

Farm ID	1
Field name	103A North
Field ID	1
Sample date	Oct 20 2017
2017 Main crop	Alf/grass
2018 Main crop (planned)	Corn silage

Laboratory measurements

Note: the 0-12" values are the average of concentrations at the 0-6" and 6-12" soil depths.
See the original laboratory report for the 0-6" and 6-12" values.

Depth (inches)	Nitrate- Nitrogen (NO ₃ -N, ppm)	Ammonium- Nitrogen (NH ₄ -N, ppm)	Soil pH ¹ (water)	Organic matter (%)
0-12	8	5	7.1	3.9
12-24	4	3	7.5	1.5
24-36	4	3	7.9	0.7

Depth inches	Soil Test Phosphorus (P) (Mehlich 3) ² ppm	Soil Test Potassium (K) (Mehlich 3) ² ppm
0-6	157	302

Estimates from laboratory measurements

Depth inches	Nitrate- Nitrogen (NO ₃ -N) ³ lb/ac	Ammonium- Nitrogen (NH ₄ -N) ³ lb/ac	Mineral nitrogen (NO ₃ -N + NH ₄ - N) ⁴ lb/ac	NO ₃ -N in each depth %	NH ₄ -N in each depth %	Mineral N in each depth %
0-12	27	16	43	45%	39%	43%
12-24	16	12	29	28%	30%	29%
24-36	16	12	29	28%	30%	29%
0-36	60	41	100	100%	100%	100%

Post-harvest nitrate test (PHNT) result: 60 lb NO₃-N/ac, 0-36 inch depth
PHNT rating³: Medium

Production recommendations for P and K⁵

	ppm	Rating	Recommended application for 2018	
Soil Test P (0-6 in., ppm) (Kelowna method)	113	Very High	0	lb P ₂ O ₅ per acre
Soil Test K (0-6 in., ppm) (Kelowna method)	227	High	20	lb K ₂ O per acre

Footnotes: See last page

Farm ID	1
Field name	103A South
Field ID	2
Sample date	Oct 20 2017
2017 Main crop	Alf/grass
2018 Main crop (planned)	Corn silage

Laboratory measurements

Note: the 0-12" values are the average of concentrations at the 0-6" and 6-12" soil depths. See the original laboratory report for the 0-6" and 6-12" values.

Depth (inches)	Nitrate- Nitrogen (NO ₃ -N, ppm)	Ammonium- Nitrogen (NH ₄ -N, ppm)	Soil pH ¹ (water)	Organic matter (%)
0-12	9	5	6.9	3.6
12-24	1	3	7.1	1.1
24-36	1	3	7.4	0.6

Depth inches	Phosphorus (P) (Mehlich 3) ² ppm	Soil Test Potassium (K) (Mehlich 3) ² ppm
0-6	182	327

Estimates from laboratory measurements

Depth inches	Nitrate- Nitrogen (NO ₃ - N) ³ lb/ac	Ammonium- Nitrogen (NH ₄ - N) ³ lb/ac	Mineral nitrogen (NO ₃ - N + NH ₄ -N) ⁴ lb/ac	NO ₃ -N in each depth %	NH ₄ -N in each depth %	Mineral N in each depth %
0-12	32	18	50	80%	42%	61%
12-24	4	12	16	10%	29%	20%
24-36	4	12	16	10%	29%	20%
0-36	40	42	82	100%	100%	100%

Post-harvest nitrate test (PHNT) result: **40** lb NO₃-N/ac, 0-36 inch depth
PHNT rating³: **Low**

Production recommendations for P and K⁵

	ppm	Rating	Recommended application for 2018	
Soil Test P (0-6 in., ppm) (Kelowna method)	131	Very High	0	lb P2O5 per acre
Soil Test K (0-6 in., ppm) (Kelowna method)	245	High	20	lb K2O per acre

Footnotes: See last page

Farm ID	1
Field name	103C Island
Field ID	3
Sample date	Oct 20 2017
2017 Main crop	Alf/grass
2018 Main crop (planned)	Alf/grass

Laboratory measurements

Note: the 0-12" values are the average of concentrations at the 0-6" and 6-12" soil depths. See the original laboratory report for the 0-6" and 6-12" values.

Depth (inches)	Nitrate- Nitrogen (NO ₃ -N, ppm)	Ammonium- Nitrogen (NH ₄ -N, ppm)	Soil pH ¹ (water)	Organic matter (%)
0-12	4	5	7.3	3.5
12-24	2	4	8.0	2.1
24-36	1	4	8.0	1.3

Depth inches	Phosphorus (P) (Mehlich 3) ² ppm	Soil Test Potassium (K) (Mehlich 3) ² ppm
0-6	73	112

Estimates from laboratory measurements

Depth inches	Nitrate- Nitrogen (NO ₃ - N) ³ lb/ac	Ammonium- Nitrogen (NH ₄ - N) ³ lb/ac	Mineral nitrogen (NO ₃ - N + NH ₄ -N) ⁴ lb/ac	NO ₃ -N in each depth %	NH ₄ -N in each depth %	Mineral N in each depth %
0-12	12	17	30	50%	35%	40%
12-24	8	16	24	33%	32%	33%
24-36	4	16	20	17%	32%	27%
0-36	24	49	74	100%	100%	100%

Post-harvest nitrate test (PHNT) result: **24** lb NO₃-N/ac, 0-36 inch depth
PHNT rating³: **Low**

Production recommendations for P and K⁵

	ppm	Rating	Recommended application for 2018	
Soil Test P (0-6 in., ppm) (Kelowna method)	53	High	27	lb P ₂ O ₅ per acre
Soil Test K (0-6 in., ppm) (Kelowna method)	84	Low	71	lb K ₂ O per acre

Footnotes: See last page

Farm ID	1
Field name	103B West
Field ID	4
Sample date	Oct 20 2017
2017 Main crop	Alf/grass
2018 Main crop (planned)	Corn silage

Laboratory measurements

Note: the 0-12" values are the average of concentrations at the 0-6" and 6-12" soil depths. See the original laboratory report for the 0-6" and 6-12" values.

Depth (inches)	Nitrate- Nitrogen (NO ₃ -N, ppm)	Ammonium- Nitrogen (NH ₄ -N, ppm)	Soil pH ¹ (water)	Organic matter (%)
0-12	12	6	7.2	5.5
12-24	3	4	7.5	2.5
24-36	2	4	7.7	1.9

Depth inches	Phosphorus (P) (Mehlich 3) ² ppm	Soil Test Potassium (K) (Mehlich 3) ² ppm
0-6	177	366

Estimates from laboratory measurements

Depth inches	Nitrate- Nitrogen (NO ₃ - N) ³ lb/ac	Ammonium- Nitrogen (NH ₄ - N) ³ lb/ac	Mineral nitrogen (NO ₃ - N + NH ₄ -N) ⁴ lb/ac	NO ₃ -N in each depth %	NH ₄ -N in each depth %	Mineral N in each depth %
0-12	42	19	61	68%	37%	54%
12-24	12	16	28	19%	31%	25%
24-36	8	16	24	13%	31%	21%
0-36	62	51	113	100%	100%	100%

Post-harvest nitrate test (PHNT) result: **62** lb NO₃-N/ac, 0-36 inch depth
PHNT rating³: **Medium**

Production recommendations for P and K⁵

	ppm	Rating	Recommended application for 2018	
Soil Test P (0-6 in., ppm) (Kelowna method)	127	Very High	0	lb P ₂ O ₅ per acre
Soil Test K (0-6 in., ppm) (Kelowna method)	275	Very High	0	lb K ₂ O per acre

Footnotes: See last page

Farm ID	1
Field name	103B East
Field ID	5
Sample date	Oct 20 2017
2017 Main crop	Alf/grass
2018 Main crop (planned)	Corn silage

Laboratory measurements

Note: the 0-12" values are the average of concentrations at the 0-6" and 6-12" soil depths. See the original laboratory report for the 0-6" and 6-12" values.

Depth (inches)	Nitrate- Nitrogen (NO ₃ -N, ppm)	Ammonium- Nitrogen (NH ₄ -N, ppm)	Soil pH ¹ (water)	Organic matter (%)
0-12	11	6	7.2	4.5
12-24	2	3	7.5	1.3
24-36	2	4	7.3	1.0

Depth inches	Phosphorus (P) (Mehlich 3) ² ppm	Soil Test Potassium (K) (Mehlich 3) ² ppm
0-6	209	430

Estimates from laboratory measurements

Depth inches	Nitrate- Nitrogen (NO ₃ - N) ³ lb/ac	Ammonium- Nitrogen (NH ₄ - N) ³ lb/ac	Mineral nitrogen (NO ₃ - N + NH ₄ -N) ⁴ lb/ac	NO ₃ -N in each depth %	NH ₄ -N in each depth %	Mineral N in each depth %
0-12	36	19	56	69%	41%	56%
12-24	8	12	20	15%	25%	20%
24-36	8	16	24	15%	34%	24%
0-36	52	47	100	100%	100%	100%

Post-harvest nitrate test (PHNT) result: **52** lb NO₃-N/ac, 0-36 inch depth
PHNT rating³: **Medium**

Production recommendations for P and K⁵

	ppm	Rating	Recommended application for 2018	
Soil Test P (0-6 in., ppm) (Kelowna method)	150	Very High	0	lb P ₂ O ₅ per acre
Soil Test K (0-6 in., ppm) (Kelowna method)	323	Very High	0	lb K ₂ O per acre

Footnotes: See last page

Farm ID	1
Field name	104 Harolds Lower
Field ID	6
Sample date	Oct 06 2017
2017 Main crop	Corn silage
2018 Main crop (planned)	Corn silage

Laboratory measurements

Note: the 0-12" values are the average of concentrations at the 0-6" and 6-12" soil depths. See the original laboratory report for the 0-6" and 6-12" values.

Depth (inches)	Nitrate-Nitrogen (NO ₃ -N, ppm)	Ammonium-Nitrogen (NH ₄ -N, ppm)	Soil pH ¹ (water)	Organic matter (%)
0-12	3	8	7.6	2.3
12-24	3	6	7.8	1.5
24-36	2	6	8.1	1.2

Depth inches	Phosphorus (P) (Mehlich 3) ² ppm	Soil Test Potassium (K) (Mehlich 3) ² ppm
0-6	145	348

Estimates from laboratory measurements

Depth inches	Nitrate-Nitrogen (NO ₃ -N) ³ lb/ac	Ammonium-Nitrogen (NH ₄ -N) ³ lb/ac	Mineral nitrogen (NO ₃ -N + NH ₄ -N) ⁴ lb/ac	NO ₃ -N in each depth %	NH ₄ -N in each depth %	Mineral N in each depth %
0-12	10	26	36	34%	35%	35%
12-24	12	24	36	39%	32%	34%
24-36	8	24	32	26%	32%	31%
0-36	30	74	105	100%	100%	100%

Post-harvest nitrate test (PHNT) result: **30** lb NO₃-N/ac, 0-36 inch depth
PHNT rating³: **Low**

Production recommendations for P and K⁵

	ppm	Rating	Recommended application for 2018	
Soil Test P (0-6 in., ppm) (Kelowna method)	104	Very High	0	lb P2O5 per acre
Soil Test K (0-6 in., ppm) (Kelowna method)	261	Very High	0	lb K2O per acre

Footnotes: See last page

Farm ID	1
Field name	104 Harolds Upper
Field ID	7
Sample date	Oct 06 2017
2017 Main crop	Corn silage
2018 Main crop (planned)	Corn silage

Laboratory measurements

Note: the 0-12" values are the average of concentrations at the 0-6" and 6-12" soil depths. See the original laboratory report for the 0-6" and 6-12" values.

Depth (inches)	Nitrate- Nitrogen (NO ₃ -N, ppm)	Ammonium- Nitrogen (NH ₄ -N, ppm)	Soil pH ¹ (water)	Organic matter (%)
0-12	3	6	7.5	3.0
12-24	4	5	7.6	1.5
24-36	2	5	8.0	1.3

Depth inches	Phosphorus (P) (Mehlich 3) ² ppm	Soil Test Potassium (K) (Mehlich 3) ² ppm
0-6	263	394

Estimates from laboratory measurements

Depth inches	Nitrate- Nitrogen (NO ₃ - N) ³ lb/ac	Ammonium- Nitrogen (NH ₄ - N) ³ lb/ac	Mineral nitrogen (NO ₃ - N + NH ₄ -N) ⁴ lb/ac	NO ₃ -N in each depth %	NH ₄ -N in each depth %	Mineral N in each depth %
0-12	10	19	30	30%	32%	32%
12-24	16	20	36	47%	34%	39%
24-36	8	20	28	23%	34%	30%
0-36	34	59	94	100%	100%	100%

Post-harvest nitrate test (PHNT) result: **34** lb NO₃-N/ac, 0-36 inch depth
PHNT rating³: **Low**

Production recommendations for P and K⁵

	ppm	Rating	Recommended application for 2018	
Soil Test P (0-6 in., ppm) (Kelowna method)	189	Very High	0	lb P ₂ O ₅ per acre
Soil Test K (0-6 in., ppm) (Kelowna method)	296	Very High	0	lb K ₂ O per acre

Footnotes: See last page

Farm ID	1
Field name	202 Reimer
Field ID	8
Sample date	Oct 06 2017
2017 Main crop	Corn silage
2018 Main crop (planned)	Alf/grass

Laboratory measurements

Note: the 0-12" values are the average of concentrations at the 0-6" and 6-12" soil depths. See the original laboratory report for the 0-6" and 6-12" values.

Depth (inches)	Nitrate- Nitrogen (NO ₃ -N, ppm)	Ammonium- Nitrogen (NH ₄ -N, ppm)	Soil pH ¹ (water)	Organic matter (%)
0-12	4	8	7.5	2.9
12-24	2	6	8.0	1.3
24-36	6	3	7.9	1.0

Depth inches	Phosphorus (P) (Mehlich 3) ² ppm	Soil Test Potassium (K) (Mehlich 3) ² ppm
0-6	217	348

Estimates from laboratory measurements

Depth inches	Nitrate- Nitrogen (NO ₃ - N) ³ lb/ac	Ammonium- Nitrogen (NH ₄ - N) ³ lb/ac	Mineral nitrogen (NO ₃ - N + NH ₄ -N) ⁴ lb/ac	NO ₃ -N in each depth %	NH ₄ -N in each depth %	Mineral N in each depth %
0-12	12	26	38	27%	42%	36%
12-24	8	24	32	18%	39%	30%
24-36	24	12	36	54%	19%	34%
0-36	44	62	106	100%	100%	100%

Post-harvest nitrate test (PHNT) result: **44** lb NO₃-N/ac, 0-36 inch depth
PHNT rating³: **Low**

Production recommendations for P and K⁵

	ppm	Rating	Recommended application for 2018	
Soil Test P (0-6 in., ppm) (Kelowna method)	156	Very High	0	lb P ₂ O ₅ per acre
Soil Test K (0-6 in., ppm) (Kelowna method)	261	Very High	0	lb K ₂ O per acre

Footnotes: See last page

Farm ID	1
Field name	109 Sylvia East
Field ID	9
Sample date	Oct 03 2017
2017 Main crop	Corn silage
2018 Main crop (planned)	Corn silage

Laboratory measurements

Note: the 0-12" values are the average of concentrations at the 0-6" and 6-12" soil depths. See the original laboratory report for the 0-6" and 6-12" values.

