Worksheet 1. Calculate the Crop Nitrogen Application Recommendations

A	B	C	D	E	F	G	H
Field Description	**Crop Information**			**Crop Nitrogen (N) Applicator Calculations**			**Crop Nitrogen Application Recommend'n**
(name or number)	Crop type to be fertilized	Crop dry yield (estimated) (tons/ac)[a]	Protein content of crop[b] (estimated) (%)	Crop Nitrogen (N) Uptake (col. C x D x 1.6 x 2) (lb N/ac)	Available soil nitrogen (nitrate plus ammonia)[c] (lab report) (lb N/ac)	Nitrogen fertility factor (Table 1) (lb N/ac)	(col. E – F - G) (lb N/ac)
101 Barns	*corn sil*	*7.5*	*8.0*	*192*	*20*	*90.0*	*82*
102 Sorenson Sylvia	*corn sil*	*7.5*	*8.0*	*192*	*12*	*0.0*	*180*
103 Hullcar Hall	*Alf/Gra*	*6.5*	*20.0*	*416*	*20*	*90.0*	*306*
103B Doug's	*Alf/Gra*	*6.5*	*20.0*	*416*	*20*	*90.0*	*306*
103C Island	*corn sil*	*7.5*	*8.0*	*192*	*20*	*45.0*	*127*
104 Harold's	*corn sil*	*7.0*	*8.0*	*179*	*22*	*20.0*	*137*
105 Dixon Back	*Alf/Gra*	*7.0*	*18.0*	*403*	*20*	*0.0*	*383*
106 Dixon Front	*corn sil*	*7.5*	*8.0*	*192*	*20*	*0.0*	*172*
101B,C Yard	*corn sil*	*7.5*	*8.0*	*192*	*20*	*45.0*	*127*
201 Skelton	*Alf/Gra*	*6.5*	*20.0*	*416*	*13*	*0.0*	*403*
202 Reimer	*corn sil*	*7.5*	*8.0*	*192*	*20*	*0.0*	*172*
203 Heokstra	*Alf/Gra*	*6.0*	*18.0*	*346*	*9*	*0.0*	*337*
204 Steinkrud	*Grass*	*4.0*	*16.0*	*205*	*7*	*0.0*	*198*
205 Jessie	*Alf/Gra*	*6.0*	*21.0*	*403*	*20*	*0.0*	*383*
401/2 Pivots	*Barley*	*2.2*	*12.5*	*88*	*14*	*0.0*	*74*
500 Vandursen	*wheat*	*2.0*	*15.0*	*96*	*10*	*0.0*	*86*

This sheet shows the related nitrogen related information on all fields by first the estimated dry matter yield per acre and the expected protein content of the feed. The Nitrogen Applicator Calculations uses a formula that uses dry matter yield multiplied by the % protein content then divided by the average nitrogen content in the protein to to give "Total Crop Nitrogen Uptake" in pounds of nitrogen per acre. It then subtracts the available nitrogen in the top 6 inches of the soil and a "Nitrogen Fertility Factor" that has been developed by the Ministry to adjust the expected nutrient requirements according to the previous cropping and nutrient applications to the field. The last column is the recommended application rate that is used in the subsequent worksheets.

[a] convert tonnes/ha to tons/acre by dividing by 2.25
(tonnes/ha ÷ 2.25 = tons/ac)

[b] Enter value as a whole number (i.e. "16" rather than "0.16"). If protein content is unknown, use the following values:
Grass and Grass-legume mix stands for hay or silage production (up to 40% legumes): 3 cuts or less - 12%; 5 cuts or more - 16%
Silage corn - 8%
Alfalfa hay (3 cuts) - 20%
Annual ryegrass: 1 cut - 12%, 2 cuts - 15%
Cereals (1 cut, whole crop cut for forage) - 11%

[c] if lab soil nitrate or ammonia value is in ppm, mg/kg, µg/g, mg/L, µg/mL, then convert to lb N/ac by multiplying by 1.3

Table 1. Assessing Field Nitrogen (N) Fertility (see note to the right)

Frequency and Amount of Manure and Fertilizer, Previous Crop, Nitrogen Fixation by Legumes	Nitrogen Fertility Factor (lb N/ac)
Fertilizer application every two years or less often at low rate (less than 35 kg N/ha)	-90
Fertilizer application every two years at recommended annual rates	-45
Annual inorganic fertilizer application at recommended rates or higher	0
Previous Crop: established forage stands - 30-50% legumes OR Legume (as sole crop or in mixture) is ploughed down in spring	45
Manure application every year at agronomic nitrogen rates or higher OR Previous Crop: established forage stands - more than 50% legumes	90

Table 1 Note for South Coastal farms: A determination of soil nitrogen content does not accurately reflect a soil's available nitrogen content because in early spring when soil samples are taken, very little crop-available nitrogen is present in the soil. Microbial activity in the soil during the warm summer months breaks down organic material and releases nitrogen, which is used by the crop. For that reason, the amount of nitrogen a soil can deliver to a growing crop is more accurately predicted by assessing the previous nutrient additions to the site.

Values in Table 1 serve as a general guide. Where more than one factor applies, the values **should be added.**

All fields at H.S. Jansen and Sons are calculated using the 0 to + 90 pound "Nitrogen Fertility Factor."

This reduces the nitrogen recommendations by the same number .

Worksheet 2. Calculate the Crop Phosphorus Application Recommendation

A	B	C	D	E	F	G	H	I
Field Description	**Crop Information**		**Crop Phosphorus (P) Applicator Calculations**					**Crop Phosphorus Application Recommendation (SEE NOTE BELOW)**
(Worksheet 1, col. A) (name or number)	Crop type to be fertilized	Crop dry yield (estimated) (tons/ac)	Crop phosphorus factor (Table 2) (lb P/ton)	Crop Phosphorus Uptake (col. C x D) (lb P/ac)	Soil test phosphorus value (Kelowna method) [a] 0-15 cm depth (ppm)	Soil phosphorus status (Table 3, col. 2)	Soil phosphorus level factor (Table 3, col. 5)	(col. E x H) x 2.3 (lb P_2O_5/ac)
101 Barns	corn sil	7.5	4.0	30	136	Excess	0	0
102 Sorenson Sylvia	corn sil	7.5	4.0	30	29	Medium	0.75	52
103 Hullcar Hall	Alf/Gra	5	7.4	37	76	High	0.2	17
103B Doug's	Alf/Gra	5	7.4	37	132	Excess	0	0
103C Island	corn sil	7.5	4.0	30	76	High	0.2	14
104 Harold's	corn sil	7	7.4	52	111	Excess	0	0
105 Dixon Back	Alf/Gra	7	7.4	52	61	Optimum	0.5	60
106 Dixon Front	corn sil	7.5	4.0	30	61	Optimum	0.5	35
101B,C Yard	corn sil	7.5	4.0	30	136	Excess	0	0
201 Skelton	Alf/Gra	5	7.4	37	76	High	0.2	17
202 Reimer	corn sil	7.5	4.0	30	114	Excess	0	0
203 Heokstra	Alf/Gra	6	7.0	42	62	Optimum	0.5	48
204 Steinkrud	Grass	4	6.0	24	38	Medium	0.75	41
205 Jessie	Alf/Gra	6	7.4	44	61	Optimum	0.5	51
401/2 Pivots	Barley	2.2	6.0	13	33	Medium	0.75	23
500 Vandursen	wheat	2	6.0	12	30	Medium	0.75	21

