AOSA RULE CHANGES FOR 1997
AOSA/SCST ANNUAL MEETING BOISE, IDAHO

Effective October 1, 1998

RULE PROPOSAL NO. 1

Approved by the AOSA Executive Board as a tentative rule.

AOSA RULES FOR TESTING SEEDS, section 3.7, page 18
Seed count test for soybean (*Glycine max*)--The following method shall be employed when using a mechanical seed counter to determine the number of seeds contained in a sample.

a. *Samples*--Samples for testing shall be of at least 500 grams and received in moisture proof containers. Samples shall be retained in moisture proof containers until they are prepared for the seed count test.

b. *Seed counter calibration*--The seed counter shall be calibrated daily prior to use.

(1) Prepare a calibration sample by counting 10 sets of 100 soybean seeds. Visually examine each set to insure that it contains whole seeds. Combine the 10 sets of seeds to make a 1,000 seed calibration sample. The seeds of the calibration sample should be approximately the same size as the seeds in a sample being tested. If the seeds in a sample being tested are noticeably different in size from those in the calibration sample, prepare another calibration sample with seeds of the appropriate size. Periodically re-examine the calibration samples to insure that no seeds have been lost or added.

(2) Carefully pour the 1,000 seed calibration sample into the seed counter. Start the counter and run it until all the seeds have been counted. The seeds should not touch as they run through the counter. Record the number of seeds as displayed on the counter read out. The seed count should not vary more than + or - 2 seeds from 1,000. If the count is not within this tolerance, clean the mirrors, adjust the feed rate and/or reading sensitivity. Rerun the calibration sample until it is within the + or - 2 seed tolerance. If the seed counter continues to fail the calibration procedure and the calibration sample has been checked to ensure that it contains 1,000 seeds, do not use the counter until it has been repaired.

c. *Sample preparation*--A purity test shall be conducted on the sample, according to AOSA Rules, prior to the seed count test. The pure seed from the purity test shall

be divided into 2 portions of approximately 250 grams each using a seed divider. Record the exact weight of each portion. Each portion shall be tested separately.

d. *Conducting the test*--After the seed counter has been calibrated, test both 250 gram subsamples and record the number of seeds in each subsample.

e. *Calculation of results*--Calculate the number of seeds per pound to the nearest whole number for each subsample using the following formula:

$$\text{Number of seeds per pound} = \frac{453.6\text{ g}}{\text{pound}} \times \frac{\text{Number of seeds}}{\text{Weight tested in grams}} \times \%\text{ pure seed}$$

If the difference between the results of the subsamples is less than 1.2 percent, the final test result is the average seed count of the 2 subsamples. To determine this, calculate the average of the 2 results (number of seeds per pound) and multiply by 1.2 percent. If the difference of the 2 subsamples exceeds 1.2 percent, test an additional 250 gram sample(s) of pure seed and use the average of the 2 test results with a difference of less than 1.2 percent.

f. *Tolerance for results from different laboratories*--Consider the results of tests from 2 laboratories in tolerance if they differ by less than 2.0 percent.

RULE PROPOSAL NO. 2

AOSA RULES FOR TESTING SEEDS, sections 2.6, 2.7,and 2.10, pages 6 and 8

2.6 Seed unit. - The seed unit is the structure usually regarded as a seed in planting practices and in commercial channels. The seed unit may consist of one or more of the following structures:

b. Seed units in the grass family (for descriptions and illustrations of grass seed units, see AOSA Newsletter 70(1):49-59, 1996) including the following:

(9) For *Lolium multiflorum*, *L. perenne* and *Festuca arundinacea* refer to section 2.10 a.(4).

2.7 Kind or cultivar considered pure seed.

g. Seed units of the grass family listed in sections 2.6 b(1) through (5) and (9) provided a caryopsis with some degree of endosperm development can be detected in the unit either by slight pressure or by examination over light. Refer to sections 2.7 g(1) and (2) for species in which determination of endosperm development is not necessary. Refer to sections 2.7 h and 2.10 a(8) when nematode galls, fungus bodies, etc. have replaced the caryopsis in seed units.

2.10 Inert matter. -

a. Seeds and seed like structures from crop plants.

