

RECOMMENDED CHANGES IN THE 1965 REVISED RULES OF THE
ASSOCIATION OF OFFICIAL SEED ANALYSTS

Vera L. Colbry, Chairman Rules Committee

The Rules Committee, Association of Official Seed Analysts, recommends effective July 1, 1966, certain changes in the 1965 rules. These changes must be considered by the Association at the forthcoming June meeting. The proposed changes and explanations are as follows:

1. Section 2.5 a, third paragraph, page 21, reads "Insofar as laws, and rules and regulations permit, classification as to weed or crop seed shall be according to the 1964 revised edition of the handbook 'Uniform Classification of Weed and Crop Seeds'."
The Rules Committee recommends the classification of Poa glaucantha as listed in the handbook be changed from category (3) to (1).

As a result of this change glaucantha bluegrass shall be regarded as a crop seed in all samples when occurring in any amounts. It is regarded as a crop seed in the rules and regulations under the Federal Seed Act. It has been found on the market either as the principal component of a sample or as a component of Canada bluegrass samples. The Association of Seed Control Officials of the Northeastern States requested this change.

2. Section 2.11 Special purity procedures or alternate methods, page 24.
 - (a) When testing samples designated as Kentucky bluegrass we recommend that all seeds of Poa pratensis and its varieties, including Merion, which are removed by the uniform blowing method remain in the inert matter.

This procedure was requested because lightweight florets of Merion Kentucky bluegrass are found in the inert portion of certain samples of Kentucky bluegrass. Dr. L. E. Everson reported to the Rules Committee that he supports the change for the following reasons:

- (1) All samples of this type tested and recorded in their laboratory contain less than 1 percent of pure Merion Kentucky bluegrass florets in the inert fraction,
- (2) careful examination of the light portion under the binocular for Merion Kentucky bluegrass florets requires almost as much time as the purity test, and

- (3) such a procedure contributes to the variation between tests because all purity analysts do not apply the same basis of classification. The Association of Seed Control Officials of the Northeastern States requested this change.
- (b) Mrs. Bette Nelson, chairman of the Subcommittee on Uniform Blowing Procedure for Merion Kentucky bluegrass, and Dr. Ben Clark, chairman of the Research Committee, recently notified us they may have data by June to recommend that a uniform blowing procedure be adopted for testing Merion Kentucky bluegrass. We did not have time prior to the required publication date to contact the members of the Rules Committee concerning this matter. If a uniform blowing procedure is proposed, Mrs. Nelson recommends that the General blower be adjusted to test Merion Kentucky bluegrass with the gate opening set one turn below the calibration point specified for Kentucky bluegrass in the handbook "Instruction for the Uniform Blowing of Kentucky Bluegrass (*Poa pratensis*) seed." Paragraph a in Section 2.11 shall be re-written to take care of this.

If this method is adopted, the Rules Committee should probably delete recommendation (a) above, concerning the disposition of Merion Kentucky bluegrass florets found in the inert portion of samples designated as Kentucky bluegrass. Presumably, if Merion florets are found in samples of Kentucky bluegrass, and if a standard blowing procedure is authorized for Merion Kentucky bluegrass, such samples could be re-blown for purposes of removing the Merion Kentucky bluegrass florets.

- (c) Mrs. Patricia Morgan, chairman of the Subcommittee on Uniform Blowing Procedure for Pensacola Bahiagrass, recommends that a standardized blowing method be adopted as the only method for the purity analysis of Pensacola Bahiagrass. Her proposal arrived too late for consideration by the Rules Committee members. Detailed instructions for the Pensacola Bahiagrass blowing method have been approved by Dr. L. E. Everson and Dr. Ben E. Clark. Calibration samples can be obtained from the Alabama State seed laboratory. Dr. Clark suggested the following re-wording of Section 2.11, page 24 of the 1965 edition of the rules would probably effect the change:
 "d. Uniform Blowing Method for Pensacola Bahiagrass (*Paspalum notatum* var. *saurae*). The Uniform Blowing Method shall be used for the separation of pure seed and inert matter in seeds of Pensacola Bahiagrass. Specific instructions

for the application of the Uniform Blowing Procedure to Pensacola Bahiagrass and stained samples for blower calibration may be obtained through the Association of Official Seed Analysts."

