



# Regenerative AG Consulting

Presented by **NuLeaf Farms Inc.**

**NuLeaf Farms Inc.**

[www.NuLeafFarms.ca](http://www.NuLeafFarms.ca)

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# Introduction

At NuLeaf Farms Inc., we are passionate about revolutionizing agriculture through regenerative practices that promote resilience, community empowerment, and sustainable food production. While our journey began with advanced indoor farming technologies and consulting services to optimize yields and resource efficiency, we have expanded our mission to embrace regenerative agriculture as fundamental to our approach.



Regenerative agriculture with NuLeaf Farms goes beyond sustainability, actively restoring soil health, enhancing biodiversity, and sequestering carbon. By integrating these principles into our projects, we create vibrant, self-sustaining agricultural ecosystems that provide fresh, nutrient-rich produce year-round while fostering local economic growth. We look forward to partnering with you to implement regenerative agriculture solutions tailored to your community, cultivating thriving ecosystems that promote environmental stewardship and food security.

# Introduction

**Growing a Legacy of Sustainable Farmers for a Sustainable Future.**



## Food Security

Steady supply,  
Reduced dependency



## Building Resilience

Economic  
development



## Innovative Farming

Tailored solutions,  
Sustainable practices.



**Cultivate communities by empowering the next generation of farmers with the knowledge, technology, and skills they need to succeed.**

# The Problem

## Addressing Soil Degradation and Economic Challenges in Conventional Agriculture

Soil health has been degrading at a constant rate in Canada since the advent of a conventional primary agriculture production model that includes mechanical tillage and the use of chemically-based fertilizers, herbicides, and fungicides.

Along with soil degradation, economic and environmental challenges that are beyond the control of agricultural producers are causing financial hardship and loss of profitability on farms and ranches across the country.

Despite these challenges, many farmers and ranchers are unsure how to decrease their reliance on synthetic nutrients and crop protection products that propose to drive their yields yet continue to erode their profitability and functional soil health.



# The Challenge

Farmers and ranchers have three main problems to solve

Determine, design, and deploy production practices that steadily increase carbon cycling and photosynthetic efficiency, thereby continuously increasing the levels of soil carbon.



Enhance existing relationships and collaboration, as both tenants and partners, with Indigenous and Metis Nations.

- Incorporate these community members into operations.
- Awaken the already existing knowledge and ancient practices within these communities.
- Provide foundational training on soil health and regenerative ag practices.

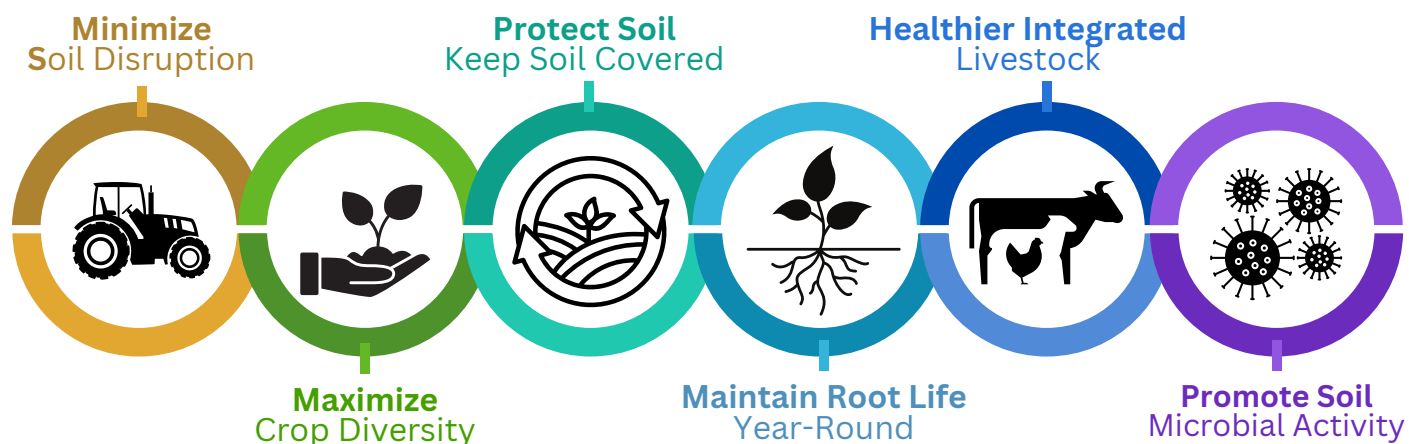
Create an economic environment that welcomes a distributed food system, thereby increasing rural economic resiliency and establishing common ground for the common good.



