

Handling and Storage of Seed

By: Brandon Carr, Soil Conservationist



Anyone can collect and store seed without an expensive storage facility. Proper seed collection and storage is the key to ensure viable seed in the future. The length of time seed can be stored depends on several factors such as the type of species being stored, environmental conditions which the seed was produced, collection and preparation, and storage. With a little preparation, some seed has the ability to last several years.

The first step is seed collection. Mature seed should be harvested from the plants before it shatters and is exposed to weather. Researching a particular specie will provide an understanding of seed maturation and growth and identification of the plant. Several trips to a collection site may be necessary in order to obtain enough seed for the collection. Temperature and precipitation will influence seed maturity as well. Extreme heat and dry conditions may cause plants to produce seed earlier than a wet cool season. Collect a good representative sample of seed from a population, but avoid gathering all the seed. Some seed should be left so that the population can reseed itself. Mature seed is usually dark in color, firm and dry. Immature seed is often green, soft and moist and will not normally germinate. Seed should be kept in a paper bag or envelope. Never store seed in a plastic bag or air tight container. The moisture trapped will cause the seed to mold and ruin the sample. The bag should always be kept in a dry place.

Once the collection is finished, it needs to be processed for storage. The first step is to dry the seed. The collection can be laid out on a table and air dried for one to three days depending on the humidity. Leaves, stems and any other trash should be removed from the collection. This will help the seed dry quicker and reduce the volume of seed being stored. Clean samples will also reduce the chance of damage to the seed by disease and insects. Insects can damage seed before or during storage. Dusting with a mild insecticide can eliminate insects before seed storage. Another method is to place the seed in a freezer for a brief period. Seed should be left long enough to kill live insects as well as any eggs that may be deposited on the sample.

The final step is the actual storage of the seed collection. Proper storage is essential to maintaining viability of the seed. The most critical step is keeping the seed at a constant temperature and humidity. The ideal storage condition is a temperature below 50 degrees Fahrenheit and less than 50 percent humidity. There are many different storage containers that can be used for storing seed with each one having advantages and disadvantages. A paper bag or envelope works well for seed that will be stored for a short time. Place bag in a refrigerator or cool, dry area with a small amount of desiccant such as silica gel. This will keep the seed dry and cool until it is ready to be planted. The disadvantage with using paper containers is that humidity changes from circulating air can eventually damage the seed. Another example is a sealed container. Some common items are used baby food jars, canning jars, zip-lock storage bags, or plastic containers with snap-on lids. These containers prevent

circulating air from entering the container. A small amount of desiccant should also be added to these containers to prevent moisture. These containers can provide longer storage by preventing humidity changes in the seed. The main disadvantage to these containers is that seed is not completely dried before sealing and moisture trapped inside the container ruins the seed. Seed dried at 100 degrees F for six hours will bring the moisture level down to 8% which will increase the storage life. The collected seed should also be labeled with basic information such as species name, date collected, and location of the collection.

Following these simple steps will increase the chance of a successful planting when seed is used. Even with good seed collection, processing, and storage, some seed has a short longevity. Other species can survive several years in storage.