

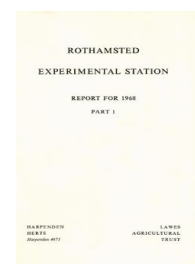
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Conversion Factors

Rothamsted Research

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CONVERSION FACTORS

Factors for the Conversion of British to Metric Units

1 inch (in.)	=	2.540 centimetres (cm)
1 foot (ft) (=12 in.)	=	30.48 cm
1 yard (yd) (=3 ft)	=	0.9144 metres (m)
1 square yard (sq yd)	=	0.8361 sq m
1 acre (=4840 sq yd)	=	0.4047 hectare (ha)
1 ounce (oz)	=	28.35 grams (g)
1 pound (lb)	=	0.4536 kilogram (kg)
1 hundredweight (cwt) (=112 lb)	=	50.80 kg
1 ton (=2240 lb)	=	1016 kg
1 ton (=2240 lb)	=	1.016 metric tons (tonnes)
1 pint	=	0.5682 litre
1 gallon (gal) (=8 pints)	=	4.546 litre
1 fluid ounce = 1/20 pint	=	0.02841 litre = 28.41 ml
1 cubic foot	=	28.32 litre

<i>To convert</i>	<i>Multiply by</i>
oz/acre to g/ha	70.06
lb/acre to kg/ha	1.121
cwt/acre to kg/ha	125.5
tons/acre to kg/ha	2511
tons/acre to tonnes/ha	2.511
gal/acre to litre/ha	11.233

In general reading of the text there will be no great inaccuracy in regarding:

$$1 \text{ lb} = \frac{1}{2} \text{ kg}$$
$$1 \text{ lb/acre} = \text{kg/ha}$$

The following factors are accurate to about 2 parts in 100:

$$1.1 \times \text{lb/acre} = \text{kg/ha}$$
$$11 \times \text{gallons/acre} = \text{litre/ha}$$
$$2\frac{1}{2} \times \text{tons/acre} = \text{tonnes/ha}$$

Plant nutrients

Plant nutrients are best stated in terms of amounts of the elements (P, K, Na, Ca, Mg, S); the old 'oxide' terminology P_2O_5 , K_2O , Na_2O , CaO , MgO , SO_3) is still used in work involving fertilisers and liming since Regulations require statements of P_2O_5 , K_2O , etc.

For quick conversions

(accurate to within 2%) the following factors may be used:

$$\begin{array}{ll} 2\frac{1}{3} \times P = P_2O_5 & \frac{3}{7} \times P_2O_5 = P \\ 1\frac{1}{5} \times K = K_2O & \frac{5}{6} \times K_2O = K \\ 1\frac{2}{5} \times Ca = CaO & \frac{7}{10} \times CaO = Ca \\ 1\frac{2}{3} \times Mg = MgO & \frac{3}{5} \times MgO = Mg \end{array}$$

For accurate conversions:

<i>To convert</i>	<i>Multiply by</i>	<i>To convert</i>	<i>Multiply by</i>
P_2O_5 to P	0.4364	P to P_2O_5	2.2915
K_2O to K	0.8301	K to K_2O	1.2047
CaO to Ca	0.7146	Ca to CaO	1.3994
MgO to Mg	0.6031	Mg to MgO	1.6581

Temperatures

To convert °F into °C subtract 32 and multiply by $\frac{5}{9}$ (0.556)

To convert °C into °F multiply by $\frac{9}{5}$ (1.8) and add 32