

Notes on Seed Collection and Seed Saving

- **Seed Collection**

- Recommended Equipment
 - Work gloves
 - Pruners
 - Large plastic, unbreakable combs
 - Durable, light weight tubs/trays
 - Bags (Brown paper or Cloth; want bags to be breathable)
 - Milk Jug Belt (see video link)
- When do you know when a flowering plant is ready to have its seed collected?
 - If the flower has a wilted, dry appearance, is loose, and the stalk is brown, the seeds are ready for harvest
 - If the flower has a slightly colored appearance, is tight and firm, and the stalk still has green to it, the seeds are not ready for harvest
 - It is not recommended to harvest seed heads early, as they may not be fully developed and might fail to grow when planted
- Hand Collection Techniques
 - For plants with a distinct flowered end, cut the flower and top part of the stalk (about 2 inches or slightly more of stalk should be good)
 - For plants with an explosive pod, bag them prior to seed dispersal
 - For grasses, use a plastic comb to directly remove the seeds from the inflorescence
 - For small, finer inflorescences like Little Blue Stem, use the small teeth on the comb
 - For large, coarser inflorescences like Big Bluestem and Indian Grass, use the large teeth on the comb
 - It is helpful to have a container, netting, or other tool to catch the seed heads you cut off
 - It is recommended that you keep seeds from the same species together to avoid confusion and for proper over-winter storage
- General Collection Information
 - Do not collect from early established plants; you want to give them a few years (3-5 years) to establish their seed banks in the soil
 - How much should you collect? 20-50% seems to be recommended, making sure you don't overharvest your meadows

- Spread your collecting out to not overharvest one particular location in the meadow
- When harvesting over the course of several years, avoid harvesting the same area twice in a row
- If collecting for genetic diversity, try to harvest from 20-30 well dispersed individuals from the locality, and avoid targeting plants with novelty appearances (goal is diversity of genes, not selecting for a novelty look)
 - This is highly recommended to ensure long-term establishment of planted species
- **Seed Saving**
 - Recommended Equipment
 - Brown paper bag (short-term storage)
 - Ziploc bag or mason jar (long-term storage)
 - Light colored tray
 - Light colored paper
 - Cardboard Cutout “Work Area”
 - Toothpicks/Tweezers
 - Cleaning and Sorting Seeds Out
 - Make sure the seed heads you’ve brought in are dried up enough and that the seeds will fall off easily
 - For example, when the ray petals have fallen off a Black-Eyed Susan seed head, it is ready to go
 - Gently break open the seed head from the sides and let the seed fall off
 - You will be left with chaff and seed; chaff is unwanted leftovers and you can discard it
 - It is important to be able to identify what the actual seeds look like; you don’t want to discard them by accident!
 - Chaff generally has a flaky/brittle appearance and texture with two colors, while the seed usually has a single coloration and uniform appearance
 - If you pour out your seed and chaff onto paper, you can pour the collected seeds out into your storage container of choice
 - Seed Storage
 - Always make sure seeds are completely dried up before being put away for storage
 - Any excess moisture may cause the seed to rot or for mold to grow
 - It is not recommended to store seeds in plastic, Ziploc bags as a primary means of storage, due to moisture issues

- Brown paper bags or cloth bags can be used for seed storage; mason jars or empty baby jars are also very good options
 - Make sure all jars are washed and completely dry before storing seeds in them!
- Seeds need to be stored in a dark, cool, dry place
 - It is not recommended to store seeds in the freezer as this may damage them
- If you are using mason jars to store seed, it is highly recommend to put a silica packet into the jar with the seeds
 - Can also use cat litter (translucent crystal litter only); wrap the litter in a coffee filter or tissue paper and staple the ends shut
 - Creates a budget version of a silica packet
- Make sure everything is labelled! This is very important!!!
- Stratification
 - It is important to keep in mind that some seeds require their dormancy to be broken by a change in temperature and or humidity
 - Milkweed is an example of a plant that requires a cold stratification
 - These plants have a strong seed coating to prevent an early warm spell from triggering their growth, followed by being killed off by returning cold weather
 - The easiest method is to use soaking and paper towels (from AmericanMeadows.com)
 - Soak seeds for 1-2 hours
 - Use a paper towel or coffee filter to drain the water
 - Spread seeds out in a single layer on a paper towel
 - Wrap a dry paper towel around the damp paper towel to help keep things moist, but not too wet
 - Place in a Ziploc bag and seal
 - Label the variety and date clearly on the bag
 - Place in the refrigerator for 1 month before planting; if seedlings start to sprout in the bag or fridge, remove them immediately
 - Plant either in ground or in pots until they are supposed to be planted outdoors
- **Planting Seeds**
 - It is recommended to go heavier on pollinating plants and lighter on grasses
 - This provides easier pathways for animals to move through the meadow
 - Mix your seed with sand to avoid drift when laying down seed
 - When planting in the spring, you must wait until temperatures will no longer reach a point where frost can occur
 - First Frost Date for Boston, MA is **November 8th**

- Last Spring Frost Date for Boston, MA is **April 6th**
- Want soil temperatures to be a minimum of 55 °F before planting for optimal growth
- Generally want 3-9 lbs of live, cleaned flower seed per acre, with an additional 4-8 lbs of native grass seed

Helpful Links/Sources

- Basics of Seed Collecting: <https://www.youtube.com/watch?v=7W3W4DW4TB0>
- Seed Collecting Brochure (Iowa):
https://ionxchange.com/content/images/Seed_Collecting_Brochure.pdf
- Hand Harvesting Wildflower Seeds <https://www.youtube.com/watch?v=Gmku3gHSILs>
- Wildflower Seed Planting Instructions:
<https://www.americanmeadows.com/wildflower-seed-planting-instructions>
- Collecting and Using Your Own Wildflower Seed to Expand Pollinator Habitat:
http://xerces.org/sites/default/files/2018-05/16-026_01_XercesSoc_Collecting%2BUsing-Your-Own-Wildflower-Seed_web.pdf
- Seed Processing/ID Guide: <http://www.hazmac.biz/Seed%20Processing/2009S.pdf>