

## REPORT OF THE COMMITTEE ON RULES AND REGULATIONS

The committee on rules and regulations has given consideration, by correspondence, to several proposed rule changes. A list of the changes being proposed to the Association are being indicated. (Reference to page numbers are those in Proceedings of the Association of Official Seed Analysts 1943-1944, pages 17-42.)

1. On page 17 beginning with paragraph "d" under the heading "General Procedure" and ending with paragraph "d" under the heading "Size of Samples" on page 18, change to read as follows:

(d) Composite samples shall be obtained to determine the quality of a lot of seed (i.e. percentages of pure seed, other crop seed, weed seed, inert matter, and germination). Individual-bag samples may be obtained to determine if the lot of seed is uniform.

- (1) To determine if there is an obvious lack of uniformity of seed from which a composite sample is being obtained each portion shall be examined (see paragraph (2) below) and the portions shall then be combined to form a composite sample or samples.
- (2) If the lot is found not to be uniform when obtaining a composite sample to determine its quality then additional individual-bag samples shall be taken for the purpose of testing for uniformity. Such individual-bag samples may also be taken for the purpose of testing for uniformity even though a composite sample has not previously been obtained. The identity of each individual-bag sample must be maintained.

Bulk: Bulk seeds shall be sampled by inserting a long probe or thrusting the hand into the bulk, as circumstances require, in at least seven uniformly distributed parts of the quantity being sampled.

Bags: (a) To obtain a composite sample:

- (1) In quantities of five bags or less, each bag shall be sampled.
- (2) In quantities of more than five bags, at least every fifth but not less than five bags, shall be sampled.

(b) To obtain individual-bag samples:

In obtaining samples to test for uniformity at least four bags shall be sampled if there are less than 100 bags in the lot; seven bags if there are from 100 to 400 bags in the lot and 10 bags if there are over 400 bags in the lot.

Size of sample:

(a) For composite sample to test for quality.

The following are minimum weights for samples of seed to be submitted for analysis, test or examination:

- (1) Two ounces (approximately 55 grams) of grass seed not otherwise mentioned, white or alsike clover or seeds not larger than these.
- (2) Five ounces (approximately 150 grams) of red or crimson clover, alfalfa, lespedezas, ryegrasses, bromegrasses, millet, flax, rape, or seeds of similar size.
- (3) One pound for Sudan grass, sorghum, proso, hemp seed or seeds of similar size.
- (4) Two pounds (approximately 1,000 grams) of cereals, vetches, or seeds of similar or larger size.

- (b) For individual-bag samples to test for uniformity:

The size of any individual-bag sample to determine uniformity in a lot of seed shall be not less than the quantities set out in the column "Minimum Weight for Noxious Weed Seed Examination" for the respective kinds of seed listed in table 1.

2. On page 24, revise the wording under the heading "Inert Matter" to read as follows:

Inert matter shall include seedlike structures from both crop and weed plants and other matter not seeds as follows:

- (a) Seedlike structures from crop plants. - Pieces of seeds one-half the original size or less, whether broken, insect-damaged, or diseased, seeds of legumes and crucifers with the seed coats entirely removed, empty glumes and sterile florets of grasses, attached sterile floret of grasses (which must be removed from the fertile florets except in bluegrasses, Rhodes grass, bluestems and grammas).
- (b) Seedlike structures from weed plants. - All badly injured, undeveloped or empty structures which resemble seeds but which by visual examination including dissection or reflected light can be easily demonstrated as having no embryo or having only a rudimentary embryo or having an embryo that has been destroyed by a disease organism. Included as inert matter are structures from weed plants as follows:
- (1) Seeds of grasses with over half the embryo removed;
  - (2) "Seeds" of dodder which are usually fragile, ashen gray to brown in color and somewhat enlarged;
  - (3) Ragweed seed with both involucre and pericarp absent;
  - (4) Shriveled, blackened seeds of buckhorn;
  - (5) Empty seeds or fruits such as occur in the sedge, buckwheat, morning-glory, and sunflower families;
  - (6) Empty glumes and sterile florets of grasses;
  - (7) Seeds of legumes and species of Brassica with the seed coats entirely removed;
  - (8) Bulbets of wild onion and garlic with the basal or stem end portion removed; and
  - (9) Seeds of Juncus spp. when not in excess of 0.01 percent.
- (c) Other matter. - Soil, sand, stones, chaff, stems, leaves, nematode galls, fungus bodies (such as ergot and other sclerotia and smut balls.)

