

Metric Conversion Factors

To Convert	Multiply by	To Obtain
Acres (a)	0.4047	Hectare (ha)
Acres	43,560	Sq. feet (ft ²)
Acres	0.00405	Sq. kilometer (km ²)
Acres	4047	Sq. meter (m ²)
Acres	4840	Sq. yards (yd ²)
Acre-feet	325,851	Sq. feet (ft ²)
Acre-feet	43560	Cu. Feet (ft ³)
Acre-feet	1233.5	m ³
Acre-inch	102.8	m ³
Bar	14.5	lb/in ²
Bar	1019.7	g/cm ³
Bar	29.53	inches Hg @ 0°C
Bar	75	cm Hg @ 0°C
Bar	0.001	J/kg
Bar	100	kPa
Bushels (dry)	0.03524	m ²
Bushels	1.245	ft ³
Calorie (cal)	4.184	Joules (J)
Centimeters (cm)	0.03281	Feet (ft)
cm	0.3937	Inches (in)
cm	0.1094	Yards (yd)
cm	0.01	Meters (m)
cm	10	Millimeters (mm)
cm/sec	1.9685	ft/min
cm/sec	0.0223694	MPH
cm ² (square centimeters)	0.001076	ft ²
cm ²	0.1550	in ²
cm ³ (cubic centimeters)	0.0610237	in ³
cm ³	0.0338	fl oz
Cup	8	fl oz
Cup	236.6	cm ³
Feet (ft)	30.48	cm
ft	0.3048	m
ft	305	mm
ft ² (square feet)	929	cm ²
ft ²	0.0929	m ²
ft ²	9.294 x 10 ⁻⁶	Hectares (ha)
ft ³ (cubic feet)	0.0283	m ³
ft ³	7.4805	Gallons
ft ³	1728	Cubic inches (in ³)
ft ³	0.037	Cubic yards (yd ³)
ft ³	28.32	Liters (L)
ft ³ /1,000 ft ²	0.030463	m ³ /100 m ²
Feet per minute	0.01136	MPH
Feet head of water	0.433	PSI

Metric Conversion Factors

To Convert	Multiply by	To Obtain
Foot candle	10.764	Lux
Gallons (gal)	3.785	Liters
Gal	3785	Milliliters
Gal	128	Ounces (liquid)
Gal	0.13368	ft ³
Gal/acre (gpa)	9.354	Liters/hectare
gpa	0.09354	L/100 m ²
gpa	2.938	oz/1,000 ft ² (liquid)
Gal/1,000 ft ²	4.0746	L/100 m ²
Gal/minute	2.228 x 10 ⁻³	Cubic feet/second
Gal/min	0.06309	L/sec
Gal/min	0.227125	m ³ /hr
Grams (g)	0.002205	Pounds
Gram	0.035274	oz
g/cm ³	0.036127	lb/in ³
g/cm ³	62.428	lb/ft ³
g/ft ²	96	lb/acre
g/ha	0.000893	lbs/acre
g/ha	0.014275	oz/acre
g/kg	0.10	percent (%)
g/liter	1000	PPM
g/liter	10	Percent
g/liter	0.00834595	lbs/gal
g/liter	0.13351	oz/gal
g/m ²	0.00020481	lb/ft ²
g/m ²	0.20481	lbs/1,000 ft ²
Hectares (ha)	2.471	Acres
Ha	107,639	ft ²
Ha	107.64	1,000 ft ²
horsepower (hp) (electrical or mechanical)	746	watts
hp	550	ft-pounds/sec
hp	1.014	metric horsepower
Inches	2.540	Centimeters
Inches	0.0254	Meters
Inches	25.40	Millimeters
Inches of mercury	3.4	kilopascals (kPa)
in/ft	0.083	mm/mm
in ²	6.4516	cm ²
in ³	16.3871	cm ³
in ³	0.55411	fl oz
in ³	0.01732	qt
Joules per kilograms (J/kg)	1	kPa
kilo Pascal (kPa)	1	J/kg
kPa	1	0.01 bar
kPa	0.01	bar

