

IFAFS Cheatgrass Control & Range Restoration Project

Cheatgrass Seed Handling Protocol

1. Collection

Prior to each seeding, collect the cheatgrass seed heads near the study sites. Carefully avoid collecting other species, especially weeds (e.g. mustards) that may be present at the site. Collectors should also try to avoid seed heads that are infected with smut fungus since the spores can infect the whole bag of seeds. Label the bags with the corresponding site of origin. Once collected, air-dry the collected plant material in a ventilated dry room.

Estimated date of collection: mid-late June (NV)

2. Cleaning

The initial step when cleaning the seeds consists of removing the seeds from the seed heads. Gently break the seed heads with you hand to loose the seeds and rub them on a corrugated rubber surface or a fine screen. Then, carefully pass the material trough a course screen (quarter to half inch opening) and discard the litter. It is important that the sieving process is done gently to avoid damaging the seeds (i.e., separate the material by hand and do not grind it against the metallic mesh).

The next step is to pass the material trough the seed blower to remove fine material. Regulate airflow so no viable seeds are lost. Collect the clean seeds.

3. Storage

Store the clean seeds in paper bags to avoid moisture accumulation and place them under dry lab conditions 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 of 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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