

# Code of Practice for Native Seed Harvesting

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## Overview

Native grasslands are threatened ecosystems that provide a multitude of ecosystem services, including habitat, biodiversity, carbon sequestration and the sustainable capture and release of water. As native grasslands continue to shrink and fragment, it is vital to restore disturbed grasslands wherever possible to retain and improve ecosystem health, services, and sustainability. Restoration practitioners have identified a lack of locally adapted native seed genotypes on the market as a barrier to successful native grassland restoration.

Restoration projects that are currently underway or being planned require a suite of native grass and forb species that are not commercially available. To supply these species wild harvested seed collection is needed. This Code of Practice is designed to provide operational guidelines for anyone involved in wild harvesting of native seed and to help reduce impacts to the native plant community and overall ecosystem health.

## Mechanical Seed Harvesting

Typically, there are two types of low impact mechanical seed harvesters used to harvest seed while leaving the forage intact. These include: a frontend loader mounted brush stripper header on a tractor, or a pull type brush stripper header that is generally pulled by an all terrain vehicle (ATV) or small tractor. A hand held brush stripper (which operates similarly to a weed trimmer) can be used, but is generally used for smaller seed collections.

For mechanical seed harvesting activities: Follow steps below and applicable Best Management Practices.

1. Obtain permission to scout and method of scouting for desired property from the appropriate Landowner, Lease holder or Land manager.
2. Obtain written permission to harvest on specific areas of the property, including the method of harvest intended (i.e. mechanical or hand harvest). Define and confirm harvest area boundaries and approved access route to the harvest area.
3. To avoid rutting or soil compaction, only operate equipment or vehicles under suitably dry or frozen soil conditions. Avoid low lying areas, all classes of wetlands, riparian habitat and fragile or sensitive habitat, unless authorized to do so. Stick to existing trails where possible.
4. Avoid or minimize collection of undesirable plants when possible. This includes noxious and restricted weeds and invasive agronomic species. A pre-harvest scouting of the harvest area is recommended to identify plant communities, species of concern, and areas to avoid. These areas can be flagged ahead of time or during harvest if necessary.
5. Focus harvest efforts on dense stands of the desired target species, leaving lighter areas to drop seed naturally.

6. Set mechanical stripper header to remove ripe/mature seed only, leaving immature seed to naturally cure and drop to the ground. **Note:** Brush type stripper headers do not remove forage material (i.e. the leaves of a grass plant), only mature seed is removed.
7. By design, a portion of the seed stripped never makes it into the hopper, and is dropped to the ground, scattered over and around the header, freely dispersing mature seed while harvesting and contributing to the native seedbank.
8. Minimize equipment tracking. i.e. avoid multiple passes in different directions within a given area.

## Hand Harvesting Native Grasses and Forbs

Hand harvesting of native grasses and forbs is a common practice, used when collecting small amounts of seed, collecting from small patches of desired plants, targeting individual species within a matrix of species, or fruiting structures that are not readily harvested mechanically, where terrain is not suitable for mechanical harvesting, or approval has not been granted for mechanical harvesting.

Hand harvesting techniques are simple and may include: hand stripping, or snipping/clipping seed heads.

For hand seed harvesting activities: Follow steps 1-4 above and applicable Best Management Practices.

1. **Grasses:** If hand stripping, take only the seed that comes off easily without excessive pulling and tugging, leaving any immature seed to ripen and shell out naturally.
2. **Grasses:** If snipping/clipping heads (panicle), snip individual stems (culms) or entire stems 5-10 cm above crown. Avoid snipping or removing plant leaves and damage to the crown.
3. **Forbs:** A general rule of thumb is to harvest no more than 50% of the seed from an individual plant or 50% of an individual species in a given area or patch. This includes immature and shattered seed. If collecting in small patches, i.e. (less than 1000 plants) reduce harvest percentage accordingly. Alberta Native Plant Council suggests a 10% harvest rate in these situations.
4. **Forbs:** Annual, Biennial. A general rule of thumb is to harvest no more than 25% of mature seed from an individual plant or 25% of an individual species in a given area or patch to maintain seedbank integrity.
5. **Forbs:** If collecting forb seed for nursery plot establishment: Collect seed from at least 50 individual plants within a given ecozone to maintain genetic diversity.

**Note:** Avoid collecting seed from S1 and S2 listed plants unless this is a mitigation for occurrences about to be destroyed or otherwise impacted. This seed is not to be harvested for general sales.

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## Environmental Considerations and Best Management Practices

- Ensure all equipment and vehicles are cleaned prior to entry.
- Confirm access routes and trails to and from property, and within harvest area (if required).
- Designate staging or laydown areas for equipment, vehicles, materials, etc.
- Have Fire Suppression equipment readily available, ideally mounted on harvesting unit(s).
- Have Spill Kits and Secondary Containment for fueling, lubricating or repairs readily available. Secondary Containment may be a drip tray under equipment when not in use or when fueling or completing repairs.
- Develop and have available on site, an Emergency Response Plan (ERP) that is appropriate for the activity being undertaken.
- Ensure you have correctly identified the target species.
- Avoid harvesting the same area consecutively year after year. At minimum, rest field or (area) for at least one year or more. This applies to mechanical and hand harvesting activities.
- Report all incidents to the appropriate land manager. (i.e. landowner, lease holder or appropriate regulatory authority).

## Resources

Alberta Native Plant Council

Alberta Weed Control Act Regulation

Alberta Wetland Classification System Field Guide

Alberta Wetland Policy

Grassland Restoration Forum

Invasive Plants of Alberta 4<sup>th</sup> edition , 2022

Rangeland Health Assessment for Grassland, Forest and Tame Pasture

Southern Alberta Native Seed Collaborative

## Cover Photos

Fescue Stripping (courtesy of EnviroScapes) and  
Vacuum Harvesting Forb Seed (courtesy of Skinner Native Seeds)