**The Basics**

Native plant seeds prefer to be treated as naturally as possible and are generally not adapted to being harvested, dried and stored as we do with our garden seeds. Observing the natural process and seasons of seed dispersal, along with soil and habitat preferences for each species, and then replicating these natural processes and conditions, as closely as possible, encourages the highest germination rates.

**Field Collected Seed**

In most cases, it is best to use freshly harvested seed and sow as soon as possible. Seed can be harvested from many natural areas. Make sure to get permission from property owners and only harvest what you need (usually very little). Fresh seed can be held in a plastic bag in the refrigerator for several weeks. Seeds that tend to be air dried on the plant by the end of summer can be collected, dried naturally in paper bags and put in cool storage for a longer period if needed.

Field collected seed should always be labeled with the species name, the date collected and where it was collected. Note that it is best to plant seed that is native to the watershed being restored thus helping to maintain genetic diversity.

**Germination**

Most native seeds need a period of ‘cold stratification’ in order to break dormancy and germinate. This can be done by storing in a refrigerator or by simply planting the seed in the fall and letting the seed over-winter outdoors in flats. Covering seed flats with shredded leaves of the parent plant offers additional protection from the elements and duplicates natural ‘mulching’. Partly burying flats in soil or bark can help to further stabilize soil temperature.

Some native seeds, such as berries and hips depend on wildlife to open fleshy seed cases. Therefore these seeds need to be macerated (softened and separated) and the pulp separated from the seed. This is most easily done in a bowl of water, which helps to separate pulp from seed. If fruits have dried they will need to be soaked before macerating.

Be patient, native seeds often germinate sporadically over a long period of time in spring, one of their survival adaptations. Once seeds have germinated make sure flats have plenty of air circulation and remain moist while avoiding over saturation. Provide sun/shade conditions that replicate the needs of the particular species. Transplant into 4” pots or directly into the habitat area once seedlings have at least 2 sets of mature leaves.

### Common Native Seeds

- **Wild rose species**
- **Vine maple**
- **Oregon grape**
- **Sedge species**
- **Oceanspray**
- **Native grass species**
- **Goldenrod**

*Photos by Heidi Bohan*
Where to Plant Seeds?

4” pots are best for seeds with high germination rates. Pots can be sown with seeds, and extra seedlings thinned after germination. Seedlings from flats or the field can also be transplanted into 4” pots.

Flats are useful for all seeds especially those with low germination rates. They can be sown with seed in rows, or scattered over the entire surface. After the seeds germinate and grow they can be transplanted into larger containers (woody plants) or directly into the project (herbaceous plants).

Direct sowing into the habitat area is best for herbaceous species with high germination rates. Sow in small labeled areas in order to distinguish from non native or other plant species. This can be an easy and effective way to enhance existing plantings.
How to Plant Seed

Fill the containers with a potting soil mix and gently drop the container from several inches to settle the potting soil (do not compress with hands). Containers should be filled to about 1/4" below the rim.

Plant seed to the depth specified for the species (see page 4). If uncertain, plant to a depth equal to twice the seed size. Use a stick or pencil tip to create holes or planting rows. Use fingers to place seeds. Plant thickly and plan to thin or transplant if necessary. Cover loosely with soil and gently pat in place.

Label immediately with plant name, date, and student names (optional).

Caring for the Flats

Cover with seed cloth, also called ‘row cover’ which is widely available at garden centers. This is particularly important for the success of native plant seeds which require long periods of cold stratification, leaving them exposed to animals and weather temperature extremes for long periods.

Mulch with very finely shredded leaves to give added protection for larger seeds, such as maple and Oregon ash, and to help retain moisture.

Place flats against a south (best), east or west facing wall or rock, ideally with shrubs or tree cover to provide protection from winds and sun.

Embed flats in a ‘bed’ of wood chips, soil or mulch which will help improve germination rates by stabilizing soil temperature.

Bird cloth suspended over the flats can add one more level of protection from birds, animals and people.

Water flats if they become dry. However, normal rainfall should provide enough moisture for the flats through winter. If holding the flats through summer, it may be advisable to place flats in a partly shady spot.
<table>
<thead>
<tr>
<th>Suggested species</th>
<th>Collection</th>
<th>Sowing preference</th>
<th>Information</th>
</tr>
</thead>
</table>
| **Berries**
*Mahonia, Vaccinium, Cornus, Amelanchier, Sambucus, Gaultheria, etc.*

Harvest ripe or dried berries from plant. Separate seeds from pulp as much as possible (soak if necessary). Sow immediately, or refrigerate for several weeks, or dry and store.

