Rothamsted Experimental Station Report for 1969 Part 2

ROTHAMSTED
EXPERIMENTAL STATION

REPORT FOR 1969
PART 2

HARPENDEN
HERTS
Harpenden 4872

LAWES
AGRICULTURAL
TRUST

Conversion Factors / Conversion Tables

Rothamsted Research

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)
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

To convert	Multiply by
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 gallon/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

190

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)	=	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

To convert	Multiply by
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
ka/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:

$$2\tfrac{1}{3} \times P = P_2O_5 \qquad \tfrac{3}{7} \times P_2O_5 = P$$
$$1\tfrac{1}{5} \times K = K_2O \qquad \tfrac{5}{6} \times K_2O = K$$
$$1\tfrac{2}{5} \times Ca = CaO \qquad \tfrac{7}{10} \times CaO = Ca$$
$$1\tfrac{2}{3} \times Mg = MgO \qquad \tfrac{3}{5} \times MgO = Mg$$

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_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

191