Depth (inches)	Nitrate- Nitrogen (NO ₃ -N, ppm)	Ammonium- Nitrogen (NH ₄ -N, ppm)	Soil pH ¹ (water)	Organic matter (%)
0-12	13	4	7.4	2.5
12-24	7	3	8.0	1.1
24-36	11	3	8.0	1.3

Depth inches	Phosphorus (P) (Mehlich 3) ² ppm	Soil Test Potassium (K) (Mehlich 3) ² ppm
0-6	143	214

Estimates from laboratory measurements

Depth inches	Nitrate- Nitrogen (NO ₃ - N) ³ lb/ac	Ammonium- Nitrogen (NH ₄ - N) ³ lb/ac	Mineral nitrogen (NO ₃ - N + NH ₄ -N) ⁴ lb/ac	NO ₃ -N in each depth %	NH ₄ -N in each depth %	Mineral N in each depth %
0-12	45	14	59	38%	37%	38%
12-24	28	12	40	24%	32%	26%
24-36	44	12	56	38%	32%	36%
0-36	117	38	155	100%	100%	100%

Post-harvest nitrate test (PHNT) result: **117** lb NO₃-N/ac, 0-36 inch depth
PHNT rating³: **High**

Production recommendations for P and K⁵

	ppm	Rating	Recommended application for 2018	
Soil Test P (0-6 in., ppm) (Kelowna method)	103	Very High	0	lb P ₂ O ₅ per acre
Soil Test K (0-6 in., ppm) (Kelowna method)	161	Medium	36	lb K ₂ O per acre

Footnotes: See last page

Farm ID	1
Field name	109 Sylvia West
Field ID	10
Sample date	Oct 03 2017
2017 Main crop	Corn silage
2018 Main crop (planned)	Corn silage

Laboratory measurements

Note: the 0-12" values are the average of concentrations at the 0-6" and 6-12" soil depths. See the original laboratory report for the 0-6" and 6-12" values.

Depth (inches)	Nitrate- Nitrogen (NO ₃ -N, ppm)	Ammonium- Nitrogen (NH ₄ -N, ppm)	Soil pH ¹ (water)	Organic matter (%)
0-12	10	4	7.6	2.9
12-24	1	3	7.8	1.0
24-36	4	3	8.2	0.9

Depth inches	Phosphorus (P) (Mehlich 3) ² ppm	Soil Test Potassium (K) (Mehlich 3) ² ppm
0-6	135	284

Estimates from laboratory measurements

Depth inches	Nitrate- Nitrogen (NO ₃ - N) ³ lb/ac	Ammonium- Nitrogen (NH ₄ - N) ³ lb/ac	Mineral nitrogen (NO ₃ - N + NH ₄ -N) ⁴ lb/ac	NO ₃ -N in each depth %	NH ₄ -N in each depth %	Mineral N in each depth %
0-12	33	14	47	62%	37%	52%
12-24	4	12	16	8%	32%	18%
24-36	16	12	28	30%	32%	31%
0-36	53	38	91	100%	100%	100%

Post-harvest nitrate test (PHNT) result: **53** lb NO₃-N/ac, 0-36 inch depth
PHNT rating³: **Medium**

Production recommendations for P and K⁵

	ppm	Rating	Recommended application for 2018	
Soil Test P (0-6 in., ppm) (Kelowna method)	97	High	15	lb P ₂ O ₅ per acre
Soil Test K (0-6 in., ppm) (Kelowna method)	213	High	36	lb K ₂ O per acre

Footnotes: See last page

Farm ID	1
Field name	101 Barns
Field ID	11
Sample date	Oct 20 2017
2017 Main crop	Alf/grass
2018 Main crop (planned)	Alf/grass

Laboratory measurements

Note: the 0-12" values are the average of concentrations at the 0-6" and 6-12" soil depths. See the original laboratory report for the 0-6" and 6-12" values.

Depth (inches)	Nitrate- Nitrogen (NO ₃ -N, ppm)	Ammonium- Nitrogen (NH ₄ -N, ppm)	Soil pH ¹ (water)	Organic matter (%)
0-12	8	4	7.5	4.3
12-24	2	2	8.2	1.1
24-36	1	3	8.3	0.8

Depth inches	Phosphorus (P) (Mehlich 3) ² ppm	Soil Test Potassium (K) (Mehlich 3) ² ppm
0-6	235	500

Estimates from laboratory measurements

Depth inches	Nitrate- Nitrogen (NO ₃ - N) ³ lb/ac	Ammonium- Nitrogen (NH ₄ - N) ³ lb/ac	Mineral nitrogen (NO ₃ - N + NH ₄ -N) ⁴ lb/ac	NO ₃ -N in each depth %	NH ₄ -N in each depth %	Mineral N in each depth %
0-12	28	12	40	70%	38%	55%
12-24	8	8	16	20%	25%	22%
24-36	4	12	16	10%	37%	22%
0-36	40	32	72	100%	100%	100%

Post-harvest nitrate test (PHNT) result: **40** lb NO₃-N/ac, 0-36 inch depth
PHNT rating³: **Low**

Production recommendations for P and K⁵

	ppm	Rating	Recommended application for 2018	
Soil Test P (0-6 in., ppm) (Kelowna method)	169	Very High	0	lb P ₂ O ₅ per acre
Soil Test K (0-6 in., ppm) (Kelowna method)	375	Very High	0	lb K ₂ O per acre

Footnotes: See last page

Farm ID	1
Field name	102 Sorensen South
Field ID	12
Sample date	Oct 20 2017
2017 Main crop	Alf/grass
2018 Main crop (planned)	Alf/grass

Laboratory measurements

Note: the 0-12" values are the average of concentrations at the 0-6" and 6-12" soil depths. See the original laboratory report for the 0-6" and 6-12" values.

Depth (inches)	Nitrate- Nitrogen (NO ₃ -N, ppm)	Ammonium- Nitrogen (NH ₄ -N, ppm)	Soil pH ¹ (water)	Organic matter (%)
0-12	8	3	7.7	3.8
12-24	3	4	8.0	1.5
24-36	2	3	8.1	0.9

Depth inches	Phosphorus (P) (Mehlich 3) ² ppm	Soil Test Potassium (K) (Mehlich 3) ² ppm
0-6	140	446

Estimates from laboratory measurements

Depth inches	Nitrate- Nitrogen (NO ₃ - N) ³ lb/ac	Ammonium- Nitrogen (NH ₄ - N) ³ lb/ac	Mineral nitrogen (NO ₃ - N + NH ₄ -N) ⁴ lb/ac	NO ₃ -N in each depth %	NH ₄ -N in each depth %	Mineral N in each depth %
0-12	28	10	38	58%	27%	44%
12-24	12	16	28	25%	42%	33%
24-36	8	12	20	17%	31%	23%
0-36	48	38	86	100%	100%	100%

Post-harvest nitrate test (PHNT) result: **48** lb NO₃-N/ac, 0-36 inch depth
PHNT rating³: **Medium**

Production recommendations for P and K⁵

	ppm	Rating	Recommended application for 2018	
Soil Test P (0-6 in., ppm) (Kelowna method)	101	Very High	0	lb P ₂ O ₅ per acre
Soil Test K (0-6 in., ppm) (Kelowna method)	335	Very High	0	lb K ₂ O per acre

Footnotes: See last page

Farm ID	1
Field name	102 Sorensen North
Field ID	13
Sample date	Oct 20 2017
2017 Main crop	Alf/grass
2018 Main crop (planned)	Alf/grass

Laboratory measurements

Note: the 0-12" values are the average of concentrations at the 0-6" and 6-12" soil depths. See the original laboratory report for the 0-6" and 6-12" values.

Depth (inches)	Nitrate- Nitrogen (NO ₃ -N, ppm)	Ammonium- Nitrogen (NH ₄ -N, ppm)	Soil pH ¹ (water)	Organic matter (%)
0-12	7	4	7.7	3.8
12-24	2	2	7.8	1.6
24-36	2	2	7.6	1.0

Depth inches	Phosphorus (P) (Mehlich 3) ² ppm	Soil Test Potassium (K) (Mehlich 3) ² ppm
0-6	133	378

Estimates from laboratory measurements

Depth inches	Nitrate- Nitrogen (NO ₃ - N) ³ lb/ac	Ammonium- Nitrogen (NH ₄ - N) ³ lb/ac	Mineral nitrogen (NO ₃ - N + NH ₄ -N) ⁴ lb/ac	NO ₃ -N in each depth %	NH ₄ -N in each depth %	Mineral N in each depth %
0-12	23	12	35	58%	43%	52%
12-24	8	8	16	21%	28%	24%
24-36	8	8	16	21%	28%	24%
0-36	39	28	67	100%	100%	100%

Post-harvest nitrate test (PHNT) result: **39** lb NO₃-N/ac, 0-36 inch depth
PHNT rating³: **Low**

Production recommendations for P and K⁵

	ppm	Rating	Recommended application for 2018	
Soil Test P (0-6 in., ppm) (Kelowna method)	96	High	15	lb P ₂ O ₅ per acre
Soil Test K (0-6 in., ppm) (Kelowna method)	284	Very High	0	lb K ₂ O per acre

Footnotes: See last page

Farm ID	1
Field name	105A Dixon Back South
Field ID	14
Sample date	Oct 17 2017
2017 Main crop	Alf/grass
2018 Main crop (planned)	Corn silage

Laboratory measurements

Note: the 0-12" values are the average of concentrations at the 0-6" and 6-12" soil depths. See the original laboratory report for the 0-6" and 6-12" values.

Depth (inches)	Nitrate- Nitrogen (NO ₃ -N, ppm)	Ammonium- Nitrogen (NH ₄ -N, ppm)	Soil pH ¹ (water)	Organic matter (%)
0-12	9	6	7.3	2.1
12-24	2	4	7.4	1.1
24-36	1	4	8.0	0.6

Depth inches	Phosphorus (P) (Mehlich 3) ² ppm	Soil Test Potassium (K) (Mehlich 3) ² ppm
0-6	117	154

Estimates from laboratory measurements

Depth inches	Nitrate- Nitrogen (NO ₃ - N) ³ lb/ac	Ammonium- Nitrogen (NH ₄ - N) ³ lb/ac	Mineral nitrogen (NO ₃ - N + NH ₄ -N) ⁴ lb/ac	NO ₃ -N in each depth %	NH ₄ -N in each depth %	Mineral N in each depth %
0-12	30	21	50	71%	39%	53%
12-24	8	16	24	19%	30%	25%
24-36	4	16	20	10%	30%	21%
0-36	42	53	94	100%	100%	100%

Post-harvest nitrate test (PHNT) result: **42** lb NO₃-N/ac, 0-36 inch depth
PHNT rating³: **Low**

Production recommendations for P and K⁵

	ppm	Rating	Recommended application for 2018	
Soil Test P (0-6 in., ppm) (Kelowna method)	84	High	15	lb P ₂ O ₅ per acre
Soil Test K (0-6 in., ppm) (Kelowna method)	116	Low	54	lb K ₂ O per acre

Footnotes: See last page

Farm ID	1
Field name	105B Dixon Back North
Field ID	15
Sample date	Oct 17 2017
2017 Main crop	Alf/grass
2018 Main crop (planned)	Corn silage

Laboratory measurements

Note: the 0-12" values are the average of concentrations at the 0-6" and 6-12" soil depths. See the original laboratory report for the 0-6" and 6-12" values.

Depth (inches)	Nitrate- Nitrogen (NO ₃ -N, ppm)	Ammonium- Nitrogen (NH ₄ -N, ppm)	Soil pH ¹ (water)	Organic matter (%)
0-12	5	5	7.4	1.8
12-24	1	4	7.4	0.8
24-36	1	4	7.4	0.6

Depth inches	Phosphorus (P) (Mehlich 3) ² ppm	Soil Test Potassium (K) (Mehlich 3) ² ppm
0-6	48	83

Estimates from laboratory measurements

Depth inches	Nitrate- Nitrogen (NO ₃ - N) ³ lb/ac	Ammonium- Nitrogen (NH ₄ - N) ³ lb/ac	Mineral nitrogen (NO ₃ - N + NH ₄ -N) ⁴ lb/ac	NO ₃ -N in each depth %	NH ₄ -N in each depth %	Mineral N in each depth %
0-12	17	16	33	68%	33%	45%
12-24	4	16	20	16%	34%	27%
24-36	4	16	20	16%	34%	27%
0-36	25	48	73	100%	100%	100%

Post-harvest nitrate test (PHNT) result: **25** lb NO₃-N/ac, 0-36 inch depth
PHNT rating³: **Low**

Production recommendations for P and K⁵

	ppm	Rating	Recommended application for 2018	
Soil Test P (0-6 in., ppm) (Kelowna method)	35	Medium	36	lb P ₂ O ₅ per acre
Soil Test K (0-6 in., ppm) (Kelowna method)	62	Very Low	134	lb K ₂ O per acre

Footnotes: See last page

Farm ID	1
Field name	106 Dixon Front
Field ID	16
Sample date	Oct 03 2017
2017 Main crop	Corn silage
2018 Main crop (planned)	Corn silage

Laboratory measurements

Note: the 0-12" values are the average of concentrations at the 0-6" and 6-12" soil depths. See the original laboratory report for the 0-6" and 6-12" values.