(4) For *Lolium multiflorum, L. perenne* and *Festuca arundinacea*, empty florets extending to the tip of the fertile floret (excluding the awn) or beyond and glumes shall be removed and classed as inert matter. For all other species of grasses, glumes and empty florets shall be classed as inert matter except as stated under pure seed in sections 2.7 g and h.

RULE PROPOSAL NO. 3

AOSA RULES FOR TESTING SEEDS, sections 2.6 and 2.7, page 6

2.6 Seed Unit - The seed unit is the structure usually regarded as a seed in planting practices and in commercial channels. The seed unit may consist of one or more of the following structures:

c. Dry indehiscent fruits in the following plant families: Aceraceae, Asteraceae, Betulaceae, Brassicaceae, Casuarinaceae, Chenopodiaceae, Fabaceae, Fagaceae, Geraniaceae, Juglandaceae, Magnoliaceae, Nyssaceae, Oleaceae, Platanaceae, Polygonaceae, Rosaceae, Simaroubaceae, Ulmaceae and Valerianaceae;

2.7 Kind or cultivar considered pure seed. - The pure seed shall include all seeds of each kind and/or cultivar under consideration which are present in excess of 5%... The following shall be included with the pure seed:

f. Intact fruits, whether or not they contain a seed, of species belonging to families other than Poaceae, in which the seed unit is a dry, indehiscent fruit (refer to section 2.6 c., d, e and f). Refer to section 2.10 a(9) for the classification of visibly empty fruits and to section
2.10 a(11) for classification of the pericarp (fruit wall) in antelope bitterbrush (*Purshia tridentata*).

RULE PROPOSAL NO. 4

AOSA RULES FOR TESTING SEEDS, section 2.10, page 8

2.10 a. Inert matter. - Inert matter shall include seeds and seedlike structures from both crop and weed plants and other material not seed as follows:

(5) Broken and unattached wings of tree and shrub seeds or fruits.
(6) Attached wings of tree and shrub seeds or fruits as follows:
(c) for *Acer, Ailanthus, Betula, Casuarina, Catalpa, Chamaecyparis, Cupressus, Fraxinus, Grevillea, Liquidambar, Liriodendron, Platanus, Platycladus, Sequoia, Sequoiadendron, Thuja*, and *Ulmus* the wing shall not be removed as inert matter.

RULE PROPOSAL NO. 5

AOSA RULES FOR TESTING SEEDS, NEW RULE, section 2.7 k, page 7

2.7 Kind or cultivar considered pure seed.

k. Refer to section 2.10 a(6) for classification of tree and shrub seed and fruit wings.

RULE PROPOSAL NO. 6

UNIFORM CLASSIFICATION OF WEED AND CROP SEED
Contribution No. 25 to the Handbook on Seed Testing

Remove the 'NOX' column from the main body of Handbook 25.

RULE PROPOSAL NO. 7

UNIFORM CLASSIFICATION OF WEED AND CROP SEED
Contribution No. 25 to the Handbook on Seed Testing

Remove the symbol 'W' from the 'spp. class' column of Handbook for species which have other symbols listed. The 'W' symbol would remain in the 'spp. class' column exclusively for those species which are only considered weeds.

RULE PROPOSAL NO. 8

UNIFORM CLASSIFICATION OF WEED AND CROP SEED
Contribution No. 25 to the Handbook on Seed Testing, page 3

		Classification							
		Spp.	contaminating						
Scientific /Common Name	Family	Class	A	F	H	R	S	T	V
Achillea millefolium --yarrow, common	(Asteraceae)	F	W	C	W	C	W	W	W

RULE PROPOSAL NO. 9

UNIFORM CLASSIFICATION OF WEED AND CROP SEED
Contribution No. 25 to the Handbook on Seed Testing, page 7

		Classification							
		Spp.	Contaminating						
Scientific /Common Name	Family	Class	A	F	H	R	S	T	V
Allium schoenoprasum --chives	(Liliaceae)	H,V	W	C	C	W	W	W	C

RULE PROPOSAL NO. 10

UNIFORM CLASSIFICATION OF WEED AND CROP SEED
Contribution No. 25 to the Handbook on Seed Testing, page 7

		Classification							
		Spp.	contaminating						
Scientific /Common Name	Family	Class	A	F	H	R	S	T	V
Allium cernuum --onion, nodding	(Liliaceae)	F, V	W	C	W	W	W	W	C