- **Sow late summer to winter.** Plant seeds thickly in flats, cover seeds twice as deep as their size. Mulch lightly with shredded leaf.
- **Slow growing but often best propagation method for species.** Germination rates vary. Transplant into 4” pots when true leaves appear.

| **Douglas or Oregon Iris**
*Iris douglasiana, Iris tenax***

Shake seeds out of pods into bags. Sow immediately or dry and store.

- **Sow fall through winter in flats.** Plant thickly. Keep moist in sun or shade.
- **Moderate germination rates.** Transplant in one year.

| **Yarrow**
*Achillea millefolium***

Harvest seedheads in fall. Separate the seeds by rubbing and blowing away the chaff.

- **Sow early spring, scatter seeds thickly on loose potting soil, and cover very lightly with soil or compost.**
- **Easy germination.** Transplant in late spring or early summer.

| **Pearly Everlasting**
*Anaphalis margaritacea***

Dry store in a refrigerator or harvest fresh in late winter and plant immediately.

- **Sow fall and over-winter, or plant in spring.** Plant seeds thickly on pots of potting soil, and cover lightly with compost or shredded leaves.
- **Easy to germinate. Fast growth.** Germinates in spring.

| **Aster species**

Gather the seedheads in late summer before the seeds have scattered. Dry and store in paper bags in the refrigerator or plant immediately.

- **Sow fall and over-winter, or plant in spring.** Plant seeds thickly on top of loose potting soil, and cover lightly with compost or shredded leaves.
- **Moderate germination rates if fertile seed.**

| **Goat’sbeard**
*Aruncus dioicus***

Gather seed from many plants as some plants are infertile males. Sow immediately or dry seed clusters and refrigerate.

- **Sow fall to early spring in flats, pots or direct sow.** Scatter seed in flats on potting soil, fall to late winter; or direct sow once soil is warm.
- **Cover with light layer of leaf mulch. Moderate germination rates if fertile seed.**

| **Goldenrod**
*Solidago canadensis***

Gather clusters in fall. Sow immediately or dry and store.

- **Sow fall to spring in flats, pots or direct sow.** Surface sow fine seed on general mix.
- **Easy to germinate. Fast growth.** Germinates in 2-3 weeks at 55-70 degrees F.

| **Grass species**
*Deschampsia cespitosa; Festuca idahoensis or F. romeri; other native species***

Gather seed in late summer and fall. Dry and store in cool place.

- **Sow fall to spring in flats, pots or direct sow; cold period not needed but OK.**
- **Easy germination.** Fast growth. Easy to transplant new seedlings directly to site.

| **Oceanspray**
*Holodiscus discolor***

Collect seed in fall from many plants, viable seed will be less than 10%. Sow immediately or dry and store in refrigerator.

- **Sow in fall to over-winter.** Scatter seeds generously in flats on planting mix. Gently put into soil. Cover with a light dusting of potting soil.
- **Mulch with very light layer of shredded leaves.** Germination will take place over spring and summer.

| **Red Columbine**
*Aquilegia formosa***

Collect seed by shaking pods into a bag, or purchase commercially. Sow immediately or dry and store.

- **Sow fall to late winter.** Over-winter or pre-chill for 3 days. Scatter evenly in flats, or direct sow. Cover with thin layer of soil. Keep moist.
- **Grows well from seed.**

| **Sedge species**
*Carex obtupta; Carex volpinoides; other native species***

Gather seed heads in fall, and separate seeds. Sow immediately, or dry and refrigerate.

- **Fall to winter, sow seeds 1/8” deep in flats of potting mix, or containers.** Keep wet through winter.
- **Easy to germinate.** Will germinate in early spring. Fast growth.

| **Maples**
*Acer circinatum
Acer macrophyllum***

Collect winged seeds in fall. Separate ‘helicopters’ into separate winged seeds.

- **Plant seeds thickly in rows by ‘nosing’ the winged seed into planting mix about 3/4”. Some of the wing will still be showing.** Cover with shredded maple leaves or leaf mulch.
- **Germinates in spring.** Transplant in one year.

| **Wild Rose**
*Rosa nootkana
Rosa gymnogarum***

Collect hips in fall to winter. Macerate and separate seeds in water. Sow immediately or dry and refrigerate.

- **Separate seed from pulp. Prechill 6-8 weeks or over-winter out of doors.** Sow seed in general seed mix and cover to depth of seed.
- **Germinates slowly in spring.** Transplant in late fall.