



2015 Nutrient Management Plan

Prepared for;

Douglas Regehr

Armstrong, B.C.

4/22/2015

Prepared By: Doug Macfarlane, CCA



DOUGLAS REGEHR

2015 NUTRIENT MANAGEMENT PLAN

Producer Information;

Douglas Regehr

Armstrong, B.C. V0E 1B4

Mobile: [REDACTED]

I, _____ hereby certify that I have reviewed the Nutrient Management Plan with the agriculture consultant who prepared it and I shall in good faith attempt to follow and implement the recommendations as set out within the plan

Signature: _____ Date: _____

Preparer Information;

Doug Macfarlane, CCA Emerald Bay Ag Services

#10 Mary's Emerald Bay Road

Vernon, B.C. V1H 2A7

Mobile: 250.550.0545 dougmacf@shaw.ca

I, Doug Macfarlane, CCA, hereby certify that based on relevant information that was gathered in good faith and excluding unforeseen or uncontrollable circumstances, the recommendations contained in the attached Nutrient Management Plan report will, if implemented, result in acceptable management practices.

Signature: _____ Date: _____

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1 OBJECTIVE

This paper is for the purpose of defining a comprehensive nutrient management plan to ensure efficient and responsible use of manure nutrients produced on the farm. Douglas Regehr's farm is located above an unconfined aquifer that supplies water to neighboring properties and due to soil type in some areas susceptible to leaching if excessive nutrients are applied.

This plan is the first step in producing an operational nutrient plan for the farm that will ensure that nutrients are applied in amounts that correspond to crop requirements and at times that will give us the best chance for good crop utilization

2 INTRODUCTION

Doug Regehr is an operating organic farm that has no livestock to supply the nutrients required for crop production and has been using broiler manure sources either locally or from the Fraser Valley to supply the required nutrients.

I have done soil tests in 2011 and 2012 to try and improve production and started a broiler manure program in 2012. After the Ministry of Environment wrote an order for them to complete a nutrient management plan I started sampling again in the spring of 2014.

2.1 2011, 2012, 2013 AND 2014 CROP YEARS

The first soil sample taken August 29th 2011 showed a soil profile with average or desirable nitrogen levels remaining after the 2011 crop but nothing extra for the upcoming 2012 wheat crop.

Generally accepted principals of a manure program are that when you use a total nitrogen manure test only 50% is available to the crop the first year and then varying amounts in succeeding years with the full value realized by year 5. 2.5 tons of broiler manure was applied in the spring of 2012. The crop responded well.

After the 2012 crop was harvested the soil was retested on August 27th 2012 and the soil nitrates came back slightly lower and on the low side of where you have confidence the crop had ample nitrogen throughout the season. The recommendation was the same for manure application for the 2013 crop year.

No soil samples were taken in the fall of 2013 so there is no data as to the soil status then and whether or not soil nutrient levels were building enough to start using the second and 3rd year manure release numbers in crop recommendations. From my understanding the manure program was repeated for the 2014 crop year because there was no new test results and from the positive results seen with the program so far. Manure was applied in the fall of 2013 for the 2014 crop. In most situations in the Interior that has been a very common and accepted practice.

Soil samples were again taken in the spring of 2014 because of the order and they showed very low soil nitrogen levels all the way down to the 2 foot level. This was unexpected because of the fall application that had been done. No new nutrient applications were done for the year. Fall soil tests done after the crop was harvested showed Medium to high soil available nitrogen levels. I feel this can be attributed to the residual nitrogen release from the previous manure applications.

3 OWNER AND CONTACT INFORMATION

Owner;

Douglas Regehr

[REDACTED]

Armstrong, B.C. V0E 1B4

E-mail:

Mobile: [REDACTED]

Plan writer;

Doug Macfarlane, CCA

10 Mary's Emerald Bay Road

Vernon, B.C. V1H 2A7

E-mail: dougmacf@shaw.ca

Home: [REDACTED]

Mobile: 250.550.0545

4 GOALS AND OBJECTIVES

4.1 ENVIRONMENTAL

To ensure that all nutrients brought on to the farm are spread and used in a responsible and environmentally friendly manner on the land that minimizes any chance of on or off farm pollution, either through surface runoff or subsurface leaching.