Depth (inches)	Nitrate- Nitrogen (NO ₃ -N, ppm)	Ammonium- Nitrogen (NH ₄ -N, ppm)	Soil pH ¹ (water)	Organic matter (%)
0-12	13	3	7.5	1.5
12-24	6	4	7.9	0.8
24-36	7	4	7.9	0.6

Depth inches	Phosphorus (P) (Mehlich 3) ² ppm	Soil Test Potassium (K) (Mehlich 3) ² ppm
0-6	142	308

Estimates from laboratory measurements

Depth inches	Nitrate- Nitrogen (NO ₃ - N) ³ lb/ac	Ammonium- Nitrogen (NH ₄ - N) ³ lb/ac	Mineral nitrogen (NO ₃ - N + NH ₄ -N) ⁴ lb/ac	NO ₃ -N in each depth %	NH ₄ -N in each depth %	Mineral N in each depth %
0-12	45	10	56	46%	25%	40%
12-24	24	16	40	25%	38%	29%
24-36	28	16	44	29%	38%	32%
0-36	97	42	140	100%	100%	100%

Post-harvest nitrate test (PHNT) result: **97** lb NO₃-N/ac, 0-36 inch depth
PHNT rating³: **High**

Production recommendations for P and K⁵

	ppm	Rating	Recommended application for 2018	
Soil Test P (0-6 in., ppm) (Kelowna method)	102	Very High	0	lb P ₂ O ₅ per acre
Soil Test K (0-6 in., ppm) (Kelowna method)	231	High	20	lb K ₂ O per acre

Footnotes: See last page

Farm ID	1
Field name	205 Jessies
Field ID	17
Sample date	Oct 17 2017
2017 Main crop	Alf/grass
2018 Main crop (planned)	Alf/grass

Laboratory measurements

Note: the 0-12" values are the average of concentrations at the 0-6" and 6-12" soil depths. See the original laboratory report for the 0-6" and 6-12" values.

Depth (inches)	Nitrate- Nitrogen (NO ₃ -N, ppm)	Ammonium- Nitrogen (NH ₄ -N, ppm)	Soil pH ¹ (water)	Organic matter (%)
0-12	9	4	7.5	1.9
12-24	1	4	8.0	1.1
24-36	1	4	8.2	0.9

Depth inches	Phosphorus (P) (Mehlich 3) ² ppm	Soil Test Potassium (K) (Mehlich 3) ² ppm
0-6	43	139

Estimates from laboratory measurements

Depth inches	Nitrate- Nitrogen (NO ₃ - N) ³ lb/ac	Ammonium- Nitrogen (NH ₄ - N) ³ lb/ac	Mineral nitrogen (NO ₃ - N + NH ₄ -N) ⁴ lb/ac	NO ₃ -N in each depth %	NH ₄ -N in each depth %	Mineral N in each depth %
0-12	31	14	45	80%	30%	53%
12-24	4	16	20	10%	35%	24%
24-36	4	16	20	10%	35%	24%
0-36	39	46	85	100%	100%	100%

Post-harvest nitrate test (PHNT) result: **39** lb NO₃-N/ac, 0-36 inch depth
PHNT rating³: **Low**

Production recommendations for P and K⁵

	ppm	Rating	Recommended application for 2018	
Soil Test P (0-6 in., ppm) (Kelowna method)	31	Medium	36	lb P ₂ O ₅ per acre
Soil Test K (0-6 in., ppm) (Kelowna method)	104	Low	54	lb K ₂ O per acre

Footnotes: See last page

Farm ID	1
Field name	201A Skelton East
Field ID	18
Sample date	Oct 18 2017
2017 Main crop	Alf/grass
2018 Main crop (planned)	Alf/grass

Laboratory measurements

Note: the 0-12" values are the average of concentrations at the 0-6" and 6-12" soil depths. See the original laboratory report for the 0-6" and 6-12" values.

Depth (inches)	Nitrate- Nitrogen (NO ₃ -N, ppm)	Ammonium- Nitrogen (NH ₄ -N, ppm)	Soil pH ¹ (water)	Organic matter (%)
0-12	8	4	7.4	1.9
12-24	2	4	7.7	1.0
24-36	1	4	8.1	0.6

Depth inches	Phosphorus (P) (Mehlich 3) ² ppm	Soil Test Potassium (K) (Mehlich 3) ² ppm
0-6	107	199

Estimates from laboratory measurements

Depth inches	Nitrate- Nitrogen (NO ₃ - N) ³ lb/ac	Ammonium- Nitrogen (NH ₄ - N) ³ lb/ac	Mineral nitrogen (NO ₃ - N + NH ₄ -N) ⁴ lb/ac	NO ₃ -N in each depth %	NH ₄ -N in each depth %	Mineral N in each depth %
0-12	26	14	40	68%	30%	48%
12-24	8	16	24	21%	35%	29%
24-36	4	16	20	11%	35%	24%
0-36	38	46	84	100%	100%	100%

Post-harvest nitrate test (PHNT) result: **38** lb NO₃-N/ac, 0-36 inch depth
PHNT rating³: **Low**

Production recommendations for P and K⁵

	ppm	Rating	Recommended application for 2018	
Soil Test P (0-6 in., ppm) (Kelowna method)	77	High	15	lb P ₂ O ₅ per acre
Soil Test K (0-6 in., ppm) (Kelowna method)	149	Medium	54	lb K ₂ O per acre

Footnotes: See last page

Farm ID	1
Field name	201B Skelton West
Field ID	19
Sample date	Oct 18 2017
2017 Main crop	Alf/grass
2018 Main crop (planned)	Alf/grass

Laboratory measurements

Note: the 0-12" values are the average of concentrations at the 0-6" and 6-12" soil depths. See the original laboratory report for the 0-6" and 6-12" values.

Depth (inches)	Nitrate- Nitrogen (NO ₃ -N, ppm)	Ammonium- Nitrogen (NH ₄ -N, ppm)	Soil pH ¹ (water)	Organic matter (%)
0-12	7	5	7.4	2.1
12-24	1	5	8.0	1.1
24-36	1	5	8.2	0.8

Depth inches	Phosphorus (P) (Mehlich 3) ² ppm	Soil Test Potassium (K) (Mehlich 3) ² ppm
0-6	70	145

Estimates from laboratory measurements

Depth inches	Nitrate- Nitrogen (NO ₃ - N) ³ lb/ac	Ammonium- Nitrogen (NH ₄ - N) ³ lb/ac	Mineral nitrogen (NO ₃ - N + NH ₄ -N) ⁴ lb/ac	NO ₃ -N in each depth %	NH ₄ -N in each depth %	Mineral N in each depth %
0-12	24	16	40	75%	28%	45%
12-24	4	20	24	12%	36%	27%
24-36	4	20	24	12%	36%	27%
0-36	32	56	88	100%	100%	100%

Post-harvest nitrate test (PHNT) result: **32** lb NO₃-N/ac, 0-36 inch depth
PHNT rating³: **Low**

Production recommendations for P and K⁵

	ppm	Rating	Recommended application for 2018	
Soil Test P (0-6 in., ppm) (Kelowna method)	50	High	27	lb P ₂ O ₅ per acre
Soil Test K (0-6 in., ppm) (Kelowna method)	109	Low	54	lb K ₂ O per acre

Footnotes: See last page

Footnotes for 2017 PHNT Data

1. Soil pH (water)

- "Water" refers to the test method
- Soil pH is typically tested in the top 12 inches of soil to determine if soil acidity is optimal
 - Alfalfa minimum pH 6.5
 - Corn (silage) minimum pH 5.5

2. Soil test phosphorus (P) and potassium (K)

- Different jurisdictions have researched different methods (e.g. Bray P1) to measure P and K fertility, usually at the 0-6 inch soil depth
- You can compare results of the same method over time for a given field

3. Nitrate-Nitrogen (NO₃-N)

- Measured *ppm* values are converted to *lb/ac* values using a particular soil bulk density value
- In this report, a soil bulk density value of 1300 kg per m³ was assumed for the 0-12 inch soil layer and 1500 kg per m³ for the 12-24 inch and 24-36 inch soil layers

Example

To convert 10 ppm NO₃-N (measured in a sample from the 0-12 inch depth) to lb/ac NO₃-N, 10 ppm = 10 mg per kg of dry soil
0-12 inch depth = 0.30 m thickness

$$\text{kg/ha NO}_3\text{-N} = \frac{10 \text{ ppm}}{1000} \times \frac{1300}{1} \times 0.30 \text{ m soil} = 39 \text{ kg/ha NO}_3\text{-N}$$

$$\text{lb/ac NO}_3\text{-N} = 39 \text{ kg/ha} \times \frac{0.89}{1} = 35 \text{ lb/ac NO}_3\text{-N}$$

- Post-harvest nitrate test
 - What it indicates: the amount of nitrate not used by the most recently harvested crop; whether nitrogen management can be more efficient (Table 1); and the amount of nitrate that *can* be lost (e.g. leached) at some point.
 - What is uncertain: the amount of nitrate that will be available to the next crop; and the amount of nitrate that *will* be lost (e.g. leached).

Table 1. Proposed interpretations of the post-harvest nitrate test for nitrogen (N) management, assuming the test describes the amount of nitrate not used by a crop with near-optimum yields.

Proposed rating	Post-harvest nitrate test (PHNT, lb NO ₃ -N per ac)	Management suggestion if growing the same crop next year in the same field
Low	0 – 44	Continue with N management program
Medium	45 – 89	Consider changes to N management ^a
High	90 – 180	Reduce N without risk to crop quality or yield
Very High	> 180	Reduce N without risk to crop quality or yield

a. Proposed interpretations in the medium range are crop-specific for forage crops and cereals: re-evaluate estimates of agronomic N rates if PHNT exceeds 70 lb NO₃-N per ac for silage corn or if PHNT exceeds approximately 55 lb NO₃-N per ac for perennial forages.

4. Mineral nitrogen

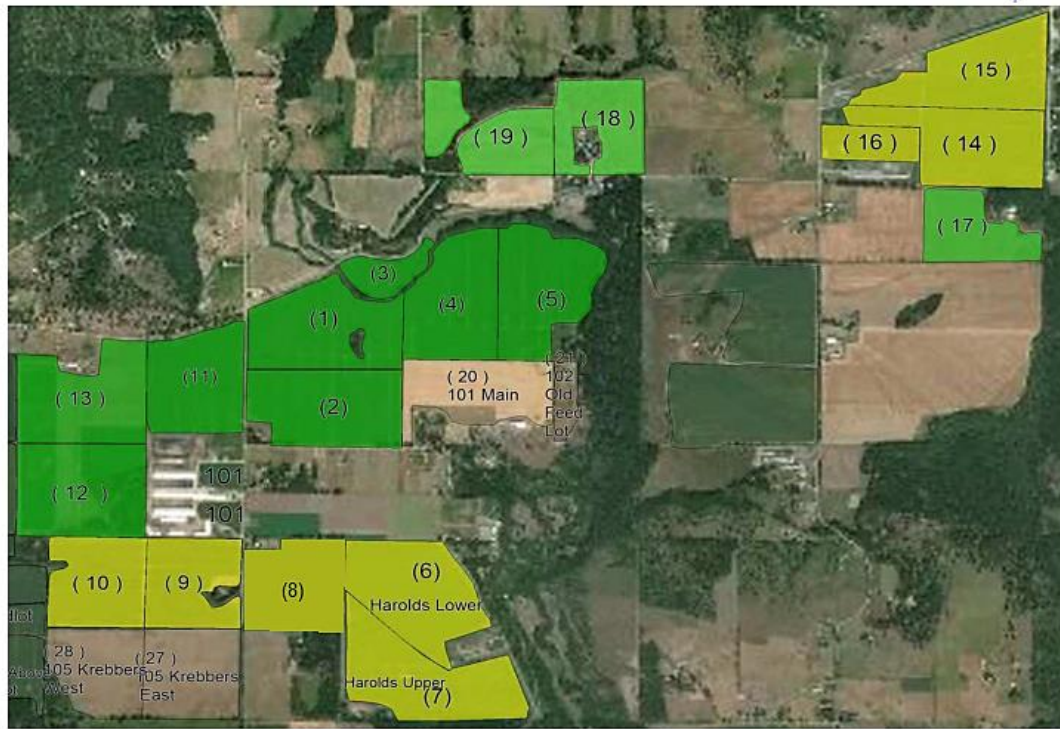
- Mineral nitrogen is the sum of nitrate and ammonium
- There are no proposed interpretations or ratings for post-harvest ammonium or post-harvest mineral nitrogen at this point

5. Fertilizer recommendations

- Soil test P ('Mehlich 3' method) and Soil Test K ('Mehlich 3' method) were converted to 'Kelowna method equivalent values' using relationships determined with B.C. soils
- Soil test ratings and production recommendations for many crops are available from B.C. research that relates the Kelowna method equivalent soil test value with crop response to phosphate or potash fertilizer, using soil samples from the 0-6 inch soil depth
 - Silage corn: Even at high phosphorus fertility levels, corn might respond to starter phosphorus at a rate of about 20 lb/ac of P_2O_5 . This starter phosphorus is typically applied in a band 2 inches below and 2 inches to the side of the seed row.
- Additional information can be found at <http://www2.gov.bc.ca/gov/content/industry/agriculture-seafood/agricultural-land-and-environment/soil-nutrients/nutrient-management/what-to-apply/soil-nutrient-testing>

Please Note: Due to rounding, some totals may not correspond with the sum of the separate figures.

Farm ID 1



Alfalfa Seeding	36.60 ac
Alfalfa	63.40 ac
Alfalfa Grass Mix	456.00 ac
Corn Silage	300.10 ac

Farm ID	2
Field name	101 Main Field
Field ID	20
Sample date	Sep 13 2017
2017 Main crop	Canola
2018 Main crop (planned)	Spelt

Laboratory measurements

Note: the 0-12" values are the average of concentrations at the 0-6" and 6-12" soil depths. See the original laboratory report for the 0-6" and 6-12" values.

Depth (inches)	Nitrate-Nitrogen (NO ₃ -N, ppm)	Ammonium-Nitrogen (NH ₄ -N, ppm)	Soil pH ¹ (water)	Organic matter (%)
0-12	12	4	7.4	3.4
12-24	6	4	7.5	1.3
24-36	4	4	7.5	1.1

Depth inches	Soil Test Phosphorus (P) (Mehlich 3) ² ppm	Soil Test Potassium (K) (Mehlich 3) ² ppm
0-6	265	368

Estimates from laboratory measurements

Depth inches	Nitrate-Nitrogen (NO ₃ -N) ³ lb/ac	Ammonium-Nitrogen (NH ₄ -N) ³ lb/ac	Mineral nitrogen (NO ₃ -N + NH ₄ -N) ⁴ lb/ac	NO ₃ -N in each depth %	NH ₄ -N in each depth %	Mineral N in each depth %
0-12	40	14	54	50%	30%	43%
12-24	24	16	40	30%	35%	32%
24-36	16	16	32	20%	35%	25%
0-36	80	46	126	100%	100%	100%

Post-harvest nitrate test (PHNT) result: **80** lb NO₃-N/ac, 0-36 inch depth
PHNT rating³: **Medium**

Production recommendations for P and K⁵

	ppm	Rating	Recommended application for 2018	
Soil Test P (0-6 in., ppm) (Kelowna method)	191	Very High	0	lb P2O5 per acre
Soil Test K (0-6 in., ppm) (Kelowna method)	276	Very High	0	lb K2O per acre

Footnotes: See last page

Farm ID	2
Field name	102 Old Feedlot
Field ID	21
Sample date	Sep 13 2017
2017 Main crop	Canola
2018 Main crop (planned)	Spelt

Laboratory measurements

Note: the 0-12" values are the average of concentrations at the 0-6" and 6-12" soil depths. See the original laboratory report for the 0-6" and 6-12" values.

