

## SOIL SEED-BANK TEST

Detecting, identifying and quantifying seed in soil samples  
A new test at the Oregon State University Seed Laboratory

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Fig. 1.

### The importance of Soil Seed-Bank Test

Farmers, agronomists, weed and soil scientists, conservation programs and others often want to know what kind of seeds may be present in a particular soil to prevent potential problems in today's quality conscious markets. The soil seed-bank test can effectively identify noxious weed seed or any other seeds in a soil sample.

Finding seeds in a soil sample used to be a challenge (Fig. 1). Now, Oregon State University Seed Laboratory has developed an effective test to detect, identify, and test the viability of seeds present in soil.

### Test Procedure

**Washing and Filtration.** The soil sample is washed and filtered to eliminate all the fine clay particles that cover the seeds. Appropriate sieve sizes are used in order to retain seeds as small as *Juncus* spp.

**Screening.** The remaining particles are dried and screened into desired particle sizes in preparation for examination.

**Examination and identification:** All particles are inspected using high quality optic Ergovision system (Figs 2).

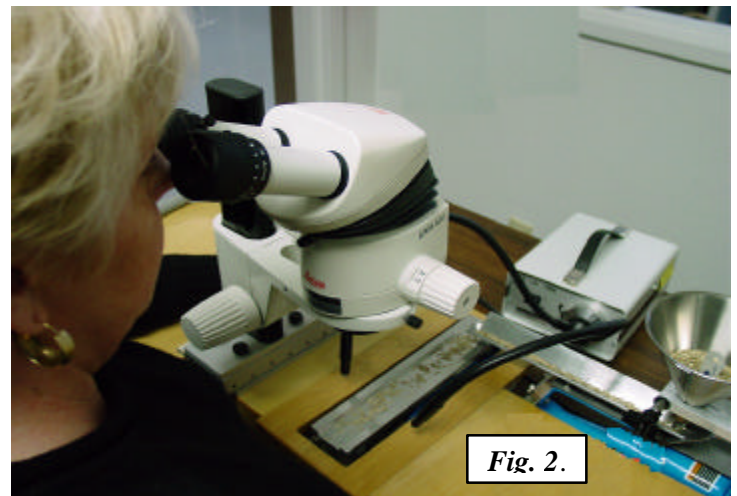


Fig. 2.

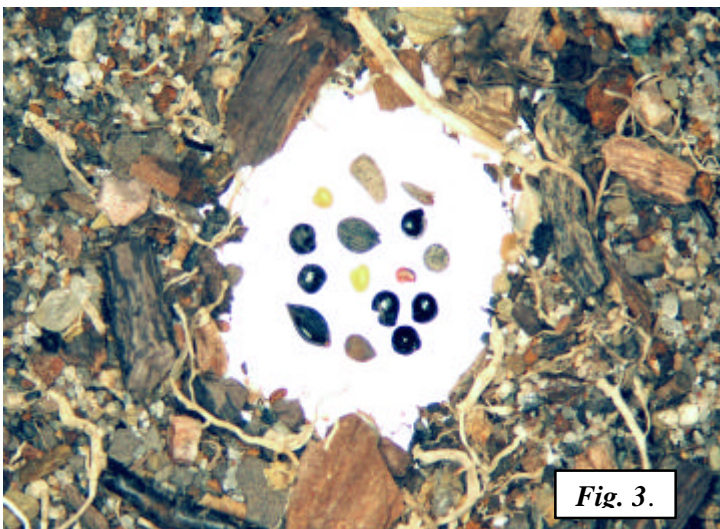


Fig. 3.

### Test Results

The new procedure, the microscopic system and the analysts' experience makes it possible to find, identify and quantify any seed in a soil sample effectively (Fig. 3). Viability of seeds found in a soil sample can be determined by a TZ or germination test if desired.

#### How to request this test?

The customer needs to submit a representative sample (dry or wet soil) in a plastic bag. A minimum of one pound sample should be submitted, out of which 100g is used for the test. A larger sample can be tested for additional fees. Service is available from Jan to June. From July to Dec., call for availability.