

IFAFS Cheatgrass Control & Range Restoration Project

Sagebrush Seed Handling Protocol

1. Collection

Prior to each seeding, collect the sagebrush inflorescences near the study sites. In order to improve the quality of the collection, first check if the seeds are filled. Label the bags with the corresponding site of origin and allow the plant material to air-dry

Estimated date of collection: 2nd-3rd week of November (NV)

2. Cleaning

Once the material is air-dried, you need to pass it through two sets of sieves. First, use a coarse-mesh sieve (roughly 5mm or 0.25 in. diameter opening) to remove the bulk of the stems, leaves and other trash. Note that you may need to sieve the material twice through this size mesh. Next, use a 2mm mesh (standard no. 10 soil sieve) to further remove smaller stems and woody debris.

Note: the sieving process needs to be done gently so that seed coats are not broken (i.e., separate the material by hand and do not grind it against the metallic mesh).

3. Storage

Store the clean seeds in paper bags to avoid moisture accumulation and place them under cool conditions (2-5°C) until use.

4. Purity and viability test

Seed viability will be tested using the Tetrazolium Procedure of Association of Official Seed Analysts (see TZ test under <http://www.ag.unr.edu/ifafs/Databases.htm>). We will be sending the seeds to the Utah State Seed Lab in SLC, UT.

In order to have representative samples, careful procedures should be followed. First obtain composite samples by mixing together subsamples from the same site. Then prepare **two samples per site** (4 samples per state) to send for testing. Each sample should be approximately 10–12 grams.

Clearly specify what you want done (testing procedure). In this case, **specify that PURITY and TZ-testing should be done in all samples.**

Estimated cost:

Purity testing - \$ 10 per sample

TZ-testing (for viability) - \$ 20 per sample

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