Monitor soil nitrate and phosphorous levels to control subsoil leaching of nutrients. Use of the 30-60 cm soil test will allow us to monitor leaching potentials.

4.2 AGRONOMIC

To use manure as a nutrient source to ensure efficient crop production including;

- Adjusting the manure applications for a crop cycle that will efficiently use the nutrients applied. Both the "Agronomic Balance" (supply ample nutrients to all crops to ensure maximum growth with no crop deficiencies developing) and a "Crop Removal Balance" accounting to eliminate excessive soil building of nutrients over the complete crop rotation will be watched.
- Developing a seasonal application plan to correspond with safe spreading practices and high plant utilization periods.
- To optimize the use of the manure nutrients thus increasing its economic value while reducing or eliminating the import of excess or unnecessary nutrients.

5 FARM DESCRIPTION

5.1 LAND BASE

D. REGEHR HOME FARM

	Description	Acres	2015 Crop
1	Main Home Field	38.4	Wheat
2	Old Feedlot	7.7	Wheat
3	Buffer Strip	1.6	Grass
	Total acres	47.7	

5.1 2015 Projected Manure Use

Field	Acres	Application #1 (ton/acre)	Date	Total tons
1	38.4	1.5	20-Apr	57.6
2	7.7	?	21-Apr	
3	1.6	1.5	20-Apr	2.4
	47.7			60

Field #1 will be resampled by the 1st of April 2015 and that sample will help determine a spring application rate.

6 SAMPLING PROCEDURES

6.1 SOIL

Soil sampling will be done annually on field # 1 and any other field receiving nutrient applications. The samples normally include;

- 0-6" - complete with micro nutrients and E.C.
- 6-12" and 12-24" basic N-P-K with E.C.

Soil samples are to be geo referenced to ensure sample data that will correspond with field changes over time. In fields that may be E.C. mapped 2 sites of 8 cores will be sampled. In unmapped fields 15 geo referenced cores representing the whole field will be gathered.

When possible, soil sampling is to be carried out in the fall after crop are harvested and before any field work begins.

6.2 2015 OBJECTIVES AND TIMETABLE

	Event	Responsibilities	Actions
April 1,2015	Complete soil and manure sampling	To determine starting soil nutrient content.	
April 15,2015	Complete Spring manure application plan	To ensure spring manure application amounts match with in season crop nitrogen requirements.	
April 20,2015	Manure applications		
Oct 2015	Complete post-harvest soil testing	To determine soil nutrient levels after crops are harvested and before and soil amendments are added or tillage operations are preformed	
Nov/Dec 2015	Complete NMP for the upcoming year	Match after crop residual soil nutrient content with proposed crop production requirements and available manure resources.	Annually
Nov/Dec 2016	Complete NMP for the upcoming year 2017	Match after crop residual soil nutrient content with proposed crop production requirements and available manure resources.	

A & L Canada Laboratories Inc.



Report Number: C15097-10025
Account Number: 05219

2136 Jetstream Road, London, Ontario, N5V 3P5
Telephone: (519) 457-2575 Fax: (519) 457-2684

To: EMERALD BAY AG SERVICES
10 MARYS EMERALD BAY ROAD
VERNON, BC V1H 2A7

For: DOUG REGHER

Attn: DOUG MACFARLANE
250-548-3847

Grower Code: 05219083
Farm: HOME
Field: 101 HOME

05219-N727

Report Date: 2015-04-09 Print Date: 2015-04-22

SOIL TEST REPORT

Page: 1

Sample Number	Legal Land Descript:	Depth	Lab Number	Organic Matter	Phosphorus - P ppm Blcarb Bray-P1	Potassium K ppm	Magnesium Mg ppm	Calcium Ca ppm	pH	CEC meq/100g	Percent Base Saturations						
											% K	% Mg	% Ca	% H	% Na		
1011A		6	44026	3.4	55 G	131 H	298 VH	210 M	2020 M	6.9	6.9	13.9	5.5	12.6	72.8	8.5	0.6
1011B		12	44027							6.9							
1011C		24	44028														