RULE PROPOSAL NO. 11

UNIFORM CLASSIFICATION OF WEED AND CROP SEED
Contribution No. 25 to the Handbook on Seed Testing, page 12

		Classification							
		Spp.	contaminating						
Scientific / Common Name	Family	Class	A	F	H	R	S	T	V
Apium graveolens var. dulce --celery	(Apiaceae)	V, H	C	W	C	W	W	W	C

RULE PROPOSAL NO. 12

UNIFORM CLASSIFICATION OF WEED AND CROP SEED
Contribution No. 25 to the Handbook on Seed Testing, page 16

		Classification							
		Spp.	contaminating						
Scientific /Common Name	Family	Class	A	F	H	R	S	T	V
Aster glaucodes --aster, blueleaf	(Asteraceae)	F	W	C	W	C	W	W	W

RULE PROPOSAL NO. 13

UNIFORM CLASSIFICATION OF WEED AND CROP SEED
Contribution No. 25 to the Handbook on Seed Testing, page 19

		Classification							
		Spp.	contaminating						
Scientific /Common Name	Family	Class	A	F	H	R	S	T	V
Baileya multiradiata --marigold, desert --marigold, wooly	(Asteraceae)	F	W	C	W	C	W	W	W

RULE PROPOSAL NO. 14

UNIFORM CLASSIFICATION OF WEED AND CROP SEED
Contribution No. 25 to the Handbook on Seed Testing, page 19

		Classification							
		Spp.	contaminating						
Scientific /Common Name	Family	Class	A	F	H	R	S	T	V
Balsamorhiza sagittata --balsamroot, arrowleaved	(Asteraceae)	F	W	C	W	C	W	W	W

RULE PROPOSAL NO. 15

UNIFORM CLASSIFICATION OF WEED AND CROP SEED
Contribution No. 25 to the Handbook on Seed Testing, page 24

		Classification							
		Spp.	contaminating						
Scientific /Common Name	Family	Class	A	F	H	R	S	T	V
Bromus hordeaceus --chess, soft --brome, blando	(Poaceae)	R	W	W	W	C	W	W	W

RULE PROPOSAL NO. 16

UNIFORM CLASSIFICATION OF WEED AND CROP SEED
Contribution No. 25 to the Handbook on Seed Testing, page 23

Scientific / Common Name	Family
Bromus catharticus --rescuegrass --brome, prairie	(Poaceae)

RULE PROPOSAL NO. 17

UNIFORM CLASSIFICATION OF WEED AND CROP SEED
Contribution No. 25 to the Handbook on Seed Testing, page 28

		Classification							
		Spp.	contaminating						
Scientific /Common Name	Family	Class	A	F	H	R	S	T	V
Carthamus tinctorius --safflower	(Asteraceae)	A, F	C	C	C	W	W	W	W

RULE PROPOSAL NO. 18, AS AMENDED

UNIFORM CLASSIFICATION OF WEED AND CROP SEED
Contribution No. 25 to the Handbook on Seed Testing, page 28

		Classification							
		Spp.	contaminating						
Scientific / Common Name	Family	Class	A	F	H	R	S	T	V
Cichorium intybus --chicory	(Asteraceae)	V, F	W	W	W	W	W	W	W

RULE PROPOSAL NO. 19

UNIFORM CLASSIFICATION OF WEED AND CROP SEED
Contribution No. 25 to the Handbook on Seed Testing, page 40

		Classification							
		Spp.	contaminating						
Scientific /Common Name	Family	Class	A	F	H	R	S	T	V
Cuminum cyminum --cumin	(Apiaceae)	H	W	W	C	W	W	W	W

RULE PROPOSAL NO. 20, AS AMENDED

UNIFORM CLASSIFICATION OF WEED AND CROP SEED
Contribution No. 25 to the Handbook on Seed Testing, page 47

		Classification							
		Spp.	contaminating						
Scientific /Common Name	Family	Class	A	F	H	R	S	T	V
Echinacea angustifolia --coneflower, purple-headed	(Asteraceae)	F, H	W	C	C	C	W	W	W

