1-1-1972

Metric conversion for agriculture

Department of Agriculture, Western Australia

Follow this and additional works at: https://researchlibrary.agric.wa.gov.au/journal_agriculture4

Part of the Agricultural Education Commons, and the Special Functions Commons

Recommended Citation
Available at: https://researchlibrary.agric.wa.gov.au/journal_agriculture4/vol13/iss3/3

This article is brought to you for free and open access by Research Library. It has been accepted for inclusion in Journal of the Department of Agriculture, Western Australia, Series 4 by an authorized administrator of Research Library. For more information, please contact jennifer.heathcote@agric.wa.gov.au, sandra.papenfus@agric.wa.gov.au.
IMPORTANT DISCLAIMER

This document has been obtained from DAFWA's research library website (researchlibrary.agric.wa.gov.au) which hosts DAFWA's archival research publications. Although reasonable care was taken to make the information in the document accurate at the time it was first published, DAFWA does not make any representations or warranties about its accuracy, reliability, currency, completeness or suitability for any particular purpose. It may be out of date, inaccurate or misleading or conflict with current laws, polices or practices. DAFWA has not reviewed or revised the information before making the document available from its research library website. Before using the information, you should carefully evaluate its accuracy, currency, completeness and relevance for your purposes. We recommend you also search for more recent information on DAFWA's research library website, DAFWA's main website (https://www.agric.wa.gov.au) and other appropriate websites and sources.

Information in, or referred to in, documents on DAFWA's research library website is not tailored to the circumstances of individual farms, people or businesses, and does not constitute legal, business, scientific, agricultural or farm management advice. We recommend before making any significant decisions, you obtain advice from appropriate professionals who have taken into account your individual circumstances and objectives.

The Chief Executive Officer of the Department of Agriculture and Food and the State of Western Australia and their employees and agents (collectively and individually referred to below as DAFWA) accept no liability whatsoever, by reason of negligence or otherwise, arising from any use or release of information in, or referred to in, this document, or any error, inaccuracy or omission in the information.
Metric conversion for agriculture

Farmers are already becoming involved with metric units and by 1974 conversion of the farming industry will be well advanced. Wool sales converted to metric measurements in August, 1971, and sales by the various grain marketing boards will be largely in metric terms in the 1972 harvest. Weather information to the public has been given in metric terms since September 1.

Rural industry—in common with other sectors—will have to think increasingly in metric terms. An experienced farmer can guess fairly accurately a steer or lamb's live weight, or a ripening crop's likely yield in bushels per acre. This ability will need to be translated into metric terms.

Farmers will use the metric system in buying goods, selling their produce and running their farms. Generally they will be concerned with common units only—length, area, volume, mass (weight) and weather details.

There is no direct relationship between imperial and metric units and it will be important to forget the imperial system completely as soon as a "feel" for metric quantities is attained. The following examples show the approximate relationships between the two systems. The commonly used dividers and multipliers used to make larger and smaller units from base units are milli (thousandth; 1 millilitre = 0.001 litre) and centi (hundredth; 1 centimetre = 0.01 metre).

Length

<table>
<thead>
<tr>
<th>Metric</th>
<th>Equivalent</th>
</tr>
</thead>
<tbody>
<tr>
<td>10 millimetres (mm)</td>
<td>1 centimetre (cm)</td>
</tr>
<tr>
<td>100 centimetres</td>
<td>1 metre (m)</td>
</tr>
<tr>
<td>1,000 millimetres</td>
<td>1 metre</td>
</tr>
<tr>
<td>1,000 metres</td>
<td>1 kilometre (km)</td>
</tr>
</tbody>
</table>

A metre is 39.37 inches—a little longer than a yard. A kilometre is about 0.62 mile. A chain (22 yards) is very close to 20 metres in length. A furlong (220 yards) is very close to 200 metres in length. An inch contains 25.4 mm. A "hand" (4 inches) is about 100 mm or 10 cm. Therefore, a 14-hand horse is 140 cm tall at the withers. A 4 in. x 2 in. scantling is 100 mm x 50 mm. A 300 mm rule is roughly the size of a conventional foot rule.

Area

- square metre (m²) = 1 hectare (ha)
- 10,000 square metres = 1 hectare (ha)

In Europe the term "are" has had long standing use as the description of an area of 100 square metres. Australia will adopt the hectare (100 "ares"; or 10,000 m²) in place of the acre. Areas less than a hectare will be expressed in square metres.

A hectare contains almost 2½ acres (2.47 acres).

A 100-acre paddock is a 40-hectare paddock.

A 25-acre paddock is a 10-hectare paddock.

Volume (Dry)

1,000,000 cubic centimetres (cm³) = 1 cubic metre (m³)

There will be no equivalent to the bushel in the metric system.

As we now use the bushel it is in fact a measure of mass (weight). In the metric system weights will be measured in kilograms (see below) and dry volumes in cubic metres or decimal fractions thereof.

Grain densities now expressed in pounds per bushel will be expressed in kilograms per hectolitre, as this is international practice.

Volume (Liquid or Gas)

1,000 millilitres (ml) = 1 litre (l)
1,000 litres = 1 cubic metre (m³)

A litre contains 1⅔ pints. It is somewhat smaller than a quart.

A gallon contains approximately 4⅓ litres.

A 4-gallon can holds 18 litres.

A 44-gallon drum holds a little more than 200 litres.

A 7-ounce beer glass holds 200 millilitres.

Mass

1,000 grams (g) = 1 kilogram (kg)
1,000 kilograms = 1 tonne (t)

One ton (avoirdupois) contains 2,240 lb.

One tonne contains 2,204 lb.

One pound is one-tenth (10 per cent) less than a half a kilogram.

An ounce is 28.4 grams.

One hundredweight is very close to 50 kilograms (50.8).

Half a hundredweight is very close to 25 kilograms.

Temperature reports

Temperatures will be measured in degrees Celsius (°C).

- Hot 30°C = 86°F
- Warm 20°C = 68°F
- Mild 15°C = 59°F
- Cold 5°C = 41°F
- Freezing 0°C = 32°F

Temperatures below freezing have a minus sign; for example —5°C (23°F).

Rainfall will be measured in millimetres.

1 millimetre = 4 points
25 millimetres = 100 points = 1 inch

Handy rules

1 ton per acre = 2½ tonnes per hectare.
1 lb. per acre is a little more than 1 kilogram per hectare.
1 gallon per acre is 11 litres per hectare approximately.
10 metres is 11 yards approximately.
10 square metres is 12 square yards approximately.
10 cubic metres is 13 cubic yards approximately.

Metric Conversion Board

Journal of Agriculture Vol 13 No 3, 1972