Sample Number	Sulfur ppm \$ lbs/ac	Nitrate Nitrogen ppm NOS-N lbs/ac	Zinc Zn ppm	Manganese Mn ppm	Iron Fe ppm	Copper Cu ppm	Boron B ppm	Soluble Salts ms/cm	Saturation %P	Aluminum Al ppm	Saturation %Al*	K/Mg Ratio	ENR	Chloride Cl ppm	Sodium Na ppm	Molybdenum Mo ppm
1011A	11 VL	20	7 L	13					39 H	429	0.1 G	0.44	46		18 L	
1011B	0	8 L	14													
1011C	0	10 M	36													

OE VL - VERY LOW L - LOW M - MEDIUM H - HIGH VH - VERY HIGH * G - GOOD, M - MARGINAL, MT - MODERATE PHYTO-TOXIC, T - PHYTO-TOXIC, ST - SEVERE PHYTO-TOXIC

GRAPHIC SUMMARY

Very High (*High)	High (*GOOD)	Medium	Low	Very Low													
■	■	■	■	■	■	■	■										
P1*	%P*	N	K	Mg	Ca	S	Zn	Mn	Fe	Cu	B						

SOIL FERTILITY GUIDELINES (lbs/ac)

Sample Number	Previous Crop	Intended Crop	Yield Goal	Lime Tons/Acre	N	P205	K2O	Mg	Ca	S	Zn	Mn	Fe	Cu	B
1011A	Wheat Red Spring	Wheat Red Spring	100 bu	0.0	167	15	20	10	0	20					

Crop yield is influenced by a number of factors in addition to soil fertility. No guarantee or warranty concerning crop performance is made by A & L.



C15097-10025

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A&L Canada is a laboratory accredited by Standards Council of Canada / CAEAL and OMAF

Spring 2015 soil test shows the total available nitrogen is at 63 pounds with the top foot of soil down to only 27 pounds of available Nitrogen. There was a fall cover crop planted on the field that is to be worked in just before spring planting. This is where some of the available nitrogen should have been taken up and captured in the plant material to be released this summer.

Using the Spring 2015 soil test and with the intentions and ability to produce a 100 bushel Hard Red Spring Wheat for Rogers Flour Mill the recommended application rate for nitrogen of 167 pounds per acre is very reasonable. As Mr. Regher uses manure as the sole nutrient source for his organic farming operation and manure has a slower total release pattern than commercial fertilizer and as he has now been applying manure since 2012 cropping season we will consider the total manure nitrogen content in the manure as available for this year.

167 pound N required Divided by 70 pounds per ton = a 2.4 ton per acre application rate of Broiler manure for 2015.

Manure will be applied to the 40 acres included in fields 1 and 3, no manure or future nutrients will be applied in field #2. This is where the old feedlot was located and it will be cropped for the first time this year.

8 SUMMARY

- All nutrients used on this farm are brought on in an organic form and with the freight, handling and spreading costs care has been and will be used to not over apply manure.
- Due to the light soil type and apparent nutrient leaching taking place in the winter and spring season's. Nutrients will only be applied in the spring after runoff is complete or a limited application could be required in the fall for starting a winter crop. This would be limited to the fall crop expected uptake amounts with the main nutrient application still being done in the spring.
- Fall sampling will be done to determine the amount of N that has been released through the summer and not taken up by the crop. This will be balance with the early season plant requirements to develop an application rate for the field that addresses both the crop and the possibility of nutrient leaching in the off season.

