



Grassland Set-Aside Program



Photo: Tyler Garnham

**Delta Farmland
& Wildlife Trust**
Partners in Stewardship

*Resting annually cropped fields to
enhance soil health and provide
critical wildlife habitat*

Why are grasslands important?

Grassland ecosystems are Canada's most at-risk natural spaces. Within BC, grasslands represent less than 1% of the province's landscape. Within Delta, old field habitat once covered 8,000 hectares of land, today, less than 10% of that ecosystem remains. The significant challenges facing grassland landscapes primarily stem from urbanization, industrialization, and farming. Species loss is directly connected to loss of grassland habitat, as grassland species are among the most at risk within Canada .



What is the Grassland Set-Aside Program?

The Grassland Set-Aside (GLSA) program provides funding to incorporate grasslands into crop rotations to improve soil productivity and provide habitat for wildlife.

GLSAs are farm fields planted with grasses and broad-leaved plants left to rest for up to 4 years. These grassland fields resemble the historical tall-grass habitats of the estuary before it was diked and drained for farming in the late 1800s.

How does it benefit wildlife?

These grassland fields mimic essential habitat for many wildlife species that rely on grasslands in the Fraser River delta (FRD). Fields provide vegetative cover for foraging, roosting, and nesting wildlife and support a diverse ecosystem that includes raptors, wading birds, songbirds, pollinating insects, and small mammals. The fields also provide safe hunting grounds away from roadsides for Species-At-Risk, such as Barn Owls and Barn Swallows. These spaces provide an essential diversity of flowering resources to support local pollinators and honeybee populations.

Why consider this practice?

GLSAs are beneficial for farming systems for a variety of reasons. They are ideal for helping restore degraded land, transition conventional fields into organic production, or diversify crop rotations to strengthen soil health.

Farmers in the Fraser River delta have a unique set of challenges and pressures. The area's soils and need for high productivity requires intensive tillage, and tend to degrade over time due to compaction, nutrient loss from rain, and loss of organic matter in the soil. Crop yields can decline as soils degrade, resulting in a need to continuously add nutrients and organic matter to maintain crop yields. The high cost of land and limited availability of land provides added pressures.

When fields are planted with the recommended grasses and left to rest:

- Soil structure improves; the soil becomes less compacted, and drainage improves
- Organic matter, nutrients, and microorganisms in the soil increase
- Pollinating insects are attracted
- Soil infiltration is enhanced in areas where fields tend to pond
- Water holding capacity increases significantly to support crops throughout dry summers.

What's involved?

Participants plant and manage GLSAs to promote grassland growth and maximize soil health and wildlife benefits. A mixture of coarse and fine grasses and varying plant preferences provide habitat diversity for many species. Ideally, the grass seed mixture used to establish a GLSA should:

- require little to no maintenance,
- enhance soil organic matter and structure, and
- establish good vegetative cover for foraging, roosting and nesting wildlife.

Scan here to receive up-to-date program information, including program changes and important reminders:



Planting Guidelines

Participants are encouraged to laser level before planting a Grassland Set-Aside.

Ideal planting date: May

Planting deadline: June 15th

30lbs/acre when using a nurse crop of barley or oats.

NOTE: If a nurse crop is not used, add annual ryegrass to the GLSA mix to help control weeds and plant at 40lb/acre

During the establishment year of the GLSA, a nurse crop of barley, oats or annual ryegrass is recommended. The nurse crops of barley or oats may be taken to grain, or the nurse crop may be harvested as silage or hay, but no other subsequent harvest will be permitted during the establishment year (12 months from the planting date).

Apply manure or fertilizer to the GLSA if growth is slow.

If establishment in the first year is deemed, for any reason, to be unsuccessful, soil tests may be conducted, and/or lime applications and/or reseeding may be required. All costs associated with these activities are to be paid by the cooperator.

Enrolled acres remain in place for a minimum of two years or a maximum of 4 years. This is conditional upon the field being well maintained with a dense grass establishment.

Yearly contracts run from April 1st to March 31st. GLSAs in their last year must be left intact until March 31st.