Worksheet 3. Calculate the Crop Potassium Application Recommendation

A	B	C	D	E	F	G	H	I
Field Description	**Crop Information**		**Crop Potassium (P) Applicator Calculations**					**Crop Potassium Application Recommendation**
(Worksheet 1, col. A) (name or number)	Crop type to be fertilized	Crop dry yield (estimated) (tons/ac)	Crop potassium factor (Table 4) (lb K/ton)	Crop potassium uptake (col. C x D) (lb K/ac)	Soil test potassium value (Kelowna method) [a] 0-15 cm depth (ppm)	Soil potassium status (Table 5, col. 2)	Soil potassium level factor (Table 5, col. 5)	(col. E x H) * 1.2 (lb K_2O/ac)
101 Barns	corn sil	7.5	20.0	150	535	Excess	0	0
102 Sorenson Sylvia	corn sil	7.5	20.0	150	185	Optimum +	0.3	54
103 Hullcar Hall	Alf/Gra	5	40.0	200	328	Excess	0	0
103B Doug's	Alf/Gra	5	40.0	200	538	Excess	0	0
103C Island	corn sil	7.5	20.0	150	328	Excess	0	0
104 Harold's	corn sil	7	40.0	280	412	Excess	0	0
105 Dixon Back	Alf/Gra	7	40.0	280	258	High	0	0
106 Dixon Front	corn sil	7.5	20.0	150	258	High	0	0
101B,C Yard	corn sil	7.5	20.0	150	535	Excess	0	0
201 Skelton	Alf/Gra	5	40.0	200	253	High	0	0
202 Reimer	corn sil	7.5	20.0	150	424	Excess	0	0
203 Heokstra	Alf/Gra	6	40.0	240	177	Optimum +	0.3	86
204 Steinkrud	Grass	4	20.0	80	157	Optimum +	0.3	29
205 Jessie	Alf/Gra	6	40.0	240	258	High	0	0
401/2 Pivots	Barley	2.2	20.0	44	301	High	0	0
500 Vandursen	wheat	2	25.0	50	250	Optimum +	0.3	18

Worksheet 4. Calculate Crop Nutrients in the Manure Sources

A	B	C	D	E	F	G	H	I	J	K	L	M	N
Manure Source and Application Method	**Manure Nitrogen (N) Availability Calculation**									**Manure P_2O_5 and K_2O**			
	Total nitrogen content (lab report) (%)[a]	Ammonium content (NH_4-N) (lab report) (ppm)[a]	Organic nitrogen content (col. B – C / 10^4) x 20 (lb N/ton)	N Mineralization factor (Table 6) (select from drop-down list)	Organic nitrogen mineralized this cropping year (col. D x E) (lb N/ton)	Ammonia (NH_4-N) retention factor (Table 7)	Ammonia (NH_4-N) remaining after volatilization (col. C / 10^4 x 20) x col. G (lb N/ton)	Nitrate (NO3-N) content of manure (lab report) (ppm)[a,b]	First-year plant available nitrogen (col. F + H) + (col. I / 10^4) (lb N/ton)	Total P (lab report) (%)[a]	Total P_2O_5 (col. K x 20 x 2.3) (lb P_2O_5/ton)	Total K (lab report) (%)[a]	Total K_2O (col. M x 20 x 1.2) (lb K_2O/ton)
Flush Lagoon	*0.10*	*712*	*0.6*	*0.5*	*0.30*	*0.9*	*1.28*		*1.58*	*0.028*	*1.3*	*0.12*	*2.9*
Dairy Solids	*0.24*	*420*	*3.9*	*0.25*	*0.97*	*0.58*	*0.49*		*1.45*	*0.125*	*5.8*	*0.17*	*4.0*
Settling Lagoon	*0.13*	*733*	*1.1*	*0.5*	*0.56*	*0.7*	*1.03*		*1.58*	*0.064*	*2.9*	*0.12*	*2.9*
			0.0		*0.00*		*0.00*		*0.00*		*0.0*		*0.0*
			0.0		*0.00*		*0.00*		*0.00*		*0.0*		*0.0*
			0.0		*0.00*		*0.00*		*0.00*		*0.0*		*0.0*
			0.0		*0.00*		*0.00*		*0.00*		*0.0*		*0.0*
			0.0		*0.00*		*0.00*		*0.00*		*0.0*		*0.0*

Worksheet 5. Estimate the Agronomic Balance for Nitrogen, Phosphorus and Potassium

