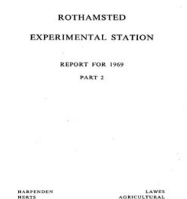


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# Rothamsted Experimental Station Report for 1969 Part 2



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## Conversion Factors / Conversion Tables

### Rothamsted Research

Rothamsted Research (1970) *Conversion Factors / Conversion Tables* ; Rothamsted Experimental Station Report For 1969 Part 2, pp 190 - 191 - DOI: <https://doi.org/10.23637/ERADOC-1-4>

## 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                          |

| <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 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

### 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     |

| <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              |
| 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:

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

### 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             |