DFWT may ask participants to mow part or all of the GLSA to increase its wildlife habitat value and control weeds. Under the program, co-operators are also permitted to take a single cut for harvest of hay or silage per year. While cutting or mowing the grass, co-operators are encouraged to:

- drive slowly so that small mammals and other wildlife have some chance of escape;
- to cut from the center of the field towards the edge so that small mammals and other wildlife do not become trapped;
- and leave a small uncut field margin, 3-20 ft. wide, around the edges of the field to act as cover for displaced wildlife and beneficial insects.

Mowing or harvesting should only occur after July 15th to minimize impacts on breeding birds.

What funding is available?

\$500/acre enrolled for each year for up to four years.

An additional seeding reimbursement of **\$150/acre** will be provided when GLSAs are planted, or reseeded to enhance pollination resources.

In cases where a crop is harvested as grain, grass, hay, straw or silage during any contracted year (only one cut/harvest per year), the co-operator will be paid half the rate eligible for that year (\$250/acre). If the co-operator chooses to only mow or cut and ted the crop without removing the cut plant material from the field, no reduction in cost share will be made.

GLSAs must remain in place for a minimum of two years.

Eligible Acreage: The maximum allowable acreage per participant is 50% of total farm acres, or 100 acres.

All field preparation and seed costs are to be paid by the co-operator.

What is the application process?

Participants must apply to DFWT before planting to ensure funding remains available. The GLSA program is first-come, first-served, and funding will be allocated to projects in the order requests are received.

There are three ways you can start your application:

- email programs@dfwt.ca to discuss your project,
- complete the online application form at: form.jotform.com/230796281707059
- visit deltafarmland.ca to find PDF versions of our GLSA agreement, and email a completed copy to programs@dfwt.ca.

Once you receive notification that your application is formally approved, you can plant your GLSA knowing funding has been allocated to your project. Cost-share payments will be made through automatic funds transfer payment in the summer/fall each year following project verification.

Am I eligible?

Cost-share funding is available for farmers or landowners with farmland in Metro Vancouver and Abbotsford.

This program is available on a first-come, first-served basis. Please contact DFWT before starting your project to ensure funding remains available.



Species Highlight

Sunflowers are a species that work well within GLSAs. They are late blooming and provide pollination resources for insects when most flowers have come and gone; the seeds also support songbirds in the fall and overwintering ducks. Sunflowers have long and deep tap roots. They tolerate dry conditions and work to break up soil and alleviate compaction issues, ultimately improving water infiltration. This species should be incorporated into most GLSA mixes.

Seed Mix

We recommend seeding one of the following mixes:

Grassland Set-Aside Mix

- Orchard grass (15%),
- Tall Fescue (15%),
- Timothy (15%),
- Chewing's Fescue (15%)
- Creeping Red Fescue (15%)
- Double Cut Red Clover (7%)
- Sunflower (8%)
- Alsike clover (10%)

Contact the DFWT office for information on where the seed mix can be obtained.

Pollinator Mix

- Ethiopian rape (5%)
- Safflower (5%)
- Common Sunflower (10%)
- Lacy phacelia (5%)
- Egyptian clover (10%)
- Ribwort Plantain (5%)
- Crimson clover (10%)
- Red clover (10%)
- Orchard grass (15%)
- Tall fescue (15%)
- Perennial ryegrass (10%)

Carbon Sequestration Information

On farmland, plant matter is removed from the soil during crop harvest, and the fields which remain bare over winter are not performing photosynthesis to capture and store carbon. As a result, agricultural soils have a large capacity to store carbon. Research shows that GLSAs will increase soil organic carbon substantially within farm soils. Studies found as much as an 86% increase within the top 0-15cm of soils. The crops planted following a GLSA then have access to much greater levels of soil organic carbon, improved texture, and the acres enrolled have helped to store carbon.

Research and Verification

Research and project verification are critical components of DFWT programs. Our cost-share programs are grounded in science and require annual surveying efforts to ensure projects have the desired effect on wildlife and soil health.

Winter Monitoring

GLSAs are visited regularly by Field Technicians from November to March to assess the species using these habitats for overwintering. Key species found include:

- Short-eared Owls
- Great Blue Herons
- Rough-legged Hawks
- Cooper's Hawks
- Northern Harriers
- Barn Owls

Spring Monitoring

Field Technicians conduct spring breeding bird surveys in these areas, to help us understand how important these grassland spaces are in supporting grassland breeding birds. In 2022 technicians found 47 bird species utilizing these areas for foraging, breeding and hunting. The barn swallow is a key species listed as threatened under COSEWIC (Committee on the Status of Endangered Wildlife in Canada). Barn swallows regularly visit GLSAs and in 2022 were one of the top five most regularly seen birds within these habitats.

