

2022-2023 Pure Seed/Inert Matter Written PT

1. **True** False Structures not specifically described as part of the PSU must be removed and classified as inert matter.
2. True **False** Seeds of other species that are attached to the kind under consideration shall be left attached to the kind under consideration and counted as pure seed.
3. **True** False Attached rachis segments of barley (*Hordeum vulgare*) must be removed and classified as inert matter.
4. **True** False Chalcid damaged seeds (puffy, soft, or dry and crumbly) in the Fabaceae family are considered inert matter.
5. True **False** Weevil-infested vetch (*Vicia* spp.) and pea (*Pisum* spp.) seeds are always considered inert matter.
6. True **False** When testing a sample of onion (*Allium cepa*) pairs of seeds adhering together must be separated.
7. **True** False Ragweed (*Ambrosia* spp.) seeds with both the involucre and pericarp absent are considered inert matter.
8. **True** False A single species may have more than one PSU number/definition.
9. True **False** Partially ergotized wheat seed is considered pure seed.
10. True **False** Seeds that are cracked are considered inert matter.

Multiple choice:

11. When are florets and caryopses of weedy grass species considered inert matter?
 - a. Glumes and empty florets of weedy grasses
 - b. Damaged grass caryopses, including free caryopses with over half the root-shoot axis missing (the scutellum excluded).
 - c. Immature free caryopses devoid of embryo and/or endosperm
 - d. All of the above**
12. What part of the AOSA Rules is used to determine which PSU definition should be used for the kind of seed being tested?
 - a. Table 2A**
 - b. Section 1
 - c. Table 3A
 - d. Table 6A

13. When applying PSU 22, which species does not use the multiple unit procedure described in section 3.7? (select all that apply)

- a. *Festuca rubra*
- b. *Festuca trachyphylla*
- c. *Elymus virginicus*
- d. *Agropyron desertorum*
- e. All of the above

14. Which of the following would describe a wild garlic bulblet that would not be considered inert matter?

- a. Bulblets that are damaged on the basal end
- b. Bulblets that have any part of the husk remaining and are not damaged on the basal end
- c. Bulblets that fall through a 1/13 inch square hole sieve
- d. Bulblets devoid of the husk

15. Which of the following species need to have some degree of endosperm development to be considered pure seed? (select all that apply)

- a. *Festuca arundinacea*
- b. *Avena sativa*
- c. *Bromus inermis* Leyss. subsp. *inermis*
- d. *Sorghastrum nutans*
- e. *Poa annua*
- f. *Poa compressa*

16. Which of the following species need to have a caryopsis a minimum of a third the length of the seed (select all that apply)?

- a. *Lolium perenne*
- b. *Bouteloua curtipendula*
- c. *Bromus arvensis*
- d. *Eremochloa ophiuroides*
- e. *Elymus virginicus*
- f. *Andropogon gerardi*

17. How are wings of ponderosa pine (*Pinus ponderosa*) classified when performing a purity?

a. wings removed and classified as inert matter

b. intact seeds with or without wing are considered pure seed

c. seeds, with or without seed coat, with or without wing(s) are considered pure seed

18. You are conducting a purity on a sample of *Triticum monococcum* Einkhorn wheat (seeds shown below) which PSU definition should you use?

a. 12

b. 17

c. 14

d. 15

Classify the following as pure seed or inert matter:

19. The following *Glycine max* seeds found in a sample of *Glycine max*:

Pure seed

Inert matter

20. The following *Solanum lycopersicum* seeds found in a sample of *Solanum lycopersicum*

Pure seed

Inert matter

21. The following *Calendula officinalis* seeds found in a sample of *Calendula officinalis*.

Pure seed

Inert

22. The following *Zea mays* seed found in a sample of *Zea mays*.

Pure seed

Inert matter

23. The following *Cenchrus americanus* seeds found in a sample of *Cenchrus americanus*. (The top center seed is for reference to the average size of the seed sample.)

Pure seed

Inert matter

24. The following *Capsicum spp.* seeds found in a sample of *Capsicum spp.*

Pure seed

Inert matter

25. The following *Spinacia oleracea* seeds found in a sample of *Spinacia oleracea*.

Pure seed

Inert matter

26. The following *Fagopyrum esculentum* seeds found in a sample of *Fagopyrum esculentum*.

Pure seed

Inert matter

27. The following *Poa pratensis* seeds that blew up into the top receiving pan when used at the correct gate opening setting and EAV for the general blower when found in *Poa pratensis*.

Pure seed

Inert matter

28. The following *Glycine max* seed found in a sample of *Glycine max*.

Pure seed Inert matter

29. The following *Anthriscus cerefolium* seeds found in a sample of *Anthriscus cerefolium*.

Pure seed Inert matter

30. The following *Cenchrus americanus* seeds found in a sample of *Cenchrus americanus*.

Pure seed Inert matter

31. The following *Coriandrum sativum* seeds when found in a sample of *Coriandrum sativum*.

Pure seed Inert matter

32. The following *Helianthus annuus* seeds when found in a sample of *Helianthus annuus*.

Pure seed Inert matter

33. The following *Glycine max* seeds when found in a sample of *Glycine max*.

Pure seed Inert matter

34. The following *Zinnia elegans* seeds when found in a sample of *Zinnia elegans*.

Pure seed Inert matter

35. The following *Sorghum bicolor* seeds when found in a sample of *Sorghum bicolor*.

Pure seed Inert matter

36. The following *Triticum aestivum* when found in a sample of *Triticum aestivum*.

Pure seed Inert matter

37. The following *Beta vulgaris* L. subsp. *vulgaris* seeds when found in a sample of *Beta vulgaris* L. subsp. *vulgaris*.

Pure seed Inert matter

38. The following *Fagopyrum esculentum* seeds found in a sample of *Fagopyrum esculentum*.

Pure seed Inert matter

39. The following *Salvia officinalis* seeds when found in a sample of *Salvia officinalis*.

Pure seed Inert matter

40. On the following *Oryza sativa* seeds do the stems remain attached or are they removed and classified as inert?

Leave attached Remove and classify as inert matter

41. Coating material found in a coated sample of *Medicago sativa*

Pure seed Inert matter

Pure seed	Inert matter
100%	0%
90%	10%
80%	20%
70%	30%
60%	40%
50%	50%
40%	60%
30%	70%
20%	80%
10%	90%
0%	100%

Pure seed Inert matter

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Pure seed Inert matter

Pure seed Inert matter

Pure seed	Inert matter
100%	0%
90%	10%
80%	20%
70%	30%
60%	40%
50%	50%
40%	60%
30%	70%
20%	80%
10%	90%
0%	100%

Pure seed Inert matter

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Pure seed	Inert matter
100%	0%
90%	10%
80%	20%
70%	30%
60%	40%
50%	50%
40%	60%
30%	70%
20%	80%
10%	90%
0%	100%

Pure seed	Inert matter
100%	0%
90%	10%
80%	20%
70%	30%
60%	40%
50%	50%
40%	60%
30%	70%
20%	80%
10%	90%
0%	100%