



EXPERIMENTAL ACRES

Sample Farm Plans



ANIMAL/
GRAZING



Bale Grazing Beef Cattle

Rotational grazing of cows.

SUMMARY:

This farm has proposed to install fencing to manage mob/ rotational grazing over 6 acres. Previously, these 6 acres were heavily cropped and are in need of soil mending. Costing assumes a perimeter of 2000 feet and installation of Smart Fence (\$450/100m) and energizer.

The farm will use the funding to acquire fencing materials, to be installed in two places – the crest of a hill (Plot A), and along a flat floodplain (Plot B). The farm can install the fencing. Currently, the acres have natural vegetation (grasses, golden rod).

Three treatments will be applied to Plot A:

1. Bale grazing of beef cattle, followed by chicken grazing, addition of clippings
2. Bale grazing of beef cattle, addition of clippings
3. Mowing of greenery, removal of clippings

Treatments 2 and 3 will be repeated in Plot B.

SIZE OF TEST AREA

6 acres
(2000 linear feet)

TOTAL FUNDING

\$3000

ELIGIBLE EXPENSES

- Fencing supplies
- Energizer
- Additional laboratory analyses

SAMPLE ACTIVITES:

- Compaction, infiltration, and green cover monitoring
- Soil sampling – nutrient analysis
- Photo monitoring
- End of programme celebration



ANIMAL/
GRAZING

Silvopasture with Cattle

Use of apple trees in cattle pasture.

SUMMARY:

Apple trees will be planted in underproductive (pasture) areas of this farm with the goal of increasing soil fertility, shade, diversity and practicing intercropping. Costing assumes a semi-dwarf Spy variety planted at 170 trees per acre.

Funding will be spent on tree stock and soil testing. Tree protection/wire may be supplied by the farm. Programme staff and participants will help with the tree planting.

Monitoring and testing will consist of baseline soil testing and observational monitoring prior to planting. An additional soil test will be completed in the fall to determine change in nutrient levels. Observational monitoring and biodiversity surveys will also be conducted throughout the growing season.

SIZE OF TEST AREA

1 acre

TOTAL FUNDING

\$2000

ELIGIBLE EXPENSES

- Tree stock
- Tree planting supplies
- Additional laboratory analyses

SAMPLE ACTIVITES:

- Compaction, infiltration and green cover monitoring
- Soil sampling – nutrient analysis
- Photo monitoring
- Tree planting
- End of programme celebration



INNOVATION

Tarping to Break Hay

Testing methods of breaking hay for vegetable planting.

SUMMARY:	SIZE OF TEST AREA
Different no-till methods for breaking hay will be tested. The land will be used as a vegetable garden after hay breaking. Three treatments will be applied: <ol style="list-style-type: none">1. Tillage to terminate hay (small bed)2. White and black silage plastic to terminate hay3. Landscape Fabric to terminate hay Funding will be used to acquire different tarping materials, soil tests and equipment rental for tillage. Monitoring and testing will include four soil tests (two in spring and two in fall) and observation monitoring throughout the season. Chicken grazing may be included as part of the trial, based on availability of equipment and tarp trial timelines.	3 plots of 50' by 100'
	TOTAL FUNDING
	\$3000
	ELIGIBLE EXPENSES
	<ul style="list-style-type: none">• Tarping equipment• Equipment rental

SAMPLE ACTIVITES:

- Compaction, infiltration and green cover monitoring
- Soil sampling – nutrient analysis, soil health
- Photo monitoring
- Setting tarps
- End of programme celebration



CROP/
PLANTING

Fertility Management in Hay

Comparing fertility methods across established and new hay, and new planting methods to introduce legumes into standing crop.