3. On page 24 following the last paragraph under the heading "Separation" add the following paragraph:

"With reference to classification of crop seeds or fragments thereof, applicable methods of determination may include visual examination, use of reflected light or specific gravity; the above has reference particularly to insect damaged, broken or diseased seeds, or sterile grass glumes."

4. On page 25, change the paragraph "Fluorescence Test on Ryegrass" to read as follows:

Fluorescence Test on Ryegrass! A fluorescence test shall be made on all samples of ryegrass for which the proportion of perennial ryegrass (Lolium perenne) and Italian ryegrass (L. multiflorum) are to be determined. The seedlings shall be grown on filter

paper and the number of fluorescent seedlings determined under the ultra-violet light at the end of the germination period. The percentages of pure seed, fluorescence, non-fluorescence and dead seed shall be determined and the results shall be subjected to the following formula to calculate the proportion of the two kinds of ryegrass present in a sample:

$$\frac{\% \text{ fluorescence} - (5 \times \% \text{ non-fluorescence}) \times \% \text{ ryegrass}}{\% \text{ germination}}$$

= % Italian ryegrass and hybrids.

5. The committee recommends that the following kinds of seeds and information relating to methods of testing for purity and germination be added to tables 1 and 2. These shall be treated as (tentative) rules.

Table 1  
WEIGHT OF WORKING SAMPLE

Name of Seed	Minimum weight for purity analysis Grams	Minimum wgt. for noxious-weed seed examination Grams	Approximate number of seeds per gram Number	Approximate number of seeds per ounce Number
<u>Agricultural Seed</u>				
Bluegrass:				
Nevada - <i>Poa nevadensis</i>	1	25	2,304	65,434
Texas - <i>Poa arachnifera</i>	1	25	2,500	71,000
Bluestem:				
Big - <i>Andropogon furcatus</i> <sup>1</sup>	10	50	336	9,542
Little - <i>Andropogon Scoparius</i> <sup>1</sup>	5	50	560	15,904
Sand - <i>Andropogon hallii</i> <sup>1</sup>	10	50	233	6,617
Brome: Mountain - <i>Bromus marginatus</i>	25	150	141	4,004
Buffalo grass - <i>Buchloe dactyloides</i> <sup>2</sup>				
(Burs)	50	300	110	3,124
(Caryopses)	2	50	738	20,959
Clover: Large hop - <i>Trifolium procumbens</i>	1	25	5,434	154,326
Dropseed, sand - <i>Sporobolus cryptandrus</i>	1	25	11,927	338,727
Giant panic grass - <i>Panicum antidotale</i>	2	50	1,448	41,123
Grass, blue - <i>Bouteloua gracilis</i> <sup>1</sup>	2	50	1,977	56,147
Grass, side-oats, <i>Bouteloua curtipendula</i> <sup>3</sup>				
(Other than caryopses)	5	50	422	11,985
(Caryopses)	2	50	1,607	45,639

Table 1 (Continued)

Name of Seed	Minimum weight for purity analysis	Minimum wgt. for noxious-weed seed examination	Approximate number of seeds per gram	Approximate number of seeds per ounce
	Grams	Grams	Number	Number
Harding grass - <i>Phalaris tuberosa</i> var. <i>stenoptera</i>	5	50	750	21,300
Indian grass - <i>Sorghastrum nutans</i> <sup>1</sup>	10	50	364	10,338
Lespedeza, Siberian - <i>Lespedeza hedysaroides</i>	5	50	820	23,288
Lovegrass, weeping - <i>Eragrostis curvula</i>	1	25	3,282	93,208
Ricegrass, Indian - <i>Oryzopsis hymenoides</i>	10	50	308	8,747
Sesbania - <i>Sesbania exaltata</i>	25	150	105	2,982
Smilo - <i>Oryzopsis miliacea</i>	2	50	2,008	57,027
Switch grass - <i>Panicum virgatum</i>	5	50	814	23,117
Vasey grass - <i>Paspalum urvillei</i>	2	50	970	27,548
Wild-rye, Canada - <i>Elymus canadensis</i>	10	50	261	7,412
<u>Vegetable Seed</u>				
Beans: <i>Asparagus sesquipedalis</i> - <i>Vigna</i>	100	500	8	227
Cardoon - <i>Cynara cardunculus</i>	100	500	----	----

1. Pure seed unit consists of naked caryopsis, spikelet, or floret with at least 1 caryopsis.
2. Pure seed unit consists of bur, floret or caryopsis.
3. Pure seed unit consists of spike, spikelet, floret or caryopsis.