# The Solution

There exists a nature-based framework, called the **6-3-4 (6 principles of soil health, the 3 rules of adaptive stewardship, 4 ecosystem processes)**, that when followed enables primary producers to switch over to a regenerative agriculture system allowing them to increase their profitability, improve their functional soil health, and enhance the nutrient density of the food they grow.

## 6 principles of Regenerative Agriculture



### Minimize Soil Disruption

Minimize tillage to maintain soil structure, protect soil organisms, and preserve organic matter, preventing erosion, compaction, and soil carbon loss.

### Maximize Crop Diversity

Grow diverse crops in rotation and polycultures to enhance biodiversity, improve soil structure, and reduce pest and disease pressures, promoting a resilient ecosystem.

### Keep Soil Covered

Maintain soil cover with cover crops, residues, or mulches to protect against erosion, conserve moisture, and provide habitat for soil organisms.

### Maintain Root Life Year-Round

Keep living roots year-round with cover crops, perennials, and diverse systems to support soil microorganisms, improve structure, and enhance nutrient cycling.

### Healthier Integrated Livestock

Incorporate managed grazing and integrate livestock to cycle nutrients, improve soil fertility, and stimulate plant growth.

### Promote Soil Microbial Activity

Foster a healthy soil food web by providing organic matter, minimizing chemical inputs, and avoiding harmful practices, enhancing nutrient availability and soil structure.

# Solution

## 3 Rules of Adaptive Stewardship

### Diversity and Complexity



Continuous Learning and Adaptation

Building and Maintaining Ecosystem Functions

### Diversity and Complexity:

Promote biodiversity and ecological complexity in agricultural practices. This involves integrating a variety of crops, livestock, and natural habitats to create resilient ecosystems. Diverse systems are better able to adapt to changes and stresses, such as pests, diseases, and climate variations.

### Continuous Learning and Adaptation:

Implement a cyclical process of observation, feedback, and adaptation. Farmers and land managers continuously monitor their systems, learn from outcomes, and make necessary adjustments to practices. This approach ensures that management strategies remain effective under changing conditions and incorporate new knowledge and technologies.

### Building and Maintaining Ecosystem Functions:

Focus on enhancing and sustaining the natural functions of ecosystems, such as nutrient cycling, water retention, soil fertility, and energy flow. Practices should aim to regenerate these functions rather than deplete them. This involves minimizing soil disturbance, maintaining ground cover, and fostering symbiotic relationships between plants and microorganisms.





# Solution

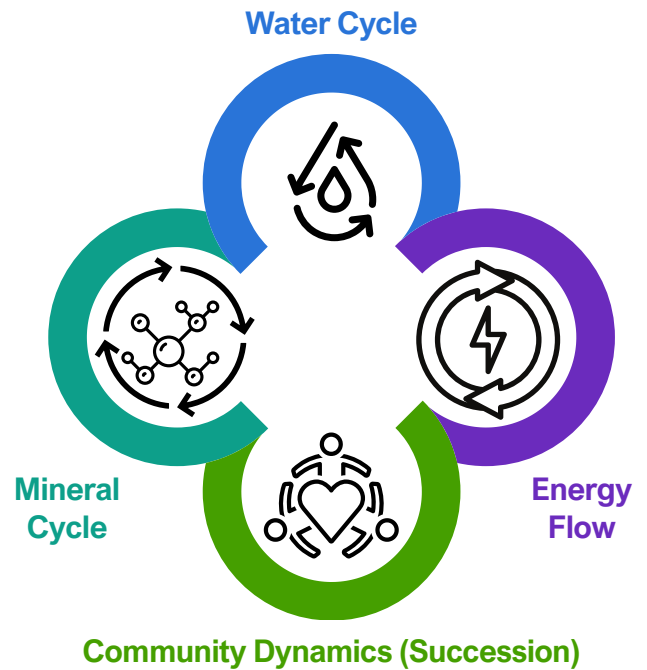
**Water Cycle:** The movement of water through the environment, including precipitation, infiltration into the soil, transpiration by plants, evaporation, and runoff. A healthy water cycle ensures that water is effectively absorbed, stored, and utilized by plants and soil, reducing erosion and drought impacts.

**Mineral Cycle:** The movement and recycling of nutrients and minerals through the soil, plants, animals, and microorganisms. Effective mineral cycling ensures that essential nutrients are available to plants and soil organisms, enhancing soil fertility and plant health.

**Energy Flow:** The transfer of energy from the sun through photosynthesis into plants, and then through the food chain via herbivores, predators, decomposers, and other organisms. Efficient energy flow supports plant growth, animal health, and overall ecosystem productivity.

