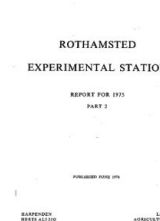


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# Rothamsted Experimental Station Report for 1975 Part 2



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## Conversion Factors

### Rothamsted Research

Rothamsted Research (1976) *Conversion Factors* ; Rothamsted Experimental Station Report For 1975 Part 2, pp 132 - 133 - DOI: <https://doi.org/10.23637/ERADOC-1-10>

## 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 (ac) (=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) (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                             |

| <i>To convert</i>                           | <i>Multiply by</i> |
|---|--------------------|
| oz ac <sup>-1</sup> to g ha <sup>-1</sup>   | 70.06              |
| lb ac <sup>-1</sup> to kg ha <sup>-1</sup>  | 1.121              |
| cwt ac <sup>-1</sup> to kg ha <sup>-1</sup> | 125.5              |
| cwt ac <sup>-1</sup> to t ha <sup>-1</sup>  | 0.1255             |
| ton ac <sup>-1</sup> to kg ha <sup>-1</sup> | 2511               |
| ton ac <sup>-1</sup> to t ha <sup>-1</sup>  | 2.511              |
| gal ac <sup>-1</sup> to l ha <sup>-1</sup>  | 11.233             |

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

$$1 \text{ lb ac}^{-1} = 1.1 \text{ kg ha}^{-1}$$

$$1 \text{ gal ac}^{-1} = 11 \text{ litres ha}^{-1}$$

$$1 \text{ ton ac}^{-1} = 2.5 \text{ t ha}^{-1}$$

*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

## 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 (sq m)           | = | 1.196 square yards (sq yd)                  |
| 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                         | = | 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 <sup>-1</sup> to oz ac <sup>-1</sup>    | 0.01427            |
| kg ha <sup>-1</sup> to lb ac <sup>-1</sup>   | 0.8921             |
| kg ha <sup>-1</sup> to cwt ac <sup>-1</sup>  | 0.007966           |
| t ha <sup>-1</sup> to cwt ac <sup>-1</sup>   | 7.966              |
| kg ha <sup>-1</sup> to tons ac <sup>-1</sup> | 0.0003983          |
| t ha <sup>-1</sup> to tons ac <sup>-1</sup>  | 0.3983             |
| l ha <sup>-1</sup> to gal ac <sup>-1</sup>   | 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<sub>2</sub>O<sub>5</sub>, K<sub>2</sub>O, Na<sub>2</sub>O, CaO, MgO, SO<sub>3</sub> is still used in work involving fertilisers and liming since Regulations require statements of P<sub>2</sub>O<sub>5</sub>, K<sub>2</sub>O, etc.

### For quick conversions

(accurate to within 2%) the following factors may be used:

|                                  |                                 |
|----------------------------------|---------------------------------|
| $2\frac{1}{3} \times P = P_2O_5$ | $\frac{3}{7} \times P_2O_5 = P$ |
| $1\frac{1}{5} \times K = K_2O$   | $\frac{5}{8} \times K_2O = K$   |
| $1\frac{2}{5} \times Ca = CaO$   | $\frac{7}{10} \times CaO = Ca$  |
| $1\frac{2}{3} \times Mg = MgO$   | $\frac{3}{5} \times MgO = Mg$   |

### For accurate conversions:

| <i>To convert</i>                  | <i>Multiply by</i> | <i>To convert</i>                  | <i>Multiply by</i> |
|------------------------------------|--------------------|------------------------------------|--------------------|
| P <sub>2</sub> O <sub>5</sub> to P | 0.4364             | P to P <sub>2</sub> O <sub>5</sub> | 2.2915             |
| K <sub>2</sub> O to K              | 0.8301             | K to K <sub>2</sub> O              | 1.2047             |
| CaO to Ca                          | 0.7146             | Ca to CaO                          | 1.3994             |
| MgO to Mg                          | 0.6031             | Mg to MgO                          | 1.6581             |