

1a - Pigs

Operation Name:		Greenwald Colony Farms Ltd.			
Operation Type	Storage Type	Volatilization	Animal Numbers (Places)	N Excreted Per Herd Adjusted for Storage N Loss (lb/yr/herd)	P2O5 Excreted Per Herd Per Year (lb/yr/herd)
Gilts (Purchased)	Liquid Uncovered Earthen	30%		0	0
Boars	Liquid Uncovered Earthen	30%		0	0
Weanlings/Nursery	Liquid Uncovered Earthen	30%		0	0
Growers/Finishers	Liquid Uncovered Earthen	30%		0	0
Sows, farrow to 6.2 kg	Liquid Uncovered Earthen	30%		0	0
Sows, farrow to 28 kg	Liquid Uncovered Earthen	30%		0	0
Sows, farrow to finish	Liquid Uncovered Earthen	30%	950	257953	149831

Last Revised February 12, 2020

1b - Beef

Operation Name: **Greenwald Colony Farms Ltd.**

Operation Type	Animal Category	Storage Type	Volatilization	Animal Numbers	Weight In (lb)	Weight Out (lb)	Days per Cycle (Days)	Cycles per Year	Rate of Gain (lb/day)	Days Place is Occupied per Year (days)	N Excreted Per Herd Adjusted for Storage N Loss (lb N/yr/herd)	P2O5 Excreted Per Herd Per Year (lb P2O5/year)
Cow Calf	Mature Cows and Bred Heifers, plus associated livestock	Field Storage	40%		n/a	n/a	n/a	n/a	n/a	n/a	0	0
Feeder	Feedlot Cattle - long keep	Field Storage	40%		581	1300	240	1.0	3.00	240	0	0
Feeder	Feedlot Cattle - short keep	Field Storage	40%		975	1300	116	1.0	2.80	116	0	0
Feeder	Backgrounders - pasture	Field Storage	40%		793	975	105	1.0	1.73	105	0	0
Feeder	Backgrounders - confined	Field Storage	40%	25	500	793	180	1.0	1.63	180	715	331

Last Revised January 21, 2015

1c - Dairy

Operation Name:

Greenwald Colony Farms Ltd.

Type	Storage Type	Volatilization	Animal Numbers	N Excreted Per Herd Adjusted for Storage N Loss (lb N/yr/herd)	P2O5 Excreted Per Herd Per Year (lb P2O5/year)
Mature Cows, plus associated livestock	Liquid Uncovered Steel/Concrete	20%	3	1069.5	462.6

Last Revised October 18, 2019

1d -Sheep

Operation Name		Greenwald Colony Farms Ltd.								
Sheep/Operation Type	Storage Type	Volatilization	Animal	Weight	Ave	Days on	Cycles	N Excreted per	P2O5	
			Numbers	In	Out					Weight
				lb	lb	lb		lb/flock/yr	lb/flock/yr	
Ewes	Field Storage	40%	120	170	145	365	1	0	0	
Replacement Ewes	Field Storage	40%	45	80	63	210	1	0	0	
Rams	Field Storage	40%	100	200	150	365	1	0	0	
Lambs	Field Storage	40%	8	45	27	70	1.4	0	0	
Ewes, plus assoc livestock	Field Storage	40%	n/a	n/a	n/a	n/a	n/a	0	0	
Feeder	Field Storage	40%	45	100	73	365	1	0	0	

