References
Timber Ridge Pork

Manure Sample Analysis *(#/1000 gal or #/ton basis)*

	N	NH4	OrgN	1st Year AvN	P2O5	K20
Stage 2	8.4	3	5.4	4.56	1.2	7.6
Stage 1	20.25	12.4	7.85	14.507	36.975	7.4

The lagoon has 2 stages (Stage 1 & 2). Stage 1 is expected to be higher in nutrient levels than Stage 2, due to accumulated solids. It would be expected to haul Stage 2 to nearby fields and Stage 1 to farther away fields.

Application Method N retention	% N retention, from MWPS
SURFACE, SOLID	0.75
SURFACE, LIQUID	0.8
AERWAY	0.9
SURFACE, INCORP	0.95
INJECT	0.98
IRRIGATE	0.7
NONE	0

Organic N Mineralization	% of OrgN	LMFA Regulations
Year of App	0.3	
Year 1 after App	0.3	
Year 2 after App	0.15	
Year 3 after App	0.0875	
Year 4 after App	0.04375	

N, P, & K Requirements	lbs/bu or t, from IL Agronomy Handbook		
Crop	**N**	**P**	**K**
Corn	1.2	0.43	0.28
Soybeans	0	0.85	1.3
Corn Silage	1.2	2.6	7
Wheat	1	0.9	0.3
Grass Hay	150	12	50
Alfalfa Hay	0	12	50

Timber Ridge Pork
Recommended Application Rates

Crop	Yield	Crop Rotation	Application Method		lbs N/1000 gal	N rate gal/acre	P rate gal/acre
CORN	200	After Corn	Inject	Stage 2	15	16,000	n/a
					20	12,000	
				Stage 1	25	10,000	2,300
					30	8,000	
		After Beans		Stage 2	15	13,000	n/a
					20	10,000	
				Stage 1	25	8,000	2,300
					30	6,700	
CORN	180	After Corn	Inject	Stage 2	15	14,400	n/a
					20	10,800	
				Stage 1	25	8,600	2,000
					30	7,200	
		After Beans		Stage 2	15	11,700	n/a
					20	8,800	
				Stage 1	25	7,000	2,000
					30	5,900	

Crop	Yield	Crop Rotation	Application Method		lbs N/1000 gal	gal/acre	gal/acre
CORN	160	After Corn	Inject	Stage 2	15	12,800	n/a
					20	9,600	
				Stage 1	25	7,700	1,900
					30	6,400	
		After Beans		Stage 2	15	10,100	n/a
					20	7,600	
				Stage 1	25	6,000	1,900
					30	5,000	
BEANS	55	--	Inject	Stage 2	15	10,000	n/a
					20	7,500	
				Stage 1	25	6,000	1,300
					30	5,000	

These recommended rates are based on the stated yields and crops, and assumes fields have NO recent manure applications (no N credits from manure application). These are estimates only, and can be used as guides when climate or other factors exist that require deviations from planned manure applications. Previous applications would require that these application rates be decreased from present estimates.

Also, these recommendations are based on an actual facility analyses. HOWEVER, analyses can fluctuate from year to year, so annual manure testing is important to determine actual nutrient loading rates.

"n/a" is listed for the P rate from Stage 2 manure, as the P rate would be so high, as to be higher than the N rate, and is therefore, not applicable

*N available 1st year = (Am-N * App Method Efficency) + (OrgN * .35)*

Previous manure applications should be given N credits =

*(App rate (in 1,000 gal) * Org N (per 1,000 gal) * Mineralization Factor) / 2*

Mineralization Factors: Year 1= .3, Year 2 = .15, Year 3 = .075, Year 4 = 0.04

Efficiency of Application = Liquid, Broadcast = 0.80, Solid, Broadcast = 0.75, Aerway = 0.90, Liquid Inject = 0.98