SUMMARY:	SIZE OF TEST AREA
<p>A legume crop will be planted into standing hay to improve soil quality and diversity of the standing crop. This farm is also looking to improve the nutritional quality of hay and improve the economic outcome. The land is currently only under hay.</p> <p>Legumes will be planted over approximately two acres in a few different management trials. Three different fertility methods will be applied perpendicular to establishment methods:</p> <ol style="list-style-type: none">1. OMAFRA recommended fertilizer inputs2. Manure3. No fertility amendments <p>Funding will be used for cover crop seed and fuel costs.</p>	2 acres
	TOTAL FUNDING
	\$1000
	ELIGIBLE EXPENSES
	<ul style="list-style-type: none">• Cover crop seed• Equipment use/rental, contractor time• Estimated fuel costs• Soil testing in addition to the four provided tests

SAMPLE ACTIVITES:

- Compaction, infiltration and green cover monitoring
- Soil sampling – nutrient analysis, soil health
- Manure analysis
- Equipment rental for no-till planting
- Photo monitoring
- End of programme celebration



CROP/
PLANTING

No-Till Brussels Sprouts

Reducing tillage in a horticulture system.

SUMMARY:

Brussel sprouts will be planted in strip tillage over 15 acres. This will include two separate trials: a strip tillage trial (Plot A), and cover cropping after winter rye, followed by Brussel sprout planting in 2023 (Plot B). Different varieties of Brussel sprouts will be planted in 2023.

Funding will be used to support equipment rental and soil sampling.

SIZE OF TEST AREA

15 acres

TOTAL FUNDING

\$1000

ELIGIBLE EXPENSES

- Equipment rental
- Soil amendments, if necessary,
- Soil testing in addition to the four provided tests

SAMPLE ACTIVITES:

- Compaction, infiltration and green cover monitoring
- Soil sampling – nutrient analysis, soil health
- Equipment rental for no-till planting
- Photo monitoring
- End of programme celebration



Managed Grazing of Pigs

Silvopasture using pigs to uproot degraded vegetation before reseeding.

SUMMARY:

This farm has proposed to graze pigs to improve the soil health and terrain in an area previously used to deposit pond dredgeate. The area seems to have been previously dug out, possibly to accommodate the pond dredgeate.

Soil tests will occur within the fenced area with the pigs, and immediately outside the fenced off area. Tests will be taken in the spring and the fall to compare the impact pigs can have during one season of grazing. Observational monitoring will occur throughout the season.

Funding will be used to acquire fencing materials and installation.

SIZE OF TEST AREA

1000 linear feet
of fenceline

TOTAL FUNDING

\$2000

ELIGIBLE EXPENSES

- Fencing supplies
- Energizer
- Fencing installation
- Additional laboratory analyses

SAMPLE ACTIVITES:

- Compaction, infiltration and green cover monitoring
- Soil sampling – nutrient analysis
- Photo monitoring
- Tree planting
- End of programme celebration



CROP/
PLANTING

Intercropping in Soybean

Cover crop in standing soybean crop to mitigate erosion.

SUMMARY:

This farm has proposed interseeding a cover crop mix into standing soybean crop during different stages of growth. Ideally, the cover crop will not be damaged during harvest, and will winter-kill.

Monitoring and testing for this experiment includes two soil tests in one location (spring and fall) and application of Credit Valley Conservations (CVC) soil observation protocol. Monthly monitoring visits (CVC protocol) will take place starting in June with varying lengths of time for each visit. Cover crop will be gently raked into the soil to improve soil-seed contact.

The funding will be used for cover crop seed mixes and equipment rental.

SIZE OF TEST AREA

2 acres

TOTAL FUNDING

\$1000

ELIGIBLE EXPENSES

- Seed
- Equipment rental
- Contractor time
- Estimated fuel costs

SAMPLE ACTIVITES:

- Compaction, infiltration and green cover monitoring
- Soil sampling – nutrient analysis, soil health, heavy metals
- Photo monitoring
- End of programme celebration



INNOVATION

Winter Crop Rotation

Continuous winter crop rotation with summer cover to improve soil health.

SUMMARY:

This farm is looking to test if they can create an all winter crop rotation - winter wheat, winter barley, and winter canola over 50 acres. Between winter crops, a cover crop will be planted (July-September).

Compost will be spread after canola harvest, prior to buckwheat planting. Buckwheat will be allowed to flower, and then terminated using glyphosate mid-September.

