WILD HARVESTING OF NATIVE SEED

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About Blazing Star Wildflower Seed Company
Wild Harvest vs Nursery
Knowing the Species

- How common is the species?
- Identification
  - vegetative, flowering, and seed stages
- Life Cycle
  - Annual, biennial, perennial
- Propagation Method
  - Seeds, rhizomes, stolons, bulblets
Knowing the Species

- Approximate flowering and seed set cycle
- Habitat types
- Slope location
- Sensitivity of the species to harvesting
- Flowering triggers
- Response to site management
- Proper collection and storage techniques
## Table 1: Selected seed harvest dates - average of Alberta & Manitoba data. Ripening times generally are earlier with increasing altitude and latitude.

<table>
<thead>
<tr>
<th>SCIENTIFIC NAME</th>
<th>COMMON NAME</th>
<th>MAY</th>
<th>JUNE</th>
<th>JULY</th>
<th>AUGUST</th>
<th>SEPTEMBER</th>
<th>OCTOBER</th>
<th>NOVEMBER</th>
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<tbody>
<tr>
<td><em>Agropyron spp.</em></td>
<td>wheat grasses</td>
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<td><em>Andropogon gerardii</em></td>
<td>big bluestem</td>
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<td><em>Andropogon scoparius</em></td>
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<tr>
<td><em>Bouteloua gracilis</em></td>
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<td><em>Bromus inermis</em></td>
<td>fringed bristlegrass</td>
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<tr>
<td><em>Calamagrostis montana</em></td>
<td>plains reed grass</td>
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<td><em>Calamovilla longifolia</em></td>
<td>sand reed grass</td>
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<td><em>Carex spp.</em></td>
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<td><em>Elymus canadensis</em></td>
<td>Canada wild rye</td>
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<td><em>Festuca spp.</em></td>
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<td><em>Helmintochloa heteroecous</em></td>
<td>Hooker's fescue</td>
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<td><em>Hesperostipa comata</em></td>
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<td><em>Koeleria cristata</em></td>
<td>June grass</td>
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<td><em>Koeleria gracilis</em></td>
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<td><em>Muhlenbergia spp.</em></td>
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<td><em>Oryzopsis hymenoides</em></td>
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<td><em>Panicum virgatum</em></td>
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<td><em>Poa spp.</em></td>
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<td><em>Sorghastrum nutans</em></td>
<td>Indiana grass</td>
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<td><em>Sporobolus spp.</em></td>
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<td><em>Stipa spp.</em></td>
<td>needle/spike grasses</td>
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<td><em>Achillea millefolium</em></td>
<td>yarrow</td>
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<td><em>Allium textile</em></td>
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<td>leadplant</td>
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<td><em>Anemone cylindrica</em></td>
<td>long-fruited anemone</td>
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<td><em>Anemone tetraphylla</em></td>
<td>cut-leaved anemone</td>
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<td><em>Anemone patens</em></td>
<td>prairie crocus</td>
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<td><em>Antennaria aprica</em></td>
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<td><em>Acyosus crenatilobus</em></td>
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<td><em>Artemisia frigida</em></td>
<td>pasture sage</td>
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<td><em>Artemisia ludoviciana</em></td>
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<td><em>Astragalus canadensis</em></td>
<td>milkweeds</td>
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<td><em>Aster spp.</em></td>
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<td><em>Asterlandia fasciculata</em></td>
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<td><em>Astragalus latifolius</em></td>
<td>ascending purple milk-vetch</td>
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<td><em>Balsamorhiza sagittata</em></td>
<td>balsam root</td>
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<td><em>Campanula rotundifolia</em></td>
<td>harebell</td>
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</tbody>
</table>

*Morgan et al., 1995*
Knowing the Species
Prairie Crocus – Anemone patens
Prairie Crocus
Three-flowered Avens – *Geum triflorum*
Western Red Lily – *Lilium philadelphicum*
Milkweed – *Asclepias sp.*

- Showy Milkweed
- Dwarf Milkweed
Plains Rough Fescue – *Festuca altaica hallii*
Where To Harvest

• Obtain permits to collect on crown lands
• Obtain permission to collect on private lands
• Avoid rare or fragile habitats
• Highway and road ditches – can be dangerous
• Avoid land infested with exotic and weedy species
• Avoid areas where there is high human traffic
• Consider the terrain and the capabilities of your equipment
Site Management
When To Harvest

- Collect when sites are least susceptible to damage
- Harvesting seed that has not fully ripened may result in reduced viability
- Collect ripe seeds (firm and dry)
- Seeds are usually ripe 6 to 8 weeks after flowering
When To Harvest

- Indicators of ripe seed:
  - Stem will be brown and dry
  - Seeds or seed head will begin to dry and change colour as it ripens
  - Seed strips off easily by hand
  - Tapping seed heads gently into your palm produces numbers of seeds
  - Colour - the seeds often turning white, black, brown or grey

- Seeds that are difficult to remove from the plant and are still green are not ripe
Harvesting Native Seed

1. Hand Harvesting
2. Mechanized Harvesting
   a) Hand Vacuum
   b) Seed Strippers
   c) Combines
   d) Native Hay

*Remember to keep your equipment and clothing weed seed free!

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**Table 1. Choosing Your Equipment.**

<table>
<thead>
<tr>
<th>Method</th>
<th>Cost</th>
<th>Volume</th>
<th>Selectivity</th>
<th>Accessibility</th>
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<tbody>
<tr>
<td>Hand Collecting</td>
<td>Low</td>
<td>Low</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Hand Vacuum</td>
<td>Low</td>
<td>Low</td>
<td>High</td>
<td>High</td>
</tr>
<tr>
<td>Hand Stripper</td>
<td>Low-Medium</td>
<td>Low-Medium</td>
<td>High</td>
<td>High</td>
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<tr>
<td>4 ft Stripper</td>
<td>Medium</td>
<td>Medium-High</td>
<td>Medium</td>
<td>Medium</td>
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<tr>
<td>12 ft Flail-vac</td>
<td>High</td>
<td>High</td>
<td>Medium-Low</td>
<td>Low</td>
</tr>
</tbody>
</table>

*Hammermeister, 2000*
Hand Harvesting

Photo Credit: Keith Barr
Hand Vacuумing

Photo Credit: Dean Nuremberg

Photo Credit: Keith Barr
Seed Strippers

Photo Credit: Dean Nuremberg

Photo Credit: Prairie Habitats Inc.
How Much to Harvest

- Recommendations are to take only 10% to 30% of seed from a given patch
- Do not collect in consecutive years from the same patch
- Never collect all the seeds from a single plant or from a small group of plants
- Collect a few seeds from different plants within a population
How Much to Harvest

• Leave enough seed to allow for:
  – Natural propagation
  – Food and habitat for insects, birds, and mammals.

• To promote genetic diversity:
  – Collect seeds at several times during the season and over several years
  – Use multiple locations within the same area for collection

• Collect no more seeds than you require
Record Keeping

• Label seeds when you collect them
• Record collection date and location
• Record cleaning and storage information
• Record who picked the seed and who cleaned it
Seed Drying and Storage

• Make sure seeds are dry before storing
• Keep away from rodents and insects
• Store in a cool, dry place
  — Heat and moisture will deteriorate the seeds
• Long-term storage: Freezer
Seed Drying

Photo Credit: Dean Nuremberg
Seed Cleaning
Seed Storage
Saskatoon Naturalized Parks Program
Resources

Native Plant Society of Saskatchewan:  www.npss.sk.ca

Alberta Native Plant Council:  www.anpc.ab.ca
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