Supporting Documentations

Fall 2011 Soil Test

Report Number: C11237-124
Account Number: 05139

A & L Canada Laboratories
2138 Jetstream Rd, London, Ontario, N5V 3P5
Telephone: (519) 457-2575 Fax: (519)457-2664



To: AGRI-TREND AGROLOGY
507 PINERIDGE RD
ARMSTRONG, BC V0E 1B6

For: OKA TRANSPORT 97 LTD.

Grower Code: 85746

Attn: DOUG MACFARLANE

Field: HOME 1

Report Date: 8/29/2011

SOIL TEST REPORT

Page: 1

Sample Number	Legal Land Descript	Depth	Lab Number	Organic Matter	Phosphorus - P ppm		Potassium K ppm	Magnesium Mg ppm	Calcium Ca ppm	pH		CEC meq/100g	Percent Base Saturations			
					Bicarb	Bray-P1				pH	Buffer		% K	% Mg	% Ca	% H
1-A	85746	0	19361	5.0	54	165	485	260	2730	7.3		17.1	7.3	12.6	79.6	0.5
1-B	85746	12	19362	4.4	61	186	590	255	2200	7.5		14.8	10.3	14.4	74.6	0.8

Sample Number	Sulfur ppm	Nitrate Nitrogen ppm	Zinc Zn ppm	Manganese Mn ppm	Iron Fe ppm	Copper Cu ppm	Boron B ppm	Molybdenum Mo ppm	Soluble Salts mmhos/cm	Saturation P %	Aluminum Al ppm	K/Mg Ratio	NH4N ppm	Chloride Cl ppm	Sodium Na ppm
1-B	14	7								41	577	0.72			26

SOIL FERTILITY GUIDELINES (lbs/ac)

Sample Number	Crop	Yield Goal	Lime Tons/Acre	N	P2O5	K2O	Mg	Ca	S	Zn	Mn	Fe	Cu	B

Results Authorized By: Ian McLachlin, Vice President

Crop yield is influenced by a number of factors in addition to soil fertility. No guarantee or warranty concerning crop performance is made by A & L. Tests are based on building nutrients to a level to maintain soil health. Banding and/or precision placement techniques can be utilized to increase fertilizer efficiency. If this report contains soil in excess of 7500 ppm Ca it may or may not effect the calculated Cation Exchange Capacity. Excessive seed placed fertilizer can cause injury.

The results of this report relate to the sample submitted and analyzed. A&L Canada Laboratories Inc. is accredited by the Standards Council of Canada for specific tests as listed on www.scc.ca and by the Canadian Association for Laboratory Accreditation as listed on www.cala.ca

19 ppm of nitrate in the 0-6" soil (38 Lb) and 7 ppm of Nitrate in the 6"-12" depth (14 Lb) after harvest.

For a total of 52 pounds of nitrogen remaining for the next year's crop.

Nutrient testing only done in the top 12"



Emerald Bay Ag Services

Doug Macfarlane, C C A
Agri-Trend Group of Companies
dougmacf@shaw.ca or 250.550.0545

Feb 27, 2012

Oka Transport
 C/O Doug Regehr

Attached is your soil analysis from last fall and a chart of crop requirements and fertilizer recommendations for a 100 bushel wheat crop for 2012.

I was seeing good nodulation on the Berseem Clover you planted last fall but do not think we had enough growth to materially add to the nitrogen pool in the ground.

		Nitrogen	p2o5	k2o	Sulfur	
Wheat required	100 bushel	210 lb	72 lb	160 lb	23 lb	
Available		127	>100	>320	26	
Required		83 production	30 maintenance		15 maintenance	

If broiler manure is approved by your Certification governing body then an application of 2 ½ tons per acre of this manure incorporated within 1 day of application should provide the required nitrogen with 50% release in 2012 and the balance in later years. Soil phosphorous levels should be monitored as broiler manure has excess phosphorous to your crop needs and soil phosphorous levels are already in the good to high range.

