Calibration of Hand Sprayers 1000 Ft² Method

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Hand sprayers are often used to treat ornamental or small areas of turf. Recommendations are based amount per acre and amount per 1000 ft². The following is a procedure of 1000 ft².

Step 1. Measure the length and width of the test area to be sprayed. Then calculate the area to be covered.

Test Area is: length ___ ft X width ___ ft = ___ ft²

Step 2. Fill sprayer with water and spray the test area. Record the amount of water to refill the sprayer.

Volume (ounces) per test area ___ ___

Step 3. Find the label rate of material to be applied per 1000 ft².

Rate ___ ___ ___ per 1000 ft²

Step 4. \[ \frac{1000 \text{ ft}^2 \times \text{ounces per test area}} {\text{Test Area(} \text{ft}^2) \} = \text{Volume (ounces) per 1000 ft}^2 \]

Step 5. Calculate the area covered per tank as follows:

\[ \frac{\text{Tank volume (ounces)} \times 1000 \text{ ft}^2}{\text{Volume per 1000 ft}^2} = \text{Area covered per tank ft}^2 \]

Step 6. Calculate amount of material to add to tank.

\[ \frac{\text{Area per tank (ft}^2\} \times \text{Rate per 1000 ft}^2}{1000} = \text{Amount to add} \]

Solutions derived from the above may need to be converted to smaller units in order to accurately measure the pesticide accurately. The following conversion will help simplify this problem.

Conversions:

**Volume**

- pints x 16 = fluid ounces (fl oz)
- fl oz x 29.57 = milliliters (ml)
- gallon x 4 = quarts (qts)
- quarts x 2 = pints (pts)
- fl oz x 2 = Tablespoons (tbs)
- tbs x 3 = teaspoons (tsp)
- tsp x 5 = milliliters (ml)

**Weight**

- pounds x 16 = weight ounces (wt oz)
- wt. ounces x 28.35 = grams (g)
- grams x 1000 = milligrams (mg)