

Appendix C

Estimating Storage Facilities

The calculations on the following page will allow you to estimate the volume of manure produced on your farm. Having that information will provide a rough idea of the size storage facility needed. The actual sizing of the facility must take into account a number of other factors including projected herd expansion, feed intake, management approaches, precipitation, runoff, and evaporation. A properly designed facility will store manure until it can be applied during seasons when the nutrients can be used by crops.

Manure Production Calculations

- a) Total number of heifers ___ H ___ lbs (body weight)) 1000 = ___ animal units
- b) Total number of milking cows ___ H ___ lbs (body weight)) 1000 = ___ animal units
- c) Total number of dry cows ___ H ___ lbs (body weight)) 1000 = ___ animal units
- d) Total number of calves ___ H ___ lbs (body weight)) 1000 = ___ animal units

- e) Total animal units = sum of lines a) through d)

- f) Total animal units (from line e) H 85 = ___ pounds manure per day.

- g) Total pounds manure per day (from line f) H 365 days = ___ pounds manure per year.
- h) Total pounds manure per year (from line g)) 8 = ___ gallons manure per year.

- i) Total gallons manure per year (from line h)) 12 H ___ months storage = ___ gallons

Result: A storage facility will need to hold a minimum of (total from line i) gallons of manure. Additional storage is required to accomodate such things as waste feed, bedding, parlor water, and precipitation.