2018 Rule Proposal 1

**Purpose:** to emphasize the need for laboratories to be properly equipped to conduct seed purity, germination, tetrazolium, and other seed quality testing, and to have an appropriate seed herbarium for morphological identification of seeds.

**Current and proposed rule:**

**INTRODUCTION**

Seed testing has been developed to aid agriculture in avoiding some of the hazards of crop production by furnishing needed information about the quality of seeds that are to be used for planting purposes. This information may be desired for the seed producer or seed dealer in connection with seed conditioning or merchandising; as a guide to the person who will sell, buy, or plant the seed; or for seed control purposes. In all these cases, the ultimate purpose of making the test is to determine the value of the seed for planting.

There has been developed, especially in connection with the enforcement of labeling laws for seed lots, a standard analysis that furnishes information as to the composition of the representative seed sample, and of the ability of the seed to produce plants, and determination of other seed quality traits.

It is desirable to have definitions and fundamental procedures agreed upon that are based on a thorough knowledge of the principles involved. The following rules attempt to summarize and make useful the accumulated experience of seed analysts, and must be followed as a matter of routine to promote uniformity in testing within and among laboratories. Laboratories must be properly equipped to test species within their declared scope of work. Laboratories conducting seed quality testing in accordance with the AOSA Rules for Testing Seeds (Rules) must possess the proper supplies and equipment to carry out the testing protocols as described in these Rules, and equipment must be routinely maintained and calibrated to ensure proper function. Laboratories must also have access to an adequate seed reference collection (herbarium) and scientific literature with which to make seed identifications. When a laboratory does not have a specific piece of equipment capable of meeting the requirement(s) specified in a test protocol, as described in the Rules, the laboratory shall not conduct that test. Not possessing the appropriate equipment or supplies to conduct a particular test protocol is not an acceptable deviation.

When individual samples appear to require special treatment resulting in deviations from the Rules, the following statement must be made in the remarks section of the report of analysis: “(insert name of test) test was not conducted in accordance with the AOSA Rules for Testing Seeds.” This statement must then be followed by a citation of the AOSA Rule and a description/explanation of the deviation. The allowance for deviation should not be construed as an authorization to indiscriminately conduct and report testing not in accordance with the Rules.
This four-volume document constitutes the official AOSA statement regarding seed testing procedures and is referred to as the AOSA Rules for Testing Seeds or the “Rules.” The four volumes are as follows:

AOSA Rules for Testing Seeds Volume 1. Principles and Procedures
AOSA Rules for Testing Seeds Volume 3. Uniform Classification of Weed and Crop Seeds

Changes or additions to any of these documents cannot be considered official until proposed to and accepted by the AOSA and SCST memberships in the general business meeting at an annual convention of the associations. Additional directions for updating Volume 3, Classification of Weed and Crop Seeds, are found on page viii of that volume.

Harmonization Statement:
This proposal does not change any existing rules, and therefore does not impact harmonization. The proposal merely revises text of the Introduction, emphasizing two essential laboratory requirements for properly carrying out seed quality tests: availability of appropriate supplies and equipment, and access to an adequate seed herbarium.

Supporting Evidence:
Every seed quality test is based on procedures developed and performed according to scientific research involving specific methods and equipment. Therefore, the procedures and equipment described in each test must be followed as a matter of routine to ensure test validity and promote uniformity within and among laboratories, thus ensuring test results are comparable and repeatable.

Missing equipment can affect the results of any seed quality test. For example, in the absence of low temperature incubators necessary for pre-chilling treatments, dormancy of seeds would not be broken, which would affect the germination test results. If a microscope is not available in a laboratory, it would affect the accuracy of identification of small seeds, and the accurate evaluation of small seeded crops (such as bentgrass) in the tetrazolium test. Similarly, if a laboratory does not have a seed reference herbarium or access to such a collection through a university, museum or government facility, or access to appropriate scientific literature (physical or digital), that could affect the precision of identification of some seeds.

Often, decisions based on sound justification must be made by government agencies or private companies regarding expenditures on new equipment, maintenance and calibration of equipment, supplies to conduct laboratory testing, collection, storage and curation of seed herbarium specimens, and purchases of reference materials (books and subscriptions to journals and web-based references). The proposed wording change to the introduction of the Rules would provide the necessary justification.
Submitted by:
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