

Quick Sizing Chart based on UMN Milk house Waste Design Guide draft 04/15/08.

Bark Bed approximate sizing chart. (Use cow number or estimated gallons per day.)

# Cows	Gallons per day	Tank Capacity gallons	Soil 1	Soil 2	Soil 3	Soil 4
			<i>- Square feet of bark bed needed -</i>			
30	150	900	470	940	1240	2360
40	200	1200	620	1250	1650	3150
50	250	1500	780	1570	2060	3940
60	300	1800	930	1880	2480	4730
70	350	2100	1090	2190	2890	5510
80	400	2400	1240	2500	3300	6300
90	450	2700	1400	2820	3710	7090
100	500	3000	1560	3130	4130	7880
110	550	3300	1710	3440	4540	8660
120	600	3600	1870	3760	4950	9450
130	650	3900	2020	4070	5360	10240
140	700	4200	2180	4380	5780	11030
150	750	4500	2330	4700	6190	11810

* Bark bed sizing for estimated 750 mg/l BOD coming from second septic tank.

Soil 1 = course sand, medium sand, loamy sand

Soil 2 = fine sand, sandy loam, loam

Soil 3 = silt loam, silt-clay loam, sandy clay, silty clay

Soil 4 = clay, sandy clay, silty clay

Irrigation approximate sizing chart. (Use cow number)

# Cows	Gallons per day	Tank Capacity gallons	<i>- Nitrogen Utilization lbs/acre/year -</i>					
			50	75	100	125	150	175
30	150	450	10,200	6,800	5,100	4,100	3,400	2,900
40	200	600	13,600	9,100	6,800	5,400	4,500	3,900
50	250	750	17,000	11,300	8,500	6,800	5,700	4,900
60	300	900	20,400	13,600	10,200	8,200	6,800	5,800
70	350	1050	23,800	15,900	11,900	9,500	7,900	6,800
80	400	1200	27,200	18,100	13,600	10,900	9,100	7,800
90	450	1350	30,600	20,400	15,300	12,200	10,200	8,700
100	500	1500	34,000	22,700	17,000	13,600	11,300	9,700
110	550	1650	37,400	24,900	18,700	14,900	12,500	10,700
120	600	1800	40,800	27,200	20,400	16,300	13,600	11,600
130	650	1950	44,200	29,400	22,100	17,700	14,700	12,600
140	700	2100	47,600	31,700	23,800	19,000	15,900	13,600
150	750	2250	51,000	34,000	25,500	20,400	17,000	14,600

Estimate 90-170 lbs/acre/yr for area in poor to good corn-soybean rotation.

Estimate 50 – 130 lbs/acre/yr for area in poor to good pasture or grassland.