Depth (inches)	Nitrate-Nitrogen (NO ₃ -N, ppm)	Ammonium-Nitrogen (NH ₄ -N, ppm)	Soil pH ¹ (water)	Organic matter (%)
0-12	10	5.5	7.2	8.6
12-24	7	4	7.5	1.5
24-36	4	4	7.7	1.1

Depth inches	Soil Test Phosphorus (P) (Mehlich 3) ² ppm	Soil Test Potassium (K) (Mehlich 3) ² ppm
0-6	1187	606

Estimates from laboratory measurements

Depth inches	Nitrate-Nitrogen (NO ₃ -N) ³ lb/ac	Ammonium-Nitrogen (NH ₄ -N) ³ lb/ac	Mineral nitrogen (NO ₃ -N + NH ₄ -N) ⁴ lb/ac	NO ₃ -N in each depth %	NH ₄ -N in each depth %	Mineral N in each depth %
0-12	35	19	54	44%	37%	41%
12-24	28	16	44	36%	31%	34%
24-36	16	16	32	20%	31%	25%
0-36	79	51	130	100%	100%	100%

Post-harvest nitrate test (PHNT) result: **79** lb NO₃-N/ac, 0-36 inch depth
PHNT rating³: **Medium**

Production recommendations for P and K⁵

	ppm	Rating	Recommended application for 2018	
Soil Test P (0-6 in., ppm) (Kelowna method)	855	Very High	0	lb P2O5 per acre
Soil Test K (0-6 in., ppm) (Kelowna method)	455	Very High	0	lb K2O per acre

Footnotes: See last page

Footnotes for 2017 PHNT Data

1. Soil pH (water)

- "Water" refers to the test method
- Soil pH is typically tested in the top 12 inches of soil to determine if soil acidity is optimal
 - Alfalfa minimum pH 6.5
 - Corn (silage) minimum pH 5.5

2. Soil test phosphorus (P) and potassium (K)

- Different jurisdictions have researched different methods (e.g. Bray P1) to measure P and K fertility, usually at the 0-6 inch soil depth
- You can compare results of the same method over time for a given field

3. Nitrate-Nitrogen (NO₃-N)

- Measured *ppm* values are converted to *lb/ac* values using a particular soil bulk density value
- In this report, a soil bulk density value of 1300 kg per m³ was assumed for the 0-12 inch soil layer and 1500 kg per m³ for the 12-24 inch and 24-36 inch soil layers

Example

To convert 10 ppm NO₃-N (measured in a sample from the 0-12 inch depth) to lb/ac NO₃-N,

10 ppm = 10 mg per kg of dry soil

0-12 inch depth = 0.30 m thickness

$$\text{kg/ha NO}_3\text{-N} = \frac{10 \text{ mg NO}_3\text{-N}}{\text{kg dry soil}} \times \frac{1 \text{ kg}}{10^6 \text{ mg}} \times \frac{1300 \text{ kg dry soil}}{\text{m}^3 \text{ soil}} \times 0.30 \text{ m soil} \times \frac{10,000 \text{ m}^2 \text{ soil}}{\text{ha}} = 39 \text{ kg/ha NO}_3\text{-N}$$

$$\text{lb/ac NO}_3\text{-N} = 39 \text{ kg/ha} \times 0.89 \frac{\text{lb/ac}}{\text{kg/ha}} = 35 \text{ lb/ac NO}_3\text{-N}$$

- Post-harvest nitrate test
 - What it indicates: the amount of nitrate not used by the most recently harvested crop; whether nitrogen management can be more efficient (Table 1); and the amount of nitrate that *can* be lost (e.g. leached) at some point.
 - What is uncertain: the amount of nitrate that will be available to the next crop; and the amount of nitrate that *will* be lost (e.g. leached).

Table 1. Proposed interpretations of the post-harvest nitrate test for nitrogen (N) management, assuming the test describes the amount of nitrate not used by a crop with near-optimum yields.

Proposed rating	Post-harvest nitrate test (PHNT, lb NO ₃ -N per ac)	Management suggestion if growing the same crop next year in the same field
Low	0 – 44	Continue with N management program
Medium	45 – 89	Consider changes to N management ^a
High	90 – 180	Reduce N without risk to crop quality or yield
Very High	> 180	Reduce N without risk to crop quality or yield

a. Proposed interpretations in the medium range are crop-specific for forage crops and cereals: re-evaluate estimates of agronomic N rates if PHNT exceeds 70 lb NO₃-N per ac for silage corn or if PHNT exceeds approximately 55 lb NO₃-N per ac for perennial forages.

4. Mineral nitrogen

- Mineral nitrogen is the sum of nitrate and ammonium
- There are no proposed interpretations or ratings for post-harvest ammonium or post-harvest mineral nitrogen at this point

5. Fertilizer recommendations

- Soil test P ('Mehlich 3' method) and Soil Test K ('Mehlich 3' method) were converted to 'Kelowna method equivalent values' using relationships determined with B.C. soils
- Soil test ratings and production recommendations for many crops are available from B.C. research that relates the Kelowna method equivalent soil test value with crop response to phosphate or potash fertilizer, using soil samples from the 0-6 inch soil depth
 - Silage corn: Even at high phosphorus fertility levels, corn might respond to starter phosphorus at a rate of about 20 lb/ac of P_2O_5 . This starter phosphorus is typically applied in a band 2 inches below and 2 inches to the side of the seed row.
- Additional information can be found at <http://www2.gov.bc.ca/gov/content/industry/agriculture-seafood/agricultural-land-and-environment/soil-nutrients/nutrient-management/what-to-apply/soil-nutrient-testing>

Please Note: Due to rounding, some totals may not correspond with the sum of the separate figures.

Farm ID 2



Wheat, Winter 47.70 ac



Farm ID	3
Field name	101A Feedlot
Field ID	22
Sample date	Oct 12 2017
2017 Main crop	Corn silage
2018 Main crop (planned)	Corn silage

Laboratory measurements

Note: the 0-12" values are the average of concentrations at the 0-6" and 6-12" soil depths. See the original laboratory report for the 0-6" and 6-12" values.

Depth (inches)	Nitrate-Nitrogen (NO ₃ -N, ppm)	Ammonium-Nitrogen (NH ₄ -N, ppm)	Soil pH ¹ (water)	Organic matter (%)
0-12	14	7	7.0	6.2
12-24	4	5	7.3	1.8
24-36	5	7	7.7	1.7

Depth inches	Soil Test Phosphorus (P) (Mehlich 3) ² ppm	Soil Test Potassium (K) (Mehlich 3) ² ppm
0-6	265	522

Estimates from laboratory measurements

Depth inches	Nitrate-Nitrogen (NO ₃ -N) ³ lb/ac	Ammonium-Nitrogen (NH ₄ -N) ³ lb/ac	Mineral nitrogen (NO ₃ -N + NH ₄ -N) ⁴ lb/ac	NO ₃ -N in each depth %	NH ₄ -N in each depth %	Mineral N in each depth %
0-12	47	24	71	57%	34%	46%
12-24	16	20	36	19%	28%	23%
24-36	20	28	48	24%	39%	31%
0-36	83	72	155	100%	100%	100%

Post-harvest nitrate test (PHNT) result: **83** lb NO₃-N/ac, 0-36 inch depth
PHNT rating³: **Medium**

Production recommendations for P and K⁵

	ppm	Rating	Recommended application for 2018	
Soil Test P (0-6 in., ppm) (Kelowna method)	191	Very High	0	lb P2O5 per acre
Soil Test K (0-6 in., ppm) (Kelowna method)	392	Very High	0	lb K2O per acre

Footnotes: See last page

Farm ID	3
Field name	101B Above Feedlot
Field ID	23
Sample date	Oct 12 2017
2017 Main crop	Corn silage
2018 Main crop (planned)	Corn silage

Laboratory measurements

Note: the 0-12" values are the average of concentrations at the 0-6" and 6-12" soil depths. See the original laboratory report for the 0-6" and 6-12" values.

Depth (inches)	Nitrate-Nitrogen (NO ₃ -N, ppm)	Ammonium-Nitrogen (NH ₄ -N, ppm)	Soil pH ¹ (water)	Organic matter (%)
0-12	7	8	7.4	5.2
12-24	2	5	7.8	1.8
24-36	1	4	8.0	1.2

Depth inches	Soil Test Phosphorus (P) (Mehlich 3) ² ppm	Soil Test Potassium (K) (Mehlich 3) ² ppm
0-6	214	400

Estimates from laboratory measurements

Depth inches	Nitrate-Nitrogen (NO ₃ -N) ³ lb/ac	Ammonium-Nitrogen (NH ₄ -N) ³ lb/ac	Mineral nitrogen (NO ₃ -N + NH ₄ -N) ⁴ lb/ac	NO ₃ -N in each depth %	NH ₄ -N in each depth %	Mineral N in each depth %
0-12	23	28	50	65%	44%	51%
12-24	8	20	28	23%	31%	28%
24-36	4	16	20	12%	25%	20%
0-36	35	64	98	100%	100%	100%

Post-harvest nitrate test (PHNT) result: **35** lb NO₃-N/ac, 0-36 inch depth
PHNT rating³: **Low**

Production recommendations for P and K⁵

	ppm	Rating	Recommended application for 2018	
Soil Test P (0-6 in., ppm) (Kelowna method)	154	Very High	0	lb P2O5 per acre
Soil Test K (0-6 in., ppm) (Kelowna method)	300	Very High	0	lb K2O per acre

Footnotes: See last page

Farm ID	3
Field name	102A Parkinson Lake
Field ID	24
Sample date	Oct 12 2017
2017 Main crop	Corn silage
2018 Main crop (planned)	Corn silage

Laboratory measurements

Note: the 0-12" values are the average of concentrations at the 0-6" and 6-12" soil depths. See the original laboratory report for the 0-6" and 6-12" values.

Depth (inches)	Nitrate-Nitrogen (NO ₃ -N, ppm)	Ammonium-Nitrogen (NH ₄ -N, ppm)	Soil pH ¹ (water)	Organic matter (%)
0-12	13	6	7.6	7.8
12-24	3	6	8.0	2.1
24-36	7	4	8.0	2.1

Depth inches	Soil Test Phosphorus (P) (Mehlich 3) ² ppm	Soil Test Potassium (K) (Mehlich 3) ² ppm
0-6	291	733

Estimates from laboratory measurements

Depth inches	Nitrate-Nitrogen (NO ₃ -N) ³ lb/ac	Ammonium-Nitrogen (NH ₄ -N) ³ lb/ac	Mineral nitrogen (NO ₃ -N + NH ₄ -N) ⁴ lb/ac	NO ₃ -N in each depth %	NH ₄ -N in each depth %	Mineral N in each depth %
0-12	43	21	64	52%	34%	44%
12-24	12	24	36	14%	39%	25%
24-36	28	16	44	34%	26%	31%
0-36	83	61	144	100%	100%	100%

Post-harvest nitrate test (PHNT) result: **83** lb NO₃-N/ac, 0-36 inch depth
PHNT rating³: **Medium**

Production recommendations for P and K⁵

	ppm	Rating	Recommended application for 2018	
Soil Test P (0-6 in., ppm) (Kelowna method)	210	Very High	0	lb P2O5 per acre
Soil Test K (0-6 in., ppm) (Kelowna method)	550	Very High	0	lb K2O per acre

Footnotes: See last page

Farm ID	3
Field name	102B Parkinson Lake
Field ID	25
Sample date	Oct 12 2017
2017 Main crop	Corn silage
2018 Main crop (planned)	Corn silage

Laboratory measurements

Note: the 0-12" values are the average of concentrations at the 0-6" and 6-12" soil depths. See the original laboratory report for the 0-6" and 6-12" values.

Depth (inches)	Nitrate-Nitrogen (NO ₃ -N, ppm)	Ammonium-Nitrogen (NH ₄ -N, ppm)	Soil pH ¹ (water)	Organic matter (%)
0-12	19	6	7.4	10.1
12-24	4	4	7.6	2.6
24-36	7	5	7.8	1.3

Depth inches	Soil Test Phosphorus (P) (Mehlich 3) ² ppm	Soil Test Potassium (K) (Mehlich 3) ² ppm
0-6	322	861

Estimates from laboratory measurements

Depth inches	Nitrate-Nitrogen (NO ₃ -N) ³ lb/ac	Ammonium-Nitrogen (NH ₄ -N) ³ lb/ac	Mineral nitrogen (NO ₃ -N + NH ₄ -N) ⁴ lb/ac	NO ₃ -N in each depth %	NH ₄ -N in each depth %	Mineral N in each depth %
0-12	66	21	87	60%	37%	52%
12-24	16	16	32	15%	28%	19%
24-36	28	20	48	25%	35%	29%
0-36	110	57	167	100%	100%	100%

Post-harvest nitrate test (PHNT) result: **110** lb NO₃-N/ac, 0-36 inch depth
PHNT rating³: **High**

Production recommendations for P and K⁵

	ppm	Rating	Recommended application for 2018	
Soil Test P (0-6 in., ppm) (Kelowna method)	232	Very High	0	lb P2O5 per acre
Soil Test K (0-6 in., ppm) (Kelowna method)	646	Very High	0	lb K2O per acre

Footnotes: See last page

Farm ID	3
Field name	103 Hullcar Road
Field ID	26
Sample date	Oct 12 2017
2017 Main crop	Corn silage
2018 Main crop (planned)	Corn silage

Laboratory measurements

Note: the 0-12" values are the average of concentrations at the 0-6" and 6-12" soil depths. See the original laboratory report for the 0-6" and 6-12" values.

