

**AOSA Rule Changes For 1993
AOSA/SCST Annual Meetings Fort Collins, Colorado
Effective October 1, 1993**

Proposal No. 1.

AOSA Rules For Testing Seeds, page 18, section 4.9c.

4.9 Explanation of Table 3, 4, and 5.

c. *Temperature.* - Single numerals in the Tables indicate constant temperatures. Two numerals separated by a dash indicate an alternation of temperature, the test to be held at the first temperature for approximately 16 hours and at the second temperature for approximately 8 hours per day. If the tests are not subjected to alternating temperatures over weekends and on holidays, they are to be held at the lower temperature during this time. Variation from the temperature specified in the rules should not be more than $\pm 1^{\circ}\text{C}$ due to the apparatus. In the case of species of *Trifolium*, *Medicago* and *Vicia faba*, the temperature should not exceed 20°C and a temperature of 17° to 18°C is more desirable. A sharp alternation of temperature, such as obtained by hand transfer, may be beneficial in breaking dormancy.

Rule proposal No.2.

AOSA Rules For Testing Seeds, pages 15, section 4.6a, a(1) and a(2). Page 16, section 4.7a., b., and Table 2.

4.6 When to retest

a. Retest when the range of 100-seed replicates of a given test exceeds the maximum tolerated range in Table 2 (Column C or D). - To find the maximum tolerated range, compute the average percent of all replicates of a given test (drop a fraction less than 0.5, but increase to the next whole percent a fraction of 0.5 or more). The average is found in either Column A or B of Table 2 and the maximum tolerated range is found opposite in the appropriate Column (C or D). See also section 4.7.b.

4.7 Calculation of percentage germination

a. When a single test is made in accordance with these rules and retesting is not required, the average of the four or two 100-seed replicates shall be reported as the percentage germination or germination and hard seeds.

b. When more than one test is made, the results of such tests or retests, which fall within one tolerance range, or tests by alternate methods, shall be averaged and reported as the percentage germination. When different official methods are employed, and the highest result is not within tolerance of the next lower, the higher percentage shall be reported. When retests are required because of out of tolerance replicates and are satisfactory (section 4.6.a) but out of tolerance with the original test, a third test must be conducted and the average of the tests which are within tolerance reported (if the result of the third test falls between the first two, and is in tolerance with both, report the average of the three tests). When retests are required for other reasons (section 4.6. b,c,d,e) and are satisfactory but out of tolerance with the original test, the higher percentage shall be reported.

Table 2. Maximum tolerated ranges in germination percentage^a

Average percent germination		No. replicates of 100 seeds		Average percent germination		No. replicates of 100 seeds	
A	B	4	2	A	B	4	2
		C	D			C	D
99	2	5	--	75	26	17	14
98	3	6	--	74	27	17	14
97	4	7	6	73	28	17	14
96	5	8	6	72	29	18	14
95	6	9	7	71	30	18	14
94	7	10	8	70	31	18	14
93	8	10	8	69	32	18	14
92	9	11	9	68	33	18	15
91	10	11	9	67	34	18	15
90	11	12	9	66	35	19	15
89	12	12	10	65	36	19	15
88	13	13	10	64	37	19	15
87	14	13	11	63	38	19	15
86	15	14	11	62	39	19	15
85	16	14	11	61	40	19	15
84	17	14	11	60	41	19	15
83	18	15	12	59	42	19	15
82	19	15	12	58	43	19	15
81	20	15	12	57	44	19	15
80	21	16	13	56	45	19	15
79	22	16	13	55	46	20	15
78	23	16	13	54	47	20	16
77	24	17	13	53	48	20	16
76	25	17	13	52	49	20	16
				51	50	20	16

^aAllowance for random sampling variation

Rule proposal No. 3.

AOSA Rules For Testing Seeds, page 4 section 2.5a., b., b.(1)-(4).

