

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

Rothamsted Experimental Station Report for 1970 Part 2



[Full Table of Content](#)

Conversion Factors

Rothamsted Research

Rothamsted Research (1971) *Conversion Factors* ; Rothamsted Experimental Station Report For 1970 Part 2, pp 258 - 259 - DOI: <https://doi.org/10.23637/ERADOC-1-5>

CONVERSION FACTORS

Factors for the Conversion of Imperial 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 metre (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 = 1.016 metric tons (tonnes) (t)
1 pint	= 0.5682 litre
1 gallon (gal) (=8 pints)	= 4.546 litres
1 fluid ounce = 1/20 pint	= 0.02841 litre = 28.41 ml
1 cubic foot	= 28.32 litres

<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
cwt/acre to tonnes/ha	0.1255
tons/acre to kg/ha	2511
tons/acre to tonnes/ha	2.511
gal/acre to litre/ha	11.233

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

1 lb/acre =	1.1 kg/ha
1 gal/acre =	11 litre/ha
1 ton/acre =	2.5 tonnes/ha

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

1 lb =	0.5 kg
1 lb/acre =	1 kg/ha

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

Factors for the Conversion of Metric to Imperial Units

1 centimetre (cm)	= 0.3937 inch (in.) = 0.03281 ft
1 metre (m)	= 1.094 yards (yd)
1 square metre (sq m)	= 1.196 square yards (sq yd)
1 hectare (ha)	= 2.471 acres
1 gram (g)	= 0.03527 ounce (oz)
1 kilogram (kg)	= 2.205 pounds (lb)
1 kg	= 0.01968 hundredweight (cwt) = 0.0009842 ton
1 metric ton (tonne) (t)	= 0.9842 ton
1 litre	= 1.760 pints = 0.2200 gallon (gal)
1 litre = 1000 millilitres (ml)	= 35.20 fluid ounces = 0.03531 cubic foot

<i>To convert</i>	<i>Multiply by</i>
g/ha to oz/acre	0.01427
kg/ha to lb/acre	0.8921
kg/ha to cwt/acre	0.007966
tonnes/ha to cwt/acre	7.966
kg/ha to tons/acre	0.0003983
tonnes/ha to tons/acre	0.3983
litre/ha to gal/acre	0.08902

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:

$2\frac{1}{3} \times P = P_2O_5$	$\frac{3}{7} \times P_2O_5 = P$
$1\frac{1}{3} \times K = K_2O$	$\frac{5}{8} \times K_2O = K$
$1\frac{2}{5} \times Ca = CaO$	$\frac{7}{10} \times CaO = Ca$
$1\frac{2}{3} \times Mg = MgO$	$\frac{3}{5} \times MgO = Mg$

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