Depth (inches)	Nitrate-Nitrogen (NO ₃ -N, ppm)	Ammonium-Nitrogen (NH ₄ -N, ppm)	Soil pH ¹ (water)	Organic matter (%)
0-12	15	5	7.3	5.4
12-24	8	4	7.3	1.2
24-36	16	4	7.8	1.2

Depth inches	Soil Test Phosphorus (P) (Mehlich 3) ² ppm	Soil Test Potassium (K) (Mehlich 3) ² ppm
0-6	269	475

Estimates from laboratory measurements

Depth inches	Nitrate-Nitrogen (NO ₃ -N) ³ lb/ac	Ammonium-Nitrogen (NH ₄ -N) ³ lb/ac	Mineral nitrogen (NO ₃ -N + NH ₄ -N) ⁴ lb/ac	NO ₃ -N in each depth %	NH ₄ -N in each depth %	Mineral N in each depth %
0-12	50	16	66	34%	33%	34%
12-24	32	16	48	22%	34%	25%
24-36	64	16	80	44%	34%	41%
0-36	146	48	194	100%	100%	100%

Post-harvest nitrate test (PHNT) result: **146** lb NO₃-N/ac, 0-36 inch depth
PHNT rating³: **High**

Production recommendations for P and K⁵

	ppm	Rating	Recommended application for 2018	
Soil Test P (0-6 in., ppm) (Kelowna method)	194	Very High	0	lb P2O5 per acre
Soil Test K (0-6 in., ppm) (Kelowna method)	356	Very High	0	lb K2O per acre

Footnotes: See last page

Farm ID	3
Field name	105 Krebbers Southeast
Field ID	27
Sample date	Oct 12 2017
2017 Main crop	Corn silage
2018 Main crop (planned)	Corn silage

Laboratory measurements

Note: the 0-12" values are the average of concentrations at the 0-6" and 6-12" soil depths. See the original laboratory report for the 0-6" and 6-12" values.

Depth (inches)	Nitrate-Nitrogen (NO ₃ -N, ppm)	Ammonium-Nitrogen (NH ₄ -N, ppm)	Soil pH ¹ (water)	Organic matter (%)
0-12	11	5	7.0	3.3
12-24	2	4	7.2	1.5
24-36	5	4	7.6	1.3

Depth inches	Soil Test Phosphorus (P) (Mehlich 3) ² ppm	Soil Test Potassium (K) (Mehlich 3) ² ppm
0-6	211	250

Estimates from laboratory measurements

Depth inches	Nitrate-Nitrogen (NO ₃ -N) ³ lb/ac	Ammonium-Nitrogen (NH ₄ -N) ³ lb/ac	Mineral nitrogen (NO ₃ -N + NH ₄ -N) ⁴ lb/ac	NO ₃ -N in each depth %	NH ₄ -N in each depth %	Mineral N in each depth %
0-12	38	17	56	58%	35%	48%
12-24	8	16	24	12%	32%	21%
24-36	20	16	36	30%	32%	31%
0-36	66	49	116	100%	100%	100%

Post-harvest nitrate test (PHNT) result: **66** lb NO₃-N/ac, 0-36 inch depth
PHNT rating³: **Medium**

Production recommendations for P and K⁵

	ppm	Rating	Recommended application for 2018	
Soil Test P (0-6 in., ppm) (Kelowna method)	152	Very High	0	lb P2O5 per acre
Soil Test K (0-6 in., ppm) (Kelowna method)	188	Medium	36	lb K2O per acre

Footnotes: See last page

Farm ID	3
Field name	105 Krebbers Northwest
Field ID	28
Sample date	Oct 12 2017
2017 Main crop	Corn silage
2018 Main crop (planned)	Corn silage

Laboratory measurements

Note: the 0-12" values are the average of concentrations at the 0-6" and 6-12" soil depths. See the original laboratory report for the 0-6" and 6-12" values.

Depth (inches)	Nitrate-Nitrogen (NO ₃ -N, ppm)	Ammonium-Nitrogen (NH ₄ -N, ppm)	Soil pH ¹ (water)	Organic matter (%)
0-12	3	6	7.4	2.6
12-24	1	5	8.0	1.8
24-36	1	5	8.2	1.1

Depth inches	Soil Test Phosphorus (P) (Mehlich 3) ² ppm	Soil Test Potassium (K) (Mehlich 3) ² ppm
0-6	126	226

Estimates from laboratory measurements

Depth inches	Nitrate-Nitrogen (NO ₃ -N) ³ lb/ac	Ammonium-Nitrogen (NH ₄ -N) ³ lb/ac	Mineral nitrogen (NO ₃ -N + NH ₄ -N) ⁴ lb/ac	NO ₃ -N in each depth %	NH ₄ -N in each depth %	Mineral N in each depth %
0-12	10	21	31	57%	34%	39%
12-24	4	20	24	22%	33%	30%
24-36	4	20	24	22%	33%	30%
0-36	18	61	79	100%	100%	100%

Post-harvest nitrate test (PHNT) result: **18** lb NO₃-N/ac, 0-36 inch depth
PHNT rating³: **Low**

Production recommendations for P and K⁵

	ppm	Rating	Recommended application for 2018	
Soil Test P (0-6 in., ppm) (Kelowna method)	91	High	15	lb P2O5 per acre
Soil Test K (0-6 in., ppm) (Kelowna method)	170	Medium	36	lb K2O per acre

Footnotes: See last page

Farm ID	3
Field name	104 Kevins
Field ID	29
Sample date	Oct 12 2017
2017 Main crop	Corn silage
2018 Main crop (planned)	Corn silage

Laboratory measurements

Note: the 0-12" values are the average of concentrations at the 0-6" and 6-12" soil depths. See the original laboratory report for the 0-6" and 6-12" values.

Depth (inches)	Nitrate-Nitrogen (NO ₃ -N, ppm)	Ammonium-Nitrogen (NH ₄ -N, ppm)	Soil pH ¹ (water)	Organic matter (%)
0-12	4	6	7.8	6.7
12-24	1	5	8.0	2.5
24-36	1	6	8.1	1.2

Depth inches	Soil Test Phosphorus (P) (Mehlich 3) ² ppm	Soil Test Potassium (K) (Mehlich 3) ² ppm
0-6	228	377

Estimates from laboratory measurements

Depth inches	Nitrate-Nitrogen (NO ₃ -N) ³ lb/ac	Ammonium-Nitrogen (NH ₄ -N) ³ lb/ac	Mineral nitrogen (NO ₃ -N + NH ₄ -N) ⁴ lb/ac	NO ₃ -N in each depth %	NH ₄ -N in each depth %	Mineral N in each depth %
0-12	14	21	35	63%	32%	40%
12-24	4	20	24	18%	31%	28%
24-36	4	24	28	18%	37%	32%
0-36	22	65	87	100%	100%	100%

Post-harvest nitrate test (PHNT) result: **22** lb NO₃-N/ac, 0-36 inch depth
PHNT rating³: **Low**

Production recommendations for P and K⁵

	ppm	Rating	Recommended application for 2018	
Soil Test P (0-6 in., ppm) (Kelowna method)	164	Very High	0	lb P2O5 per acre
Soil Test K (0-6 in., ppm) (Kelowna method)	283	Very High	0	lb K2O per acre

Footnotes: See last page

Farm ID	3
Field name	201 Waynes
Field ID	30
Sample date	Oct 06 2017
2017 Main crop	Corn silage
2018 Main crop (planned)	Corn silage

Laboratory measurements

Note: the 0-12" values are the average of concentrations at the 0-6" and 6-12" soil depths. See the original laboratory report for the 0-6" and 6-12" values.

Depth (inches)	Nitrate-Nitrogen (NO ₃ -N, ppm)	Ammonium-Nitrogen (NH ₄ -N, ppm)	Soil pH ¹ (water)	Organic matter (%)
0-12	17	3.5	7.2	4.75
12-24	7	4	7.4	1.9
24-36	7	4	7.7	1.5

Depth inches	Soil Test Phosphorus (P) (Mehlich 3) ² ppm	Soil Test Potassium (K) (Mehlich 3) ² ppm
0-6	212	365

Estimates from laboratory measurements

Depth inches	Nitrate-Nitrogen (NO ₃ -N) ³ lb/ac	Ammonium-Nitrogen (NH ₄ -N) ³ lb/ac	Mineral nitrogen (NO ₃ -N + NH ₄ -N) ⁴ lb/ac	NO ₃ -N in each depth %	NH ₄ -N in each depth %	Mineral N in each depth %
0-12	59	12	71	51%	27%	45%
12-24	28	16	44	24%	36%	28%
24-36	28	16	44	24%	36%	28%
0-36	115	44	159	100%	100%	100%

Post-harvest nitrate test (PHNT) result: **115** lb NO₃-N/ac, 0-36 inch depth
PHNT rating³: **High**

Production recommendations for P and K⁵

	ppm	Rating	Recommended application for 2018	
Soil Test P (0-6 in., ppm) (Kelowna method)	153	Very High	0	lb P2O5 per acre
Soil Test K (0-6 in., ppm) (Kelowna method)	274	Very High	0	lb K2O per acre

Footnotes: See last page

Footnotes for 2017 PHNT Data

1. Soil pH (water)

- “Water” refers to the test method
- Soil pH is typically tested in the top 12 inches of soil to determine if soil acidity is optimal
 - Alfalfa minimum pH 6.5
 - Corn (silage) minimum pH 5.5

2. Soil test phosphorus (P) and potassium (K)

- Different jurisdictions have researched different methods (e.g. Bray P1) to measure P and K fertility, usually at the 0-6 inch soil depth
- You can compare results of the same method over time for a given field

3. Nitrate-Nitrogen (NO₃-N)

- Measured *ppm* values are converted to *lb/ac* values using a particular soil bulk density value
- In this report, a soil bulk density value of 1300 kg per m³ was assumed for the 0-12 inch soil layer and 1500 kg per m³ for the 12-24 inch and 24-36 inch soil layers

Example

To convert 10 ppm NO₃-N (measured in a sample from the 0-12 inch depth) to lb/ac NO₃-N,

10 ppm = 10 mg per kg of dry soil

0-12 inch depth = 0.30 m thickness

$$\text{kg/ha NO}_3\text{-N} = \frac{10 \text{ mg NO}_3\text{-N}}{\text{kg dry soil}} \times \frac{1 \text{ kg}}{10^6 \text{ mg}} \times \frac{1300 \text{ kg dry soil}}{\text{m}^3 \text{ soil}} \times 0.30 \text{ m soil} \times \frac{10,000 \text{ m}^2 \text{ soil}}{\text{ha}} = 39 \text{ kg/ha NO}_3\text{-N}$$

$$\text{lb/ac NO}_3\text{-N} = 39 \text{ kg/ha} \times 0.89 \frac{\text{lb/ac}}{\text{kg/ha}} = 35 \text{ lb/ac NO}_3\text{-N}$$

- Post-harvest nitrate test
 - What it indicates: the amount of nitrate not used by the most recently harvested crop; whether nitrogen management can be more efficient (Table 1); and the amount of nitrate that *can* be lost (e.g. leached) at some point.
 - What is uncertain: the amount of nitrate that will be available to the next crop; and the amount of nitrate that *will* be lost (e.g. leached).

Table 1. Proposed interpretations of the post-harvest nitrate test for nitrogen (N) management, assuming the test describes the amount of nitrate not used by a crop with near-optimum yields.

Proposed rating	Post-harvest nitrate test (PHNT, lb NO ₃ -N per ac)	Management suggestion if growing the same crop next year in the same field
Low	0 – 44	Continue with N management program
Medium	45 – 89	Consider changes to N management ^a
High	90 – 180	Reduce N without risk to crop quality or yield
Very High	> 180	Reduce N without risk to crop quality or yield

a. Proposed interpretations in the medium range are crop-specific for forage crops and cereals: re-evaluate estimates of agronomic N rates if PHNT exceeds 70 lb NO₃-N per ac for silage corn or if PHNT exceeds approximately 55 lb NO₃-N per ac for perennial forages.

4. Mineral nitrogen

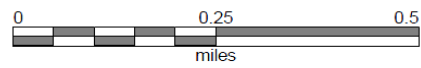
- Mineral nitrogen is the sum of nitrate and ammonium
- There are no proposed interpretations or ratings for post-harvest ammonium or post-harvest mineral nitrogen at this point


5. Fertilizer recommendations

- Soil test P ('Mehlich 3' method) and Soil Test K ('Mehlich 3' method) were converted to 'Kelowna method equivalent values' using relationships determined with B.C. soils
- Soil test ratings and production recommendations for many crops are available from B.C. research that relates the Kelowna method equivalent soil test value with crop response to phosphate or potash fertilizer, using soil samples from the 0-6 inch soil depth
 - Silage corn: Even at high phosphorus fertility levels, corn might respond to starter phosphorus at a rate of about 20 lb/ac of P_2O_5 . This starter phosphorus is typically applied in a band 2 inches below and 2 inches to the side of the seed row.
- Additional information can be found at <http://www2.gov.bc.ca/gov/content/industry/agriculture-seafood/agricultural-land-and-environment/soil-nutrients/nutrient-management/what-to-apply/soil-nutrient-testing>

Please Note: Due to rounding, some totals may not correspond with the sum of the separate figures.

Farm ID 3



 Corn Silage 322.24 ac

Farm ID	4
Field name	209 Swaans
Field ID	31
Sample date	Sep 18 2017
2017 Main crop	Corn silage
2018 Main crop (planned)	Corn silage

Laboratory measurements

Note: the 0-12" values are the average of concentrations at the 0-6" and 6-12" soil depths. See the original laboratory report for the 0-6" and 6-12" values.

Depth (inches)	Nitrate-Nitrogen (NO ₃ -N, ppm)	Ammonium-Nitrogen (NH ₄ -N, ppm)	Soil pH ¹ (water)	Organic matter (%)
0-12	7	5	8.0	5.4
12-24	2	4	8.1	2.3
24-36	3	3	8.2	1.8

Depth inches	Soil Test Phosphorus (P) (Mehlich 3) ² ppm	Soil Test Potassium (K) (Mehlich 3) ² ppm
0-6	75	317

Estimates from laboratory measurements

Depth inches	Nitrate-Nitrogen (NO ₃ -N) ³ lb/ac	Ammonium-Nitrogen (NH ₄ -N) ³ lb/ac	Mineral nitrogen (NO ₃ -N + NH ₄ -N) ⁴ lb/ac	NO ₃ -N in each depth %	NH ₄ -N in each depth %	Mineral N in each depth %
0-12	23	16	38	53%	36%	44%
12-24	8	16	24	19%	37%	28%
24-36	12	12	24	28%	28%	28%
0-36	43	44	86	100%	100%	100%

Post-harvest nitrate test (PHNT) result: **43** lb NO₃-N/ac, 0-36 inch depth
PHNT rating³: **Low**

Production recommendations for P and K⁵

	ppm	Rating	Recommended application for 2018	
Soil Test P (0-6 in., ppm) (Kelowna method)	54	High	27	lb P2O5 per acre
Soil Test K (0-6 in., ppm) (Kelowna method)	238	High	20	lb K2O per acre

Footnotes: See last page

Farm ID	4
Field name	Purple Springs East
Field ID	32
Sample date	Sep 13 2017
2017 Main crop	Nursery
2018 Main crop (planned)	Nursery

Laboratory measurements

Note: the 0-12" values are the average of concentrations at the 0-6" and 6-12" soil depths. See the original laboratory report for the 0-6" and 6-12" values.