2.5 The purity analysis

a. Separation of component parts. - The weight of the working sample shall be determined to the number of decimal places indicated below:

<u>Weight of working sample in grams</u>	<u>Number of decimal places</u>
Less than 1.0000	4
1.000 to 9.999	3
10.00 to 99.99	2
100.0 to 999.9	1
1000 or more	0

The working sample shall then be separated into the following parts: (1) kind or cultivar to be considered pure seed; (2) other crop seed; (3) inert matter; and (4) weed seed. The component parts shall be weighed in grams to the same number of decimal places as the working sample, except as provided for in 2.5 b (2) where it is not necessary to weigh the pure seed component. The percentage of each part shall be determined to two decimal places.

Aids in the classification of crop seed, inert matter, and weed seed may include visual examination, use of transmitted light (diaphanoscope), or specific gravity (seed blowers). Specific instructions for classification as to pure seed, inert matter, and weed seed are given in sections 2.7 to 2.11, inclusive. Insofar as laws, and rules and regulations permit, classification as to weed or crop seed shall be as specified in section 10.

b. Calculation of percent of component parts in the sample.

- (1) Minimum working sample less than 25 grams: Percentages shall be based on the sum of the weights of the component parts and not on the original weight. However, the sum of the weights of the component parts shall be compared with the original weight of the working sample as a check against loss of material or other error.
- (2) Minimum working sample of 25 grams or more: The other crop seed, inert matter, and weed seed shall be weighed and their percentages calculated on the basis of the original weight. The pure seed need not be weighed; its percentage may be determined by subtracting the sum of the percentages of the other three components from 100.
- (3) When rounding off the calculated percentages of each component to the second decimal place, round down if the third decimal place is 4 or less and round up if the third decimal place is 5 or more, except that if any component is determined to be present in any amount calculated to be less than 0.015%, then that component shall be reports as 0.01%. If any component is not found in the purity analysis, then that component shall be reported as 0.00%.
- (4) The total percentage of all components shall be 100.00%. If the total does not equal 100.00% (e.g. 99.99% or 100.01%) then add to or subtract from the component with the largest value (normally the pure seed component).

Rule proposal No.4
AOSA Rules For Testing Seeds, page 53 Table 3.

Table 3. Methods of testing for laboratory germination, AGRICULTURAL SEEDS (continued)

Kind of Seed	Substrata (See Sec. 4.9-a-b)	Tempera- ture°C. (See Sec. 4.9-c)	First count days (See 4.9-d)	Final count days	<u>Additional Directions</u>	
					Specific require- ments and photograph numbers (See Sec. 4.9-b-e-f-j)	Fresh and dormant seed (See Sec. 4.2-e & 4.9-e-f)
<u>Helianthus annuus</u>	T,B	20	4	7		

Rule proposal No.5
AOSA Rules For Testing Seeds, page 6 section 2.8 and section 2.9.

2.8 Other crop seed. - Seeds of plants grown as crops (other than the kind(s) and cultivar(s) included in the pure seed) shall be considered other crop seeds, unless recognized as weed seeds by laws, regulations, or by general usage, refer to section 10. All interpretations and definitions for pure seed in section 2.7 shall also apply in determining whether seeds are other crop or inert matter with the following two exceptions which may be applied as acceptable alternatives:

2.9 Weed seed. - Seeds, florets, bulblets, tubers, or sporocarps of plants recognized as weeds by laws, official regulations, or by general usage shall be considered weed seeds, refer to section 10. For classification of badly damaged weed seeds and immature seedlike structures refer to section 2.10b. Species requiring special consideration are as follows:

Rule proposal No.6.
AOSA Rules For Testing Seeds, page 28 section 10.

10. UNIFORM CLASSIFICATION OF WEED AND CROP SEEDS

For classification of weed and crop seeds, refer to AOSA Handbook No.25: *Uniform Classification of Weed and Crop Seeds, 1993.*

Rule proposal No.7.
AOSA SEEDLING EVALUATION HANDBOOK, page 98 (glossary).

Nucellus. Tissue of the inner part of an ovule in which the embryo sac develops; it may persist as nutritive tissue in some seeds (see perisperm).