RULE PROPOSAL NO. 21, AS AMENDED

UNIFORM CLASSIFICATION OF WEED AND CROP SEED
Contribution No. 25 to the Handbook on Seed Testing, page 47

		Classification							
		Spp.	contaminating						
Scientific /Common Name	Family	Class	A	F	H	R	S	T	V
Echinacea purpurea --coneflower, purple	(Asteraceae)	F, H	W	C	C	C	W	W	W

RULE PROPOSAL NO. 22

UNIFORM CLASSIFICATION OF WEED AND CROP SEED
Contribution No. 25 to the Handbook on Seed Testing, page 48

Scientific /Common Name	Family	Classification: Spp. Class	contaminating: A	F	H	R	S	T	V
Elymus elymoides --bottlebrush-squirreltail --squirreltail	(Poaceae)	R	W	W	W	C	W	W	W

RULE PROPOSAL NO. 23

UNIFORM CLASSIFICATION OF WEED AND CROP SEED
Contribution No. 25 to the Handbook on Seed Testing, page 52

Scientific /Common Name	Family	Classification: Spp. Class	contaminating: A	F	H	R	S	T	V
Eschscholzia caespitosa --poppy, dwarf California	(Papaveraceae)	F	W	C	W	C	W	W	W
Eschscholzia californica subsp. californica --poppy, California	(Papaveraceae)	F	W	C	W	C	W	W	W
Eschscholzia californica subsp. mexicana --poppy, Mexican gold	(Papaveraceae)	F	W	C	W	C	W	W	W

RULE PROPOSAL NO. 24

UNIFORM CLASSIFICATION OF WEED AND CROP SEED
Contribution No. 25 to the Handbook on Seed Testing, page 61

Scientific /Common Name	Family	Classification: Spp. Class	contaminating: A	F	H	R	S	T	V
Helianthus annuus --sunflower, wild --sunflower, common	(Asteraceae)	A, F	C	C	W	W	W	W	W

RULE PROPOSAL NO. 25

UNIFORM CLASSIFICATION OF WEED AND CROP SEED
Contribution No. 25 to the Handbook on Seed Testing, page 70

Lathyrus hirsutus (Fabaceae)
--rough-pea

RULE PROPOSAL NO. 26

UNIFORM CLASSIFICATION OF WEED AND CROP SEED
Contribution No. 25 to the Handbook on Seed Testing, page 70

		Classification							
		Spp.	contaminating						
Scientific /Common Name	Family	Class	A	F	H	R	S	T	V
Lavandula angustifolia --lavender	(Lamiaceae)	H, F	W	C	C	W	W	W	W

RULE PROPOSAL NO. 27

UNIFORM CLASSIFICATION OF WEED AND CROP SEED
Contribution No. 25 to the Handbook on Seed Testing, page 74

		Classification							
		Spp.	contaminating						
Scientific /Common Name	Family	Class	A	F	H	R	S	T	V
Linum lewisii --flax, Lewis --flax, prairie	(Linaceae)	F	W	C	W	C	W	W	W

RULE PROPOSAL NO. 28

UNIFORM CLASSIFICATION OF WEED AND CROP SEED
Contribution No. 25 to the Handbook on Seed Testing, page 76

		Classification							
		Spp.	contaminating						
Scientific /Common Name	Family	Class	A	F	H	R	S	T	V
Lotus scoparius --deerweed	(Fabaceae)	R	W	W	W	C	W	W	W

RULE PROPOSAL NO. 29

UNIFORM CLASSIFICATION OF WEED AND CROP SEED
Contribution No. 25 to the Handbook on Seed Testing, page 88

		Classification							
		Spp.	contaminating						
Scientific /Common Name	Family	Class	A	F	H	R	S	T	V
Osmorhiza occidentalis --aniseroot, sweet	(Apiaceae)	F	W	C	W	C	W	W	W

RULE PROPOSAL NO. 30

UNIFORM CLASSIFICATION OF WEED AND CROP SEED, NEW RULE
Contribution No. 25 to the Handbook on Seed Testing, page 90

		Classification							
		Spp.	contaminating						
Scientific /Common Name	Family	Class	A	F	H	R	S	T	V
Paspalum nicorae --brunswickgrass	(Poaceae)	R	W	W	W	C	W	W	W