Depth (inches)	Nitrate-Nitrogen (NO ₃ -N, ppm)	Ammonium-Nitrogen (NH ₄ -N, ppm)	Soil pH ¹ (water)	Organic matter (%)
0-12	8	6	7.8	4.6
12-24	2	5	8.2	1.7
24-36	1	4	8.3	1.0

Depth inches	Soil Test Phosphorus (P) (Mehlich 3) ² ppm	Soil Test Potassium (K) (Mehlich 3) ² ppm
0-6	173	302

Estimates from laboratory measurements

Depth inches	Nitrate-Nitrogen (NO ₃ -N) ³ lb/ac	Ammonium-Nitrogen (NH ₄ -N) ³ lb/ac	Mineral nitrogen (NO ₃ -N + NH ₄ -N) ⁴ lb/ac	NO ₃ -N in each depth %	NH ₄ -N in each depth %	Mineral N in each depth %
0-12	28	19	47	70%	35%	49%
12-24	8	20	28	20%	36%	30%
24-36	4	16	20	10%	29%	21%
0-36	40	55	95	100%	100%	100%

Post-harvest nitrate test (PHNT) result: **40** lb NO₃-N/ac, 0-36 inch depth
PHNT rating³: **Low**

Production recommendations for P and K⁵

	ppm	Rating	Recommended application for 2018	
Soil Test P (0-6 in., ppm) (Kelowna method)	125	Very High	0	lb P2O5 per acre
Soil Test K (0-6 in., ppm) (Kelowna method)	227	High	20	lb K2O per acre

Footnotes: See last page

Farm ID	4
Field name	Purple Springs Northwest
Field ID	33
Sample date	Sep 13 2017
2017 Main crop	Nursery
2018 Main crop (planned)	Nursery

Laboratory measurements

Note: the 0-12" values are the average of concentrations at the 0-6" and 6-12" soil depths. See the original laboratory report for the 0-6" and 6-12" values.

Depth (inches)	Nitrate-Nitrogen (NO ₃ -N, ppm)	Ammonium-Nitrogen (NH ₄ -N, ppm)	Soil pH ¹ (water)	Organic matter (%)
0-12	4	7	7.5	3.3
12-24	1	4	7.8	1.3
24-36	1	4	8.0	0.9

Depth inches	Soil Test Phosphorus (P) (Mehlich 3) ² ppm	Soil Test Potassium (K) (Mehlich 3) ² ppm
0-6	134	236

Estimates from laboratory measurements

Depth inches	Nitrate-Nitrogen (NO ₃ -N) ³ lb/ac	Ammonium-Nitrogen (NH ₄ -N) ³ lb/ac	Mineral nitrogen (NO ₃ -N + NH ₄ -N) ⁴ lb/ac	NO ₃ -N in each depth %	NH ₄ -N in each depth %	Mineral N in each depth %
0-12	14	24	38	63%	43%	49%
12-24	4	16	20	18%	28%	26%
24-36	4	16	20	18%	28%	26%
0-36	22	56	78	100%	100%	100%

Post-harvest nitrate test (PHNT) result: **22** lb NO₃-N/ac, 0-36 inch depth
PHNT rating³: **Low**

Production recommendations for P and K⁵

	ppm	Rating	Recommended application for 2018	
Soil Test P (0-6 in., ppm) (Kelowna method)	96	High	15	lb P2O5 per acre
Soil Test K (0-6 in., ppm) (Kelowna method)	177	Medium	36	lb K2O per acre

Footnotes: See last page

Farm ID	4
Field name	Purple Springs Southwest
Field ID	34
Sample date	Sep 13 2017
2017 Main crop	Nursery
2018 Main crop (planned)	Nursery

Laboratory measurements

Note: the 0-12" values are the average of concentrations at the 0-6" and 6-12" soil depths. See the original laboratory report for the 0-6" and 6-12" values.

Depth (inches)	Nitrate-Nitrogen (NO ₃ -N, ppm)	Ammonium-Nitrogen (NH ₄ -N, ppm)	Soil pH ¹ (water)	Organic matter (%)
0-12	3	7	7.7	3.5
12-24	1	5	7.9	1.3
24-36	1	4	8.1	0.9

Depth inches	Soil Test Phosphorus (P) (Mehlich 3) ² ppm	Soil Test Potassium (K) (Mehlich 3) ² ppm
0-6	96	256

Estimates from laboratory measurements

Depth inches	Nitrate-Nitrogen (NO ₃ -N) ³ lb/ac	Ammonium-Nitrogen (NH ₄ -N) ³ lb/ac	Mineral nitrogen (NO ₃ -N + NH ₄ -N) ⁴ lb/ac	NO ₃ -N in each depth %	NH ₄ -N in each depth %	Mineral N in each depth %
0-12	10	23	33	57%	38%	43%
12-24	4	20	24	22%	34%	31%
24-36	4	16	20	22%	27%	26%
0-36	18	59	77	100%	100%	100%

Post-harvest nitrate test (PHNT) result: 18 lb NO₃-N/ac, 0-36 inch depth
PHNT rating³: Low

Production recommendations for P and K⁵

	ppm	Rating	Recommended application for 2018	
Soil Test P (0-6 in., ppm) (Kelowna method)	69	High	27	lb P ₂ O ₅ per acre
Soil Test K (0-6 in., ppm) (Kelowna method)	192	High	36	lb K ₂ O per acre

Footnotes: See last page

Farm ID	4
Field name	101 Home KR
Field ID	35
Sample date	Sep 18 2017
2017 Main crop	Corn silage
2018 Main crop (planned)	Corn silage

Laboratory measurements

Note: the 0-12" values are the average of concentrations at the 0-6" and 6-12" soil depths. See the original laboratory report for the 0-6" and 6-12" values.

Depth (inches)	Nitrate-Nitrogen (NO ₃ -N, ppm)	Ammonium-Nitrogen (NH ₄ -N, ppm)	Soil pH ¹ (water)	Organic matter (%)
0-12	12	5	7.5	7.8
12-24	4	4	7.9	2.1
24-36	4	3	8.0	1.1

Depth inches	Soil Test Phosphorus (P) (Mehlich 3) ² ppm	Soil Test Potassium (K) (Mehlich 3) ² ppm
0-6	405	372

Estimates from laboratory measurements

Depth inches	Nitrate-Nitrogen (NO ₃ -N) ³ lb/ac	Ammonium-Nitrogen (NH ₄ -N) ³ lb/ac	Mineral nitrogen (NO ₃ -N + NH ₄ -N) ⁴ lb/ac	NO ₃ -N in each depth %	NH ₄ -N in each depth %	Mineral N in each depth %
0-12	42	17	59	57%	38%	50%
12-24	16	16	32	22%	35%	27%
24-36	16	12	28	22%	26%	24%
0-36	74	45	119	100%	100%	100%

Post-harvest nitrate test (PHNT) result: **74** lb NO₃-N/ac, 0-36 inch depth
PHNT rating³: **Medium**

Production recommendations for P and K⁵

	ppm	Rating	Recommended application for 2018	
Soil Test P (0-6 in., ppm) (Kelowna method)	292	Very High	0	lb P ₂ O ₅ per acre
Soil Test K (0-6 in., ppm) (Kelowna method)	279	Very High	0	lb K ₂ O per acre

Footnotes: See last page

Farm ID	4
Field name	105 Feedlot Bottom
Field ID	36
Sample date	Sep 18 2017
2017 Main crop	Corn silage
2018 Main crop (planned)	Corn silage

Laboratory measurements

Note: the 0-12" values are the average of concentrations at the 0-6" and 6-12" soil depths. See the original laboratory report for the 0-6" and 6-12" values.

Depth (inches)	Nitrate-Nitrogen (NO ₃ -N, ppm)	Ammonium-Nitrogen (NH ₄ -N, ppm)	Soil pH ¹ (water)	Organic matter (%)
0-12	9	5	7.5	5.8
12-24	2	3	7.9	1.5
24-36	4	3	8.1	1.6

Depth inches	Soil Test Phosphorus (P) (Mehlich 3) ² ppm	Soil Test Potassium (K) (Mehlich 3) ² ppm
0-6	324	304

Estimates from laboratory measurements

Depth inches	Nitrate-Nitrogen (NO ₃ -N) ³ lb/ac	Ammonium-Nitrogen (NH ₄ -N) ³ lb/ac	Mineral nitrogen (NO ₃ -N + NH ₄ -N) ⁴ lb/ac	NO ₃ -N in each depth %	NH ₄ -N in each depth %	Mineral N in each depth %
0-12	31	16	47	57%	39%	49%
12-24	8	12	20	14%	30%	21%
24-36	16	12	28	29%	30%	30%
0-36	55	40	95	100%	100%	100%

Post-harvest nitrate test (PHNT) result: 55 lb NO₃-N/ac, 0-36 inch depth
PHNT rating³: Medium

Production recommendations for P and K⁵

	ppm	Rating	Recommended application for 2018	
Soil Test P (0-6 in., ppm) (Kelowna method)	233	Very High	0	lb P2O5 per acre
Soil Test K (0-6 in., ppm) (Kelowna method)	228	High	20	lb K2O per acre

Footnotes: See last page

Farm ID	4
Field name	103 Far West & 104 West Hill
Field ID	37
Sample date	Oct 18 2017
2017 Main crop	Alf/grass
2018 Main crop (planned)	Alf/grass

Laboratory measurements

Note: the 0-12" values are the average of concentrations at the 0-6" and 6-12" soil depths. See the original laboratory report for the 0-6" and 6-12" values.

Depth (inches)	Nitrate-Nitrogen (NO ₃ -N, ppm)	Ammonium-Nitrogen (NH ₄ -N, ppm)	Soil pH ¹ (water)	Organic matter (%)
0-12	7	6	7.4	5.1
12-24	2	5	7.6	2.2
24-36	1	5	7.9	1.4

Depth inches	Soil Test Phosphorus (P) (Mehlich 3) ² ppm	Soil Test Potassium (K) (Mehlich 3) ² ppm
0-6	194	126

Estimates from laboratory measurements

Depth inches	Nitrate-Nitrogen (NO ₃ -N) ³ lb/ac	Ammonium-Nitrogen (NH ₄ -N) ³ lb/ac	Mineral nitrogen (NO ₃ -N + NH ₄ -N) ⁴ lb/ac	NO ₃ -N in each depth %	NH ₄ -N in each depth %	Mineral N in each depth %
0-12	23	21	43	65%	34%	45%
12-24	8	20	28	23%	33%	29%
24-36	4	20	24	12%	33%	25%
0-36	35	61	95	100%	100%	100%

Post-harvest nitrate test (PHNT) result: 35 lb NO₃-N/ac, 0-36 inch depth
PHNT rating³: Low

Production recommendations for P and K⁵

	ppm	Rating	Recommended application for 2018	
Soil Test P (0-6 in., ppm) (Kelowna method)	140	Very High	0	lb P ₂ O ₅ per acre
Soil Test K (0-6 in., ppm) (Kelowna method)	95	Low	71	lb K ₂ O per acre

Footnotes: See last page

Farm ID	4
Field name	205 Reserve
Field ID	38
Sample date	Oct 18 2017
2017 Main crop	Alf/grass
2018 Main crop (planned)	Alf/grass

Laboratory measurements

Note: the 0-12" values are the average of concentrations at the 0-6" and 6-12" soil depths. See the original laboratory report for the 0-6" and 6-12" values.

Depth (inches)	Nitrate-Nitrogen (NO ₃ -N, ppm)	Ammonium-Nitrogen (NH ₄ -N, ppm)	Soil pH ¹ (water)	Organic matter (%)
0-12	6	6	7.4	4.1
12-24	1	5	7.8	1.3
24-36	1	5	8.1	0.9

Depth inches	Soil Test Phosphorus (P) (Mehlich 3) ² ppm	Soil Test Potassium (K) (Mehlich 3) ² ppm
0-6	81	107

Estimates from laboratory measurements

Depth inches	Nitrate-Nitrogen (NO ₃ -N) ³ lb/ac	Ammonium-Nitrogen (NH ₄ -N) ³ lb/ac	Mineral nitrogen (NO ₃ -N + NH ₄ -N) ⁴ lb/ac	NO ₃ -N in each depth %	NH ₄ -N in each depth %	Mineral N in each depth %
0-12	19	19	38	70%	32%	44%
12-24	4	20	24	15%	34%	28%
24-36	4	20	24	15%	34%	28%
0-36	27	59	86	100%	100%	100%

Post-harvest nitrate test (PHNT) result: 27 lb NO₃-N/ac, 0-36 inch depth
PHNT rating³: Low

Production recommendations for P and K⁵

	ppm	Rating	Recommended application for 2018	
Soil Test P (0-6 in., ppm) (Kelowna method)	58	High	27	lb P ₂ O ₅ per acre
Soil Test K (0-6 in., ppm) (Kelowna method)	80	Low	71	lb K ₂ O per acre

Footnotes: See last page

Farm ID	4
Field name	206 Lens
Field ID	39
Sample date	Sep 15 2017
2017 Main crop	Corn silage
2018 Main crop (planned)	Corn silage

Laboratory measurements

Note: the 0-12" values are the average of concentrations at the 0-6" and 6-12" soil depths. See the original laboratory report for the 0-6" and 6-12" values.

