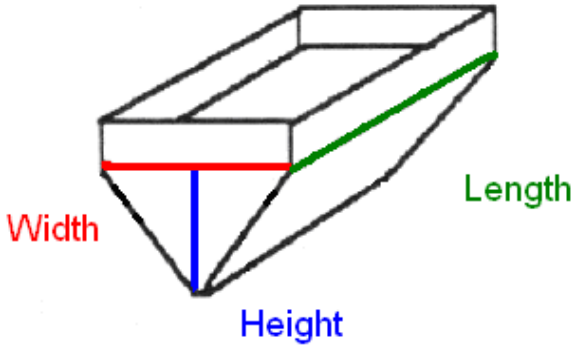
Estimating Manure Spreader Capacity

Your owner's manual should provide information regarding the size or capacity of the spreader. If this information is not available, you can use the following formulae to calculate approximate capacity.

V-bottom Type



V-bottom spreaders can hold either semi-solid (gallons) or solid manure (tonnes).

Measure the length and width of the manure spreader box and the height from the bottom of the spreader box to the top of the manure load, then insert these values into the following formula:

Solids: Length ___ (m) x Width ___ (m) x Height ___ (m) x 0.5 = ___ tonnes

Liquids: Length ___ (m) x Width ___ (m) x Height ___ (m) x 0.5 = ___ m^3 ÷ 220 = ___ gallons

Liquid Tank Type

The capacity of a liquid tank spreader is the easiest to calculate. The capacity is often painted on the side of the tank, but if not you can use the following steps to calculate the approximate capacity.

Measure the length and diameter of the tank as shown in the diagram and insert these values into the following formula:

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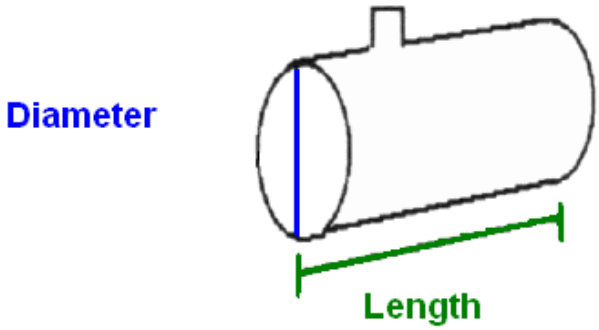
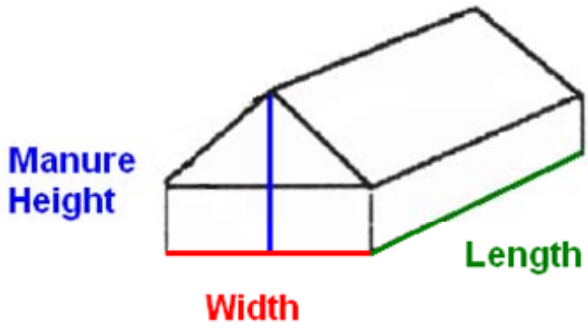


(Diameter ____ m / 2) ^{2} x Length ____ m. x 3.152 = ____ m^3 ÷ 220 = ___ gallons

NB. The actual filled capacity is only about 80% of the maximum capacity due to foaming.

Box Type

The capacity of a box spreader is difficult to estimate accurately because the density of solid manure is quite variable and depends on the amount of bedding used. Therefore, if you estimate spreader capacity as only the volume of manure the spreader holds you are overlooking the fact that some manure weighs more than other manure. You can calculate spreader volume by measuring three dimensions of the spreader though this is a much less accurate measurement of capacity than weighing the load.



Measure the length and width of the manure spreader box and the manure height then input your values into the following formula:

Length ____ m. x Width ____ m. x Manure height ____ m. x 0.8 = ____ tonnes

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Source: Estimating Manure Spreader Capacity, Brad C. Joern and Sarah L. Brichford, Department of Agronomy, Purdue University

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