1e - Poultry

Operation Name: **Greenwald Colony Farms Ltd.**

Species / Commodity	Type of Operation	Storage Type	Volatilization	Bird Places	Weight in kg	Weight out kg	Days on Feed	Cycles per Year	N Excreted Adjusted for N Loss lb/flock/yr	P2O5 Excreted lb/flock/yr
Chickens	Light Broilers	Solid Manure Shed	20%		0.043	1.8	30	7	0	0
Chickens	Broilers	Solid Manure Shed	20%	50000	0.043	2.275	35	7	34871	17378
Chickens	Broiler Breeder Pullets	Solid Manure Shed	20%		0.040	2.975	168	2	0	0
Chickens	Broiler Breeder Hens	Solid Manure Shed	20%		2.975	3.950	245	1	0	0
Eggs	White Layer Pullets	Solid Manure Shed	20%		0.040	1.355	133	2	0	0
Eggs	White Layer Hens	Solid Manure Shed	20%	11000	1.355	1.875	357	1	11642	9629
Eggs	White Breeder Pullets	Solid Manure Shed	20%		0.040	1.240	119	2	0	0
Eggs	White Breeder Hens	Solid Manure Shed	20%		1.240	1.670	350	1	0	0
Eggs	Brown Layer Pullets	Solid Manure Shed	20%		0.040	1.630	133	2	0	0
Eggs	Brown Layer Hens	Solid Manure Shed	20%		1.630	2.025	357	1	0	0
Eggs	Brown Breeder Pullets	Solid Manure Shed	20%		0.040	1.407	119	2	0	0
Eggs	Brown Breeder Hens	Solid Manure Shed	20%		1.407	1.950	350	1	0	0
Turkey	Broiler Turkey (0-9 wks)	Solid Manure Shed	20%	2300	0.070	4.950	63	5	4111	2223
Turkey	Hen Turkey (0-11 wks)	Solid Manure Shed	20%		0.070	6.650	77	4	0	0
Turkey	Heavy Hens (0-14 wks)	Solid Manure Shed	20%		0.070	9.750	98	3	0	0
Turkey	Toms (0-14 wks)	Solid Manure Shed	20%		0.070	13.000	98	3	0	0
Turkey	Breeding Hen Growers (0-30 wks)	Solid Manure Shed	20%		0.070	12.900	210	1	0	0
Turkey	Breeding Hens (31-End of Lay)	Solid Manure Shed	20%		12.900	12.400	252	1	0	0
Turkey	Breeding Tom Grower (0-17 wks)	Solid Manure Shed	20%		0.070	15.770	119	1	0	0
Turkey	Breeding Tom Grower (17-30 wks)	Solid Manure Shed	20%		15.770	25.000	91	1	0	0
Turkey	Breeding Tom (31-End of Lay)	Solid Manure Shed	20%		25.000	28.180	252	1	0	0

Last Revised November 26, 2019

2 - Crop Rotation										
Operation Name: Greenwald Colony Farms Ltd.										
Crop	Removal		Uptake		Yield	Units	Acreage	Removal		Uptake
	P2O5	N	N	Units				P2O5 (lb)	N (lb)	N (lb)
Alfalfa	13.8	58	58	lb/ton		ton/ac		-	-	-
Barley Grain	0.42	0.97	1.39	lb/bu		bu/ac		-	-	-
Barley Silage	11.8	34.4	34.4	lb/ton		ton/ac		-	-	-
Canola	1.04	1.93	3.19	lb/bu	36.6	bu/ac	1236	47047	87309	144308
Corn Grain	0.44	0.97	1.53	lb/bu		bu/ac		-	-	-
Corn Silage	12.7	31.2	31.2	lb/ton		tons/ac		-	-	-
Dry Edible Beans	1.39	4.17		lb/cwt		cwt/ac		-	-	-
Fababeans	1.79	5.02	8.4	lb/cwt		cwt/ac		-	-	-
Flax	0.65	2.13	2.88	lb/bu		bu/ac		-	-	-
Grass Hay	10	34.2	34.2	lb/ton		tons/ac		-	-	-
Lentils	1.03	3.39	5.08	lb/cwt		cwt/ac		-	-	-
Oats	0.26	0.62	1.07	lb/bu		bu/ac		-	-	-
Pasture (grazed)	10	34.2	34.2	lb/ton	0.5	ton/ac		-	-	-
Peas	0.69	2.34	3.06	lb/bu		bu/ac		-	-	-
Potatoes	0.09	0.32	0.57	lb/cwt		cwt/ac		-	-	-
Rye	0.45	1.06	1.67	lb/bu		bu/ac		-	-	-
Soybeans	0.84	3.87	5.2	lb/bu	33.6	bu/ac	1617	45638	210262	282522
Sunflower	1.1	2.8		lb/cwt		cwt/ac		-	-	-
Wheat - Spring	0.59	1.5	2.11	lb/bu	54.9	bu/ac	695	22512	57233	80508
Wheat - Winter	0.51	1.04	1.35	lb/bu		bu/ac		-	-	-
<b>Total Acres</b>							3548	115197	354804	507338
<b>Estimated Average Removal/Uptake (lb/ac)</b>								32.5	100.0	143.0
<b>Acres in Hanover and La Broquerie</b>										
<b>Proportion in Hanover or La Broquerie</b>							0%			
<b>Additional Acres</b>										
<b>Crop Planned on Additional Acres</b>										
<b>Total Acreage</b>							3548			
<b>*Notes:</b>	Enter the number of acres that are in the RM's of Hanover or La Broquerie in cell H26. Additional acres include acres for which crop removal or soil data is limited or unavailable.									