Doug Macfarlane, CCA
 Emerald Bay Ag Services

Fall 2012 Soil Test

Report Number: C12236-047
Account Number: 05219

A & L Canada Laboratories Inc.

2136 Jetstream Road, London, Ontario, N5V 3P5
Telephone: (519) 457-2575 Fax: (519) 457-2884



To: EMERALD BAY AG SERVICES
507 PINERIDGE ROAD
ARMSTRONG, BC V0E 1B6

For: REGEHR DOUG

Farm: HOME
Field: HOUSE

Attn: DOUG MACFARLANE
250-546-3847
Reported Date: 2012-06-27
Printed Date: 2012-06-27

Grower Code: 05219011

SOIL TEST REPORT

Page: 1

Sample Number	Lab Number	Organic Matter	Phosphorus - P ppm Bicarb	Phosphorus - P ppm Bray-P1	Potassium K ppm	Magnesium Mg ppm	Calcium Ca ppm	Sodium Na ppm	pH	CEC meq/100g	Percent Base Saturations				
									Buffer		% K	% Mg	% Ca	% H	% Na
HOM1A	07729	5.0	65 G	169 H	388 VH	225 M	2140 H	20 L	7.3	13.7	7.3	13.7	78.3		0.6
HOM1B	07730	4.4	70 H	178 H	341 VH	255 M	2350 H	31 M	7.2	15.6	5.6	13.6	75.2	4.8	0.9

Sample Number	Sulfur S ppm	Zinc Zn ppm	Manganese Mn ppm	Iron Fe ppm	Copper Cu ppm	Boron B ppm	Soluble Salts ms/cm	Saturation %P	Aluminum Al ppm	Saturation %Al	Nitrate Nitrogen NO3-N ppm	K/Mg Ratio	ENR	Field ID	Chloride Cl ppm
HOM1A	13 VL	14.6 VH	38 H	99 VH	2.4 H	0.6 M	0.3 VL	14 H	488	0.0 G	8 L	0.53	63		1 VL
HOM1B	14 VL							41 H	551	0.0 G	7 L	0.41	56		1 VL

OE VL - VERY LOW, L - LOW, M - MEDIUM, H - HIGH, VH - VERY HIGH, G - GOOD, MA - MARGINAL, MT - MODERATE PHYTO-TOXIC, T - PHYTO-TOXIC, ST - SEVERE PHYTO-TOXIC

SOIL FERTILITY GUIDELINES (lbs/ac)

Sample Number	Crop	Yield Goal	Lime Tons/Acre	N	P2O5	K2O	Mg	Ca	S	Zn	Mn	Fe	Cu	B
HOM1A	Alfalfa Seeding	4 tons	0.0	0	0	75	10	0	20	0.0	0	0	0	2.0
HOM1A	Corn Western	150 bu	0.0	178	20	25	10	0	20	0.0	0	0	0	0.0
HOM1A	Wheat Red Spring	70 bu	0.0	134	15	15	10	0	20	0.0	0	0	0	0.0

The results of this report relate to the sample submitted and analyzed.

* Crop yield is influenced by a number of factors in addition to soil fertility.

No guarantee or warranty concerning crop performance is made by A & L.

A&L Canada Laboratories Inc. is accredited by the Standards Council of Canada for specific tests as listed on www.scc.ca and by the Canadian Association for Laboratory Accreditation as listed on www.cala.ca

Results Authorized By: Ian McLachlin, Vice President

Soil available nitrogen is low at 8 and 7 ppm respectively for a total of 30 available pounds after harvest.

ENR or Estimated Nitrogen Release numbers are included now showing an expectation of 119 pounds (65 + 56) of nitrogen to be released from the organic matter in the soil the next growing season. This number is proving to be reliable if not sometimes conservative. Care must be taken not to use the ENR totally or the fields overall nutrition's status will deteriorate.

