

## 2024 Rule Change Proposal 5

**PURPOSE OF PROPOSAL:** To clarify when the numbers of seeds found of other crop seeds and weed seeds are stated on the Report of Analysis.

**PRESENT RULE and PROPOSED RULE** (proposed changes indicated in red text):

### SECTION 3: THE PURITY ANALYSIS

- 3.3 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 4. All interpretations and definitions for pure seed in section 3.2 shall also apply in determining whether seeds are other crop or inert matter with the following four exceptions that may be applied as acceptable alternatives: as stated in 3.3.a-d. Refer to sec. 15.i for reporting requirements.
- a. Uniform blowing procedure in section 3.6 for kinds assigned to Table 3A PSU 23 and 24 may be disregarded. If disregarded, all seed units for these kinds found in the working sample shall be manually separated into pure seed and inert matter. Only units containing at least one caryopsis with some degree of endosperm development that can be detected either by slight pressure or by examination over light are considered other crop.
  - b. For kinds assigned to Table 3A PSU 24, all multiple units found in the working sample shall be manually separated into single florets. Each floret containing a caryopsis with some degree of endosperm development that can be detected either by slight pressure or examination over light is considered other crop. Empty florets and glumes, if present, are considered inert matter.
  - c. Multiple unit procedures in section 3.7 for kinds assigned to Table 3A PSU 22 may be disregarded. If disregarded, all multiple units and single units (as defined in section 3.7) for these kinds found in the working sample shall be manually separated into single florets. Each floret containing a caryopsis that is at least one-third the length of the palea measured from the base of the rachilla is considered other crop. Empty florets and glumes, and florets containing a caryopsis less than 1/3 the length of the palea measured from the base of the rachilla are considered inert matter.
  - d. For kinds in which the PSU includes more than one seed, the seed unit shall be opened, the number of seeds found counted and reported under the other crop seeds. All parts of the seed unit, as defined in section 3.2, are classified as other crop seed if at least one seed is present.
- 3.4 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 4. For classification of badly damaged or immature weed seeds or

seed-like structures refer to section 3.5 b. [Refer to sec. 15.i for reporting requirements.](#) Special requirements are as follows:

- a. Individual seeds and seed-like structures are to be removed from fruiting structures (such as capsules, heads, pods, etc.), counted and included with the weed seeds. Grass spikelets or spikelet groups are to be separated into individual florets and those containing caryopses are counted as weed seeds (refer to section 3.5 b for inert matter related to grass weeds). Fruiting structures and accessory structures as specified in section 3.5 b are included with the inert matter. For *Ambrosia* spp. refer to section 3.5 b (8).
- b. Wild onion and wild garlic (*Allium* spp.) bulblets:
  - (1) Bulblets that have any part of the husk remaining and are not damaged at the basal end are considered weed seeds regardless of size.
  - (2) Bulblets that are completely devoid of husk, and are not damaged at the basal end, and are retained by a 1/13-inch round-hole sieve are considered weed seeds. For *Allium* spp., bulblets classed as inert matter, refer to section 3.5 b (5).

## **SECTION 15: REPORT OF ANALYSIS (ROA)**

Laboratory reports of analysis that indicate laboratory testing was performed in accordance to the AOSA Rules for Testing Seeds are required to include, but not be limited to, the following information:

- (i) When a purity analysis is conducted the following information must be reported under Purity Analysis:
  - 1) Weight of purity working sample.
  - 2) Percentage by weight of pure seed, other crop seed, inert matter and weed seed found in the purity working sample, given to two decimal places.
  - 3) Scientific name, or common name, or both, of all other crop seed or weed seed found in the purity working sample. If none are found, this must be indicated by the word none or none found. [The numbers of individual seed units found for each contaminating species may be reported upon request or at the discretion of the laboratory.](#)

### **HARMONIZATION/IMPACT STATEMENT:**

This proposal will not substantially change in the current laboratory practices for AOSA and SCST members. The proposed addition to Section 15 – Report of Analysis will simply clarify that reporting of the numbers of individual seed units of contaminating species found during a purity analysis is to be done upon request or at the discretion of the laboratory conducting the testing. Although knowing the number of seeds of contaminating species can provide valuable information to the ROA end user regarding potential field infestation, particularly for small seeded species for which percentage

values may not reflect potential infestation impact, this proposal will provide flexibility to labs on reporting such data for every sample tested. However, weed seeds that are found in the purity analysis and are also declared as noxious weed seeds may be counted as part of the total number of noxious weed seeds found in the noxious weed seed examination if the working sample weight of the purity analysis is included as part of the total working sample weight for the noxious weed seed examination.

The Federal Seed Act Regulations (FSA) do not require counting the number of other crop seed or weed seeds found in a purity analysis. The FSA does not provide instructions on reporting the results of the purity analysis. Similar to the AOSA Rules, under the FSA weed seeds that are found in the purity analysis and are also declared as noxious weed seeds may be counted as part of the total number of noxious weed seeds found in the noxious weed seed examination.

The ISTA Rules do not require counts of other seeds found in the purity analysis. The ISTA Rules do offer a separate test based on approximately ten times the purity analysis working sample weight for the 'Determination of Other Seeds by Number' and this information is reported under 'Other Determinations' on the ISTA International Certificate. This ISTA test is similar to the 'AOSA Bulk Exam' for other seeds.

The Canadian Methods and Procedures require certain contaminating species be counted in accordance with the Canadian Seed Grading Standards.

#### **SUPPORTING EVIDENCE:**

The current AOSA Rules are in conflict regarding the counting of seeds of contaminating species. In sections 3.3.d and 3.4.a the Rules clearly state that seed shall be counted, while in sec. 15.i there is no requirement for reporting such seed counts. In sections 3.3.a, b, and c, the AOSA Rules seem to imply counting of other crop seeds because the instructions given require separating attached florets into single florets containing a caryopsis. The instructions given in sections 3.3 and 3.4 are very important for testing uniformity with respect to what structures are to be classified as other crop seeds and weed seeds for the percentage by weight portion of a purity analysis. Whether or not the seed counts are reported the structures classified as other crop seeds, weed seeds, or inert matter must remain standardized among all laboratories so that the percentages of each purity component can be compared among ROAs or ROAs and seed lot labels.

The reporting of the numbers of other crop seeds and weed seeds on the AOSA ROA was an issue considered by the AOSA/SCST Report of Analysis Working Group. As a result of the working group's efforts a rule proposal was presented in 2022 (rule proposal #12) to require reporting the number of seeds of each contaminating species found in a purity analysis. The proposal failed during the Rules voting process. The major objections to the 2022 proposal were the potential time/labor cost involved in counting the seeds of contaminating species and the cost of reprogramming laboratory databases to accommodate reporting such data on ROAs. While the proposed text does not completely resolve the uniformity issue on ROAs it does clarify that this

information may be requested of the laboratory and also confirms that laboratories may report such data under the other crop and weed seed sections of the ROA.

**SUBMITTED BY:** Deborah Meyer, Purity Subcommittee SCST Co-chair, [dmeyerseeds@gmail.com](mailto:dmeyerseeds@gmail.com); Nishit Patel, Purity Subcommittee AOSA Co-chair, [nishpatel@pa.gov](mailto:nishpatel@pa.gov)

**DATE SUBMITTED:** October 12, 2023