

Car-Mer Dairy
Recommended Application Rates

<u>Crop</u>	<u>Yield</u>	<u>Crop Rotation</u>	<u>Application Method</u>	<u>Manure Source</u>	<u>N rate</u>	<u>P rate</u>
					<u>gal/acre OR t/ac</u>	<u>gal/acre OR t/ac</u>
Corn	190	Following Legume	Inject	Liquid	7,900 Gallons	4,370 Gallons
Corn	190	Following Non-Legume			6,500 Gallons	4,370 Gallons
Soybeans	55	Following Corn			- -	2,500 Gallons
Silage	20	Following Legume			4,100 Gallons	2,780 Gallons
Silage	20	Following Non-Legume			2,800 Gallons	2,780 Gallons
Alfalfa	10	Continuous Hay			- -	6,420 Gallons
Corn	190	Following Legume	Incorporate	Solid Manure	35 Tons	16 Tons
Corn	190	Following Non-Legume			29 Tons	16 Tons
Soybeans	55	Following Corn			- -	9 Tons
Silage	20	Following Legume			18 Tons	10 Tons
Silage	20	Following Non-Legume			12 Tons	10 Tons
Alfalfa	10	Continuous Hay			- -	23 Tons

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.

The recommended application rates are the rates needed to meet the nutrient requirement of the planned crop. In the case of Lagoon water and Solid manure actual application of waste at these rates may not be feasible due to volume and or water holding capacity of soil.

$N \text{ available 1st year} = (Am-N * App \text{ Method Efficiency}) + (OrgN * .35)$

Previous manure applications should be given N credits =

$(App \text{ rate (in 1,000 gal)} * Org \text{ N (per 1,000 gal)} * Mineralization \text{ Factor}) / 2$

Mineralization Factors: Year 1= .35, Year 2 = .175, Year 3 = .0875, Year 4 = 0.04

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