

Good Intentions, Harmful Impact: Wildflower Seed

Increasing plant diversity in a landscape for pollinators and other wildlife is an important initiative. Wildflower seed packs are often used to support these efforts by well-intentioned individuals. Unfortunately, many are unaware that these seed packs often cause serious problems for native species and ecosystems.

Mixed wildflower seed packs often contain invasive species. These species are exotic, spread quickly, and have harmful impacts on our environment, economy, or social well-being. These plants are hard to get rid of once they have established and require more time/energy/money to eradicate than most are able to invest. Whatever short-term benefits they provide to a system are always overshadowed by the negative impact they have.



Purple Loosestrife

An example of an invasive species that was once commonly found in wildflower seed packs is Purple Loosestrife, *Lythrum salicaria*. It is admired by people and pollinators alike for its large spikes of many small purple-pinkish flowers. Despite its beauty, it has a high reproductive capacity, and one mature plant can produce up to 2.7 million seeds in a single growing season. The seeds are highly viable and can travel by wind, water, on animals, and on our clothing and footwear. It spreads quickly, attracting pollinators away from our native species that require pollination. Once escaped into wetlands, it alters water levels and chemistry. This can result in the reduced success of tadpole development as well as a reduction in habitat quality to waterfowl and fish. This plant is now regulated by several provinces and states, including PEI, and is now much less likely to be found in mixes. Read more about our provinces regulations in the PEI Weed Control Act.

One of the biggest problems with mixed wildflower seed packs is many do not have a list of what species they contain. If the contents are listed, they are often listed by a common name instead of a more specific Latin name. Others may list the species, but studies have found many to be inaccurate. One such study grew 19 seed packs from different brand, all contained invasives and they found 30 -100% of the plants germinated to be invasive. There are claims of “Canada Safe” seed packs, however, the PEIISC still advises against them. There are few species with natural distributions that overlap over such a large geographical range, meaning they may be native in part of Canada but not locally, and so the contents may become a problem in some natural systems. In fact, even wildflower seed mixes produced locally may contain invasives and, if so, should be avoided.

Users of these mixed seed packs may also find themselves disappointed with the low success rate of germination. Seeds each require specific growing conditions to germinate, lumping so many species together may result in only the “weeds” emerging as they have the least specific growing requirements (which makes invasives so successful and hard to get rid of).

Recent trends in planting techniques include using “seed bombs”, or gift/greeting cards made of wildflower seed paper. If you are interested in these products, we advise you to create your own using

native seed you have sourced sustainably or purchased individually by species in which you are confident will be safe to plant locally. If received as a gift, we encourage you only to plant them indoors. When finished with any indoor-grown plants, discard them in the waste, and never the compost. One of the main pathways that invasive species are introduced to natural systems is by escaping home gardens and/or garden/yard waste dumping.

When planning your garden this year:

- Plant purposefully, do your research, and avoid wildflower seed mixes.
- Support local vendors who sell native species.
- Consult with us on any questions you may have relating to species suitability. The PEIISC website has a list that indicates which species we know to be invasive species to PEI; the list is not exhaustive, as identifying invasive traits is an ongoing science.
- Connect with your local watershed group to understand what initiatives may be ongoing and express your interest in keeping up to date with their activities.
- *Recommended Reading:* Pollinator Partnership Canada published a guide for gardeners, farmers, and land managers on selecting plants for pollinators for the PEI ecoregion.
 - <https://pollinatorpartnership.ca/assets/generalFiles/PrinceEdw.Isl.2017.pdf>
- *Recommended Tool:* Pollinator Partnership Canada's plant selection tool "*Find Your Roots*" to make it easier to create customized plant lists for your region and requirements.
 - <https://pollinatorpartnership.ca/en/find-your-roots>



Invasive purple loosestrife, *Lythrum salicaria*, in PEI.

Collect Native Seed to Make your Own Seed Cards & Bombs

Make your own seed cards, and seed bombs by using only native species. Collecting seed is a fun pastime and is a great way to connect with nature! Mark interesting native plants through the summer, as this is when they are most identifiable, and check back at the end of their growing season to collect seed. For best results, use species that have similar growing conditions to maximize success. Ensure when you gift your final product that you list the species scientific name on the packaging.

Collect seed responsibly:

- Do not disturb or collect from species that are imperiled (S2 or S1). View conservation status rankings listed by the Atlantic Canadian Conservation Data Center before gathering if you are unsure.
 - <http://www.accdc.com/en/ranks.html>
- Do not collect from small populations of plants. If a population is secure, the general rule is to leave populations with 7 or less plants alone.
- Leave enough behind for other wildlife and for the plant to propagate future plants.
- Avoid trampling plants.
- Clean your cutting tool between locations.
- Do not trespass.



Native species suggestions for seed cards:

- common winterberry, *Ilex verticillate* (shrub – showy bright red fruit)
- common bonset, *Eupatorium perfoliatum* (white flower)
- joe-pye weed, *Eutrochium maculatum* (purplish/pink flower)



Native Species suggestions for seed bombs:

- seaside goldenrod, *Solidago sempervirens* (yellow flower)
- hairy flat-top white aster, *Doellingeria umbellata* (white flower)
- staghorn sumac, *Rhus typhina* (tree – tropical looking, showy red fruit makes lemon flavored spices)
- hawthorn, *Crataegus spp.* (shrub – good natural fence, edible fruit)
- northern bayberry, *Myrica pensylvanica* (shrub – smells great, make candle wax from fruit)
- sweet gale, *Myrica gale* (shrub – smells great)
- + species mentioned for seed cards



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The PEIISC wishes you a happy New Year and an upcoming growing season full of lush gardens and diverse landscapes!