Soil Health Baseline

Several studies have been conducted on GLSAs to demonstrate the significant impact of these practices on soil health. DFWT also conducts soil monitoring to gain a sense of soil condition when entering the GLSA program and soil condition when concluding the program. Results are not shared publicly. DFWT utilizes this information as a resource to understand the change in soil parameters over time. Results can be shared with participants if requested.

Field Technicians
may measure:

- Soil pH
- Bulk density
- Water holding capacity
- Water infiltration
- Soil organic matter
- Soil workability

Who is Delta Farmland and Wildlife Trust?

DFWT is a grassroots organization that promotes the preservation of farmland and wildlife habitat in the Fraser River estuary and Fraser Valley by providing funding to support stewardship projects. Soil health and on-farm habitat are our two critical priorities. We work with farmers to enhance production systems through science-based approaches. Our Field Technicians survey projects to understand the impact they are having on wildlife and soil health.

DFWT has been delivering cost-share programs for farmers in Delta for 30 years. These partnerships have led to transformative change and support for wildlife on farms in this region. Starting in 2023 we have expanded some of our cost-share programs to be delivered throughout Metro Vancouver and Abbotsford. Our farmer-focused approach ensures participants receive the funding they need to get projects in the ground without a complex program process. Our organization is led by farmers and conservationists working together to support collaborative and practical efforts on farms.

Questions about the program? Get in touch with us:



604-940-3392



programs@dfwt.ca



www.deltafarmland.ca

Terms and Conditions

1. Applications to the Grassland Set-aside program should only be made for acreage within Metro Vancouver and Abbotsford, BC.
2. Approval is dependent on funding availability. New applications are date stamped upon arrival at the DFWT office and are treated on a first-come, first-served basis.
3. DFWT may decline eligibility for the GLSA at any time if vegetation is too sparse (vegetative cover of the GLSA must be 75% or greater).
4. In the event that the participant does not maintain the GLSA by the standards prescribed herein, the DFWT obligations shall cease.
5. The GLSA must be planted by June 15 to be eligible if this is the first year of the agreement.
6. To receive payment, participants must maintain and manage the field as a GLSA from April 1 (or the planting date) to March 31 of the following year. Participants must ensure that top kill, mowing, discing or plough down of the GLSA will not occur before this date.
7. Participants must not mow or harvest the GLSA until after July 15th of any year covered by this agreement and limit harvest to one cut per year.
8. Participants must discuss management practices with DFWT and concede to DFWT's recommendations before undertaking any management activities.
9. Participants agree to allow DFWT to monitor the Grassland Set-aside for wildlife use, vegetation structure or soil quality.
10. Participants agree not to receive reimbursement or exchange for rent payment for the Grassland Set-aside from any other program or agreement.

Information contained within this document is accurate at the time of printing (January 2024) and may be subject to change.



Story from a farmer who uses GLSAs

"If we know there are more native pollinators out there, and they're healthier, it can only help," says Jack Bates, who farms 400 acres of blueberries and potatoes and raises dairy cows with his extended family in Delta through Tecarte Farms.

Jack has planted several GLSAs over the years and has recognized the change in soil fertility and texture from the practice. Even on highly degraded soils that have been farmed hard for years, the resting and rebuilding nature of GLSAs result in solid yields for the crops that are grown next.

At Tecarte, focus is placed on crop rotation and soil moisture, so irrigation is not a requirement. The farm's dairy manure is incorporated into their field

vegetable systems, which helps strengthen soil nutrients and soil texture.

When it comes to GLSA mixes, Jack notes, "I've always been a believer of adding different types of clovers into the mix so you can fixate nitrogen, and the flip side is they also support pollinators." When blackberries are finished blooming, the landscape in Delta does not offer many remaining flowering species for native pollinators and honeybees. GLSA mixes incorporating late flowering species can help carry bees and other insects into the winter.

For Jack and Tecarte farms, adding soil-building and pollinator-supporting GLSAs into long-term crop rotations just makes sense.



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