2013

No soil data available. The same program was followed by the producer.

Spring 2014 Soil Test

A & L Canada Laboratories Inc.



Report Number: C14086-10015
Account Number: 05219

2136 Jetstream Road, London, Ontario, N5V 3P5
Telephone: (519) 457-2575 Fax: (519) 457-2684

To: EMERALD BAY AG SERVICES
507 PINERIDGE ROAD
ARMSTRONG, BC V0E 1B6

For: REGEHR DOUG

Grower Code: 05219011
Farm: HOME
Field: HOUSE

05219-N401

Attn: DOUG MACFARLANE
250-546-3847

Report Date: 2014-04-01 Print Date: 2015-02-22

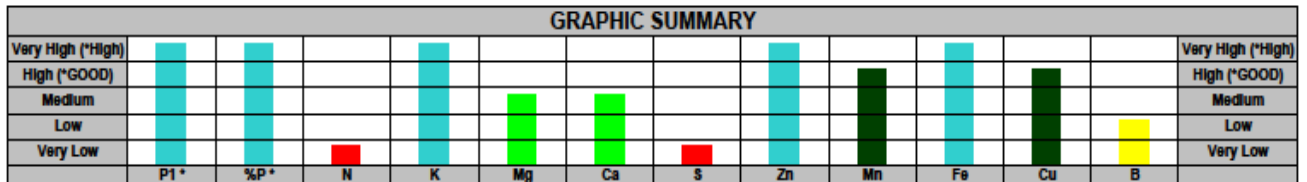
SOIL TEST REPORT

Page: 1

Sample Number	Legal Land Descpt:	Depth	Lab Number	Organic Matter	Phosphorus - P ppm	Bray-P1	Potassium K ppm	Magnesium Mg ppm	Calcium Ca ppm	pH	Buffer	CEC meq/100g	Percent Base Saturations				
												% K	% Mg	% Ca	% H	% Na	
1011A		6	31003	4.8	63 H	189 H	418 VH	240 M	2440 M	6.9	6.9	16.5	6.5	12.1	73.9	7.1	0.4
1011B		12	31004	4.6	88 H	210 H	468 VH	245 M	2440 M	6.9	6.9	16.7	7.2	12.2	73.1	7.0	0.5
1011C		24	31005	2.3	45 M	106 G	373 VH	245 M	1980 M	6.9	6.9	14.2	6.7	14.4	69.8	8.3	0.8

Sample Number	Sulfur ppm S lbs/ac	Nitrate Nitrogen ppm NOS-N lbs/ac	Zinc Zn ppm	Manganese Mn ppm	Iron Fe ppm	Copper Cu ppm	Boron B ppm	Soluble Salts ml/cm	Saturation %P	Aluminum Al ppm	Saturation %Al*	K/Mg Ratio	ENR	Chloride Cl ppm	Sodium Na ppm	Molybdenum Mo ppm
1011A	11 VL 20	1 VL 2	15.5 VH	35 H	92 VH	3.0 H	0.5 L	0.2 VL	51 H	474	0.1 G	0.54	61	13 L	17 L	
1011B	15 VL 27	4 VL 7							80 H	452	0.1 G	0.59	59		19 L	
1011C	12 VL 43	7 L 25							23 H	579	0.1 G	0.47	35		27 M	

OE VL - VERY LOW L - LOW M - MEDIUM H - HIGH VH - VERY HIGH * G - GOOD, M - MARGINAL, MT - MODERATE PHYTO-TOXIC, T - PHYTO-TOXIC, ST - SEVERE PHYTO-TOXIC



SOIL FERTILITY GUIDELINES (lbs/ac)

Sample Number	Previous Crop	Intended Crop	Yield Goal	Lime Tons/Acre	N	P2O5	K2O	Mg	Ca	S	Zn	Mn	Fe	Cu	B

Crop yield is influenced by a number of factors in addition to soil fertility. No guarantee or warranty concerning crop performance is made by A & L.



