



Native Tree Seed Observation

Spring is the perfect time to observe differences between different types of tree seeds and perhaps even have the joyful experience of seeing those seeds germinate into young seedlings. Native trees, in particular, play an important role in our ecosystem. They serve as food sources for a tremendous number of insect species and, in turn, those insects are a food source for a variety of birds and other wildlife. This simple activity can be done in a variety of ways and is intended to spark an interest in plant biology and ecology in all ages.

Materials

- tree seeds (see step 1 for more information)
- paper egg carton
- potting mix (any product that is recommended for seed-starting should work well)
- large plastic baggie
- leak-proof tray to hold planted egg cartons
- newspaper or paper bag for easy workspace cleanup (optional)
- camera (optional)
- notebook and pencil (optional)
- a printed copy of "Native Trees of Maine" by the Maine Forest Service (optional)

Instructions

1. In April and early May, collect tree seeds; preferably from the leaf litter in an unmanaged wooded area. Oak and maple seeds are easy ones to try, but be adventurous too! Be sure to only collect small amounts of seeds in order to have minimal environmental impact. Seeds collected from below trees in a home landscape are fine, too, but may not be as likely to be a species native* to Maine. While this project can be done with just one or two types of seeds, more seed variety will offer you greater opportunities to make different observations and learn about different species.
2. Make observations as you collect. See suggestions below.
3. Store seeds in a cool, dark, dry location (refrigerator works well) until planting time (preferably within 3-5 days of when they were collected).
4. Partially fill egg cartons with pre-moistened potting mix.

5. Place seeds on top of the potting mix, cover with a layer of potting mix the same depth as the thickness of the seed. When fully planted, the potting mix should be loosely filled and level with the top of the egg carton.
6. Label the trays with the planting date and type of seed. If unsure of the seed type, draw an outline of the seed (to scale) on the label and, ideally, print a picture of the seed to go with the tray.
7. Water thoroughly and cover with a plastic baggie to maintain moisture.
8. Newly-seeded trays should be kept moist and preferably indoors to make it easier to observe. If left outdoors, but sure to protect the egg cartons from rodent damage.
9. Once seedlings begin to emerge, prepare to transplant into slightly larger containers, such as toilet paper rolls lined with newspaper or transplant directly into a site outdoors.

Discussion

- Note the shape, texture and color of seeds and the leaves found on the ground nearby. Photograph or draw the seeds with the leaves or collect a few leaves for future observations at home in order to assist with plant identification, if needed.
- Did the leaves have holes in them? If you know the tree species, consider looking up what [types of insects that plant might support](#). For example, oak (*Quercus sp*) is host to 431 different species of moths and butterflies in central Maine. In many cases, seeing holes in leaves is a good thing. It means your tree is supporting insect biodiversity and, in turn, increasing food supply for birds feeding on those insects.
- Look for the nearby possible "parent" tree(s) and photograph, draw or take notes about bark texture, height, crown structure and whether there are any persistent fruit or leaves hanging on the stems. Bud shape and how they're arranged on the stem are also important identification characteristics.
- Knowing the identification of the tree isn't essential. In fact, it's helpful for youth to understand that parents are learners too. Try [using a key to identify](#) the trees.
- You are not expected to experience a 100% germination rate when doing this activity. Many factors can impact the viability of seeds and some species are trickier to germinate than others. Hopefully you'll have the pleasure of seeing at least a few baby plants develop. Even one or two seedlings can be very exciting to observe.

Learn more:

- maine.gov/dacf/mfs/publications/handbooks_guides/forest_trees/individual_spp_index.html
- nwf.org/NativePlantFinder/
- wildseedproject.net/how-to-grow-natives-from-seed/

* Non-native species can also be found in unmanaged wooded areas.

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