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
Field Description	**Crop type**	**Field Size**	**Manure Source and Application Method**	**Manure Application Rate**	**Available Nutrients in the Year of Application**							**Crop Nutrient Recommendation (based on estimated soil nutrient supply)**			**Agronomic Balance (crop nutrient recommendation minus available nutrients in the year of application)**		
					Manure Sources				**Fertilizer**								
(Worksheet 1, col. A)	(Worksheet 1, col. B)		Show/Hide Manure Source #2 / Show/Hide Manure Source #3 — Click here for help to use the show/hide buttons.	See note below for guidance in determining rate[a]	N (Col E x Worksheet 4, col. J)	P_2O_5 First-year P availability coefficient*	P_2O_5 (Col E x G x Worksheet 4, col. L)	K_2O (Col E x Worksheet 4, col. N)	N Sum all planned fertilizer additions for the year. Use Worksheet 6.1 to the right to help.	P_2O_5	K_2O	N (Worksheet 1, col. H)	P_2O_5 (Worksheet 2, col. I)	K_2O (Worksheet 3, col. I)	N[a] (col. M – F – J)	P_2O_5[a] (col. N – H – K)	K_2O[a] (col. O – I – L)
(name or number)		(ac)	(select from drop-down list)	(tons/ac)	(lb N/ac)	-	(lb P_2O_5/ac)	(lb K_2O/ac)	(lb N/ac)	(lb P_2O_5/ac)	(lb K_2O/ac)	(lb N/ac)	(lb P_2O_5/ac)	(lb K_2O/ac)	(lb N/ac)	(lb P_2O_5/ac)	(lb K_2O/ac)
101 Barns	corn sil	46.3	Flush Lagoon	40	63	0.85	44	115									
			Dairy Solids		0	0.85	0	0									
				0	0	0.85	0	0									
			all manures		63	n/a	44	115	25	10		82	0	0	-6	-54	-115
102 Sorenson Sylvia	corn sil	181.0	Flush Lagoon	100	158	0.50	64	288									
			Dairy Solids	0	0	0.50	0	0									
					0	0.50	0	0									
			all manures		158	n/a	64	288	25	10		180	52	54	-3	-23	-234
103 Hullcar Hall	Alf/Gra	101.6	Flush Lagoon	120	190	0.75	116	346									
			Dairy Solids		0	0.75	0	0									
					0	0.75	0	0									
			all manures		190	n/a	116	346				306	22	0	116	-94	-346
103B Doug's	Alf/Gra	94.0	Flush Lagoon	120	190	0.85	131	346									
			Dairy Solids		0	0.85	0	0									
					0	0.85	0	0									
			all manures		190	n/a	131	346				306	0	0	116	-131	-346
103C Island	corn sil	12.4	Flush Lagoon	70	111	0.75	68	202									
			Dairy Solids		0	0.75	0	0									
					0	0.75	0	0									
			all manures		111	n/a	68	202	25	10		127	14	0	-9	-64	-202
104 Harold's	corn sil	110.5	Flush Lagoon	100	158	0.85	109	288									
			Dairy Solids	0	0	0.85	0	0									
					0	0.85	0	0									
			all manures		158	n/a	109	288				137	0	0	-21	-109	-288
105 Dixon Back	Alf/Gra	96.0	Flush Lagoon	120	190	0.65	100	346									
			Dairy Solids	0	0	0.65	0	0									
				0	0	0.65	0	0									
			all manures		190	n/a	100	346				383	60	0	194	-41	-346
106 Dixon Front	corn sil	15.0	Flush Lagoon	80	126	0.65	67	230									
			Dairy Solids	25	36	0.65	93	99									
					0	0.65	0	0									
			all manures		163	n/a	160	329	25	10		172	35	0	-16	-136	-329
101B,C Yard	corn sil	9.3	Flush Lagoon	80	126	0.85	88	230									
			Dairy Solids		0	0.85	0	0									
					0	0.85	0	0									
			all manures		126	n/a	88	230				127	0	0	1	-88	-230
201 Skelton	Alf/Gra	69.5	Flush Lagoon	120	190	0.75	116	346									
			Dairy Solids	0	0	0.75	0	0									
					0	0.75	0	0									
			all manures		190	n/a	116	346				403	22	0	213	-94	-346
202 Reimer	corn sil	35.0	Flush Lagoon	100	158	0.85	109	288									
			Dairy Solids		0	0.85	0	0									
				0	0	0.85	0	0									
			all manures		158	n/a	109	288	25	10		172	0	0	-11	-119	-288
203 Heokstra	Alf/Gra	30.0	Flush Lagoon		0	0.65	0	0									
			Dairy Solids	0	0	0.65	0	0									
					0	0.65	0	0									
			all manures		0	n/a	0	0				337	48	86	337	48	86
204 Steinkrud	Grass	109.0	Flush Lagoon		0	0.50	0	0									
			Dairy Solids	14	20	0.50	40	55									
					0	0.50	0	0									
			all manures		20	n/a	40	55	50	20		198	41	29	127	-19	-27
205 Jessie	Alf/Gra	25.8	Flush Lagoon	50	79	0.65	42	144									
			Dairy Solids	40	58	0.65	150	158									
					0	0.65	0	0									
			all manures		137	n/a	191	302				383	51	0	246	-140	-302
401/2 Pivots	Barley	308.0	Flush Lagoon		0	0.50	0	0									
			Dairy Solids		0	0.50	0	0									
					0	0.50	0	0									
			all manures		0	n/a	0	0	75	30		74	23	0	-1	-7	0
500 Vandursen	wheat	306.3	Flush Lagoon	60	95	0.50	39	173									
			Dairy Solids		0	0.50	0	0									
					0	0.50	0	0									
			all manures		95	n/a	39	173				86	21	18	-9	-18	-155
Total		**1549.7**															

Worksheet 5 is where nutrient application rates are determined. The headings are self explanatory and manure and fertilizer application rates are determined by 3 Agronomic Balance columns on the right side. Fields 103 and 103B are the ones above the aquifer. They show with the application of 120 tons per acre of liquid dairy manure effluent that the crop is expected to be 116 pounds short on nitrogen and have extra P and K being applied.

The 120 tons per acre is broken down in other worksheets into different applications at different times in the growing season. This allows the right amount to be applied on the right fields at the right time when the plants can most efficiently use the nutrients.

The light blue cells are showing levels below the Agronomic balance and the Orange cells are the amounts above the Agronomic balance. In a crop rotation plan with corn and alfalfa as the main crops growing a nice balance of nutrients can be achieved

Worksheet 5. Estimate the Agronomic Balance for Nitrogen, Phosphorus and Potassium