Metric Conversion Factors

To Convert	Multiply by	To Obtain
Kilograms (kg)	2.2046	Pounds
kg/hectare	0.892	Pounds/acre
kg/ha	0.02048	lb/1,000 ft ²
kg/100 m ²	2.048	lbs/1,000 ft ²
kg/L	8.3454	lb/gal
Kilometers (Km)	100,000	Centimeters
Kilometers	3281	Feet
Kilometers	1000	Meters
Kilometers	0.6214	Miles
Kilometers	1094	Yards
Km/h	0.62137	MPH
Km/h	54.6807	ft/min
Kilopascals (kPa)	0.145	lbs/in ² (psi)
kPa	1	0.01 bar
kPa	1	J/kg
Liters (L)	0.2642	Gallons
L	33.814	Ounces
L	2.113	Pints
L	1.057	Quarts
L	0.035315	ft ³
L/100 m ²	0.2454	gal/1,000 ft ²
L/100 m ²	1.9634	pt/1,000 ft ²
Liters/hectare	0.107	Gallons/acre
L/ha	0.0025	gal/1,000 ft ²
L/ha	0.314	oz/1,000 ft ²
L/ha	0.855	pt/A
L/min	15.85	gal/hr
Meters (m)	3.281	Feet
Meters	39.37	Inches
Meters	1.094	yards
Meters	100	Centimeters
Meters	0.001	Kilometers
Meters	1000	Millimeters
Meters/sec	2.2369	mph
M ² (square meters)	10.764	ft ²
M ²	1,550	in ²
M ²	1.196	yd ²
M ³ (cubic meters)	35.3147	ft ³
M ³	1.30795	yd ³
M ³ /ha	14.29	ft ³ /acre
M ³ /ha	0.0122	yd ³ /1,000 ft ²
M ³ /ha	0.328	ft ³ /1,000 ft ²
mil	0.001	inch
mil	0.0254	millimeters
Miles (nautical)	1.1508	Miles (statute)

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Miles (statute)	160,900	Centimeters
Miles	5280	Feet
Miles	1.609	Kilometers
Miles	1760	Yards
Miles/hour (mph)	1.467	Feet/second
mph	88	Feet/minute
mph	1.61	Kilometers/hour
mph	0.447	meter/second
mg/kg	1	Parts per million (ppm)
Milliequivalents per liter (meq/L)	1	Millimoles per liter (mmol/L)
Milliequivalents per 100 g (meq/100g)	Eq. wt. x 10	Parts per million (ppm)
Millimhos per centimeter (mmhos/cm)	1	Decisiemens per meter (dS/m)
mmhos/cm	1,000	Micromhos per centimeter (µmhos/cm)
Milliliters (ml)	0.0338	Ounces (fluid)
ml	0.0002642	Gallons
ml/m ²	3.14	oz/1,000 ft ²
ml/l	0.12793	oz/gal
ml/10,000 L	0.0128	fl oz/1,000 gal
Millimeters (mm)	0.03937	Inches
1 mm Hg @ 0 C	0.13332	kPa
1 mm Hg	133333.3	mPa
Ounces (fluid)	0.02957	Liters
Ounces (fluid)	29.573	Milliliters
Ounces (fluid)	0.03125	qt.
Oz (fluid)/gal	7.81	ml/L
Ounces (fluid)/acre	0.0731	L/ha
Ounces (fluid)/acre	73.1	ml/ha
Ounces (fluid)/1,000 ft ²	3.18	L/ha
oz (weight)	28.35	Grams
oz (weight)	0.0625	lb
oz (weight)/acre	0.07	kg/ha
oz (weight)/acre	70	g/ha
oz (weight)/1,000 ft ²	3.05	kg/ha
oz (weight)/ft ²	305.15	g/m ²
oz (weight)/gal	7.5	g/L
oz (weight)/1,000 ft ²	0.305	g/m ²
Percent (%)	10	g/kg
Pint (liquid)	0.473	liter
pt/A	1.1692	L/ha
pt/A	0.3673	oz/1,000 ft ²
pt/1,000 ft ²	0.50932	L/100 m ²
Parts per million (ppm)	2.719	lb ai/acre foot of water
PPM	2.0	lbs/acre slice 7-in. deep
PPM	2.25	kg/ha slice 7-in. deep
PPM	0.001	g/L

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PPM	8.34	lb/million gal
PPM	1	mg/kg
PPM	0.013	Ounces/100 gal of water
PPM	0.3295	Gal/acre-foot of water
PPM	8.2897	lbs/million gal of water
Pounds (lbs)	0.4536	Kilograms (kg)
Pounds	453.6	Grams
Pounds/acre	1.12	kg/hectare
Pounds/acre	1.0413	g/100 ft ²
Pounds/acre	0.02296	lb/1,000 ft ²
Pounds/acre	0.112	g/m ²
Pounds/acre-foot	0.3682	g/m ³
Pounds/acre-foot	0.0003682	kg/m ³
Pounds/ ft ²	4883	g/m ²
Pounds/ft ³	16.23	kg/m ³
Pounds/1,000 ft ²	4.88	g/m ²
Pounds/1,000 ft ²	48.83	kg/ha
Pounds/1,000 ft ²	43.5597	lb/A
Pounds/1,000 ft ²	488	g/100 m ²
Pounds/1,000 ft ²	0.4883	kg/100 m ²
Pounds/yd ³	0.0005937	g/cm ³
Pounds/yd ³	594	g/m ³
Pounds/yd ³	0.5932	kg/m ³
Pounds/gallon	0.12	kg/liter
Pounds/1,000 gal	0.12	g/1,000 L
PSI (pounds per square inch)	6.89	Kilopascals (kPa)
PSI	0.06895	Bar
PSI	0.068046	Atmosphere (atm)
PSI	2.31	feet head of water
Quarts	0.9463	Liters
Quarts	946	Millimeters
Qt/A	2.3385	L/ha
Qt/A	0.7346	oz/1,000 ft ²
Qt/100 gal	2.5	ml/L
Temperature, °C + 17.98	1.8	Temperature, F
Temperature, F - 32	0.5555	Temperature, C
Ton (2,000 lbs)	907	kg
Ton (2,000 lbs)/acre	2240	kg/ha
Ton (2,000 lbs)	0.907	Ton (metric)
Ton (2,000 lbs)/acre	2.241	Ton (metric)/ha
Ton (metric)	2,205	lb
Ton (metric)	1,000	kg
Ton (metric)	1.102	ton (2,000 lb)
Yards (yd)	91.44	Centimeters
Yards	0.9144	Meters

