

Thank you for using eradoc, a platform to publish electronic copies of the Rothamsted Documents. Your requested document has been scanned from original documents. If you find this document is not readable, or you suspect there are some problems, please let us know and we will correct that.



ROTHAMSTED
RESEARCH

Report for 1968 - Part 1

[Full Table of Content](#)



Conversion Factors

Rothamsted Research

Rothamsted Research (1969) *Conversion Factors* ; Report For 1968 - Part 1, pp 20 - 21 - DOI: <https://doi.org/10.23637/ERADOC-1-123>

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