

## **Soil Biology +**

**Project #: 2008C**

**Cooperator: Jan & Rick McGlone**

**By: *Grey Wooded Forage Association***

**Funding: Agriculture Opportunities Fund**

**Sponsors: Clearwater County Ag Services, Bob Aasman, Jim Stone (PowerFlex posts), Soil Foodweb Canada, Vulcan, Sustainable Soil Solutions Canada Inc.**

To start off for this year we took soil samples from the area we put compost on in 2008 and from the rest of the area we added to the project. The results are on page 22.

On July 9<sup>th</sup> Matt Martinson applied the nutrient applications for this project with the Clearwater County's Kubota mounted boomless sprayer. We used a mixture of 500 mg of Grow Cal/Phos, 4 litres of fish fertilizer and 2 litres of molasses per acre at the south end of the plots.

We got a bag of calcium nitrate from Bob Aasman and applied it at two different rates at the north end of the plots. See the site map on page 22 for details. The applications went very well.

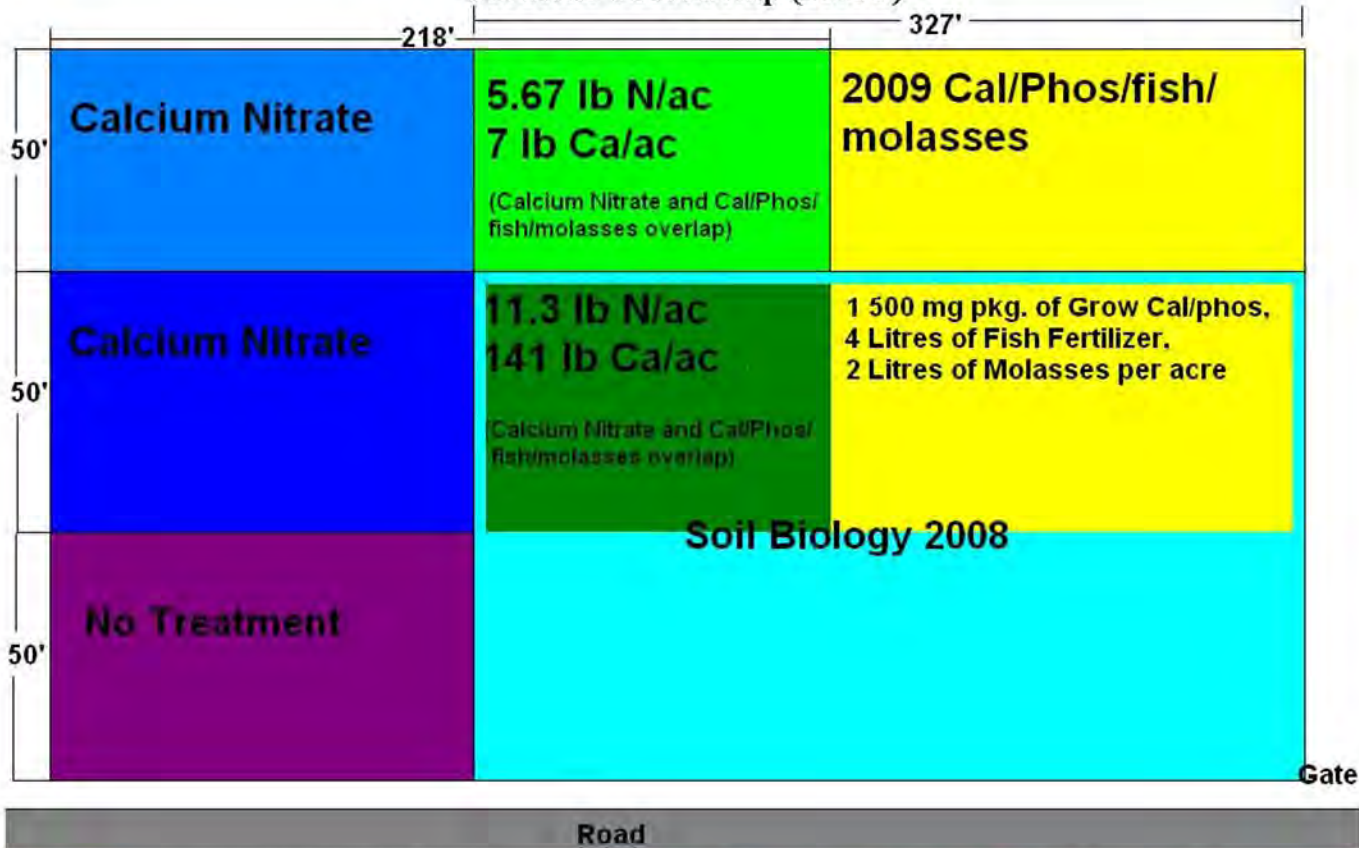
On August 17<sup>th</sup> Jan, Brette and I put an electric fence up around the site using high tensile wire and Power Flex posts. The project was our feature for the West Country Ag Tour.