**Community Dynamics (Succession):** The process of ecological succession, where plant and animal communities change and develop over time, moving towards greater complexity, stability, and resilience. Healthy community dynamics involve diverse species interacting and supporting each other, leading to robust and adaptable ecosystems.

## 4 Ecosystem Processes



# Solution

Using this system, **NuLeaf Farms** will provide full-service consulting to enable our clients to offer their customers baseline data and **regenerative agriculture** recommendations that will ensure an improvement in the net profit of each organization or enterprise, the **regeneration of the land**, the **production of highly nutrient-dense food**, and the **reconciliation of community relations** between people groups in Alberta and beyond.



## The Specific Proposed Solutions

**NuLeaf Farms** will support the **long-term** planning and implementation of a **full-scale regenerative agriculture**, primary production system through an agile management approach. The **Infinitely Regenerative Ag Model** starts with assessment and analysis, demonstrates a quantified and visualized baseline, creates a regenerative ag system plan, oversees and directs the implementation, and ensures a continual iterative process is applied resulting in continual increases in **per-acre profitability**, improvement in functional **soil health**, and enhancement of the **nutrient density of food**.

# Infinitely Regenerative Ag Model

## Outline and Deliverables

### Baseline analysis of existing operation including

- Baseline assessment and analysis, quantification, and visualization of the current regenerative agriculture status of land and business. This includes a comprehensive soil health assessment according to functional soil testing protocols (Haney Test, Phoso Lipid Fatty Acid (PLFA), and Total Nutrient Digestion as performed by the Regen Ag Lab in Pleasanton, NE).
- Regenerative ag system recommendations.
- Soil carbon credit strategy to increase revenue stream and build into the branded beef narrative.

### Deliverables, Terms, & Conditions

Deliverable	Fee	Estimated Total
On-site evaluation - 1 day @ 8 hours per 640 acres	\$150/hr	\$1200
Assessment & Observations reporting - 1 day per onsite evaluation day	\$150/hr	\$1200
Regen Ag Labs Tests: Haney Soil Test, PLFA, TND, Shipping all samples	\$100 each, \$150 each, \$90 each, \$200	\$400, \$540, \$300, \$200
Travel fees	\$150/hr	TBD
Hotels and Meals	At cost	TBD
<b>Total</b>		<b>TBD</b>

# Grant Writing

In many parts of Western Canada, grants are available for producers and landowners who wish to change their practices from conventional to regenerative agriculture systems, including but not limited to:

- Sustainable Canadian Agriculture Partnership in Alberta funding (Farm Technology, On-Farm Value-Added, and the Resilient Agriculture Landscape Program).
- On-Farm Climate Action Fund (OFCAF) / Results Driven Agriculture Research (RDAR) focusing on improving nitrogen management, increasing adoption of cover cropping, and expanding the adoption of rotational grazing.
- Resilient Agriculture Landscapes Program in Saskatchewan.

NuLeaf Farms staff will work with the project proponent/owner to determine which programs are available and where there is eligibility. Once the proper grant programs are identified and with a signed agreement in place, the project proponent agrees to work with NuLeaf Farms to determine the data required for the grant and to pay NuLeaf Farms an upfront fee of \$2000. Upon receipt of the grant approval, the client agrees to pay 10% of the total grant amount received, less the amount of the upfront fee payment. Upon signing a consulting fee agreement, a 50% payment is required upfront. The remaining 50% payment is required upon the receipt by the client of the written report and 30 days from receiving the invoice.



# About NuLeaf Farms

At **NuLeaf Farms**, we're growing the **next generation of farmers**. **Combining plant science and technology**, we work extensively with **communities** to understand their needs and **support farming objectives** that can bring **sustainable farming, economic development and food security**.

From our state-of-the-art facility in Calgary, Alberta, we provide **farming solutions** tailored to **grow affordable, fresh produce year-round**. Our services include regenerative agriculture consulting, water testing and consulting, and recommending the best farm solutions to suit your needs and budget. We help customers **grow** their own **nutritious food** on-site while **saving over 50% on food costs** and using up to **95% less water and land, reducing food waste, pesticides, and transportation** used in traditional **supply chains**. With post-project support through training programs and onsite assistance, **NuLeaf Farms** takes every customer from **seed to success**.



Working with communities to grow a sustainable and secure food future.



Reduce the financial and environmental costs of food.




Delivering all-in-one indoor hydroponic farms




Growing fresh, nutritious food year-round with a fraction of the natural resources.



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