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Yards	914.4	Millimeters
yd ²	0.836	M ²
yd ³ (cubic yards)	27	ft ³
yd ³	0.7645	m ³
yd ³	765	L
yd ³ /1,000 ft ²	0.825	m ³ /100 m ²
P ₂ O ₅	0.437	P
K ₂ O	0.830	K
CaO	0.715	Ca
MgO	0.602	Mg
meq Ca ⁺² /100 g soil	400	lbs Ca ⁺² per acre furrow slice
meq K ⁺ /100 g soil	780	lbs K ⁺ per acre furrow slice
meq Na ⁺ /100 g soil	460	lbs Na ⁺ per acre furrow slice
meq Mg ⁺² /100 g soil	109	lbs Mg ⁺² per acre furrow slice
meq Fe ⁺³ /100 g soil	372	lbs Fe ⁺³ per acre furrow slice
meq Zn ⁺² /100 g soil	654	lbs Zn ⁺² per acre furrow slice
meq H ⁺ /100 g soil	20	lbs H ⁺ per acre furrow slice
meq Al ⁺³ /100 g soil	180	lbs Al ⁺³ per acre furrow slice
meq Ca ⁺² /100 g soil	9.2	lbs Ca ⁺² per 1,000 sq.ft. furrow slice
meq K ⁺ /100 g soil	18	lbs K ⁺ per 1,000 sq.ft. furrow slice
meq Na ⁺ /100 g soil	10.6	lbs Na ⁺ per 1,000 sq.ft. furrow slice
meq Mg ⁺² /100 g soil	2.5	lbs Mg ⁺² per 1,000 sq.ft. furrow slice
meq Fe ⁺³ /100 g soil	8.5	lbs Fe ⁺³ per 1,000 sq.ft. furrow slice
meq Zn ⁺² /100 g soil	15	lbs Zn ⁺² per 1,000 sq.ft. furrow slice
meq H ⁺ /100 g soil	0.46	lbs H ⁺ per 1,000 sq.ft. furrow slice
meq Al ⁺³ /100 g soil	4.1	lbs Al ⁺³ per 1,000 sq.ft. furrow slice

Decimal and Millimeter Length Equivalents

Fraction (inch)	Decimals (inch)	Millimeters
1	1.00	25.4
15/16	0.9375	23.812
7/8	0.875	22.225
13/16	0.8125	20.638
¾	0.75	19.05
11/16	0.6875	17.462
5/8	0.625	15.875
9/16	0.5625	14.288
½	0.5	12.70
7/16	0.4375	11.112
3/8	0.3750	9.525
11/32	0.34375	8.731
5/16	0.3125	7.938
9/32	0.28125	7.144

$\frac{1}{4}$	0.25	6.350
15/64	0.234375	5.953
7/32	0.21875	5.556
13/64	0.203125	5.159
1/5	0.200	5.08
3/16	0.1875	4.762
23/128	0.1797	4.564
11/64	0.171875	4.366
1/6	0.167	4.242
21/128	0.1641	4.168
5/32	0.15625	3.969
1/7	0.143	3.633
19/128	0.1484	3.769
9/64	0.140625	3.572
$\frac{1}{8}$	0.1250	3.175
7/64	0.109375	2.778
1/10	0.100	2.540
3/32	0.09375	2.381
5/64	0.078125	1.984
1/16	0.0625	1.588
3/64	0.046875	1.191
1/32	0.03125	0.794
1/64	0.015625	0.397

Slopes

10%	=	6E	=	10:1	33%	=	18E	=	3:1
18%	=	10E	=	6:1	50%	=	26E	=	2:1
25%	=	14E	=	4:1	100%	=	45E	=	1:1