On September 29<sup>th</sup> I took yield clips of all the different plots. These samples were dried, weighed and sent to Parkland Laboratories for feed testing.

Matt Martinson, from Clearwater County Ag Services, sprayed our fall treatment of GSR Calcium on November 20<sup>th</sup>. GSR Calcium is a pure, water soluble calcium that is designed to apply in the dormant season.



### McGlone's Plot Setup (2008C)



#### Soil Foodweb Canada Ltd.

285 Service Rd, Box 420  
 Vulcan, AB T0L 2B0  
 Phone: 403-485-6981  
 Fax: 403-485-6410  
 Email: info@soilfoodweb.ca  
 Web: www.soilfoodweb.ca



**YOUR BEST CHOICE FOR  
 SOIL ENHANCING PRODUCTS**

**Sustainable Soil Solutions  
 CANADA INC.**

### Water Soluble Soil Chemistry

#### Report Prepared for:

Albert Kuipers  
 Grey Wooded Forage Assoc.  
 Box 1448  
 Rocky Mtn. House, Alberta T4T 1B1  
 Phone: (403) 844-2645  
 Fax: (403) 844-2642  
 gwfa2@telus.net

#### Report Date:

11/06/2009

#### Page:

1 of 1

**Sample ID:** 2008 Soil Bio Site  
**SFC Biology ID:** 1643

	ppm	Comments
Calcium (Ca)	2020	n/a
Phosphorus (P <sub>2</sub> O <sub>5</sub> )	79.8	Medium
Potassium (K <sub>2</sub> O)	7.5	Very Low
Magnesium (Mg)	24.7	Low
Nitrate Nitrogen (NO <sub>3</sub> -N)	0.5	n/a
Ammonia Nitrogen (NH <sub>3</sub> -N)	6.25	n/a
Sulfur (S)	13	Low
Copper (Cu)	0	Very Low
Iron (Fe)	62	Very High
Manganese (Mn)	18	Very High
pH	n/a	6.55
Conductivity	n/a	97

