

Technical Communication — Tables and Figures

Successfully communicating complex technical, scientific material in tables and figures is a skill that only comes with patience and practice. This is an essential skill, whether you are writing an assignment, a scientific paper, or a technical report. Information in this flyer is designed to help improve the presentation tables and figures in your documents.

Tables and Figures can often save you a large amount of words, illustrating quickly key findings. In this flyer, Figures include diagrams, pictures and graphs.

Tables

A well presented **table** should be able to stand alone and be placed in context by the text surrounding it. Therefore, it has the following properties:

1. The table is described in the text before it appears. Tables should appear close to the text where it is first mentioned;
2. Clear and concise row and column headings as required. Any units required to understand the table should be included in these headings;
3. Contents that are well organised, so it is easy for readers to find the information they need;
4. A caption that summarises the information presented in the table and appears above the table; and
5. Rules (lines) should be used sparingly and then only to guide the reader in interpreting the data.

Table captions are normally placed above the table, and indicate that the order in which the table appears (see Table 1 for an example). Note this means that Table 3, should appear after Table 1 and 2, but before Table 4. By numbering tables this way they can be simply referred to in the text as Table 1 etc.

Consider Table 1, a table which does not contain all of the properties of a good table.

Table 1: Table without the use of the properties for well presented tables.

Black Walnut	24.6	0.75	455	45
Pawpaw	12.2	0.4	230	102
Red Mulberry	9.9	0.4	101	25

Table 1 also does not have sufficient headings. In particular, there are no column headings. At the moment the reader is unsure exactly what the numbers actually refer to. The table needs the headings of “Average Height”, “Average Tree Diameter”, “Average Leaf Length”, and “Average Fruit Length”, to explain the numeric data.

The next error evident in Table 1 is that there are no units specified, in particular, are all the units the same, or are they different. In this case, the units are all lengths, but they might use different units. Units can be included in tables in three ways: i) in each cell; ii) as a footnote to the table; or iii) in the headings. Adding the units into each cell gives unambiguous data; however, it introduces clutter which could distract the reader. Units added using footnotes can be difficult to find. As a rule, it is better to include the units in the headings.

Table 1 also does not have a caption which explains the information given in the table. The only information which a reader can gain from this table is that the information refers to trees. The reader does not know exactly what the data presented is or how it relates. A caption which would be more informative would be: “Size characteristics of selected fruit trees”.

Table 1 also has an excessive number of rules (horizontal and vertical lines). Rules should be used sparingly, mainly to guide the reader to the information. Table 2 illustrates the improvement in Table 1 by following the properties of a good table.

Table 2: Size characteristics of selected fruit trees.

Species	Average Height (m)	Average Trunk Diameter (m)	Average Leaf Length (mm)	Average Fruit Length (mm)
Black Walnut	24.6	0.75	455	45
Pawpaw	12.2	0.4	230	102
Red Mulberry	9.9	0.4	101	25

Figures

Similarly to a well presented table, a good **figure** has similar properties. The properties are outlined below:

1. A caption that summarises the information presented. This caption is normally placed below the figure and also indicates the order in which the figure appears. Note the word figure is normally used as a generic term for diagrams, photos, and graphs in a document;
2. The contents are well organised, so that it is easy for the readers to interpret the information;
3. Legends, labels, etc are clear and concise;
4. Figures are introduced in the text and appear close to where they are first mentioned; and
5. The style of the figure is appropriate for the information being conveyed.

Figures are referenced in text the same as tables, except that the word “Figure” replaces the “Table” in the text. Figure 1, shows an example of a good figure. Figure 1 includes an informative caption; legends, labels which include necessary units.

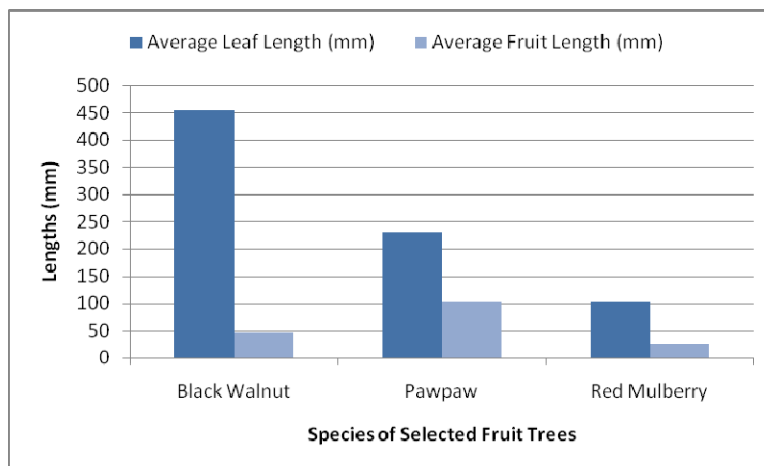


Figure 1: Average leaf and fruit length for selected fruit trees.

For more information please see the below references.

H. Butler, C. McDonald & T. Passmore, (eds) 2008, *MAT1000 Mathematics Fundamentals Study Book*, USQ.

Style Manual for authors, editors and printers, 2007, 6th edn, John Wiley & Sons Australia, Ltd.