Last revised December 18, 2017

**3 - Farm Excretion**

**Operation Name: Greenwald Colony Farms Ltd.**

<b>Species</b>	<b>Animal Category/Operation type</b>	<b>N (lb/year)</b>	<b>P2O5 (lb/year)</b>
<b>Pigs</b>	Boars	0	0
	Weanlings/Nursery	0	0
	Growers/Finishers	0	0
	Sows, farrow to 5 kg	0	0
	Sows, farrow to 23 kg	0	0
	Sows, farrow to finish	257953	149831
<b>Beef</b>	Mature Cows and Bred Heifers, plus associated livestock	0	0
	Feedlot Cattle - long keep	0	0
	Feedlot Cattle - short keep	0	0
	Backgrounders - pasture	0	0
	Backgrounders - confined	715	331
<b>Dairy</b>	Lactating cow	0	0
	Lactating First Calf Heifer	0	0
	Dry cow	0	0
	Calf, 0-3 months	0	0
	Calf, 4-13 months	0	0
	Replacements, >13 months	0	0
	Mature Cows, plus assoc livestock	1069	463
<b>Sheep</b>	Ewes	0	0
	Replacement Ewes	0	0
	Rams	0	0
	Lambs	0	0
	Ewes, plus assoc livestock	0	0
	Feeder	0	0
<b>Chickens</b>	Light Broilers	0	0
	Broilers	34871	17378
	Broiler Breeder Pullets	0	0
	Broiler Breeder Hens	0	0
<b>Layers</b>	White Layer Pullets	0	0
	White Layer Hens	11642	9629
	White Breeder Pullets	0	0
	White Breeder Hens	0	0
	Brown Layer Pullets	0	0
	Brown Layer Hens	0	0
	Brown Breeder Pullets	0	0
	Brown Breeder Hens	0	0
<b>Turkeys</b>	Broiler Turkey (0-9 wks)	4111	2223
	Hen Turkey (0-11 wks)	0	0
	Heavy Hens (0-14 wks)	0	0
	Toms (0-14 wks)	0	0
	Breeding Hen Growers (0-30 wks)	0	0
	Breeding Hens (31-End of Lay)	0	0
	Breeding Tom Grower (0-17 wks)	0	0
	Breeding Tom Grower (17-30 wks)	0	0
	Breeding Tom (31-End of Lay)	0	0
<b>Total</b>		<b>310362</b>	<b>179855</b>

**Note:** Be sure all livestock species on your farm are represented in this table, not just the livestock in the proposed expansion.

**4 - Land Base Summary****Operation Name:** Greenwald Colony Farms Ltd.

<b>Nutrients Excreted</b>		<b>lbs</b>
Nitrogen		310362
Phosphorus (P2O5)		179855
<b>Crop Nutrient Use</b>		<b>lb/ac</b>
Average Crop N Uptake		143.0
Average Crop Phosphorus (P2O5) Removal		32.5
Operation-specific Phosphorus (P2O5) Allowance		64.9
<b>Land Available</b>		<b>3548</b>
<b>Land Base Required</b>		<b>acres</b>
Acres for Nitrogen		2170
Acres for Phosphorus (P2O5)		2770
<b>Phosphorus Balance</b>		<b>acres</b>
Acres for Phosphorus Balance (1X)		5539

**Note: For lands located in Hanover and/or La Broquerie, the acres required for phosphorus are based on phosphorus balance (1X). For other lands, the acres required for phosphorus are based on twice crop phosphorus removal (2X). Land requirements for operations with lands inside and outside Hanover and/or La Broquerie are based on a weighted average.**

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