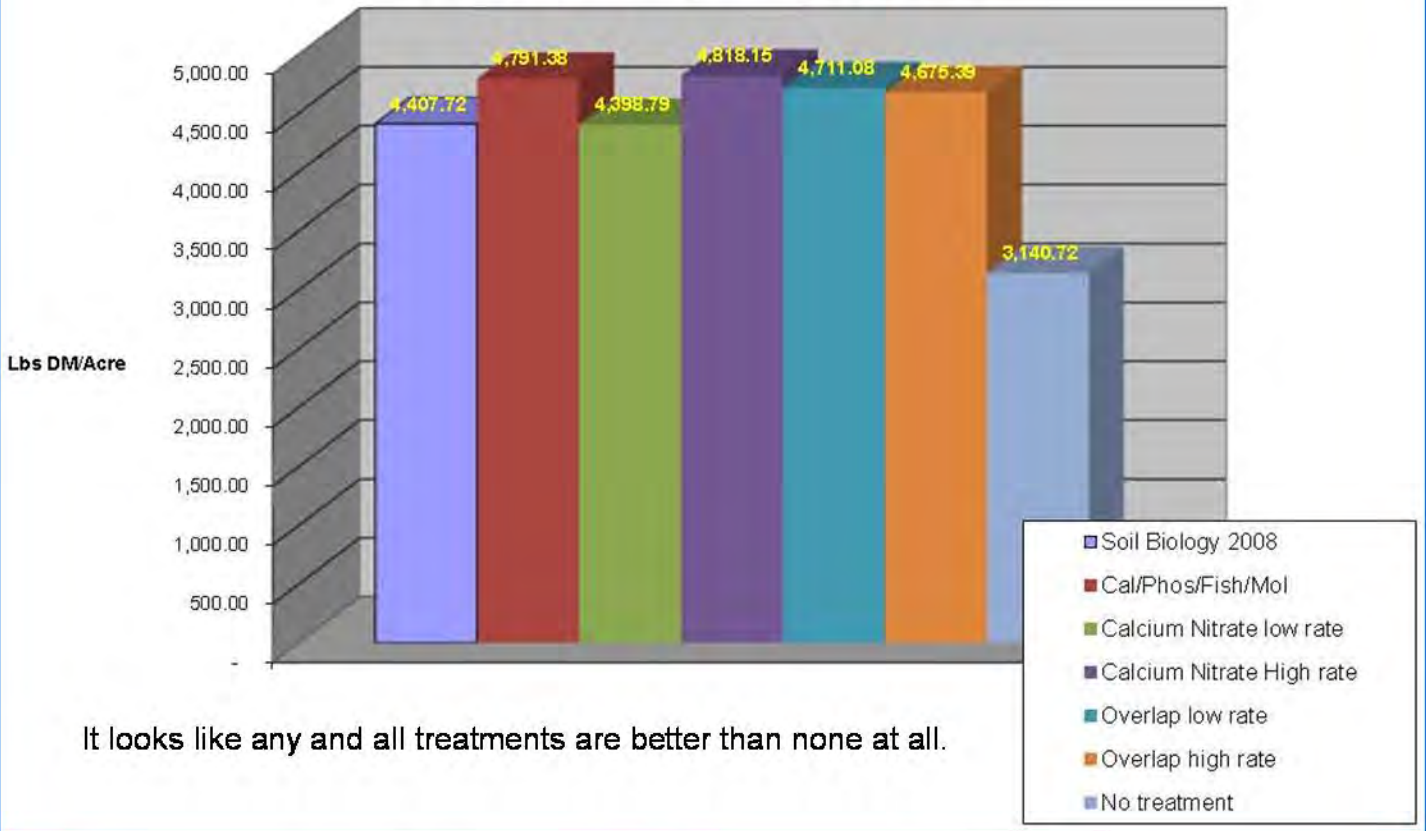
**Sample ID:** McGlone  
**SFC Biology ID:** 1642

	ppm	Comments
Calcium (Ca)	1440	n/a
Phosphorus (P <sub>2</sub> O <sub>5</sub> )	43	Low
Potassium (K <sub>2</sub> O)	10	Very Low
Magnesium (Mg)	372	Very High
Nitrate Nitrogen (NO <sub>3</sub> -N)	2	n/a
Ammonia Nitrogen (NH <sub>3</sub> -N)	4.5	n/a
Sulfur (S)	10	Low
Copper (Cu)	0.15	Very Low
Iron (Fe)	36	High
Manganese (Mn)	9	Very High
pH	n/a	6.03
Conductivity	n/a	86

The analysis report to the left came from the area that received compost in 2008, called soil biology 2008 on the site map. The report above is from the rest of the area that is now enclosed in the fence. Note that the measurements are in parts-per-million (ppm), rather than per acre. Calcium and phosphorus were higher in the 2008 soil biology plot. Potassium was a little lower. Magnesium showed a huge drop. Nitrogen showed a slight increase, but is still low.



## 2008C Yields September 29, 2009



It looks like any and all treatments are better than none at all.



### Soil Foodweb Analysis

Report prepared for:  
 Grey Wooded Forage Assoc.  
 Albert Kuipers  
 Box 1448  
 Docky Mtn. House, Alberta T4  
 (403) 844-2642  
 gwfa2@telus.net

Report Sent: 6/11/2009  
 Sample#: 08-001643  
 Unique ID: 2008 Soil Bio Site  
 Plant: Pasture

Invoice Number:  
 Sample Received: 5/26/2009

Organism Biomass Data	Dry Weight	Active Bacterial (µg/g)	Total Bacterial (µg/g)	Active Fungal (µg/g)	Total Fungal (µg/g)	Hyphal Diameter (µm)
<b>Results</b>	0.770	12.7	32.2	1.57	150	3
Comments	In Good Range	Low	Low	Low	Good	
Expected Range	Low: 0.45, High: 0.85	Low: 15, High: 25	Low: 100, High: 300	Low: 15, High: 25	Low: 100, High: 300	