3. Section 4.9 c Temperature, page 31. Except for kinds of tree and shrub seeds, we recommend (1) effective July 1, 1965, where 15-25° C. is prescribed in the rules as an alternate temperature that it be considered the recommended temperature alternation for that kind of seed, and (2) effective at the time of the next general rules revision, provided the Research Committee supplies enough data, 15-25° C. will be the only temperature alternation specified for the kinds for which it is now listed as an alternate. These two recommendations are an effort to bring about more uniformity in the testing of the kinds of seeds for which 15-20°C. is an alternate. Dr. Ben Clark, chairman of the Research Committee, supports these recommendations. Kinds of seed for which 15-20° C. is an alternate temperature are: Agropyron cristatum, A. desertorum, A. elongatum, A. intermedium, A. trichophorum, Bromus arvensis, Dactylis glomerata, Festuca arundinacea, F. elatior, F. ovina, F. rubra, Liliun multiflorum, L. perenne, Phleum pratense, Poa pratensis, and Apium graveolens.

4. Appendix, Seedling descriptions, ? Compositae, Sunflower family, a. Lactuca sativa, lettuce, pages 100-101. The 1965 changes pertaining to lettuce seedling evaluation were not clearly incorporated into the rules. The intent of the change was to require that all seedlings should be classified as abnormal if the cotyledons exhibit any degree of necrosis caused by what is considered to be a physiological breakdown of the cells on or adjacent to the midrib and lateral veins. The interpretation of necrosis due to other causes, such as fungi, bacteria, insect injury, and pressure of seed coat veins was to remain the same as in the 1960 edition of the rules, i.e., such seedlings would still be classified as normal or abnormal depending upon whether less than one-half, or one-half or more of the total cotyledon area is affected.

The revised rules do not specifically state that analysts must distinguish between physiological necrosis and other types of necrosis or injury. The classification of seedlings with other types of necrosis was omitted. The reference to figures 27 through 29 in U. S. Department of Agriculture Handbook No. 30 should be omitted because these illustrations of normal and abnormal seedlings no longer apply.

The Rules Committee recommends the following revised write-up of the lettuce seedling descriptions. Re-written portions are underlined.

2. Compositae, Sunflower family.

a. Lactuca sativa, lettuce.

Explanation of terms, and procedures:

"Normal length" is that length attained by a vigorous sample of the same kind and variety when grown under the exact test conditions as the sample in question.

One type of necrosis on lettuce cotyledons appears to be a physiological breakdown of the plant tissues, the cause of which has not been determined. It is manifested by softened, grayish, reddish, or blackish areas on the cotyledons, first appearing on or adjacent to the midrib and lateral veins, and should not be confused with the natural pigmentation of the different lettuce varieties. It is a physiological necrosis and must be distinguished from necrosis or injury due to other causes, such as fungi, bacteria, insect injury, mechanical damage, or pressure of seed coat veins. Seedlings with physiological necrosis on the cotyledons indicate seeds which will decline rapidly in viability. Seedlings with extensive physiological necrosis on the cotyledons are slower in growth and shorter than those without such affected areas.

The following interpretations are to be made only at the end of the test period:

Normal seedling

Root	Long, vigorous, preferably over half "normal length."
Hypocotyl	Long, vigorous, preferably over half "normal length," with no cracks or lesions extending into the central conducting tissue.
Cotyledons	(a) Two.
	(b) Free of <u>physiological necrosis</u> .
	(c) <u>If necrosis or injury other than physiological necrosis is present, classify as normal if the necrosis or injury covers less than half the total cotyledon area.</u>

- Epicotyl Present and entirely free from decay.
- Abnormal seedling
- Root (a) None.
- (b) Clearly shortened to less than half "normal length," with tips blunt, swollen, or discolored.
- Hypocotyl Clearly shortened to less than half "normal length," or severely twisted or grainy or with cracks or lesions extending into the central conducting tissue.
- Cotyledons (a) Only one.
- (b) With any degree of physiological necrosis.
- (c) If necrosis or injury other than physiological necrosis is present, classify as abnormal if the necrosis or injury covers one-half or more of the total cotyledon area.
- (d) Swollen cotyledons (usually grayish or darkened) with extremely short or vestigial hypocotyl and root; seed coat usually adhering to cotyledons.
- Epicotyl Missing, or with any degree of decay.