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R
Field Description	**Crop type**	**Field Size**	**Manure Source and Application Method**	**Manure Application Rate**	**Available Nutrients in the Year of Application**							**Crop Nutrient Recommendation (based on estimated soil nutrient supply)**			**Agronomic Balance (crop nutrient recommendation minus available nutrients in the year of application)**		
					Manure Sources				**Fertilizer**								
(Worksheet 1, col. A)	(Worksheet 1, col. B)		Show/Hide Manure Source #2 / Show/Hide Manure Source #3	See note below for guidance in determining rate[a]	**N** (Col E x Worksheet 4, col. J)	**P_2O_5** First-year P availability coefficient *	**P_2O_5** (Col E x G x Worksheet 4, col. L)	**K_2O** (Col E x Worksheet 4, col. N)	**N** Sum all planned fertilizer additions for the year. Use Worksheet 6.1 to the right to help.	**P_2O_5**	**K_2O**	**N** (Worksheet 1, col. H)	**P_2O_5** (Worksheet 2, col. I)	**K_2O** (Worksheet 3, col. I)	**N[a]** (col. M – F – J)	**P_2O_5[a]** (col. N – H – K)	**K_2O[a]** (col. O – I – L)
(name or number)		(ac)	Click here for help to use the show/hide buttons. (select from drop-down list)	(tons/ac)	(lb N/ac)	-	(lb P_2O_5/ac)	(lb K_2O/ac)	(lb N/ac)	(lb P_2O_5/ac)	(lb K_2O/ac)	(lb N/ac)	(lb P_2O_5/ac)	(lb K_2O/ac)	(lb N/ac)	(lb P_2O_5/ac)	(lb K_2O/ac)
101 Barns	corn sil	46.3	Flush Lagoon	40	63	0.85	44	115									
			Dairy Solids		0	0.85	0	0									
				0	0	0.85	0	0									
			all manures		63	n/a	44	115	25	10		82	0	0	-6	-54	-115
102 Sorenson Sylvia	corn sil	181.0	Flush Lagoon	100	158	0.50	64	288									
			Dairy Solids	0	0	0.50	0	0									
					0	0.50	0	0									
			all manures		158	n/a	64	288	25	10		180	52	54	-3	-23	-234
103 Hullcar Hall	Alf/Gra	101.6	Flush Lagoon	120	190	0.75	116	346									
			Dairy Solids		0	0.75	0	0									
					0	0.75	0	0									
			all manures		190	n/a	116	346				255	17	0	65	-99	-346
103B Doug's	Alf/Gra	94.0	Flush Lagoon	120	190	0.85	131	346									
			Dairy Solids		0	0.85	0	0									
					0	0.85	0	0									
			all manures		190	n/a	131	346				255	0	0	65	-131	-346
103C Island	corn sil	12.4	Flush Lagoon	70	111	0.75	68	202									
			Dairy Solids		0	0.75	0	0									
					0	0.75	0	0									
			all manures		111	n/a	68	202	25	10		127	14	0	-9	-64	-202
104 Harold's	corn sil	110.5	Flush Lagoon	100	158	0.85	109	288									
			Dairy Solids	0	0	0.85	0	0									
					0	0.85	0	0									
			all manures		158	n/a	109	288				137	0	0	-21	-109	-288
105 Dixon Back	Alf/Gra	96.0	Flush Lagoon	120	190	0.65	100	346									
			Dairy Solids	0	0	0.65	0	0									
				0	0	0.65	0	0									
			all manures		190	n/a	100	346				383	60	0	194	-41	-346
106 Dixon Front	corn sil	15.0	Flush Lagoon	80	126	0.65	67	230									
			Dairy Solids	25	36	0.65	93	99									
					0	0.65	0	0									
			all manures		163	n/a	160	329	25	10		172	35	0	-16	-136	-329
101B,C Yard	corn sil	9.3	Flush Lagoon	80	126	0.85	88	230									
			Dairy Solids		0	0.85	0	0									
					0	0.85	0	0									
			all manures		126	n/a	88	230				127	0	0	1	-88	-230
201 Skelton	Alf/Gra	69.5	Flush Lagoon	120	190	0.75	116	346									
			Dairy Solids	0	0	0.75	0	0									
					0	0.75	0	0									
			all manures		190	n/a	116	346				307	17	0	117	-99	-346
202 Reimer	corn sil	35.0	Flush Lagoon	100	158	0.85	109	288									
			Dairy Solids		0	0.85	0	0									
				0	0	0.85	0	0									
			all manures		158	n/a	109	288	25	10		172	0	0	-11	-119	-288
203 Heokstra	Alf/Gra	30.0	Flush Lagoon		0	0.65	0	0									
			Dairy Solids	0	0	0.65	0	0									
					0	0.65	0	0									
			all manures		0	n/a	0	0				337	48	86	337	48	86
204 Steinkrud	Grass	109.0	Flush Lagoon		0	0.50	0	0									
			Dairy Solids	14	20	0.50	40	55									
					0	0.50	0	0									
			all manures		20	n/a	40	55	50	20		198	41	29	127	-19	-27
205 Jessie	Alf/Gra	25.8	Flush Lagoon	50	79	0.65	42	144									
			Dairy Solids	40	58	0.65	150	158									
					0	0.65	0	0									
			all manures		137	n/a	191	302				383	51	0	246	-140	-302
401/2 Pivots	Barley	308.0	Flush Lagoon		0	0.50	0	0									
			Dairy Solids		0	0.50	0	0									
					0	0.50	0	0									
			all manures		0	n/a	0	0	75	30		74	23	0	-1	-7	0
500 Vandursen	wheat	306.3	Flush Lagoon	60	95	0.50	39	173									
			Dairy Solids		0	0.50	0	0									
					0	0.50	0	0									
			all manures		95	n/a	39	173				86	21	18	-9	-18	-155
Total		**1549.7**															

Worksheet 6. Estimate the Crop Removal Balance for Phosphorus and Potassium

A	B	C	D	E	F	G	H	I	J	K	L
Field Description	Field Size	Manure Source and Application Method	Manure Application Rate	Total Available Nutrients Applied in Manure Sources		Total Available Nutrients Applied in Fertilizer		Expected Crop Removal		Crop Removal Balance (crop removal - total available nutrients)	
(Worksheet 1, col. A) (name or number)	(ac)	(Worksheet 5, col. D)	(Worksheet 5, col. E) (tons/ac)	P_2O_5 Col. D x (Worksheet 4, col. L) (lb P_2O_5/ac)	K_2O Col. D x (Worksheet 4, col. N) (lb K_2O/ac)	P_2O_5 (Worksheet 5, col. J) (lb P_2O_5/ac)	K_2O (Worksheet 5, col. K) (lb K_2O/ac)	P_2O_5 (Worksheet 2, col. E) x 2.3 (lb P_2O_5/ac)	K_2O (Worksheet 3, col. E) x 1.2 (lb K_2O/ac)	P_2O_5 (col. I – E – G) (lb P_2O_5/ac)	K_2O (col. J – F – H) (lb K_2O/ac)
101 Barns	46.3	Flush Lagoon	40	52	115						
		Dairy Solids	0	0	0						
		0	0	0	0						
		all manures		52	115	10	0	69	180	7	65
102 Sorenson Sylvia	181	Flush Lagoon	100	129	288						
		Dairy Solids	0	0	0						
			0	0	0						
		all manures		129	288	10	0	69	180	-70	-108
103 Hullcar Hall	101.6	Flush Lagoon	120	155	346						
		Dairy Solids	0	0	0						
			0	0	0						
		all manures		155	346	0	0	85	240	-69	-106
103B Doug's	94	Flush Lagoon	120	155	346						
		Dairy Solids	0	0	0						
			0	0	0						
		all manures		155	346	0	0	85	240	-69	-106
103C Island	12.4	Flush Lagoon	70	90	202						
		Dairy Solids	0	0	0						
			0	0	0						
		all manures		90	202	10	0	69	180	-31	-22
104 Harold's	110.5	Flush Lagoon	100	129	288						
		Dairy Solids	0	0	0						
			0	0	0						
		all manures		129	288	0	0	119	336	-10	48
105 Dixon Back	96	Flush Lagoon	120	155	346						
		Dairy Solids	0	0	0						
			0	0	0						
		all manures		155	346	0	0	119	336	-35	-10
106 Dixon Front	15	Flush Lagoon	80	103	230						
		Dairy Solids	25	144	99						
			0	0	0						
		all manures		247	329	10	0	69	180	-188	-149
101B,C Yard	9.3	Flush Lagoon	80	103	230						
		Dairy Solids	0	0	0						
			0	0	0						
		all manures		103	230	0	0	69	180	-34	-50
201 Skelton	69.5	Flush Lagoon	120	155	346						
		Dairy Solids	0	0	0						
			0	0	0						
		all manures		155	346	0	0	85	240	-69	-106
202 Reimer	35	Flush Lagoon	100	129	288						
		Dairy Solids	0	0	0						
			0	0	0						
		all manures		0	0	10	0	69	180	59	180
203 Heokstra	30	Flush Lagoon	0	0	0						
		Dairy Solids	0	0	0						
			0	0	0						
		all manures		0	0	0	0	97	288	97	288
204 Steinkrud	109	Flush Lagoon	0	0	0						
		Dairy Solids	14	81	55						
			0	0	0						
		all manures		81	55	20	0	55	96	-45	41
205 Jessie	25.8	Flush Lagoon	50	64	144						
		Dairy Solids	40	230	158						
			0	0	0						
		all manures		294	302	0	0	102	288	-192	-14
401/2 Pivots	308	Flush Lagoon	0	0	0						
		Dairy Solids	0	0	0						
			0	0	0						
		all manures		0	0	30	0	30	53	0	53
500 Vandursen	306.3	Flush Lagoon	60	77	173						
		Dairy Solids	0	0	0						
			0	0	0						
		all manures		77	173	0	0	28	60	-50	-113