	Protozoa Numbers/g			Total Nematodes #/g	Percent Mycorrhizal Colonization	
	Flagellates	Amoebae	Ciliates		ENDO	ECTO
<b>Results</b>	5998	7493	181	2.55	Not Ordered	Not Ordered
Comments	Low	Low	High	Low		
Expected Range	Low: 10000, High: 10000	Low: 10000, High: 10000	Low: 50, High: 100	Low: 20, High: 30	40% - 80%	40% - 80%

Organism Biomass Ratios	Total Fungal to Total Bacterial	Active to Total Fungal	Active to Total Bacterial	Active Fungal to Active Bacterial	Plant Available N Supply
<b>Results</b>	4.67	0.01	0.39	0.12	75-100
Comments	High	Low	Good	Low	
Expected Range	Low: 0.8, High: 1.5	Low: 0.25, High: 0.95	Low: 0.25, High: 0.95	Low: 0.75, High: 1.5	



### Soil Foodweb Analysis

Report prepared for:  
 Grey Wooded Forage Assoc.  
 Albert Kuipers  
 Box 1448  
 Docky Mtn. House, Alberta T4  
 (403) 844-2642  
 gwfa2@telus.net

Report Sent: 6/11/2009  
 Sample#: 08-001642  
 Unique ID: McGlone  
 Plant: Pasture

Invoice Number:  
 Sample Received: 5/26/2009

Organism Biomass Data	Dry Weight	Active Bacterial (µg/g)	Total Bacterial (µg/g)	Active Fungal (µg/g)	Total Fungal (µg/g)	Hyphal Diameter (µm)
<b>Results</b>	0.780	17.0	34.6	2.80	118	3.5
Comments	In Good Range	Good	Low	Low	Good	
Expected Range	Low: 0.45, High: 0.85	Low: 15, High: 25	Low: 100, High: 300	Low: 15, High: 25	Low: 100, High: 300	

	Protozoa Numbers/g			Total Nematodes #/g	Percent Mycorrhizal Colonization	
	Flagellates	Amoebae	Ciliates		ENDO	ECTO
<b>Results</b>	5441	2732	40	1.31	Not Ordered	Not Ordered
Comments	Low	Low	Low	Low		
Expected Range	Low: 10000, High: 10000	Low: 10000, High: 10000	Low: 50, High: 100	Low: 20, High: 30	40% - 80%	40% - 80%

Organism Biomass Ratios	Total Fungal to Total Bacterial	Active to Total Fungal	Active to Total Bacterial	Active Fungal to Active Bacterial	Plant Available N Supply
<b>Results</b>	3.42	0.02	0.49	0.16	25-50
Comments	High	Low	Good	Low	
Expected Range	Low: 0.8, High: 1.5	Low: 0.25, High: 0.95	Low: 0.25, High: 0.95	Low: 0.75, High: 1.5	

For interpretation of this report please contact:  
 Local Advisor: or regional lab  
 Soil Foodweb Canada  
 info@soilfoodweb.ca  
 (403) 485-6961

*Consulting fees may apply*

Nematodes per Gram of Soil Identification to genus	
Bacterial Feeders	
Acrobilidae	0.02
Cephalobus	0.05
Chilopatus	0.05
Pirngyalamus	0.12
Plectus	0.14
Pseudotaxius	0.14
Rhabditidae	0.02
Fungal Feeders	
Dorylaimini	0.05
Eudorylaimini	0.23
Pungentia	0.02
Fungal/Root Feeders	
Aphelenchus	0.02
Stilpnichus	0.02
Stilpnichus	0.10
Root Feeders	
Pratylenchus	
Lesion nematode	0.05



**Full line of Permanent and Portable Fencing**

*Call or e-mail for a FREE product catalog!*

**250-402-8664**  
**403-638-8076**

**POWERFLEX FENCE™**

[www.powerflexfence.com](http://www.powerflexfence.com) | [info@powerflexfence.com](mailto:info@powerflexfence.com)