RULE PROPOSAL NO. 31

UNIFORM CLASSIFICATION OF WEED AND CROP SEED
Contribution No. 25 to the Handbook on Seed Testing, page 92

		Classification							
		Spp.	contaminating						
Scientific /Common Name	Family	Class	A	F	H	R	S	T	V
Penstemon cyananthus (Scrophulariaceae) --penstemon, Wasatch		F	W	C	W	C	W	W	W

RULE PROPOSAL NO. 32

UNIFORM CLASSIFICATION OF WEED AND CROP SEED
Contribution No. 25 to the Handbook on Seed Testing, page 92

		Classification							
		Spp.	contaminating						
Scientific / Common Name	Family	Class	A	F	H	R	S	T	V
Petroselinum crispum --parsley	(Apiaceae)	V, H	W	W	C	W	W	W	C

RULE PROPOSAL NO. 33

UNIFORM CLASSIFICATION OF WEED AND CROP SEED
Contribution No. 25 to the Handbook on Seed Testing, page 101

Scientific /Common Name	Family	Classification: Spp. Class	contaminating: A	F	H	R	S	T	V
Poa secunda --bluegrass, alkali --bluegrass, big --bluegrass, Canby --bluegrass, Nevada --bluegrass, pine --bluegrass, Sandberg	(Poaceae)	R	W	W	W	C	W	W	W

RULE PROPOSAL NO. 34, AS AMENDED

UNIFORM CLASSIFICATION OF WEED AND CROP SEED
Contribution No. 25 to the Handbook on Seed Testing, page 110

Scientific /Common Name	Family	Classification: Spp. Class	contaminating: A	F	H	R	S	T	V
Rosmarinus officinalis --rosemary	(Lamiaceae)	H, S	W	W	C	W	C	W	W

RULE PROPOSAL NO. 35

UNIFORM CLASSIFICATION OF WEED AND CROP SEED, NEW RULE
Contribution No. 25 to the Handbook on Seed Testing, page 120

Scientific /Common Name	Family	Classification: Spp. Class	contaminating: A	F	H	R	S	T	V
Solanum viarum --tropical soda apple	(Solanaceae)	W	W	W	W	W	W	W	W

RULE PROPOSAL NO. 36

UNIFORM CLASSIFICATION OF WEED AND CROP SEED
Contribution No. 25 to the Handbook on Seed Testing, page 121

			Classification						
		Spp.	contaminating						
Scientific /Common Name	Family	Class	A	F	H	R	S	T	V
Sphaeralcea munroana --globemallow, munro	(Malvaceae)	F	W	C	W	C	W	W	W

RULE PROPOSAL NO. 37, AS AMENDED

UNIFORM CLASSIFICATION OF WEED AND CROP SEED
Contribution No. 25 to the Handbook on Seed Testing, page 124

			Classification						
		Spp.	contaminating						
Scientific /Common Name	Family	Class	A	F	H	R	S	T	V
Tanacetum parthenium --matricaria --feverfew, common	(Asteraceae)	F	W	C	C	W	W	W	W

RULE PROPOSAL NO. 38, AS AMENDED

UNIFORM CLASSIFICATION OF WEED AND CROP SEED
Contribution No. 25 to the Handbook on Seed Testing, page 125

			Classification						
		Spp.	contaminating						
Scientific / Common Name	Family	Class	A	F	H	R	S	T	V
Thymus vulgaris --thyme, common	(Lamiaceae)	F, H	W	C	C	W	W	W	W

RULE PROPOSAL NO. 39

UNIFORM CLASSIFICATION OF WEED AND CROP SEED
Contribution No. 25 to the Handbook on Seed Testing, page 125

Scientific / Common Name	Family	Classification Spp. Class	contaminating A	F	H	R	S	T	V
Thymus serphyllum --mother-of-thyme --thyme, lemon --thyme, creeping	(Lamiaceae)	F, H	W	C	C	W	W	W	W

RULE PROPOSAL NO. 40

AOSA RULES FOR TESTING SEEDS, Table 1, page 46

Table 1. Weights for working sample of agricultural, vegetable and herb, flowers, and tree and shrub seeds.