Worksheet 7. Assess Farm Manure Balances

A	B	C	D	E	F	G	H
Manure Source and Application Method (Worksheet 4, Col. A)	**Total Weight to be Applied on All Fields** (Worksheet 5, ∑(Col. C x E)) (tons/yr)	**Manure Type** e.g. Dairy-liquid	**Total Weight of Manure Produced and Imported** [a] (tons/yr)	**Total Weight of Manure to be Applied** (sum appropriate values from col. B) (tons/yr)	**Total Weight of Manure to be Exported** (tons/yr)	**Excess or Deficiency of Manure** [b] (col. D – E – F) (tons/yr)	**Percentage Excess or Deficiency of Manure** ((col. G/col. D) x 100) (%)
Flush Lagoon	*100314*	*Dairy Liquid*	*96800*	*100314*		*-3514*	*-4*
Dairy Solids	*2933*	*Dairy Solids*	*2875*	*2933*		*-58*	*-2*
0	*0*					*0*	*n/a*
						0	*n/a*
						0	*n/a*
						0	*n/a*
						0	*n/a*
						0	*n/a*

Worksheet 7.1. Annual Manure Production for Dairy Cattle

Manure and Waste Generation

Type of Milk Cow: Holstein

Number of Cows Milking: 945

Average milk production per milked cow (lb/day): 72.3 (if unknown, use the default value provided)

Days Grazing:

Type of Animal	Typical Number	Your Number	Slurry	Primary Manure Type	Using Solid/Liq. Separation	% Slurry Separated to Solid fraction	Total Manure Generation Slurry (ft^3/day)	Solid (ft^3/day)
Milk Cow	945	945	☑	Slurry	☑	6	2,353	259
Dry Cow	189	190	☑	Slurry	☑	6	442	49
Heifers (16 to 26 months)	312	0	☑	Slurry	☑	10	0	0
Heifers (7 to 15 months)	265	100	☑	Slurry	☑	10	89	17
Calves (4 to 6 months)	95	90	☑	Slurry	☑	10	40	8
Calves (0 to 3 months)	95	90	☑	Slurry	☑	10	20	4
Total	1,899	1,415			**Total Daily Manure Production**		2,943	336

Milk House Effluent (typically 0.75 to 1.5 ft^3/day/milk cow): 3.5 ft^3/day/milk cow — 3,308 (ft^3/day)

1000 L = 35.3 ft^3

PLUS Other **Liquid** Wastes (silage effluent,etc.): 100 (ft^3/day)

PLUS Other **Solid** Wastes (spoiled feed, etc.): 100 (ft^3/day)

6351 436 (ft^3/day)

Assumed bulk density of solids:

580 (kg/m^3)

OR 0.488 ($tons/yd^3$)

Manure and Waste Production 85854 5895 (yd^3/year)

72356 2877 (tons/year)

Rainwater Collection

This applies only to rainwater that *enters* liquid manure handling systems.

Size of Yard Areas That Runoff Needs to be Collected From: 696000 (ft^2)

Size of Roof Area That Discharge to Yard Areas Listed Above or That Discharge Directly Into the Manure Storage: 323000 (ft^2)

Unroofed Surface Area of Manure Storage Facilities: 257500 (ft^2)

Floating crust on manure surface: ☐ No

Weather Data Site to be used: Vernon

How is this calculated?

Total Rainwater Collection 28975.5 (yd^3/year)

24419.9 (tons/year)

Total Weight of Manure

A **Total Weight of Manure Produced**

Slurry	Solid	
96775.5	2877	(tons/year)

Worksheet 8. Convert Manure Application Rate (tons/ac) to Solid or Liquid Application Rates and Spreader Loads per Area

