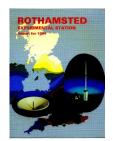
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Rothamsted Experimental Station Report for 1984



Full Table of Content

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 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

331

CONVERSION FACTORS

Factors for the Conversion of Metric to Imperial Units

1 centimetre (cm) =	0.3937 inch (in.)= 0.03281 ft
	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	
$1 \text{ ha}^{-1} \text{ to gal ac}^{-1}$	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:

$2\frac{1}{3} \times P = P_2O_5$	$^{3}/_{2}\times P_{2}O_{5}=P$
$1\frac{1}{5} \times K = K_2O$	$5/6 \times K_2O = K$
$1\frac{2}{5} \times \text{Ca} = \text{CaO}$	$7/10 \times \text{CaO} = \text{Ca}$
$1\frac{2}{3} \times Mg = MgO$	$3/5 \times MgO = Mg$

For accurate conversions:

To convert	Multiply by	To convert	Multiply by
P_2O_5 to P	0.4364	P to P_2O_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