Kind of seed	Minimum weight for purity analysis (grams)	Minimum weight for noxious weed seed or bulk examination (grams)	Approximate number of seeds per gram	Approximate number of seeds per ounce
Linaria maroccana Hook f. linaria	0.2	2	14,040	398,015

RULE PROPOSAL NO. 41

AOSA RULES FOR TESTING SEEDS, Table 1, page 37

Table 1. Weights for working sample of agricultural, vegetable and herb, flowers, and tree and shrub seeds.

Kind of seed	Minimum weight for purity analysis (grams)	Minimum weight for noxious weed seed or bulk examination (grams)	Approximate number of seeds per gram	Approximate number of seeds per ounce
Anagallis arvensis L. anagallis	2	20	1,200	34,035

RULE PROPOSAL NO. 42

AOSA RULES FOR TESTING SEEDS, NEW RULE, Table 1, page 45

Table 1. Weights for working sample of agricultural, vegetable and herb, flowers, and tree and shrub seeds.

Kind of seed	Minimum weight for purity analysis (grams)	Minimum weight for noxious weed seed or bulk examination (grams)	Approximate number of seeds per gram	Approximate number of seeds per ounce
Hesperis matronalis L. dame's rocket sweet rocket	5	50	515	14,665

RULE PROPOSAL NO. 43

AOSA RULES FOR TESTING SEEDS, NEW RULE, Table 1, page 45

Table 1. Weights for working sample of agricultural, vegetable and herb, flowers, and tree and shrub seeds.

Kind of seed	Minimum weight for purity analysis (grams)	Minimum weight for noxious weed seed or bulk examination (grams)	Approximate number of seeds per gram	Approximate number of seeds per ounce
Iberis umbellata L.				
candytuft, annual	6	60	455	12,860

RULE PROPOSAL NO. 44

AOSA RULES FOR TESTING SEEDS, NEW RULE, Table 1, page 41

Table 1. Weights for working sample of agricultural, vegetable and herb, flowers, and tree and shrub seeds.

Kind of seed	Minimum weight for purity analysis (grams)	Minimum weight for noxious weed seed or bulk examination (grams)	Approximate number of seeds per gram	Approximate number of seeds per ounce
Cosmos bipinnatus				
Cavanilles cosmos: sensation mammoth or crested types	16	160	160	4,495

RULE PROPOSAL NO. 45

AOSA RULES FOR TESTING SEEDS, NEW RULE, Table 1, page 45

Table 1. Weights for working sample of agricultural, vegetable and herb, flowers, and tree and shrub seeds.

Kind of seed	Minimum weight for purity analysis (grams)	Minimum weight for noxious weed seed or bulk examination (grams)	Approximate number of seeds per gram	Approximate number of seeds per ounce
Gazania rigens (L.) Gaertner				
pied gazania	11	110	235	6,705
'Rubbed' seed	6	60	425	12,000

RULE PROPOSAL NO. 46, AS AMENDED

AOSA RULES FOR TESTING SEEDS, Table 3, page 88 and section 4.8 o, page 23

Table 3. Methods of testing for laboratory germination

Kind of seed	Substrata	Temperature °C	First count days	Final count days	Additional directions
Securigera varia Crownvetch	B,T. TB,S.	20	7	14	Excessive moisture needed. Hard seeds: see sec. 4.2 d and 4.9k(6). Swollen seeds: see sec. 4.8o.

4.8 o. Special procedures and alternate methods for germination in Crownvetch (*Securigera varia*) - Swollen seeds: At the conclusion of the 14 day test period place seeds on new substrate and pierce the seedcoat with a sharp instrument, continue the test for 5 additional days. Alternate method: When a high percentage of swollen seeds remain at the end of the standard test, retest in a sealed polyethylene envelope.

RULE PROPOSAL NO. 47

AOSA RULES FOR TESTING SEEDS, Table 3, page 77

4.10, Table 3. Methods of testing for laboratory germination.

Kind of seed	Substrata	Temperature °C	First count days	Final count days	Additional Directions
Lupinus spp. lupine, all annual types and cultivars	B, T	20-30; 20	5[a]	18[b]	Hard seed: see sec. 4.2 d and 4.9 k(6).

RULE PROPOSAL NO. 48

AOSA RULES FOR TESTING SEEDS, Table 3, page 73

4.10, Table 3. Methods of testing for laboratory germination.

