SS-AGR-27

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IFAS Extension

Conversion Factors[1]

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Mass (Weights)

1 U.S. ton = 2,000 lbs = 0.97 metric tons

1 lb = 16 oz = 453.6 g = 0.4356 kg

1 oz = 28.35 g

Area

1 sq mile = 640 A

1/4 mi x 1/4 mi = 40 A

1,320 ft x 1,320 ft = 40A

1 A = 43,560 sq ft = 0.405 ha

1 ha = 2.47A = 10,000 m^2

1 yd^2 = 9 ft^2 = 0.836 m^2

1 ft^2 = 144 in^2 = 0.09 m^2

1 cm^2 = 0.155 in^2

#A = [length (ft) x width (ft)] ÷ 43,560 ft^2

Velocity

1 mph = 5,280 ft/hr = 88 ft/min = 1.467 ft/sec

1 m/sec = 196.85 ft/min = 2.24 mph

1 m/sec = 1.942 knots

Pressure

1 atm = 14.7 psi = 406.8 inches H_2O @ 40 °F

1 atm = 29.92 inches Hg @ 40 °F = 760 mm Hg @ 4 °C

1 atm = 1.01325 bar

1 psi = 27.68 inches H_2O @ 40 °F = 144 lb/ft^2 = 703.06 kg/m^2 @ 4 °C

1 psi = 6.8948 x 10^3 pascals = 6.895 Kpa = 2.036 inches Hg

1 psi = 70.3 g per cm^2

1 pascal = 10 dynes/cm^2 = 1.45 x 10^{-4} psi

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Temperature

°F = (9/5 °C) + 32

°C = 5/9 (°F-32)

°K = °C + 273.16

°R = °F + 459.69

Length

1 mi = 5,280 ft = 1.6093 km

1 yd = 3 ft = 36 in = 91.44 cm

1 ft = 12 in = 30.48 cm

1 in = 2.54 cm

Liquid

1 gal = 231 in^3 = 4 qt = 8 pt = 16 C = 8.4 lb (water)

1 qt = 2 pt = 4 C = 32 fl oz = 0.946 L = 946 ml

1 pt = 2 C = 16 fl oz = 0.473 L = 473 ml = 32 tbsp

1 C = 8 oz = 0.24 L = 240 ml = 0.5 pt = 16 tbsp

1 fl oz = 2 tbsp = 6 tsp = 1.8 in^3 = 0.02957 L = 29.57 ml

1 tbsp = 3 tsp = 0.5 oz = 14.78 ml

1 tsp = 0.166 oz = 4.92 ml

1 ml = 0.0338 fl oz = 1 cc

Commodity Weights

1 bu barley = 48 lbs

1 bu corn = 56 lbs

1 bu cotton = 32 lbs

1 bu cotton bale = 480 lbs

1 bu cowpeas = 60 lbs

1 bu crimson clover = 60 lbs

1 bu oat and fescue = 32 lbs

1 bu rye = 56 lbs

1 bu sorghum, forage = 50 lbs

1 bu sorghum, grain = 56 lbs

1 bu soybeans = 60 lbs

Abbreviations (in alphabetical order)

A = acre

atm = atmospheres

bu = bushel

C = cups

°C = Degrees Celcius

cc = cubic centimeters

cm = centimeter

cm^2 = square centimeters

°F = Degrees Fahrenheit

fl oz = fluid ounces

ft = foot

ft^2 = square feet

g = gram

gal = gallon

ha = hectare

Hg = mercury

hr = hour

in = inch

in^2 = square inches

in^3 = cubic inches

°K = Degrees Kelvin

kg = kilogram

km = kilometer

Kpa = kilopascals

L = liter

lb = pound

m = meter

m^2 = square meters

mi = mile

min = minute

ml = milliliter

mm = millimeter

mph = miles per hour

oz = ounce

psi = pounds per square inch

pt = pint

qt = quart

°R = Degrees Rankin

sec = second

sq = square

tbsp = tablespoon

tsp = teaspoon

yd = yard

yd^2 = square yards