

NEPCoP SEED COLLECTION GUIDELINES – Native Plant Trust Seed Bank

Thank you for your time and dedication to collect seed for the Native Plant Trust Seed Bank. The Native Plant Trust collects and stores seed for plant conservation to ensure the preservation of genetic material in case of a catastrophic population loss, future population augmentation, species reintroduction, biological studies and other future uses. Our goals are to assure that seed collected for seed banking does not damage any populations and is of optimum physical and genetic quality.

The success of any seed collection depends on the collector's knowledge of the species, timing, and luck. Some manuals briefly describe the size or color of the seed, but experience with a species is the best guide.

Recommended: Seeds and Fruits of Plants of Eastern Canada and the Northeastern United States, Montgomery, F. H., 1977, University of Toronto Press, Toronto. This book is a photographic compendium of many types of seeds.

Quick Guide to Determine Seed Ripeness

- Timing is the most important factor to seed collection. Seed collection may take two or more site visits to identify the plant in flower and then collect ripe seed. Consult previous field forms to see if comments on seed ripeness or mature fruit were made. Use these comments as a guide and adjust the times according to the vagaries of the season. Spring may be late or early in a given year, changing the period of seed collection.
- In general, seeds turn from green or white when unripe to brown when ripe, but the color of ripe seed varies widely between species.
- Seed is often ripe when it is being dispersed by the plant. Capsules will usually split or open, but some seed will be mature even before the capsule is split. If you shake a seed head and seeds fall out, or seeds come off easily when gently pulled or rubbed, the seed is probably ripe. For plants with fleshy fruits, the fruits should feel a bit soft when squeezed or should fall off with a gentle pull.
- Check seed to see if the embryo is filled. Seed can be cut open or pinched to check hardness.

Seed Collection Methods

The purpose of the collection is to obtain as genetically complete a sample of the occurrence as possible. Please read the following information carefully before going into the field!

- **Mandatory** – All seed collections must be accompanied by appropriate documentation (field forms) to meet regulations of each New England State.
 - Please take a State Rare Plant Reporting Form, NEPCoP Management Survey form, NEPCoP Seed Collection Sheet, any associated permits and envelopes into the field (provided). Please fill out the survey forms to note the population status before seed collection including total number of individuals and their status (reproductive, non-reproductive, or seedling).
- To assure that our collections do not harm wild populations, collect no more than 10% of available seed, in 10% of years. If there are sufficient seed bearing individuals, be sure to randomize collection (not just the tallest, biggest or prettiest plants). Native Plant Trust will manage scheduling of seed collection efforts to target seed collections. If a successful seed collection is obtained, returning to the site will be scheduled to conform to 10% of years collected from (e.g.: 10-years of a 100-year period).
- Collect from as many individuals as possible up to 50 individuals without damaging the population. Collect up to 10% of seed available making sure to record the total number of individuals from which you have collected. In order to capture the maximum amount of genetic variation within a population, you should collect from 30 to 50 individuals (CPC). The National Seed Science Laboratory recommends 3000 seeds as the optimum number for collection, but in many situations this figure will be difficult to achieve.
- Use one envelope per individual plant up to the first 50 plants collected from in a population. If seed is available from more than 50 individuals, seed from individual 51+ can be placed together in one envelope. If the collection is to be used for reintroduction in the future, we would like to have as many distinct individuals as possible represented.
- Seed should be collected in paper bags or envelopes to allow for air circulation, but be sure that the ends of the bags are properly sealed or the seed will be lost in transit. Plastic bags can be used for collection of moist fruits.

Please mail seeds or fruits within 1-3 days of collection along with the NEPCoP Seed Collection Data Sheet.

**Seed Bank Technician
128 North St
Whately, MA 01373**

If you have any questions please contact:

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