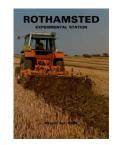
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Rothamsted Experimental Station Report for 1985



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Conversion Factors

Rothamsted Research

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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 (yd ²)	$= 0.8361 \text{ m}^2$
1 acre (ac) $(=4840 \text{ yd}^2)$	= 0.4047 hectare (ha)
1 ounce (oz)	=28·35 grams (g)
1 pound (lb)	= 0.4536 kilogram (kg)
1 hundredweight (cwt) (=112	2 lb = 50.80 kg
1 ton (=2240 lb)	=1016 kg= 1.016 metric tons (tonnes) (t)
1 pint	= 0.5682 litre (1)
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

To convert	Multiply by	
oz ac ⁻¹ to g ha ⁻¹	70.06	
lb ac ⁻¹ to kg ha ⁻¹	1.121	
cwt ac ⁻¹ to kg ha ⁻¹	125.5	
cwt ac-1 to t ha-1	0.1255	
ton ac-1 to kg ha-1	2511	
ton ac ⁻¹ to t ha ⁻¹	2.511	
gal ac ⁻¹ to 1 ha ⁻¹	11.233	

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

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

$$1 \text{ lb}=0.5 \text{ kg}$$

 $1 \text{ lb ac}^{-1}=1 \text{ kg ha}^{-1}$

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

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CONVERSION FACTORS

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 (m ²)	= 1.196 square yards (yd ²)
1 hectare (ha)	= 2.471 acres (ac)
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 (l)	= 1.760 pints=0.2200 gallon (gal)
1 litre=1000 millilitres (ml)	=35.20 fluid ounces= 0.03531 cubic foot (ft ³)

To convert	Multiply by	
g ha ⁻¹ to oz ac ⁻¹	0.01427	
kg ha ⁻¹ to lb ac ⁻¹	0.8921	
kg ha ⁻¹ to cwt ac ⁻¹	0.007966	
t ha ⁻¹ to cwt ac ⁻¹	7.966	
kg ha ⁻¹ to tons ac ⁻¹	0.0003983	
t ha ⁻¹ to tons ac ⁻¹	0.3983	
1 ha ⁻¹ to gal ac ⁻¹	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 fertilizers 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:

$2\frac{1}{3} \times P = P_2O_5$	$^{3}/_{2}\times P_{2}O_{5}=P$	
$1\frac{1}{5} \times K = K_2O$	$5\% \times K_2O = K$	
1⅔×Ca=CaO	$7/10 \times CaO = Ca$	
$1\frac{2}{3} \times Mg = MgO$	$3/5 \times MgO = Mg$	

For accurate conversions:

To convert	Multiply by	To convert	Multiply by	
P ₂ O ₅ to P	0.4364	P to P ₂ O ₅	2.2915	
K ₂ O to K	0.8301	K to K ₂ O	1.2047	
CaO to Ca	0.7146	Ca to CaO	1.3994	
MgO to Mg	0.6031	Mg to MgO	1.6581	

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