24: The Uniform Blowing Procedure)

PREFACE

This handbook is part of the AOSA Rules for Testing Seeds as set forth in section 3.6a of the Rules.

Important note about the condition of samples to be tested:

One of the basic principles for separation of pure seed and inert matter using a blowing procedure is that the particles to be separated flow freely within the air column of the blower. The Uniform Blowing Procedure has been designed for samples pulled at the end of the conditioning and cleaning process. Such samples represent a cleaned or finished product that is ready for testing, labeling and marketing. In such samples, most particles are able to flow freely without interference (refer to sections 5.4, 5.5, 6.2, 6.6, and 6.7).

The Uniform Blowing Procedure should not be used on samples drawn from lots that are not properly conditioned and cleaned because unusually large or heavy particles of inert matter can interfere with the blowing process. If such materials are present in the sample, these should be removed manually using screens or other methods prior to the blowing procedure. In the cases of blue grama and side-oats grama, removal of extraneous material prior to blowing is obligatory.

Supporting Evidence:

For Volume 1, the proposal is to move the instruction to remove extraneous material before blowing from the sections pertaining only to blue grama and side-oats grama to a

general location so that it applies to all species requiring the Uniform Blowing Procedure.

In Volume 2, the proposed wording is simply a clarification of sections 5.4, 5.5, 6.2, 6.6, and 6.7 to make sure that laboratories do pay attention to this important sample condition. Although sections 5.4 and 6.6 pertain to blue grama, and sections 5.5 and 6.7 apply to side-oats grama, removal of large extraneous material that might impede the free flow of seed in the blower air column should be considered for all species requiring the Uniform Blowing Procedure; therefore, the proposed statement provides further reinforcement of the information currently found in sec. 6.2 that applies to all species concerned.

Anytime an analyst uses the Uniform Blowing Procedure, if there is the possibility that the sample will not blow properly because of interference from extraneous material, such as large stem fragments, soil peds, etc., the analyst should consider removing these things before blowing. For most species, under the UBP the term 'should remove' applies, leaving it up to the blower operator to make the decision. For the two species of grama the statements are stronger because these species usually contain larger amounts of extraneous material [these statements are currently in the Rules Vol. 1 (3.6 d (6) & (7) & Vol. 2 (sec. 5.4 & 5.5)]. The Rules Vol. 2 (formerly HB24) already suggests removing things that might interfere with the blowing process (see sec. 6.2, Vol. 2). This proposal does not change how samples are handled, but is intended to harmonize the information regarding appropriate sample condition in Vol. 1 with the information currently in Vol. 2.

Harmonization and impact statement:

Eliminating physical impediments to the free movement and separation of florets contributes to the optimization of separation and consistency of results is mentioned in the Federal Seed Act Regulations (sec. 201.51a) for blue grama and side-oats grama. Although specific instructions to remove extraneous material before blowing are not stated in the CFIA Methods and Procedures, AOSA Handbook 24 is cited as the reference for complete instructions. The ISTA Rules for Seed Testing do not discuss removal of material that might interfere with blowing of samples.

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Date Submitted: October 15, 2009, Updated January 20, 2010