



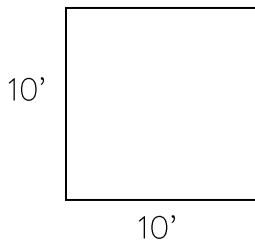
## Measuring and Figuring for Gardeners

Before purchasing plants, compost and mulch, it is good to have some idea about the quantities that will be needed. A visual estimate will usually work, but when time or money is limited and a large project is in the works, it is best to be prepared.

### How to Measure Your Garden

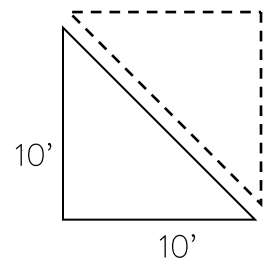
Lawns, vegetable plots and garden beds are measured in square feet. You will need to know your square footage when seeding lawns, figuring vegetable production, buying annual flowers or when spacing out perennials, shrubs and trees.

- It is easy to measure areas that are shaped like a square or rectangle: Area = Length x Width.
- Measure one side of a square plot and multiply that number by itself to get the square footage.
- Measure length and width of a rectangular plot and multiply those two numbers to get the square footage.



These two plots have the same area (square footage) because  $10' \times 10' = 100$  square feet &  $5' \times 20' = 100$  square feet

- Think of triangular plots as half-squares or half-rectangles. Measure each side and divide by two and you will have the square footage.
- Another way to visualize this is to imagine a  $10' \times 10'$  square extended from a triangular plot and divide that in half. Your imaginary half-plot is 50 square feet.
- This works with most triangular shapes. Sometimes you'll just have to estimate.
- Irregular shapes and circles can be roughly figured by combining rectangles, squares and triangles. In these cases, it's best to err on the side of buying extra.
- Remember not to confuse *square* feet with *cubic* feet: it takes 9 square feet to make 1 square yard, but it takes a whopping 27 cubic feet to make 1 cubic yard. More information on how to figure this is found on the next page!



### About Spacing Your Plants

- Plants are spaced “from center to center” – measuring from the stem/trunk of one plant to the next plant’s stem/trunk – using the mature growth width as a guideline. This is listed on plant tags as “spacing” or “width.”
- First, convert your garden bed’s square feet into square inches by multiplying by 144. The resulting (HUGE!) number will make it easier to space your plants.
- Next, divide this number by square inches needed per plant. If a plant’s mature width is 24” it needs 24 *square inches*.
- The resulting number will be how many plants you need to buy.
- Remember, plants differ in their growth rates and some are more tolerant than others to tighter spacing.

# How to Figure Cubic Feet or Cubic Yards for Your Garden

Soil, mulch, and compost are sold by the cubic foot or cubic yard. To buy the proper amount you need to know one more measurement: depth. You will also need to know how to convert from cubic feet to cubic yards or vice versa, since different amendments – bagged or in bulk – are sometimes sold by cubic foot and sometimes by cubic yard.

## **Figuring Out Cubic Feet or Cubic Yards of Soil for Raised Beds/Large Planter Boxes:**

- First figure out the square footage of your beds or planter boxes.
- Multiply your square footage by the depth of your beds/boxes to find the cubic feet of soil to fill your beds/boxes.
- Another way to think of this is LENGTH x WIDTH x DEPTH
- Convert to cubic yards if necessary, depending on how the soil is packaged/sold. See below.

## **Figuring Out Cubic Feet or Cubic Yards for Mulch or Compost Coverage of Garden Beds:**

Since you won't be applying mulch by the *cubic foot*, you need to know how many *inches* deep you want your mulch.

- For 1" of coverage, multiply your square footage by 0.083 (1/12 of a foot)
- For 2" of coverage, multiply your square footage by 0.16 (1/6 of a foot)
- For 3" of coverage, multiply your square footage by 0.25 (1/4 of a foot)
- The resulting number will be how many cubic feet of mulch you need.

*Alternately when you are buying a 2 cubic foot bag of mulch, one bag will cover:*

- 24 square feet at 1" deep (2 cubic feet ÷ 0.083 = 24)
- 12.5 square feet at 2" deep (2 cubic feet ÷ 0.16 = 12.5)
- 8 square feet at 3" deep (2 cubic feet ÷ 0.25 = 8)

*Recommended Amounts for Compost Coverage:*

- Good Soils: 2" layer (multiply square footage by 0.16)
- Moderately Poor Soils: 4" layer (multiply square footage by 0.33)
- Very Poor Clay Soils: 6" layer (multiply square footage by 0.5)
- The resulting number will be how many *cubic feet* of compost you need.
- Compost should be worked into the top 12" of existing soil.

## **And here's the tricky one - Converting between Cubic Feet and Cubic Yards:**

- REMEMBER: 12" x 12" x 12" = 1 square foot x 1 foot = 1 cubic foot
- AND: 3 cubic feet x 3 cubic feet x 3 cubic feet = 27 cubic feet = 1 cubic yard
  - SO: If you know your cubic feet, divide by 27 to get your cubic yardage.
  - AND: If you know your cubic yards, multiply by 27 to get your cubic feet.

## Conversions for Measuring Liquid or Dry Amendments

Good quality amendments will come with clear and easy to understand directions that should be followed carefully.

When you need to make larger or smaller quantities than those listed on the package, use this conversion table:

38-49 drops = ½ tsp

3 tsp = 1 Tbsp = ½ oz

6 tsp = 2 Tbsp = 1 oz

48 tsp = 16 Tbsp = 8 oz = 1 cup = ½ pint

32 Tbsp = 16 oz = 2 cups = 1 pint

64 Tbsp = 32 oz = 4 cups = 2 pints = 1 quart

64 oz = 8 cups = 4 pints = 2 quarts = ½ gallon

128 oz = 16 cups = 8 pints = 4 quarts = 1 gallon