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C14086-10015

Tet taken April 1st 2014. Soil nitrate levels are very low to low. Only 9 pounds remaining in the top 12" and another 25 pounds available in the 12"-24" level for 34 pounds of Nitrate nitrogen plus the ENR of 155 pounds.

No further nutrients were applied to the crop of 2014.

Fall 2014 Soil Test

A & L Canada Laboratories Inc.



Report Number: C14267-10034
Account Number: 05219

2136 Jetstream Road, London, Ontario, N5V 3P5
Telephone: (519) 457-2575 Fax: (519) 457-2884

To: EMERALD BAY AG SERVICES
10 MARYS EMERALD BAY ROAD
VERNON, BC V1H 2A7

For: REGEHR DOUG

Attn: DOUG MACFARLANE
250-546-3847

Grower Code: 05219011
Farm: HOME
Field: HOUSE

05219-N559

Report Date: 2014-09-26 Print Date: 2015-02-22

SOIL TEST REPORT

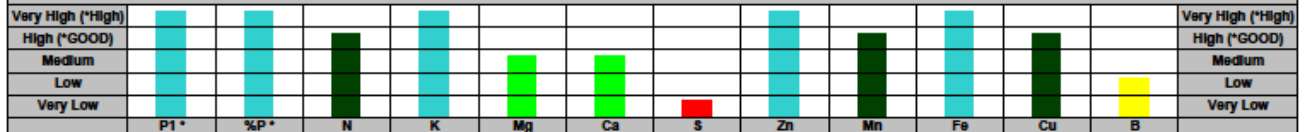
Page: 1

Sample Number	Legal Land Descript:	Depth	Lab Number	Organic Matter	Phosphorus - P ppm		Potassium K ppm	Magnesium Mg ppm	Calcium Ca ppm	pH		CEC meq/100g	Percent Base Saturations				
					Bicarb	Bray-P1				pH	Buffer		% K	% Mg	% Ca	% H	% Na
1011A		6	42601	4.4	100 H	282 H	558 VH	315 M	2380 M	7.0		18.5	7.8	14.2	64.5	12.9	0.7
1011B		12	42802	4.1	49 G	127 H	421 VH	160 M	1120 M	7.0		9.3	11.6	14.3	60.2	12.9	1.1
1011C		24	42803	2.1	51 G	114 G	618 VH	220 H	1440 M	7.2		11.3	14.0	16.2	63.8	4.5	1.4

Sample Number	Sulfur ppm S lbs/ac		Nitrate Nitrogen ppm NOS-N lbs/ac		Zinc Zn ppm	Manganese Mn ppm	Iron Fe ppm	Copper Cu ppm	Boron B ppm	Soluble Salts ms/cm	Saturation %P	Aluminum Al ppm	Saturation %Al*	K/Mg Ratio	ENR	Chloride Cl ppm	Sodium Na ppm	Molybdenum Mo ppm
	1011A	21 VL	38	34 H	81	18.3 VH	45 H	126 VH	2.9 H	0.5 L	0.5 L	88 H	528	0.1 G	0.55	56	17 M	30 M
1011B	12 VL	22	35 H	63							39 H	419	0.1 G	0.81	53		23 H	
1011C	14 VL	50	18 M	65							24 H	604	0.1 G	0.86	33		37 H	

OE VL - VERY LOW L - LOW M - MEDIUM H - HIGH VH - VERY HIGH * G - GOOD, M - MARGINAL, MT - MODERATE PHYTO-TOXIC, T - PHYTO-TOXIC, ST - SEVERE PHYTO-TOXIC

GRAPHIC SUMMARY



SOIL FERTILITY GUIDELINES (lbs/ac)

Sample Number	Previous Crop	Intended Crop	Yield Goal	Lime Tons/Acre	N	P2O5	K2O	Mg	Ca	S	Zn	Mn	Fe	Cu	B

Crop yield is influenced by a number of factors in addition to soil fertility. No guarantee or warranty concerning crop performance is made by A & L.