A	B	C	D		E	F	G	H	I
Field Description	**Manure Application Rate**	**Manure Source and Application Method**	**Spreader Volume[a]**		**Solid Manure**			**Liquid Manure**	
(name or number)	(Worksheet 5, col. E) (tons/ac)	(Worksheet 5, col. D)	(enter a number)	Choose a unit from the drop-down list: - imperial gallons for liquid manure - cubic yards for solid manure	Density of solid manure (Table 9) (tons/yd^3)	Solid manure application rate (col. B / E) (yd^3/ac)	Spreader loads/hectare (col. F / D) (loads/ac)	Liquid manure application rate (col. B)[b] (imp. gallons/ac)	Spreader loads/hectare (col. H / D) (tankers/ac)
101 Barns	40.0	Flush Lagoon	700	imp. gallons		0.0	0.0	7982	11.4
	0.0	Dairy Solids	0	cubic yards		0.0	0.0	0	0.0
	0.0	0				0.0	0.0	0	0.0
102 Sorenson Sylvia	100.0	Flush Lagoon	700	imp. gallons		0.0	0.0	19955	28.5
	0.0	Dairy Solids	0	cubic yards		0.0	0.0	0	0.0
	0.0			0.0		0.0	0.0	0	0.0
103 Hullcar Hall	120.0	Flush Lagoon	700	imp. gallons		0.0	0.0	23946	34.2
	0.0	Dairy Solids		cubic yards		0.0	0.0	0	0.0
	0.0			0.0		0.0	0.0	0	0.0
103B Doug's	120.0	Flush Lagoon	700	imp. gallons		0.0	0.0	23946	34.2
	0.0	Dairy Solids		cubic yards		0.0	0.0	0	0.0
	0.0			0.0		0.0	0.0	0	0.0
103C Island	70.0	Flush Lagoon	700	imp. gallons		0.0	0.0	13969	20.0
	0.0	Dairy Solids		cubic yards		0.0	0.0	0	0.0
	0.0			0.0		0.0	0.0	0	0.0
104 Harold's	100.0	Flush Lagoon	700	imp. gallons		0.0	0.0	19955	28.5
	0.0	Dairy Solids		cubic yards		0.0	0.0	0	0.0
	0.0			0.0		0.0	0.0	0	0.0
105 Dixon Back	120.0	Flush Lagoon	700	imp. gallons		0.0	0.0	23946	34.2
	0.0	Dairy Solids		cubic yards		0.0	0.0	0	0.0
	0.0			0.0		0.0	0.0	0	0.0
106 Dixon Front	80.0	Flush Lagoon	700	imp. gallons		0.0	0.0	15964	22.8
	25.0	Dairy Solids	15	cubic yards	0.58	43.1	2.9	0	0.0
	0.0			0.0		0.0	0.0	0	0.0
101B,C Yard	80.0	Flush Lagoon	700	imp. gallons		0.0	0.0	15964	22.8
	0.0	Dairy Solids		cubic yards		0.0	0.0	0	0.0
	0.0			0.0		0.0	0.0	0	0.0
201 Skelton	120.0	Flush Lagoon	700	imp. gallons		0.0	0.0	23946	34.2
	0.0	Dairy Solids	15	cubic yards	0.58	0.0	0.0	0	0.0
	0.0			0.0		0.0	0.0	0	0.0
202 Reimer	100.0	Flush Lagoon	700	imp. gallons		0.0	0.0	19955	28.5
	0.0	Dairy Solids		cubic yards		0.0	0.0	0	0.0
	0.0			0.0		0.0	0.0	0	0.0
203 Heokstra	0.0	Flush Lagoon		imp. gallons		0.0	0.0	0	0.0
	0.0	Dairy Solids		cubic yards		0.0	0.0	0	0.0
	0.0			0.0		0.0	0.0	0	0.0
204 Steinkrud	0.0	Flush Lagoon		imp. gallons		0.0	0.0	0	0.0
	14.0	Dairy Solids	15	cubic yards	0.58	24.1	1.6	0	0.0
	0.0			0.0		0.0	0.0	0	0.0
205 Jessie	50.0	Flush Lagoon		imp. gallons		0.0	0.0	9978	0.0
	40.0	Dairy Solids	15	cubic yards	0.58	69.0	4.6	0	0.0
	0.0			0.0		0.0	0.0	0	0.0
401/2 Pivots	0.0	Flush Lagoon		imp. gallons		0.0	0.0	0	0.0
	0.0	Dairy Solids		cubic yards		0.0	0.0	0	0.0
	0.0			0.0		0.0	0.0	0	0.0
500 Vandursen	60.0	Flush Lagoon	700	imp. gallons		0.0	0.0	11973	17.1
	0.0	Dairy Solids		cubic yards		0.0	0.0	0	0.0
	0.0			0.0		0.0	0.0	0	0.0

Worksheet 9a. Timing and Amount of Each Field Application of Liquid Manure

A	B	C	D	E	F	G	H	I	J	K	L	M	N
Field Description (name or number)	Crop Type	Manure Source (Worksheet 8, col. C)	Annual Application Rate (Worksheet 8, col. H) (imp. gallons/ac)	Annual Spreader Loads per Hectare (Worksheet 8, col. I) (tankers/ac)	Planned Manure Applications (Scroll down to see options for Fourth, Fifth and Sixth applications)								
					First			Second			Third		
					Percent (Table 10) %	Amount (D x E) (tankers/ac)	Proposed Spreading Date	Percent (Table 10) %	Amount (D x H) (tankers/ac)	Proposed Spreading Date	Percent (Table 10) %	Amount (D x K) (tankers/ac)	Proposed Spreading Date
101 Barns	corn sil	Flush Lagoon	7982	11.4	50%	5.7	24-Apr	50%	5.7	15-May		0.0	
		Dairy Solids	0	0.0		0.0			0.0			0.0	
		0	0	0.0		0.0			0.0			0.0	
102 Sorenson Sylvia	corn sil	Flush Lagoon	19955	28.5	50%	14.3	01-May	50%	14.3	10-May		0.0	
		Dairy Solids	0	0.0		0.0			0.0			0.0	
			0	0.0		0.0			0.0			0.0	
103 Hullcar Hall	Alf/Gra	Flush Lagoon	23946	34.2	33%	11.3	01-Jun	33%	11.3	10-Jul	34%	11.6	20-Aug
		Dairy Solids	0	0.0		0.0			0.0			0.0	
			0	0.0		0.0			0.0			0.0	
103B Doug's	Alf/Gra	Flush Lagoon	23946	34.2	33%	11.3	01-Jun	33%	11.3	10-Jul	34%	11.6	22-Aug
		Dairy Solids	0	0.0		0.0			0.0			0.0	
			0	0.0		0.0			0.0			0.0	
103C Island	corn sil	Flush Lagoon	13969	20.0	100%	20.0	01-May		0.0			0.0	
		Dairy Solids	0	0.0		0.0			0.0			0.0	
			0	0.0		0.0			0.0			0.0	
104 Harold's	corn sil	Flush Lagoon	19955	28.5	50%	14.3	05-May	50%	14.3	15-May		0.0	
		Dairy Solids	0	0.0		0.0			0.0			0.0	
			0	0.0		0.0			0.0			0.0	
105 Dixon Back	Alf/Gra	Flush Lagoon	23946	34.2	33%	11.3	25-Apr	33%	11.3	01-Sep	34%	11.6	30-Aug
		Dairy Solids	0	0.0		0.0			0.0			0.0	
			0	0.0		0.0			0.0			0.0	
106 Dixon Front	corn sil	Flush Lagoon	15964	22.8	100%	22.8	25-Apr		0.0			0.0	
		Dairy Solids	0	0.0		0.0			0.0			0.0	
			0	0.0		0.0			0.0			0.0	
101B,C Yard	corn sil	Flush Lagoon	15964	22.8	50%	11.4	01-May	50%	11.4	14-May		0.0	
		Dairy Solids	0	0.0		0.0			0.0			0.0	
			0	0.0		0.0			0.0			0.0	
201 Skelton	Alf/Gra	Flush Lagoon	23946	34.2	34%	11.6	05-Jun	33%	11.3	14-Jul	33%	11.3	25-Aug
		Dairy Solids	0	0.0		0.0			0.0			0.0	
			0	0.0		0.0			0.0			0.0	
202 Reimer	corn sil	Flush Lagoon	19955	28.5	50%	14.3	15-Apr	50%	14.3	01-May		0.0	
		Dairy Solids	0	0.0		0.0			0.0			0.0	
			0	0.0		0.0			0.0			0.0	
203 Heokstra	Alf/Gra	Flush Lagoon	0	0.0		0.0			0.0			0.0	
		Dairy Solids	0	0.0		0.0			0.0			0.0	
			0	0.0		0.0			0.0			0.0	
204 Steinkrud	Grass	Flush Lagoon	0	0.0		0.0			0.0			0.0	
		Dairy Solids	0	0.0		0.0			0.0			0.0	
			0	0.0		0.0			0.0			0.0	
205 Jessie	Alf/Gra	Flush Lagoon	9978	0.0		0.0			0.0			0.0	
		Dairy Solids	0	0.0		0.0			0.0			0.0	
			0	0.0		0.0			0.0			0.0	
401/2 Pivots	Barley	Flush Lagoon	0	0.0		0.0			0.0			0.0	
		Dairy Solids	0	0.0		0.0			0.0			0.0	
			0	0.0		0.0			0.0			0.0	
500 Vandursen	wheat	Flush Lagoon	11973	17.1	100%	17.1	20-Mar		0.0			0.0	
		Dairy Solids	0	0.0		0.0			0.0			0.0	
			0	0.0		0.0			0.0			0.0	