Depth (inches)	Nitrate-Nitrogen (NO ₃ -N, ppm)	Ammonium-Nitrogen (NH ₄ -N, ppm)	Soil pH ¹ (water)	Organic matter (%)
0-12	16	6	7.4	7.0
12-24	4	4	7.5	2.7
24-36	4	4	7.9	1.8

Depth inches	Soil Test Phosphorus (P) (Mehlich 3) ² ppm	Soil Test Potassium (K) (Mehlich 3) ² ppm
0-6	241	436

Estimates from laboratory measurements

Depth inches	Nitrate-Nitrogen (NO ₃ -N) ³ lb/ac	Ammonium-Nitrogen (NH ₄ -N) ³ lb/ac	Mineral nitrogen (NO ₃ -N + NH ₄ -N) ⁴ lb/ac	NO ₃ -N in each depth %	NH ₄ -N in each depth %	Mineral N in each depth %
0-12	54	21	75	63%	39%	54%
12-24	16	16	32	19%	30%	23%
24-36	16	16	32	19%	30%	23%
0-36	86	53	139	100%	100%	100%

Post-harvest nitrate test (PHNT) result: **86** lb NO₃-N/ac, 0-36 inch depth
PHNT rating³: **Medium**

Production recommendations for P and K⁵

	ppm	Rating	Recommended application for 2018	
Soil Test P (0-6 in., ppm) (Kelowna method)	174	Very High	0	lb P2O5 per acre
Soil Test K (0-6 in., ppm) (Kelowna method)	327	Very High	0	lb K2O per acre

Footnotes: See last page

Farm ID	4
Field name	207 Res Top & 208 Dorthys
Field ID	40
Sample date	Sep 18 2017
2017 Main crop	Corn silage
2018 Main crop (planned)	Corn silage

Laboratory measurements

Note: the 0-12" values are the average of concentrations at the 0-6" and 6-12" soil depths. See the original laboratory report for the 0-6" and 6-12" values.

Depth (inches)	Nitrate-Nitrogen (NO ₃ -N, ppm)	Ammonium-Nitrogen (NH ₄ -N, ppm)	Soil pH ¹ (water)	Organic matter (%)
0-12	12	6	7.0	5.9
12-24	3	4	7.3	1.6
24-36	2	4	7.9	1.8

Depth inches	Soil Test Phosphorus (P) (Mehlich 3) ² ppm	Soil Test Potassium (K) (Mehlich 3) ² ppm
0-6	162	255

Estimates from laboratory measurements

Depth inches	Nitrate-Nitrogen (NO ₃ -N) ³ lb/ac	Ammonium-Nitrogen (NH ₄ -N) ³ lb/ac	Mineral nitrogen (NO ₃ -N + NH ₄ -N) ⁴ lb/ac	NO ₃ -N in each depth %	NH ₄ -N in each depth %	Mineral N in each depth %
0-12	40	19	59	67%	37%	53%
12-24	12	16	28	20%	31%	25%
24-36	8	16	24	13%	31%	22%
0-36	60	51	111	100%	100%	100%

Post-harvest nitrate test (PHNT) result: **60** lb NO₃-N/ac, 0-36 inch depth
PHNT rating³: **Medium**

Production recommendations for P and K⁵

	ppm	Rating	Recommended application for 2018	
Soil Test P (0-6 in., ppm) (Kelowna method)	117	Very High	0	lb P ₂ O ₅ per acre
Soil Test K (0-6 in., ppm) (Kelowna method)	191	High	36	lb K ₂ O per acre

Footnotes: See last page

Footnotes for 2017 PHNT Data

1. Soil pH (water)

- “Water” refers to the test method
- Soil pH is typically tested in the top 12 inches of soil to determine if soil acidity is optimal
 - Alfalfa minimum pH 6.5
 - Corn (silage) minimum pH 5.5

2. Soil test phosphorus (P) and potassium (K)

- Different jurisdictions have researched different methods (e.g. Bray P1) to measure P and K fertility, usually at the 0-6 inch soil depth
- You can compare results of the same method over time for a given field

3. Nitrate-Nitrogen (NO₃-N)

- Measured *ppm* values are converted to *lb/ac* values using a particular soil bulk density value
- In this report, a soil bulk density value of 1300 kg per m³ was assumed for the 0-12 inch soil layer and 1500 kg per m³ for the 12-24 inch and 24-36 inch soil layers

Example

To convert 10 ppm NO₃-N (measured in a sample from the 0-12 inch depth) to lb/ac NO₃-N,

10 ppm = 10 mg per kg of dry soil

0-12 inch depth = 0.30 m thickness

$$\text{kg/ha NO}_3\text{-N} = \frac{10 \text{ mg NO}_3\text{-N}}{\text{kg dry soil}} \times \frac{1 \text{ kg}}{10^6 \text{ mg}} \times \frac{1300 \text{ kg dry soil}}{\text{m}^3 \text{ soil}} \times 0.30 \text{ m soil} \times \frac{10,000 \text{ m}^2 \text{ soil}}{\text{ha}} = 39 \text{ kg/ha NO}_3\text{-N}$$

$$\text{lb/ac NO}_3\text{-N} = 39 \text{ kg/ha} \times 0.89 \frac{\text{lb/ac}}{\text{kg/ha}} = 35 \text{ lb/ac NO}_3\text{-N}$$

- Post-harvest nitrate test
 - What it indicates: the amount of nitrate not used by the most recently harvested crop; whether nitrogen management can be more efficient (Table 1); and the amount of nitrate that *can* be lost (e.g. leached) at some point.
 - What is uncertain: the amount of nitrate that will be available to the next crop; and the amount of nitrate that *will* be lost (e.g. leached).

Table 1. Proposed interpretations of the post-harvest nitrate test for nitrogen (N) management, assuming the test describes the amount of nitrate not used by a crop with near-optimum yields.

Proposed rating	Post-harvest nitrate test (PHNT, lb NO ₃ -N per ac)	Management suggestion if growing the same crop next year in the same field
Low	0 – 44	Continue with N management program
Medium	45 – 89	Consider changes to N management ^a
High	90 – 180	Reduce N without risk to crop quality or yield
Very High	> 180	Reduce N without risk to crop quality or yield

a. Proposed interpretations in the medium range are crop-specific for forage crops and cereals: re-evaluate estimates of agronomic N rates if PHNT exceeds 70 lb NO₃-N per ac for silage corn or if PHNT exceeds approximately 55 lb NO₃-N per ac for perennial forages.

4. Mineral nitrogen

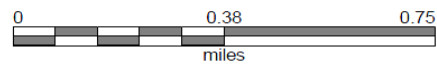
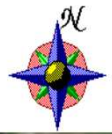
- Mineral nitrogen is the sum of nitrate and ammonium
- There are no proposed interpretations or ratings for post-harvest ammonium or post-harvest mineral nitrogen at this point

5. Fertilizer recommendations

- Soil test P ('Mehlich 3' method) and Soil Test K ('Mehlich 3' method) were converted to 'Kelowna method equivalent values' using relationships determined with B.C. soils
- Soil test ratings and production recommendations for many crops are available from B.C. research that relates the Kelowna method equivalent soil test value with crop response to phosphate or potash fertilizer, using soil samples from the 0-6 inch soil depth
 - Silage corn: Even at high phosphorus fertility levels, corn might respond to starter phosphorus at a rate of about 20 lb/ac of P_2O_5 . This starter phosphorus is typically applied in a band 2 inches below and 2 inches to the side of the seed row.
- Additional information can be found at <http://www2.gov.bc.ca/gov/content/industry/agriculture-seafood/agricultural-land-and-environment/soil-nutrients/nutrient-management/what-to-apply/soil-nutrient-testing>

Please Note: Due to rounding, some totals may not correspond with the sum of the separate figures.

Farm ID 4



Alfalfa	104.40 ac
Corn Silage	177.00 ac
Nursery Tree	168.50 ac

Farm ID	5
Field name	102 Bottom Back
Field ID	41
Sample date	Oct 18 2017
2017 Main crop	Alf/grass
2018 Main crop (planned)	Alf/grass

Laboratory measurements

Note: the 0-12" values are the average of concentrations at the 0-6" and 6-12" soil depths. See the original laboratory report for the 0-6" and 6-12" values.

Depth (inches)	Nitrate-Nitrogen (NO ₃ -N, ppm)	Ammonium-Nitrogen (NH ₄ -N, ppm)	Soil pH ¹ (water)	Organic matter (%)
0-12	8	6	7.8	7.6
12-24	2	5	8.0	1.9
24-36	2	5	8.2	1.1

Depth inches	Soil Test Phosphorus (P) (Mehlich 3) ² ppm	Soil Test Potassium (K) (Mehlich 3) ² ppm
0-6	125	372

Estimates from laboratory measurements

Depth inches	Nitrate-Nitrogen (NO ₃ -N) ³ lb/ac	Ammonium-Nitrogen (NH ₄ -N) ³ lb/ac	Mineral nitrogen (NO ₃ -N + NH ₄ -N) ⁴ lb/ac	NO ₃ -N in each depth %	NH ₄ -N in each depth %	Mineral N in each depth %
0-12	28	19	47	63%	32%	46%
12-24	8	20	28	18%	34%	27%
24-36	8	20	28	18%	34%	27%
0-36	44	59	103	100%	100%	100%

Post-harvest nitrate test (PHNT) result: **44** lb NO₃-N/ac, 0-36 inch depth
PHNT rating³: **Low**

Production recommendations for P and K⁵

	ppm	Rating	Recommended application for 2018	
Soil Test P (0-6 in., ppm) (Kelowna method)	90	High	15	lb P2O5 per acre
Soil Test K (0-6 in., ppm) (Kelowna method)	279	Very High	0	lb K2O per acre

Footnotes: See last page

Farm ID	5
Field name	105 Top Back
Field ID	42
Sample date	Sep 14 2017
2017 Main crop	Corn silage
2018 Main crop (planned)	Corn silage

Laboratory measurements

Note: the 0-12" values are the average of concentrations at the 0-6" and 6-12" soil depths.
See the original laboratory report for the 0-6" and 6-12" values.

Depth (inches)	Nitrate- Nitrogen (NO ₃ -N, ppm)	Ammonium- Nitrogen (NH ₄ -N, ppm)	Soil pH ¹ (water)	Organic matter (%)
0-12	31	6	7.0	7.7
12-24	20	4	7.3	2.4
24-36	5	4	7.6	0.9

Depth inches	Soil Test Phosphorus (P) (Mehlich 3) ² ppm	Soil Test Potassium (K) (Mehlich 3) ² ppm
0-6	254	536

Estimates from laboratory measurements

Depth inches	Nitrate- Nitrogen (NO ₃ -N) ³ lb/ac	Ammonium- Nitrogen (NH ₄ -N) ³ lb/ac	Mineral nitrogen (NO ₃ -N + NH ₄ - N) ⁴ lb/ac	NO ₃ -N in each depth %	NH ₄ -N in each depth %	Mineral N in each depth %
0-12	108	21	128	52%	39%	49%
12-24	80	16	96	39%	30%	37%
24-36	20	16	36	10%	30%	14%
0-36	208	53	261	100%	100%	100%

Post-harvest nitrate test (PHNT) result: **208** lb NO₃-N/ac, 0-36 inch depth
PHNT rating³: **Very High**

Production recommendations for P and K⁵

	ppm	Rating	Recommended application for 2018	
Soil Test P (0-6 in., ppm) (Kelowna method)	183	Very High	0	lb P ₂ O ₅ per acre
Soil Test K (0-6 in., ppm) (Kelowna method)	402	Very High	0	lb K ₂ O per acre

Footnotes: See last page

Farm ID	5
Field name	101A Home Pivot North
Field ID	43
Sample date	Sep 14 2017
2017 Main crop	Alf/grass
2018 Main crop (planned)	Alf/grass

Laboratory measurements

Note: the 0-12" values are the average of concentrations at the 0-6" and 6-12" soil depths.
See the original laboratory report for the 0-6" and 6-12" values.

Depth (inches)	Nitrate- Nitrogen (NO ₃ -N, ppm)	Ammonium- Nitrogen (NH ₄ -N, ppm)	Soil pH ¹ (water)	Organic matter (%)
0-12	6	5	7.7	4.4
12-24	3	5	7.9	1.4
24-36	4	4	7.9	1.1

Depth inches	Soil Test Phosphorus (P) (Mehlich 3) ² ppm	Soil Test Potassium (K) (Mehlich 3) ² ppm
0-6	124	361

Estimates from laboratory measurements

Depth inches	Nitrate- Nitrogen (NO ₃ -N) ³ lb/ac	Ammonium- Nitrogen (NH ₄ -N) ³ lb/ac	Mineral nitrogen (NO ₃ -N + NH ₄ - N) ⁴ lb/ac	NO ₃ -N in each depth %	NH ₄ -N in each depth %	Mineral N in each depth %
0-12	19	17	36	41%	33%	36%
12-24	12	20	32	25%	38%	32%
24-36	16	16	32	34%	30%	32%
0-36	47	53	101	100%	100%	100%

Post-harvest nitrate test (PHNT) result: **47** lb NO₃-N/ac, 0-36 inch depth
PHNT rating³: **Medium**

Production recommendations for P and K⁵

	ppm	Rating	Recommended application for 2018	
Soil Test P (0-6 in., ppm) (Kelowna method)	89	High	15	lb P ₂ O ₅ per acre
Soil Test K (0-6 in., ppm) (Kelowna method)	271	Very High	0	lb K ₂ O per acre

Footnotes: See last page

Farm ID	5
Field name	101B Home Pivot Top
Field ID	44
Sample date	Oct 18 2017
2017 Main crop	Alf/grass
2018 Main crop (planned)	Alf/grass

Laboratory measurements

Note: the 0-12" values are the average of concentrations at the 0-6" and 6-12" soil depths.
See the original laboratory report for the 0-6" and 6-12" values.

Depth (inches)	Nitrate- Nitrogen (NO ₃ -N, ppm)	Ammonium- Nitrogen (NH ₄ -N, ppm)	Soil pH ¹ (water)	Organic matter (%)
0-12	8	6	7.6	5.1
12-24	1	5	7.9	1.7
24-36	1	5	7.9	1.0

Depth inches	Soil Test Phosphorus (P) (Mehlich 3) ² ppm	Soil Test Potassium (K) (Mehlich 3) ² ppm
0-6	257	489

Estimates from laboratory measurements

Depth inches	Nitrate- Nitrogen (NO ₃ -N) ³ lb/ac	Ammonium- Nitrogen (NH ₄ -N) ³ lb/ac	Mineral nitrogen (NO ₃ -N + NH ₄ - N) ⁴ lb/ac	NO ₃ -N in each depth %	NH ₄ -N in each depth %	Mineral N in each depth %
0-12	28	19	47	78%	32%	49%
12-24	4	20	24	11%	34%	25%
24-36	4	20	24	11%	34%	25%
0-36	36	59	95	100%	100%	100%

Post-harvest nitrate test (PHNT) result: **36** lb NO₃-N/ac, 0-36 inch depth
PHNT rating³: **Low**

Production recommendations for P and K⁵

	ppm	Rating	Recommended application for 2018	
Soil Test P (0-6 in., ppm) (Kelowna method)	185	Very High	0	lb P ₂ O ₅ per acre
Soil Test K (0-6 in., ppm) (Kelowna method)	367	Very High	0	lb K ₂ O per acre

Footnotes: See last page

Farm ID	5
Field name	101C Home Pivot Bottom
Field ID	45
Sample date	Oct 18 2017
2017 Main crop	Alf/grass
2018 Main crop (planned)	Alf/grass

Laboratory measurements

Note: the 0-12" values are the average of concentrations at the 0-6" and 6-12" soil depths.
See the original laboratory report for the 0-6" and 6-12" values.