C14267-10034

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Fall of 2014 soil test after harvest.

Medium to high soil nitrate levels present after harvest. This could be from a combination of the delayed release from the previous manure applications and the fact that the early season heat wave in the North Okanagan interfered with grain yield and less was taken up by Mg by the plants. Soil organic matter dropped slightly but enough to explain the increase in soil available nitrogen. Spring 2015 soil testing will be done before any manure applications for the 2015 crop are decided upon or done. A balance between crop requirements and leaching potential or expectations will have to be found.

2012 Broil Manure Analysis and Value Sheet



Dry Manure Applied		Rate	N:S			Sample # 303805 WCD								
2012 Fall Broiler		ton/ac	7.92											
		1												
		lbs/ac												
		2,200												
A&L Lab Analysis		Data	Use Coefficients*			Nutrients Applied			\$ Value					
		%	Year 1	Year 2	Year 3	Year 1	Year 2	Year 3		Year 1	Year 2	Year 3		
Sulphur	ppm	3776	0.00378	0.50	0.20	0.10	4.2	1.7	0.8	S	\$1.26	\$0.50	\$0.25	
Dry Matter	%	78.20	0.76200	1			1,676	0.0	0.0					
Nitrogen (total)	%	2.99	0.02990				34.8	17.5	11.7					
NH4-N	%	0.34	0.00342	0.75	0	0	5.6	0.0	0.0	NH4	\$4.46	\$0.00	\$0.00	
Organic N (calculated)	%	2.65	0.02648	0.50	0.30	0.20	29.1	17.5	11.7	Organic N	\$22.98	\$13.79	\$9.19	
Phosphorus (total)	%	1.14	0.01140	0.50	0.25	0.15	12.5	6.3	3.8					
Phosphorus (P as P2O5)	%	2.62	0.02620	0.40	0.25	0.15	23.1	14.4	8.6	P2O5	\$14.26	\$8.91	\$5.35	
Potassium (total)	%	1.66	0.01660	0.80	0.10	0.05	29.2	3.7	1.8					
Potash (K as K2O)	%	1.99	0.01990	0.80	0.10	0.05	35.0	4.4	2.2	K2O	\$19.86	\$2.48	\$1.24	
Organic Matter (as ls basis)	%	60.20	0.60200	1			1,324	0.0	0.0					
Carbon:Nitrogen Ratio		11.0												
Sodium	%	0.40	0.00400	0.5	0.3	0.2	4.4	2.6	1.8					
Aluminum	ppm	77	0.00008	0.5	0.3	0.2	0.1	0.1	0.0					
Boron	ppm	11	0.00001	0.8	0.1	0.1	0.0	0.0	0.0	B	\$0.27	\$0.03	\$0.03	
Calcium	%	1.76	0.01760	0.8	0.1	0.1	31.0	3.9	3.9					
Copper	ppm	39.5	0.00004	0.8	0.1	0.1	0.1	0.0	0.0	Cu	\$1.67	\$0.21	\$0.21	
Iron	ppm	324	0.00032	0.8	0.1	0.1	0.6	0.1	0.1					
Magnesium	%	0.38	0.00380	0.8	0.1	0.1	6.7	0.8	0.8					
Manganese	ppm	317	0.00032	0.8	0.1	0.1	0.6	0.1	0.1	Mn	\$3.35	\$0.42	\$0.42	
Zinc	ppm	267	0.00027	0.8	0.1	0.1	0.5	0.1	0.1	Zn	\$3.52	\$0.44	\$0.44	
Total \$\$										\$71.63	\$26.79	\$17.13	\$115.55	
										Year 1	Year 2	Year 3	total	

Typical broiler manure analysis results and value sheet