A	B	C	D	E	F	G	H	I	J	K	L	M	N	
Field Description	**Crop Type**	**Manure Source**	**Annual Application Rate**	**Annual Spreader Loads per Hectare**	**Planned Manure Applications**									
					Fourth			**Fifth**			**Sixth**			
(name or number)		(Worksheet 8, col. C)	(Worksheet 8, col. H) (imp. gallons/ac)	(Worksheet 8, col. I) (tankers/ac)	Percent (Table 10) %	Amount (D x N) (tankers/ac)	Proposed Spreading Date	Percent (Table 10) %	Amount (D x Q) (tankers/ac	Proposed Spreading Date	Percent (Table 10) %	Amount (D x T) (tankers/ac)	Proposed Spreading Date	Sum of applications
101 Barns	corn sil	Flush Lagoon	7982	11.4		0.0			0.0			0.0		100%
		Dairy Solids	0	0.0		0.0			0.0			0.0		0%
		0	0	0.0		0.0			0.0			0.0		0%
102 Sorenson Sylvia	corn sil	Flush Lagoon	19955	28.5		0.0			0.0			0.0		100%
		Dairy Solids	0	0.0		0.0			0.0			0.0		0%
			0	0.0		0.0			0.0			0.0		0%
103 Hullcar Hall	Alf/Gra	Flush Lagoon	23946	34.2		0.0			0.0			0.0		100%
		Dairy Solids	0	0.0		0.0			0.0			0.0		0%
			0	0.0		0.0			0.0			0.0		0%
103B Doug's	Alf/Gra	Flush Lagoon	23946	34.2		0.0			0.0			0.0		100%
		Dairy Solids	0	0.0		0.0			0.0			0.0		0%
			0	0.0		0.0			0.0			0.0		0%
103C Island	corn sil	Flush Lagoon	13969	20.0		0.0			0.0			0.0		100%
		Dairy Solids	0	0.0		0.0			0.0			0.0		0%
			0	0.0		0.0			0.0			0.0		0%
104 Harold's	corn sil	Flush Lagoon	19955	28.5		0.0			0.0			0.0		100%
		Dairy Solids	0	0.0		0.0			0.0			0.0		0%
			0	0.0		0.0			0.0			0.0		0%
105 Dixon Back	Alf/Gra	Flush Lagoon	23946	34.2		0.0			0.0			0.0		100%
		Dairy Solids	0	0.0		0.0			0.0			0.0		0%
			0	0.0		0.0			0.0			0.0		0%
106 Dixon Front	corn sil	Flush Lagoon	15964	22.8		0.0			0.0			0.0		100%
		Dairy Solids	0	0.0		0.0			0.0			0.0		0%
			0	0.0		0.0			0.0			0.0		0%
101B,C Yard	corn sil	Flush Lagoon	15964	22.8		0.0			0.0			0.0		100%
		Dairy Solids	0	0.0		0.0			0.0			0.0		0%
			0	0.0		0.0			0.0			0.0		0%
201 Skelton	Alf/Gra	Flush Lagoon	23946	34.2		0.0			0.0			0.0		100%
		Dairy Solids	0	0.0		0.0			0.0			0.0		0%
			0	0.0		0.0			0.0			0.0		0%
202 Reimer	corn sil	Flush Lagoon	19955	28.5		0.0			0.0			0.0		100%
		Dairy Solids	0	0.0		0.0			0.0			0.0		0%
			0	0.0		0.0			0.0			0.0		0%
203 Heokstra	Alf/Gra	Flush Lagoon	0	0.0		0.0			0.0			0.0		0%
		Dairy Solids	0	0.0		0.0			0.0			0.0		0%
			0	0.0		0.0			0.0			0.0		0%
204 Steinkrud	Grass	Flush Lagoon	0	0.0		0.0			0.0			0.0		0%
		Dairy Solids	0	0.0		0.0			0.0			0.0		0%
			0	0.0		0.0			0.0			0.0		0%
205 Jessie	Alf/Gra	Flush Lagoon	9978	0.0		0.0			0.0			0.0		0%
		Dairy Solids	0	0.0		0.0			0.0			0.0		0%
			0	0.0		0.0			0.0			0.0		0%
401/2 Pivots	Barley	Flush Lagoon	0	0.0		0.0			0.0			0.0		0%
		Dairy Solids	0	0.0		0.0			0.0			0.0		0%
			0	0.0		0.0			0.0			0.0		0%
16	wheat	Flush Lagoon	11973	17.1		0.0			0.0			0.0		100%
		Dairy Solids	0	0.0		0.0			0.0			0.0		0%
			0	0.0		0.0			0.0			0.0		0%

