Reading Germination Tests
Normal Seedlings

Figure 1: Normal/Healthy seedlings of a melon
Figure 2: Normal/Healthy seedlings of a corn
Abnormal Seedlings

Figure 3: Abnormal seedlings of a melon

Figure 4: Abnormal seedlings of a corn
Dead Seeds

Figure 5: Dead seeds of a melon

Figure 6: Dead seeds of a corn
Germination Rate

- Normal/Healthy gives the germination rate. This is the percentage of seedlings that are healthy enough that they are likely to survive to adulthood. AOSA criteria for what makes a normal (healthy) seedling include having at least 50% of cotyledon tissue attached and free of decay, no deep lesions on the shoot, and healthy and sufficiently developed roots.
- Abnormal seeds is the percentage of seeds that sprouted but produced unhealthy seedlings (as defined by AOSA rules). Technically these are not expected to survive to maturity. However we often observe slightly higher germination in the greenhouse than in germ tests, which may be accounted by seeds getting better conditions in the greenhouse and by the strictness of AOSA rules.
- Dead seeds is the percentage of seeds that rotted during the test period.
- Unknown is the percentage of seeds that neither sprouted nor rotted during the test. These seeds may be dormant, but SSE uses the term unknown because in many crop types we don’t do any follow-up testing that would show whether or not the seeds are dormant.

\[
\text{Germination \%} = \left( \frac{\text{Healthy seedlings}}{\text{Total seeds}} \right) \times 100
\]
Thank You!