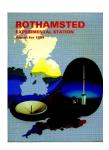
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Rothamsted Experimental Station Report for 1984



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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 lb)= 50.80 kg				
1 ton (=2240 lb)	=1016 kg= 1.016 metric tons (tonnes) (t)			
1 pint	= 0.5682 litre (l)			
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:

1 lb $ac^{-1}=1.1$ kg ha^{-1} 1 gal $ac^{-1}=11$ litres ha^{-1} 1 ton $ac^{-1}=2.5$ t ha^{-1}

In general reading of the text there will be no great inaccuracy in regarding: 1 lb=0.5 kg $1 \text{ lb ac}^{-1}=1 \text{ kg ha}^{-1}$

Temperatures

To convert °F into °C subtract 32 and multiply by $\frac{5}{0}$ (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) =	$35 \cdot 20$ fluid ounces= $0 \cdot 03531$ 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, SO₃) 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:

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