Worksheet 9b. Timing and Amount of Each Field Application of Solid Manure

A	B	-	C	D	E	F	G	H	I	J	K	L	M
Field Description	Crop Type	Manure Source	Annual Application Rate	Annual Spreader Loads per Hectare	Planned Manure Applications (Scroll down to see options for Fourth, Fifth and Sixth applications)								
					First			Second			Third		
(name or number)		(Worksheet8, col. C)	(Worksheet 8, col. F) (yd^3/ac)	(Worksheet 8, col. G) (loads/ac)	Percent (Table 10) %	Amount (D x E) (loads/ac)	Proposed Spreading Date	Percent (Table 10) %	Amount (D x H) (loads/ac)	Proposed Spreading Date	Percent (Table 10) %	Amount (D x K) (loads/ac)	Proposed Spreading Date
101 Barns	corn sil	Flush Lagoon	0	0.0		0.0			0.0			0.0	
		Dairy Solids	0	0.0		0.0			0.0			0.0	
		0	0	0.0		0.0			0.0			0.0	
102 Sorenson Sylvia	corn sil	Flush Lagoon	0	0.0		0.0			0.0			0.0	
		Dairy Solids	0	0.0		0.0			0.0			0.0	
			0	0.0		0.0			0.0			0.0	
103 Hullcar Hall	Alf/Gra	Flush Lagoon	0	0.0		0.0			0.0			0.0	
		Dairy Solids	0	0.0		0.0			0.0			0.0	
			0	0.0		0.0			0.0			0.0	
103B Doug's	Alf/Gra	Flush Lagoon	0	0.0		0.0			0.0			0.0	
		Dairy Solids	0	0.0		0.0			0.0			0.0	
			0	0.0		0.0			0.0			0.0	
103C Island	corn sil	Flush Lagoon	0	0.0		0.0			0.0			0.0	
		Dairy Solids	0	0.0		0.0			0.0			0.0	
			0	0.0		0.0			0.0			0.0	
104 Harold's	corn sil	Flush Lagoon	0	0.0		0.0			0.0			0.0	
		Dairy Solids	0	0.0									
			0	0.0									
105 Dixon Back	Alf/Gra	Flush Lagoon	0	0.0		0.0			0.0			0.0	
		Dairy Solids	0	0.0									
			0	0.0									
106 Dixon Front	corn sil	Flush Lagoon	0	0.0		0.0			0.0			0.0	
		Dairy Solids	43	2.9									
			0	0.0									
101B,C Yard	corn sil	Flush Lagoon	0	0.0		0.0			0.0			0.0	
		Dairy Solids	0	0.0									
			0	0.0									
201 Skelton	Alf/Gra	Flush Lagoon	0	0.0		0.0			0.0			0.0	
		Dairy Solids	0	0.0									
			0	0.0									
202 Reimer	corn sil	Flush Lagoon	0	0.0		0.0			0.0			0.0	
		Dairy Solids	0	0.0									
			0	0.0									
203 Heokstra	Alf/Gra	Flush Lagoon	0	0.0		0.0			0.0			0.0	
		Dairy Solids	0	0.0									
			0	0.0									
204 Steinkrud	Grass	Flush Lagoon	0	0.0		0.0			0.0			0.0	
		Dairy Solids	24	1.6	100%		30-Sep						
			0	0.0									
205 Jessie	Alf/Gra	Flush Lagoon	0	0.0		0.0			0.0			0.0	
		Dairy Solids	69	4.6	100%		10-Apr						
			0	0.0									
401/2 Pivots	Barley	Flush Lagoon	0	0.0		0.0			0.0			0.0	
		Dairy Solids	0	0.0									
			0	0.0									
500 Vandursen	wheat	Flush Lagoon	0	0.0		0.0			0.0			0.0	
		Dairy Solids	0	0.0									
			0	0.0									

A	B	-	C	D	N	O	P	Q	R	S	T	U	V	
Field Description	**Crop Type**	**Manure Source**	**Annual Application Rate**	**Annual Spreader Loads per Hectare**	**Planned Manure Applications**									
					Fourth			**Fifth**			**Sixth**			
(name or number)		(Worksheet8, col. C)	(Worksheet 8, col. F) (yd^3/ac)	(Worksheet 8, col. G) (loads/ac)	Percent (Table 10) %	Amount (D x N) (loads/ac)	Proposed Spreading Date	Percent (Table 10) %	Amount (D x Q) (loads/ac)	Proposed Spreading Date	Percent (Table 10) %	Amount (D x T) (loads/ac)	Proposed Spreading Date	Sum of applications
101 Barns	corn sil	Flush Lagoon	0	0.0		0.0			0.0			0.0		0%
		Dairy Solids	0	0.0		0.0			0.0			0.0		0%
		0	0	0.0		0.0			0.0			0.0		0%
102 Sorenson Sylvia	corn sil	Flush Lagoon	0	0.0		0.0			0.0			0.0		0%
		Dairy Solids	0	0.0		0.0			0.0			0.0		0%
			0	0.0		0.0			0.0			0.0		0%
103 Hullcar Hall	Alf/Gra	Flush Lagoon	0	0.0		0.0			0.0			0.0		0%
		Dairy Solids	0	0.0		0.0			0.0			0.0		0%
			0	0.0		0.0			0.0			0.0		0%
103B Doug's	Alf/Gra	Flush Lagoon	0	0.0		0.0			0.0			0.0		0%
		Dairy Solids	0	0.0		0.0			0.0			0.0		0%
			0	0.0		0.0			0.0			0.0		0%
103C Island	corn sil	Flush Lagoon	0	0.0		0.0			0.0			0.0		0%
		Dairy Solids	0	0.0		0.0			0.0			0.0		0%
			0	0.0		0.0			0.0			0.0		0%
104 Harold's	corn sil	Flush Lagoon	0	0.0		0.0			0.0			0.0		0%
		Dairy Solids	0	0.0										0%
			0	0.0										0%
105 Dixon Back	Alf/Gra	Flush Lagoon	0	0.0		0.0			0.0			0.0		0%
		Dairy Solids	0	0.0										0%
			0	0.0										0%
106 Dixon Front	corn sil	Flush Lagoon	0	0.0		0.0			0.0			0.0		0%
		Dairy Solids	43	2.9			10-Apr							0%
			0	0.0										0%
101B,C Yard	corn sil	Flush Lagoon	0	0.0		0.0			0.0			0.0		0%
		Dairy Solids	0	0.0										0%
			0	0.0										0%
201 Skelton	Alf/Gra	Flush Lagoon	0	0.0		0.0			0.0			0.0		0%
		Dairy Solids	0	0.0			01-May							0%
			0	0.0										0%
202 Reimer	corn sil	Flush Lagoon	0	0.0		0.0			0.0			0.0		0%
		Dairy Solids	0	0.0										0%
			0	0.0										0%
203 Heokstra	Alf/Gra	Flush Lagoon	0	0.0		0.0			0.0			0.0		0%
		Dairy Solids	0	0.0										0%
			0	0.0										0%
204 Steinkrud	Grass	Flush Lagoon	0	0.0		0.0			0.0			0.0		0%
		Dairy Solids	24	1.6			30-Mar							100%
			0	0.0										0%
205 Jessie	Alf/Gra	Flush Lagoon	0	0.0		0.0			0.0			0.0		0%
		Dairy Solids	69	4.6			15-Oct							100%
			0	0.0										0%
401/2 Pivots	Barley	Flush Lagoon	0	0.0		0.0			0.0			0.0		0%
		Dairy Solids	0	0.0										0%
			0	0.0										0%
500 Vandursen	wheat	Flush Lagoon	0	0.0		0.0			0.0			0.0		0%
		Dairy Solids	0	0.0										0%
			0	0.0										0%