



# Pollinator Projects

## Putting the Buzz in Agricultural Production

### The value of pollinators and the benefits of establishing pollinator projects on your farm

The pollinator species that live on your farm are not limited to just to bees, but also include butterflies, moths, beetles, and birds. These species are so important, they play an essential role in plant reproduction and seed production for many of our food crops. Many of these species are also considered pest suppressing and can help to control insect pests. The economic value of the services that pollinators provides to Canadians is in the billions of dollars each year.

When considering plant species for your pollinator project, it is important to include many different species to ensure that there are flowers blooming from May to October (or as long as possible). It will also be important to manage grazing rotations carefully (ie. single pass, late season) to maintain forage production and the function of your project.

Pollinator projects can be established on marginal farmland such as field edges, corners, eroded lands, hill tops, saline areas and riparian streambanks. Pollinators will often benefit from having a nearby water source (i.e. wetland) and winter habitat can be provided in shelterbelts or ecobuffers that could also include flowering species (ie. Saskatoon, Lilac, Chokecherry, or Prickly Rose). Avoid disturbing the soil in your project area as many as 80% of insect pollinators burrow in the ground.

**If you build it, they will come.** Alberta studies show that the number of pollinator species will increase once a project has been established.

Visit [www.awes-ab.ca/publications/native-pollinator-friendly-plants](http://www.awes-ab.ca/publications/native-pollinator-friendly-plants)

### Forage species selection, establishment & management

There are benefits of both native and agronomic plant species for a pollinator project, native plants may have a more beneficial relationship with pollinators, whereas agronomic species will have a more palatable cost-benefit. Which species you choose will depend on your goals, budget and time commitment.

Establishment can be difficult due to spring moisture deficits and competition from weeds. It will be important to deal with any weed issues in advance of seeding. Consider planting bunch grasses or other non-aggressive grasses to diversify your forage species, and especially if planting bloating legumes. Although native species don't require fertilizer, it will benefit the agronomic species. Soils that are deficient in Phosphorus will hinder seedlings establishment. Once established (in a biodiverse mix) legumes will be better able to liberate unavailable P from the soil.

### Funding Available for Pollinator Projects

The Mountain View County ALUS program has funding for pollinator projects on agricultural lands for up to \$5,000/project on a cost-share basis.

Up to \$50/acre/year is provided for the maintenance of these projects.

### For more program information contact

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Factsheet compiled by:

## Agronomic Species

These nitrogen fixing plant species have potential for managed grazing and also benefit pollinators



Species	Characteristics	Grazing Management
Sainfoin <i>Onobrychis viciifolia</i>	Good establishment, early bloomer and also good for late season grazing because of leaf retention. Not tolerant of salinity or saturated soils, shorter lived than alfalfa.	Excellent high quality and high yielding forage (~30% protein), non-bloating, can reduce bloat when grown with alfalfa. Requires longer for re-growth after grazing.
Purple Alfalfa <i>Medicago sativa</i> Yellow Alfalfa <i>Medicago sativa</i>	Long lived with deep taproots, tolerant of drought and wide variety of moisture conditions.	Excellent forage value, requires careful management to reduce the risk of bloat. Graze yellow blossomed species early and lighter (1/3 removal) and it will have a long blooming period and regrowth yields close to most other alfalfa varieties.
Alsike Clover <i>Trifolium hybridum</i>	Short lived (but a 2 year establishment will increase plant longevity), not tolerant of drought conditions, but will tolerate standing water and waterlogged soils.	Do not graze if there are black spots on the leaves, fungi can cause photosensitization in cows and horses, also potential for bloat in cattle. Best used for grazing.
Bird's- Foot Trefoil <i>Lotus corniculatus</i>	Good establishment, short lived (1-3 years), good tolerance of drought, salinity, heavy clay soils and can tolerate standing water and saturated soils.	Good for grazing, palatable, fair for haying, 20-25% protein, lower production compared with other agronomic species. Potential to become invasive but can also be outcompeted by aggressive grass species.
Red Clover <i>Trifolium pratense</i>	Hardy but short lived, poor tolerance to salinity and dry soils.	Good protein and palatability, good for hay, grazing and silage. Requires careful management to reduce the risk of bloat and fungus.
Cicer milkvetch <i>Astragalus cicer</i>	Long lived and tolerant of a wide range of conditions, but can be difficult to establish (may take 2 growing seasons).	Non-bloating, good for late season grazing because of leaf retention, requires careful management; overgrazing will cause this species to decrease but there is also potential for it to become invasive.

**Grass Species Companion:** Bunch grasses or non-aggressive grasses, discuss locally appropriate options with your seed supplier

## Native Plant Species

Native plant species that benefit pollinators and have potential for managed grazing

Species	Characteristics	Grazing Management after flowering
Milk Vetch <i>Astragalus canadensis</i> , <i>Astragalus americanus</i>	May do better in moist soils, <i>canadensis</i> has good, but slow establishment. Both are nitrogen fixing.	Good grazing potential. Short lived, overgrazing will cause this species to decrease. Other milk vetch species may be toxic to livestock.
American Vetch <i>Vicia americana</i>	This is an early successional species, establishes better with moisture, tolerates medium to coarse soils. Used for soil stabilization and erosion control. Nitrogen fixing.	Good to excellent grazing potential, palatable with 20% protein. Overgrazing will cause this species to decrease.
Hedysarum spp. <i>Hedysarum americanum</i> , <i>alpinum</i> , <i>boreal</i>	Tolerant of poor soils and a wide variety of conditions. Nitrogen fixing.	Fair to excellent grazing potential, overgrazing will cause this species to decrease.
Sticky Purple Geranium <i>Geranium viscosissimum</i>	Good to excellent establishment, palatable. May establish better in moist soils. Actively mycorrhizal.	Overgrazing will cause this species to decrease.
Fireweed <i>Epilobium angustifolium</i>	Tolerant of a wide range of soil and moisture conditions (including alkaline).	Fair to good grazing potential, high in nutrients and palatable from summer to fall (more palatable earlier in the season). Overgrazing will cause this species to decrease.
Purple Peavine, <i>Lathyrus venosus</i> Cream Colored Peavine, <i>Lathyrus ochroleucus</i>	Not really considered a prairie plant, its has creeping rhizomes and establishment can be difficult.	Excellent grazing potential in the summer, very palatable and up to 30% protein. Overgrazing will cause this species to decrease.
Tufted White Prairie Aster <i>Aster ericoides</i> Showy Aster, <i>Aster conspicuus</i>	Grows well in moist open prairie. Actively mycorrhizal.	Good grazing potential. Overgrazing will cause this species to decrease
Northern Bedstraw <i>Gallium boreale</i>	Grows well in moist open prairie. Actively mycorrhizal.	Excellent grazing potential. May increase with overgrazing.

**Grass Species:** Include native or agronomic bunch grasses or non-aggressive grasses that are good for grazing, suggested species such as June Grass, Canada Wild Rye, and Plains Rough Fescue (which is rhizomatous but not aggressive).

**Note:** These species may be difficult to source, there are many other native species that benefit pollinators, we have only included the species that have potential for grazing.

**References:** Alberta Agriculture (2009) Alberta Beef Forage Manual; Alberta Agriculture (1996) A guide to using Native Plants on Disturbed Lands; Agriculture and Agri-Food Canada (2018) Sainfoin for Western Canada; Alberta Agriculture (2016) Alberta Range Plants and Their Classification; Majak, W. (2008) Stock-poisoning Plants of Western Canada; Grant Lastiwka **Photo Credit:** Sonja Bloom, FFGA