

Operation Name:		Holmfield Colony			
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%	1000	271530	157717

Last Revised February 12, 2020

1b - Beef

Operation Name: **Holmfield Colony**

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%	240	n/a	n/a	n/a	n/a	n/a	n/a	32269	13351
Feeder	Feedlot Cattle - long keep	Field Storage	40%	140	581	1300	240	1.0	3.00	240	6075	3378
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%		500	793	180	1.0	1.63	180	0	0

Last Revised January 21, 2015

1c - Dairy

Operation Name:

Holmfield Colony

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 Earthen	30%	120	37431.2	18503.5

Last Revised October 18, 2019

1e - Poultry

Operation Name: **Holmfield Colony**

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%	2000	0.043	1.8	30	7	0	0
Chickens	Broilers	Solid Manure Shed	20%		0.043	2.275	35	7	1395	695
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%	500	0.040	1.355	133	2	0	0
Eggs	White Layer Hens	Field Storage	40%		1.355	1.875	357	1	397	438
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%		0.070	4.950	63	5	0	0
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	1	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

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	75.4	bu/ac	372	11780	27207	38988	
Barley Silage	11.8	34.4	34.4	lb/ton		ton/ac		-	-	-	
Canola	1.04	1.93	3.19	lb/bu	39.7	bu/ac	1195	49339	91562	151338	
Corn Grain	0.44	0.97	1.53	lb/bu	117.9	bu/ac	226	11724	25846	40767	
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	104.4	bu/ac	122	3312	7897	13628	
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	34.1	bu/ac	177	5070	23358	31386	
Sunflower	1.1	2.8		lb/cwt		cwt/ac		-	-	-	
Wheat - Spring	0.59	1.5	2.11	lb/bu	56	bu/ac	745	24615	62580	88029	
Wheat - Winter	0.51	1.04	1.35	lb/bu		bu/ac		-	-	-	
Total Acres							2837	105840	238450	364137	
Estimated Average Removal/Uptake (lb/ac)							37.3	84.1	128.4		
Acres in Hanover and La Broquerie											
Proportion in Hanover or La Broquerie							0%				
Additional Acres							4664				
Crop Planned on Additional Acres							Barley, Canola, Corn, Oats, Soybeans, Wheat				
Total Acreage							7501				

***Notes:**

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.

3 - Farm Excretion

Operation Name: Holmfield Colony

Species	Animal Category/Operation type	N	P2O5
		(lb/year)	(lb/year)
Pigs	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	271530	157717
Beef	Mature Cows and Bred Heifers, plus associated livestock	32269	13351
	Feedlot Cattle - long keep	6075	3378
	Feedlot Cattle - short keep	0	0
	Backgrounders - pasture	0	0
	Backgrounders - confined	0	0
Dairy	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	37431	18503
Sheep	Ewes	0	0
	Replacement Ewes	0	0
	Rams	0	0
	Lambs	0	0
	Ewes, plus assoc livestock	0	0
	Feeder	0	0
Chickens	Light Broilers	0	0
	Broilers	1395	695
	Broiler Breeder Pullets	0	0
	Broiler Breeder Hens	0	0
Layers	White Layer Pullets	0	0
	White Layer Hens	397	438
	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
Turkeys	Broiler Turkey (0-9 wks)	0	0
	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
Total		349096	194082

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: **Holmfield Colony**

Nutrients Excreted	lbs
Nitrogen	349096
Phosphorus (P2O5)	194082
Crop Nutrient Use	lb/ac
Average Crop N Uptake	128.4
Average Crop Phosphorus (P2O5) Removal	37.3
Operation-specific Phosphorus (P2O5) Allowance	74.6
Land Available	7501
Land Base Required	acres
Acres for Nitrogen	2720
Acres for Phosphorus (P2O5)	2601
Phosphorus Balance	acres
Acres for Phosphorus Balance (1X)	5202

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.

Last revised November 26, 2019

1e - Ducks and Geese

Operation Name: **Holmfield-Ducks and Geese**

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
Ducks		Field Storage	40%	4000	0.040	5.000	91	1	858	1180
Geese		Field Storage	40%	7500	0.104	7.720	112	1	4130	5665

13 week cycle for ducks

16 week cycle for geese

2 - Crop Rotation

Operation Name:

Holmfield-Ducks and Geese

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	75.4	bu/ac	372	11780	27207	38988
Barley Silage	11.8	34.4	34.4	lb/ton		ton/ac		-	-	-
Canola	1.04	1.93	3.19	lb/bu	39.7	bu/ac	1195	49339	91562	151338
Corn Grain	0.44	0.97	1.53	lb/bu	117.9	bu/ac	226	11724	25846	40767
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	104.4	bu/ac	122	3312	7897	13628
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	34.1	bu/ac	177	5070	23358	31386
Sunflower	1.1	2.8		lb/cwt		cwt/ac		-	-	-
Wheat - Spring	0.59	1.5	2.11	lb/bu	56	bu/ac	745	24615	62580	88029
Wheat - Winter	0.51	1.04	1.35	lb/bu		bu/ac		-	-	-
Total Acres							2837	105840	238450	364137
Estimated Average Removal/Uptake (lb/ac)								37.3	84.1	128.4
Acres in Hanover and La Broquerie										
Proportion in Hanover or La Broquerie							0%			
Additional Acres										
Crop Planned on Additional Acres										
Total Acreage							2837			

***Notes:**

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.

3 - Farm Excretion

Operation Name: Holmfield-Ducks and Geese

Species	Animal Category/Operation type	N (lb/year)	P2O5 (lb/year)
	Ducks	858	1180
	Geese	4130	5665
Turkeys			
Total		4989	6845

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

Last revised November 26, 2019

4 - Land Base Summary

Operation Name: **Holmfield-Ducks and Geese**

Nutrients Excreted		lbs
Nitrogen		4989
Phosphorus (P2O5)		6845
Crop Nutrient Use		lb/ac
Average Crop N Uptake		128.4
Average Crop Phosphorus (P2O5) Removal		37.3
Operation-specific Phosphorus (P2O5) Allowance		74.6
Land Available		
		2837
Land Base Required		acres
Acres for Nitrogen		39
Acres for Phosphorus (P2O5)		92
Phosphorus Balance		acres
Acres for Phosphorus Balance (1X)		183

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.

Last revised November 26, 2019