The treatments for this experiment are:

1. No cover used between winter crops
2. Use of buckwheat as a cover crop
3. No-till planting into buckwheat

Funding would be used to acquire seeds and rent no-till seed drill.

SIZE OF TEST AREA

53 acres

TOTAL FUNDING

\$2000

ELIGIBLE EXPENSES

- Seed
- Equipment rental
- Estimated fuel costs
- Soil testing in addition to the four provided tests

SAMPLE ACTIVITES:

- Compaction, infiltration and green cover monitoring
- Soil sampling – nutrient analysis, soil health
- Buckwheat planting
- Photo monitoring
- End of programme celebration



ANIMAL/
GRAZING



Silvopasture with Pigs

Silvopasture using pigs to uproot degraded vegetation before reseeding.

SUMMARY:

Eight pigs will be grazed in an under-utilized area that has been overtaken with dogwood.

Funding will be used to purchase fencing materials for a hard 1-acre perimeter, and a smaller, moveable fence for rotational grazing within the 1 acre perimeter. Reseeding after one season may occur.

Monitoring and soil testing will include a soil test in two locations (within and outside of the grazing area) in spring and fall and observational monitoring throughout the season.

SIZE OF TEST AREA

1 acre

TOTAL FUNDING

\$2000

ELIGIBLE EXPENSES

- Fencing supplies
- Seeds
- Additional laboratory analyses

SAMPLE ACTIVITES:

- Compaction, infiltration and green cover monitoring
- Soil sampling – nutrient analysis, soil health
- Photo monitoring
- End of programme celebration



INNOVATION

Tallgrass Prairie Planting

Testing of different methods of establishing a tallgrass prairie in Ontario.

SUMMARY:

This farm has received funding to plant tallgrass prairie over 5 acres from the Nottawasaga Conservation Authority. This offers a chance to look at different establishment methods for tallgrass prairies in Ontario. The acres were planted with soybeans in 2021 and have had no tillage or herbicide applied to remove weeds.

The 5 acres will be split into two plots with the following treatments applied:

1. Mowing of weeds after July 15
2. No mowing of weeds

Treatment one will cover larger portions of land, as mowing is considered a best management practice for establishment of tallgrass prairie. Funding will be used to purchase seed, equipment costs and soil sampling.

SIZE OF TEST AREA

5 acres

TOTAL FUNDING

\$1000

ELIGIBLE EXPENSES

- Seed
- Planting equipment

SAMPLE ACTIVITES:

- Compaction, infiltration and green cover monitoring
- Soil sampling – nutrient analysis, soil health
- Photo monitoring
- End of programme celebration



CROP/
PLANTING

Cover Crops and Nitrogen

Testing the use of a cover crop to reduce nitrogen input in following years.

SUMMARY:

This Farmer proposed the use of clover as a cover crop to reduce their need for synthetic fertilizer in the following year. Clover was frost-seeded into winter wheat in spring 2022. Corn will be planted across the 5 acres in 2023, and nitrogen fertilizer will be applied at three rates across cover cropped and non-cover cropped plots.

The 5 acres will be split into 6 plots with the following treatments being applied:

1. Red clover cover crop, 100% N fertilizer
2. Red clover cover crop, 85% N fertilizer
3. Red clover cover crop, 50% N fertilizer
4. No cover crop, 100% N fertilizer
5. No cover crop, 85% N fertilizer
6. No cover crop, 50% N fertilizer

SIZE OF TEST AREA

5 acres

TOTAL FUNDING

\$1000

ELIGIBLE EXPENSES

- Seed
- Equipment rental
- Contractor time
- Estimated fuel costs
- Soil testing in addition to the four provided tests

SAMPLE ACTIVITES:

- Compaction, infiltration and green cover monitoring
- Soil sampling – nutrient analysis, soil health
- Photo monitoring
- End of programme celebration



CROP/
PLANTING



Cover Cropping a Market Garden

Cover crop in place of double crop to improve soil quality.

SUMMARY:

This farm has proposed to develop the business case for using cover crops to 1.3 acres of market garden greenhouses.