Kind of seed	Substrata	Temperature °C	First count days	Final count days	Additional Directions
Gysophila elegans M. Bieberstein baby's breath, long-petalled	TB	20; 15	none[a]	8[b]	Light and KNO_3. Some cultivars may be sensitive to temperatures above 18°C.
Gysophila paniculata L. baby's breath, perennial	TB	20	none[a]	7[b]	Light and KNO_3.
Gysophila repens L., *G. pacifica* Komarov baby's breath	TB	15	none[a]	8[b]	Sensitive to temperatures above 18°C.

RULE PROPOSAL NO. 49

AOSA RULES FOR TESTING SEEDS, Table 3, page 63

Table 3. Methods of testing for laboratory germination

Kind of seed	Substrata	Temperature	First Count	Final Count	Additional Directions
Brassica napus Annual rape and winter rape	B, T	20 – 30; 15 – 25	3	7	

RULE PROPOSAL NO. 50, AS AMENDED

AOSA RULES FOR TESTING SEEDS, Table 3, page 66

Table 3. Methods of testing for laboratory germination

Kind of seed	Substrata	Temperature	First Count	Final Count	Additional Directions
Cicer arietinum Chickpea	T, S	20 – 30; 20	3	7	0.3 - 0.6% $Ca(NO_3)_2$

RULE PROPOSAL NO. 51, AS AMENDED

AOSA RULES FOR TESTING SEEDS, Table 3, page 81, section 4.7 d, page 21, and section 4.8 p, page 23

4.10, Table 3. Methods of testing for laboratory germination.

Kind of seed	Substrata	Temperature °C	First count days	Final count days	Additional Directions
Penstemon eatonii A. Gray firecracker penstemon					
Method 1	P	15; 10-20	7	14	see sec. 4.8p
Method 2	P	15; 10-20	14	28	see sec. 4.8p

4.7-d (See Rule Proposal No. 52)

4.8-p (See Rule Proposal No. 52)

RULE PROPOSAL NO. 52, AS AMENDED

AOSA RULES FOR TESTING SEEDS, NEW RULE, Table 3, page 81, section 4.7 d, page 21, and section 4.8 p, page 23

4.10, Table 3. Methods of testing for laboratory germination.

Kind of seed	Substrata	Temperature °C	First count days	Final count days	Additional Directions
Penstemon spp. penstemon or beardtongue, all species not named in other rules					
Method 1	P	15; 10-20	7	14	see sec. 4.8p
Method 2	P	15; 10-20	14	28	see sec. 4.8p

4.7-d.

For *Nasella viridula*, *Penstemon penlandii*, *Penstemon eatonii*, and *Penstemon* spp., report results of Method 2 (see Table 3 and sections 4.8k, 4.8m, and 4.8p), as percentage germination. If the number in Method 2 is less than in Method 1, subtract results of Method 2 from Method 1 and report the difference as dormant seed percentage.

4.8-p.

Firecracker penstemon (*Penstemon eatonii*) and other species of penstemon or beardtongue (*Penstemon* spp.) not named in other rules. -- Two test methods as prescribed in Table 3 shall be used on each sample. For Method 1, place 400 seeds on blotters moistened with 0.055% (500 ppm) GA_3, prechill for 60 days (2-5° C), and germinate for 14 days (15 or 10/20° C). Post-test viability determination of ungerminated seeds is required (sec. 4.9k). As an alternative to Method 1, conduct a TZ test on 400 seeds. For Method 2, plant 400 seeds on water-moistened blotters and germinate with light for 28 days; count normal seedlings. Refer to 4.7d for calculation and reporting of results.

RULE PROPOSAL NO. 53

This proposal was withdrawn by the author.

RULE PROPOSAL NO. 54

AOSA RULES FOR TESTING SEEDS, NEW RULE, Table 1, page 36 and Table 3, page 58

2.4, Table 1.Weights for working sample of agricultural, vegetable and herb, flower, and tree and shrub seeds

Kind of seed	Minimum Minimum weight for purity analysis	Minimum weight for noxious-weed seed or bulk examination	Approximate number of seeds per gram	Approximate number of seeds per ounce
	Grams	Grams	Number	Number
Achnatherum thurberianum **(Piper) Barkworth Thurber needlegrass**	**8**	**80**	**300**	**8,500**

4.10, Table 3. Methods of testing for laboratory germination.