Depth (inches)	Nitrate- Nitrogen (NO ₃ -N, ppm)	Ammonium- Nitrogen (NH ₄ -N, ppm)	Soil pH ¹ (water)	Organic matter (%)
0-12	3	6	7.7	4.3
12-24	1	5	8.1	1.3
24-36	1	5	8.3	1.1

Depth inches	Soil Test Phosphorus (P) (Mehlich 3) ² ppm	Soil Test Potassium (K) (Mehlich 3) ² ppm
0-6	126	291

Estimates from laboratory measurements

Depth inches	Nitrate- Nitrogen (NO ₃ -N) ³ lb/ac	Ammonium- Nitrogen (NH ₄ -N) ³ lb/ac	Mineral nitrogen (NO ₃ -N + NH ₄ - N) ⁴ lb/ac	NO ₃ -N in each depth %	NH ₄ -N in each depth %	Mineral N in each depth %
0-12	10	19	30	57%	32%	38%
12-24	4	20	24	22%	34%	31%
24-36	4	20	24	22%	34%	31%
0-36	18	59	78	100%	100%	100%

Post-harvest nitrate test (PHNT) result: **18** lb NO₃-N/ac, 0-36 inch depth
PHNT rating³: **Low**

Production recommendations for P and K⁵

	ppm	Rating	Recommended application for 2018	
Soil Test P (0-6 in., ppm) (Kelowna method)	91	High	15	lb P ₂ O ₅ per acre
Soil Test K (0-6 in., ppm) (Kelowna method)	218	High	36	lb K ₂ O per acre

Footnotes: See last page

Farm ID	5
Field name	201 Reserve Pivot Top
Field ID	46
Sample date	Sep 14 2017
2017 Main crop	Corn silage
2018 Main crop (planned)	Corn silage

Laboratory measurements

Note: the 0-12" values are the average of concentrations at the 0-6" and 6-12" soil depths.
See the original laboratory report for the 0-6" and 6-12" values.

Depth (inches)	Nitrate- Nitrogen (NO ₃ -N, ppm)	Ammonium- Nitrogen (NH ₄ -N, ppm)	Soil pH ¹ (water)	Organic matter (%)
0-12	12	5	7.3	5.3
12-24	8	4	7.6	2.5
24-36	3	3	8.1	1.2

Depth inches	Soil Test Phosphorus (P) (Mehlich 3) ² ppm	Soil Test Potassium (K) (Mehlich 3) ² ppm
0-6	99	230

Estimates from laboratory measurements

Depth inches	Nitrate- Nitrogen (NO ₃ -N) ³ lb/ac	Ammonium- Nitrogen (NH ₄ -N) ³ lb/ac	Mineral nitrogen (NO ₃ -N + NH ₄ - N) ⁴ lb/ac	NO ₃ -N in each depth %	NH ₄ -N in each depth %	Mineral N in each depth %
0-12	40	17	57	48%	38%	44%
12-24	32	16	48	38%	35%	37%
24-36	12	12	24	14%	26%	19%
0-36	84	45	129	100%	100%	100%

Post-harvest nitrate test (PHNT) result: **84** lb NO₃-N/ac, 0-36 inch depth
PHNT rating³: **Medium**

Production recommendations for P and K⁵

	ppm	Rating	Recommended application for 2018	
Soil Test P (0-6 in., ppm) (Kelowna method)	71	High	27	lb P ₂ O ₅ per acre
Soil Test K (0-6 in., ppm) (Kelowna method)	173	Medium	36	lb K ₂ O per acre

Footnotes: See last page

Farm ID	5
Field name	202 Reserve Pivot Bottom
Field ID	47
Sample date	Sep 14 2017
2017 Main crop	Corn silage
2018 Main crop (planned)	Corn silage

Laboratory measurements

Note: the 0-12" values are the average of concentrations at the 0-6" and 6-12" soil depths.
See the original laboratory report for the 0-6" and 6-12" values.

Depth (inches)	Nitrate- Nitrogen (NO ₃ -N, ppm)	Ammonium- Nitrogen (NH ₄ -N, ppm)	Soil pH ¹ (water)	Organic matter (%)
0-12	13	6	7.3	5.0
12-24	3	5	7.7	1.7
24-36	4	4	7.7	1.4

Depth inches	Soil Test Phosphorus (P) (Mehlich 3) ² ppm	Soil Test Potassium (K) (Mehlich 3) ² ppm
0-6	113	290

Estimates from laboratory measurements

Depth inches	Nitrate- Nitrogen (NO ₃ -N) ³ lb/ac	Ammonium- Nitrogen (NH ₄ -N) ³ lb/ac	Mineral nitrogen (NO ₃ -N + NH ₄ - N) ⁴ lb/ac	NO ₃ -N in each depth %	NH ₄ -N in each depth %	Mineral N in each depth %
0-12	45	19	64	62%	35%	50%
12-24	12	20	32	16%	36%	25%
24-36	16	16	32	22%	29%	25%
0-36	73	55	128	100%	100%	100%

Post-harvest nitrate test (PHNT) result: **73** lb NO₃-N/ac, 0-36 inch depth
PHNT rating³: **Medium**

Production recommendations for P and K⁵

	ppm	Rating	Recommended application for 2018	
Soil Test P (0-6 in., ppm) (Kelowna method)	81	High	15	lb P ₂ O ₅ per acre
Soil Test K (0-6 in., ppm) (Kelowna method)	218	High	36	lb K ₂ O per acre

Footnotes: See last page

Farm ID	5
Field name	301 Matheson Rd
Field ID	48
Sample date	Sep 14 2017
2017 Main crop	Grass hay
2018 Main crop (planned)	Grass hay

Laboratory measurements

Note: the 0-12" values are the average of concentrations at the 0-6" and 6-12" soil depths.
See the original laboratory report for the 0-6" and 6-12" values.

Depth (inches)	Nitrate- Nitrogen (NO ₃ -N, ppm)	Ammonium- Nitrogen (NH ₄ -N, ppm)	Soil pH ¹ (water)	Organic matter (%)
0-12	3	5	8.2	5.9
12-24	1	4	8.3	2.0
24-36	1	4	8.4	1.3

Depth inches	Soil Test Phosphorus (P) (Mehlich 3) ² ppm	Soil Test Potassium (K) (Mehlich 3) ² ppm
0-6	12	172

Estimates from laboratory measurements

Depth inches	Nitrate- Nitrogen (NO ₃ -N) ³ lb/ac	Ammonium- Nitrogen (NH ₄ -N) ³ lb/ac	Mineral nitrogen (NO ₃ -N + NH ₄ - N) ⁴ lb/ac	NO ₃ -N in each depth %	NH ₄ -N in each depth %	Mineral N in each depth %
0-12	9	16	24	52%	33%	38%
12-24	4	16	20	24%	34%	31%
24-36	4	16	20	24%	34%	31%
0-36	17	48	64	100%	100%	100%

Post-harvest nitrate test (PHNT) result: 17 lb NO₃-N/ac, 0-36 inch depth
PHNT rating³: Low

Production recommendations for P and K⁵

	ppm	Rating	Recommended application for 2018	
Soil Test P (0-6 in., ppm) (Kelowna method)	9	Low	FALSE	lb P ₂ O ₅ per acre
Soil Test K (0-6 in., ppm) (Kelowna method)	129	Medium	54	lb K ₂ O per acre

Footnotes: See last page

Footnotes for 2017 PHNT Data

1. Soil pH (water)

- "Water" refers to the test method
- Soil pH is typically tested in the top 12 inches of soil to determine if soil acidity is optimal
 - Alfalfa minimum pH 6.5
 - Corn (silage) minimum pH 5.5

2. Soil test phosphorus (P) and potassium (K)

- Different jurisdictions have researched different methods (e.g. Bray P1) to measure P and K fertility, usually at the 0-6 inch soil depth
- You can compare results of the same method over time for a given field

3. Nitrate-Nitrogen (NO₃-N)

- Measured *ppm* values are converted to *lb/ac* values using a particular soil bulk density value
- In this report, a soil bulk density value of 1300 kg per m³ was assumed for the 0-12 inch soil layer and 1500 kg per m³ for the 12-24 inch and 24-36 inch soil layers

Example

To convert 10 ppm NO₃-N (measured in a sample from the 0-12 inch depth) to lb/ac NO₃-N, 10 ppm = 10 mg per kg of dry soil

0-12 inch depth = 0.30 m thickness

kg/ha NO₃-N = $\frac{10 \text{ mg}}{1 \text{ kg}} \times \frac{1}{1000} \times \frac{1300 \text{ kg}}{\text{m}^3} \times 0.30 \text{ m soil} = 39 \text{ kg/ha NO}_3\text{-N}$

lb/ac NO₃-N = 39 kg/ha $\times 0.89 \frac{\text{lb}}{\text{kg}} = 35 \text{ lb/ac NO}_3\text{-N}$

- Post-harvest nitrate test
 - What it indicates: the amount of nitrate not used by the most recently harvested crop; whether nitrogen management can be more efficient (Table 1); and the amount of nitrate that *can* be lost (e.g. leached) at some point.
 - What is uncertain: the amount of nitrate that will be available to the next crop; and the amount of nitrate that *will* be lost (e.g. leached).

Table 1. Proposed interpretations of the post-harvest nitrate test for nitrogen (N) management, assuming the test describes the amount of nitrate not used by a crop with near-optimum yields.

Proposed rating	Post-harvest nitrate test (PHNT, lb NO ₃ -N per ac)	Management suggestion if growing the same crop next year in the same field
Low	0 – 44	Continue with N management program
Medium	45 – 89	Consider changes to N management ^a
High	90 – 180	Reduce N without risk to crop quality or yield
Very High	> 180	Reduce N without risk to crop quality or yield

a. Proposed interpretations in the medium range are crop-specific for forage crops and cereals: re-evaluate estimates of agronomic N rates if PHNT exceeds 70 lb NO₃-N per ac for silage corn or if PHNT exceeds approximately 55 lb NO₃-N per ac for perennial forages.

4. Mineral nitrogen

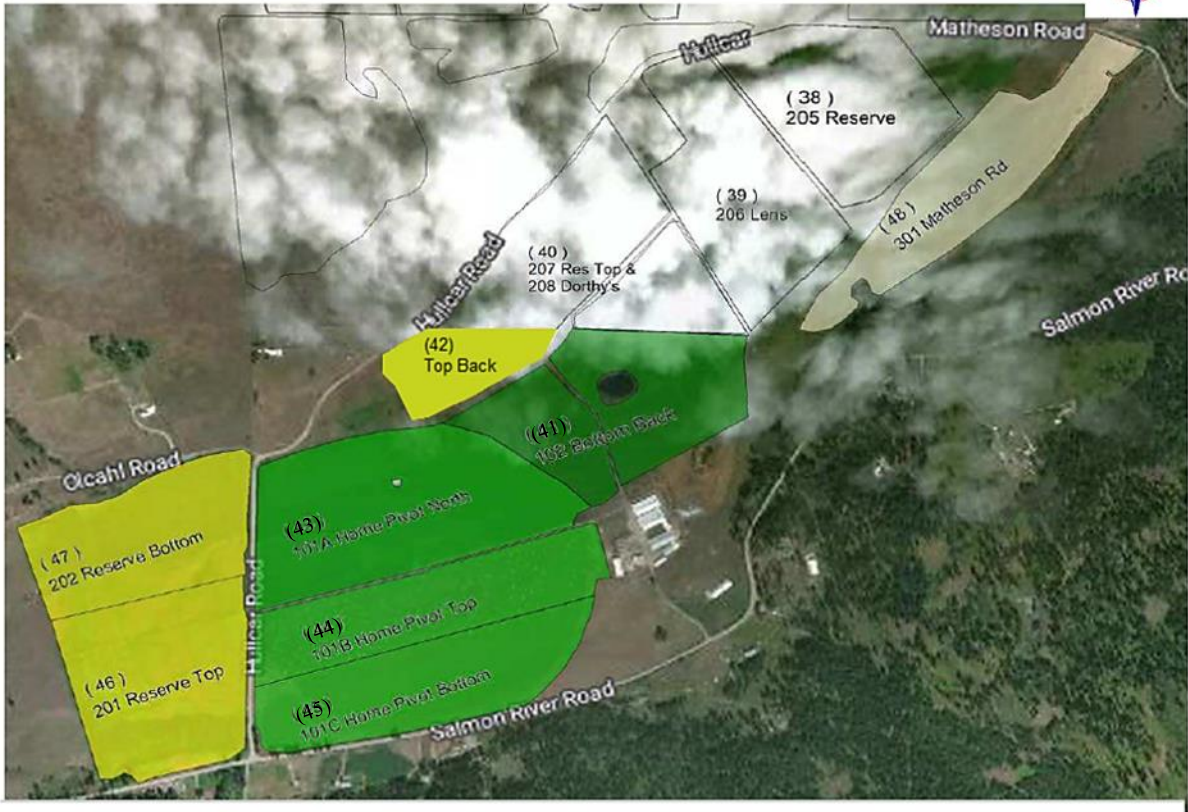
- Mineral nitrogen is the sum of nitrate and ammonium
- There are no proposed interpretations or ratings for post-harvest ammonium or post-harvest mineral nitrogen at this point

5. Fertilizer recommendations

- Soil test P ('Mehlich 3' method) and Soil Test K ('Mehlich 3' method) were converted to 'Kelowna method equivalent values' using relationships determined with B.C. soils
- Soil test ratings and production recommendations for many crops are available from B.C. research that relates the Kelowna method equivalent soil test value with crop response to phosphate or potash fertilizer, using soil samples from the 0-6 inch soil depth
 - Silage corn: Even at high phosphorus fertility levels, corn might respond to starter phosphorus at a rate of about 20 lb/ac of P_2O_5 . This starter phosphorus is typically applied in a band 2 inches below and 2 inches to the side of the seed row.
- Additional information can be found at <http://www2.gov.bc.ca/gov/content/industry/agriculture-seafood/agricultural-land-and-environment/soil-nutrients/nutrient-management/what-to-apply/soil-nutrient-testing>

Please Note: Due to rounding, some totals may not correspond with the sum of the separate figures.

Farm ID 5



Alfalfa Seeding	14.00 ac
Alfalfa	47.00 ac
Alfalfa Grass Mix	139.80 ac
Corn Silage	85.00 ac
Hay	40.00 ac