The farmer has proposed planting a cover crop rather than a second harvestable crop in several market garden plots. The plots are multi-cropped, with two harvests per year. In between harvest and planting, farm-created compost is added. Two treatments will be applied across plots:

1. First crop planting and harvest, compost addition, planting a winter-kill cover crop
2. First crop planting and harvest, compost addition, second crop planting and harvest

An economic analysis of purchasing vs creating compost, and nutritional analyses of crops grown on cover cropped plots vs non-cover cropped plots will be completed in 2023.

SIZE OF TEST AREA

1.3 acres

TOTAL FUNDING

\$1000

ELIGIBLE EXPENSES

- Seed
- Soil amendments
- Machinery rental
- Additional laboratory analyses

SAMPLE ACTIVITES:

- Compaction, infiltration and green cover monitoring
- Soil sampling – nutrient analysis, soil health
- Photo monitoring
- Cost-benefit analysis of compost creation
- End of programme celebration



ANIMAL/
GRAZING



Rotational Beef Cattle Grazing

Build infrastructure for rotational grazing of beef cattle across land with different historical management.

SUMMARY:

This Farmer has proposed rotational mob grazing of beef cattle. Cattle will be rotated across land with two management histories. Mob grazing will help build soil quality, reduce herbicides and fertilizers needed to establish quality grass pasture.

Previous land management included:

Plot 1: Continuous oats, peas and barley, replaced by newly planted pasture

Plot 2: Continuous hay

Funding will support purchasing fencing materials and installation. Monitoring and testing will include four soil tests, in addition to the VitTellus Soil Health tests already completed. Observational monitoring will also be conducted.

SIZE OF TEST AREA

2.5 acres

TOTAL FUNDING

\$3000

ELIGIBLE EXPENSES

- Fencing supplies
- Energizer
- Fencing installation
- Additional laboratory analyses

SAMPLE ACTIVITES:

- Compaction, infiltration and green cover monitoring
- Soil sampling – nutrient analysis
- Photo monitoring
- End of programme celebration



Biostimulant for Crop Residue

Use of biostimulant to release plant available nutrients from cover crop residue.

SUMMARY:	SIZE OF TEST AREA
<p>This farmer has proposed a reduction in synthetic fertilizer rate by using a biostimulant. The biostimulant should increase the decomposition rate of cover crop residue, so the current crop can benefit from the stored nutrients. Trial is mirrored across two fields.</p> <p>Plot treatment are:</p> <ol style="list-style-type: none">1. Full fertilizer rate, no biostimulant2. Full fertilizer rate, biostimulant3. 85% of full fertilizer rate, no biostimulant4. 85% of full fertilizer rate, biostimulant	30 acres
	TOTAL FUNDING
	\$1000
	ELIGIBLE EXPENSES
	<ul style="list-style-type: none">• Soil testing in addition to provided tests• Plant tissue testing

SAMPLE ACTIVITES:
<ul style="list-style-type: none">• Compaction, infiltration, green cover monitoring• Soil Health laboratory testing• Plant tissue testing• Photo monitoring• End of Programme Celebration



CROP/
PLANTING

New Tree Line as Windbreak

Incorporate hedge row into fence lines to reduce erosion and improve pasture quality

SUMMARY:

The farmer has proposed comparing different methods of establishing trees for a wind break. Trees will be planted in two locations on the farm property. Snow fences will be placed along half of the trees to protect them during the winter. Wind breaks will help reduce soil erosion.

Additionally, different organic amendments will be added during planting (coffee grounds, compost tea) to determine their use in establishing trees for a windbreak.

Funding would contribute to cost of trees.

SIZE OF TEST AREA

~500m between
two fence lines

TOTAL FUNDING

\$2000

ELIGIBLE EXPENSES

- Tree and hedgerow stock
- Hedgerow planting equipment
- Labour

SAMPLE ACTIVITES:

- Compaction, infiltration, green cover monitoring
- Soil laboratory testing
- Tree Planting
- End of Programme Celebration



Alternate formats available upon request