Table 2  
METHODS FOR LABORATORY GERMINATION

Name of Seed	Sub- strata	Tem- pera- ture °C.	First Count Days	Final Count Days	Remarks
<u>Agricultural Seed</u>					
Bluegrass:					
Nevada - <i>Poa nevadensis</i>	P	20-30	7	21	Light KNO <sub>3</sub> .
Texas - <i>Poa arachnifera</i>	P	20-30	7	28	Light, KNO <sub>3</sub> ; fresh seed prechill at 5°C. for 2 weeks.
Bluestem:					
Big - <i>Andropogon furcatus</i>	P,TS	20-30	7	28	Light, KNO <sub>3</sub> ; fresh seed prechill at 5°C. for 2 weeks.
Little - <i>Andropogon scoparius</i>	P,TS	20-30	7	28	do.
Sand - <i>Andropogon hallii</i>	P,TS	20-30	7	28	do.
Brome:					
Mountain - <i>Bromus marginatus</i>	P	20-30	6	14	Light.
Buffalo grass - <i>Buchloe dactyloides</i> (burs)	P,TB TS	20-35	7	28	Light, KNO <sub>3</sub> ; fresh seed prechill at 5°C. for 6 weeks and germinate 14 additional days.
(caryopses)	P	20-35	5	14	Light, KNO <sub>3</sub> .
Clover:					
Large hop - <i>Trifolium procumbens</i>	B	20	4	14	X
Dropseed, sand - <i>Sporobolus cryptandrus</i>	P	15-35	5	42	Light, KNO <sub>3</sub> ; dormant seed' prechill at 5°C. for 4 to 8 weeks and germinate for 28 days.
Giant panic grass - <i>panicum antidotale</i> .	P,TS	20-30	7	28	Light.
Gramma:					
Blue - <i>Bouteloua gracilis</i>	P,TB	20-30	7	28	Light; fresh seed KNO <sub>3</sub> .
Side-oats - <i>Bouteloua curtipendula</i>	P	15-30	7	28	Light; KNO <sub>3</sub> .
Guinea grass - <i>Panicum maximum</i>	P	20-30	10	28	
Harding grass - <i>Phalaris tuberosa</i> var. <i>stenoptera</i>	P	10-30	7	28	Light; fresh seed KNO <sub>3</sub> .

Table 2 (Continued)

Name of Seed	Sub- strata	Tem- pera- ture °C.	First Count Days	Final Count Days	Remarks
Indian grass - Sorghas- trum nutans.	P,TS	20-30	7	28	Light, KNO <sub>3</sub> ; fresh seed prechill at 5°C. for 2 weeks.
Lespedeza:					
Siberian - Lespedeza hedysaroides.	B,S	20-35	7	21	X
Lovegrass, weeping- Eragrostis curvula.	P	20-35	5	14	Light; fresh seed KNO <sub>3</sub> .
Ricegrass, Indian - Oryzopsis hymenoides	P	15	7	42	Dormant seed prechill at 3°C. for 4 weeks and ger- minate for 21 additional days.
Sesbania - Sesbania exalatata	B	20-30	5	7	X
Smilo - Oryzopsis miliacea	P	20-30	7	42	Light; fresh seed prechill at 5°C. for 2 weeks.
Switchgrass - Panicum virgatum	P,TS	15-30	7	28	Light, KNO <sub>3</sub> ; fresh seed prechill at 5°C. for 2 weeks.
Vasey grass --Paspalum urvillei	P	20-35	7	21	Light; fresh seed KNO <sub>3</sub> .
Wild-rye, Canada - Elymus canadensis	P	15-30	7	21	Light; dresh seed prechill At 5°C. for 2 weeks.
<u>Vegetable Seed:</u>					
Beans:					
Asparagus - Vigna sesquipedalis	R,S	20-30	5	8	Watch for weevil injury to plumule.
Cardoon - Cynara cardunculus	T	20-30	7	21	

O. L. Justice, Chairman