Kind of seed	Substrata	Temperature °C	First count days	Final count days	Additional Directions
Achnatherum thurberianum **(Piper) Barkworth Thurber needlegrass**	**P**	**10-20; 15-25**	**10**	**21**	**Dark. Ungerminated seeds: see sec. 4.2e and 4.9k.**

RULE PROPOSAL NO. 55

AOSA RULES FOR TESTING SEEDS, NEW RULE, Table 1, page 38 and Table 3, page 62

2.4, Table 1.Weights for working samples

Kind of seed	Minimum Minimum weight for purity analysis	weight for noxious-weed seed or bulk examination	Approximate number of seeds per gram	Approximate number of seeds per ounce
	Grams	Grams	Number	Number
Balsamorhiza sagittata (Pursh) Nutt. arrowleaf balsamroot	25	250	100	2,800

4.10, Table 3. Methods of testing for laboratory germination.

Kind of seed	Substrata	Temperature °C	First count days	Final count days	Additional Directions
Balsamorhiza sagittata (Pursh) Nutt. arrowleaf balsamroot	B	5-15	7	14	Prechill 70 days at 2°C. TZ may also be used: see sec. 4.9 k(2).

RULE PROPOSAL NO. 56

AOSA RULES FOR TESTING SEEDS, Table 3, page 75

4.10, Table 3. Methods of testing for laboratory germination.

Kind of seed	Substrata	Temperature °C	First count days	Final count days	Additional Directions
Kochia prostrata forage kochia	P	20	4	7	Prechill 14 days. Ungerminated seeds: see sec. 4.2e and 4.9k

RULE PROPOSAL NO. 57, AS AMENDED

AOSA RULES FOR TESTING SEEDS, section 3.5, page 16

3.5 Fluorescence test of ryegrass. -- A fluorescence test shall be made on all samples of ryegrass for which the percentage of perennial ryegrass (Lolium perenne) and /or Italian ryegrass (L. multiflorum) is to be reported. The seedlings shall be grown on filter paper and the number of fluorescent seedlings determined under ultraviolet light at the end of the germination period.[a]

[a]For description of method and apparatus for determining fluorescence in ryegrass see the article in the **AOSA Newsletter** 37 (3): 20-27, 1963 or the *Cultivar Purity Testing Handbook, Contribution no. 33 to the Handbook on Seed Testing, AOSA, 1991, Fluorescent Test, C. Annual (Lolium multiflorum) and Perennial (Lolium perenne) Ryegrass.* The formula appearing above is to be used instead of the one given in the article cited.

RULE PROPOSAL NO. 58

AOSA RULES FOR TESTING SEEDS, section 2.6, page 6

2.6 Seed unit.

b. Seed units in the grass family (for descriptions and illustrations of grass seed units, see AOSA Newsletter 70(1):49-59, 1996) include the following:

(1) Caryopses and single florets;

(2) Single floret spikelets in *Agrostis, Alopecurus,* and *Zoysia*; and multiple florets or spikelets in *Anthoxanthum, Arrhenatherum, Avena, Axonopus, Bouteloua, Brachiaria, Chloris, Echinochloa, Ehrharta, Holcus, Hordeum, Melinis, Oryza, Panicum, Paspalum, Phalaris, Poa, Setaria and Zea*;

(3) Spikelets which may have attached rachis segments, pedicels and sterile spikelets in *Andropogon, Bothriochloa ischaemum, Schizachyrium scoparium, Sorghastrum* and *Sorghum*;

(4) Spikelet groups that disarticulate as a unit in *Hilaria jamesii;* spikelet groups that disarticulate as units with attached rachis and internodes in *Andropogon* spp., *Bothriochloa ischaemum, Schizachyrium scoparium, Elymus elymoides, Bouteloua curtipendula, Sorghastrum nutans* and *Triticum spelta*;

(5) Fascicles of *Cenchrus ciliaris* and *Pennisetum,* consisting of bristles and spikelets;

(6) Burs of *Buchloe dactyloides*;

(7) Bulblets of *Poa bulbosa*;

RULE PROPOSAL NO. 59

This proposal was withdrawn by the author.