

Aids to Calculation and Measurement

Avoid measuring and mixing pesticides by selecting ready-to-use formulations. However, if you need to mix pesticides, home gardeners should purchase a set of metric measuring spoons (1, 2, 5, 15 and 25 mL sizes) for easy measurement of pesticides. Mark these measuring spoons “pesticides” so they are not used for measuring food or household items. Store them with your pesticides. Most Domestic pesticide labels give recommendations in mL for both liquid and dry formulations so you don’t have to have an expensive scale to weigh tiny quantities. Another important tool is a metric tape measure so you can measure the area that needs treatment. Accurately measuring and mixing helps avoid overuse of pesticides.

USEFUL MEASUREMENTS – ENGLISH SYSTEM

1 Imperial gallon = 4 quarts = 8 pints = 160 fl.oz. = 10 lbs of water = approx 1.2 U.S. gal.	1 mile = 5,280 feet = 1,760 yards 1 yard = 3 feet = 36 inches
1 U.S. gallon = .8345 or approx 5/6 Imperial gallon = 8.3 lbs water	1 foot = 12 inches 1 acre = approximately 209 X 209 feet = 43,560 sq. ft.
1 Imperial pint = 20 fl. oz. = 2.5 cups = 570 mL	1 square yard = 9 square feet
1 U.S. pint = 16 fl. oz. = 2 cups = 475 mL	1 square foot = 144 square inches
1 pound (lb.) = 16 ounces	1 cubic foot = 1728 cubic inches
1 tablespoon = 3 teaspoons = 14 mL	1 cubic yard = 27 cubic feet
2 tablespoons = 1 fluid ounce = 28 mL	1 rod = 5.5 yards = 16.5 feet

USEFUL MEASUREMENTS – METRIC SYSTEM

LINEAR MEASURE	CUBIC MEASURE	MASS (WEIGHT) MEASURE
10 millimetres (mm) = 1 centimetre	Dry Measure	100 grams = 0.1 kilogram (kg)
100 centimetres (cm) = 1 metre	1,000,000 cubic cm = 1 cubic metre	1000 grams = 1 kilogram (kg)
SQUARE MEASURE (AREA)	Liquid Measure	DRY – LIQUID EQUIVALENTS
100cm x 100cm = 10,000cm ² = 1m ²	100 millilitres (mL) = 0.1 litre (L)	1 cubic centimetre (cm ³) = 1 mL
100m x 100m = 10,000m ² = 1hectare	1000 millilitres (mL) = 1 litre (L)	1 cubic metre (m ³) = 1000L

PARTS PER MILLION AND WEIGHT/VOLUME EQUIVALENTS

1 percent (%) = 10,000 parts per million (ppm)	1 milligram (mg) /litre (water) = 1 ppm
1 fl. oz./Imperial gallon = 6250 ppm	1 gram (g) /litre (water) = 1000 ppm
1 gallon in 1,000,000 gallons = 1 ppm	1 millilitre (mL) /litre = 1000 ppm
1 litre in 1,000,000 litres = 1 ppm	1 mL / 1000 litres = 1 ppm
1 gram water = 1 millilitre water @ 4°C	1 kilogram water = 1 litre water @ 4°C

METRIC CONVERSION TABLE

<i>When You Know</i>	<i>Multiply by</i>	<i>To Find</i>	<i>When You Know</i>	<i>Multiply By</i>	<i>To Find</i>
<i>To Find</i>	<i>Divide By</i>	<i>When You Know</i>	<i>To Find</i>	<i>Divide By</i>	<i>When You Know</i>
LENGTH			MASS (WEIGHT)		
inches (in.)	2.5	centimetres	ounces (oz.)	28	grams
feet (ft.)	30	centimetres	pounds (lb.)	0.45	kilograms
yards (yd.)	0.9	metres	short tons	0.9	metric tonnes (t)
miles (mi.)	1.6	kilometres	grams (g)	0.035	ounces
centimetres (cm)	0.4	inches	kilograms (kg)	2.2	pounds
metres (m)	1.1	yards	metric tonnes (t)	1.1	short tons
AREA			TEMPERATURE		
square inches (sq.in.)	6.5	square cm	Fahrenheit (°F)	- 32 then X 5/9	Celsius (°C)
square feet (sq.ft.)	0.09	square metres	Celsius (°C)	X 9/5 then + 32	Fahrenheit (°F)
square yards (sq.yd.)	0.8	square metres	PRESSURE		
acres	0.4	hectares	pounds / sq.in.	6.9	kilopascals(kPa)
square centimetres	0.16	square inches	pounds / sq.in.	0.069	bars
square metres (m2)	1.2	square yards	APPLICATIONS		
hectares (ha)	2.5	acres	tsp. / Imp. gal.	1	mL or grams / L
VOLUME			tbsp. / Imp. gal.	3	mL or grams / L
cubic inches (cu.in.)	16	cubic centimetres	cups / Imp. gal.	50	mL or grams / L
cubic yards (cu.yd.)	0.8	cubic metres	oz./gal.	6.2	mL / L
fluid ounces	28	millilitres (mL)	lb./acre	0.0033	oz. / yd ²
Imperial quarts	1.1	litres	ounces / sq. ft.	305	grams / m ²
Imperial gallons	4.54	litres	oz./ ft. of row	93	grams / m of row
U.S. gallons	3.8	litres	feet / second	0.3	metres / second