socioeconomics of sustainable insect farming in

Papua New Guinea

IFTA Staff Excel Training Manual

INTRODUCTION

Microsoft Excel is a program designed to create spreadsheets. A spreadsheet is a large sheet of squared paper where the squares can be used in calculation with each other. The program consists of worksheets containing both columns and rows. The combination of a column and a row make up a **"cell"**. The following manual is a basic guide to using Microsoft Excel.

This is what you will see when you open up a spreadsheet in Microsoft Excel:
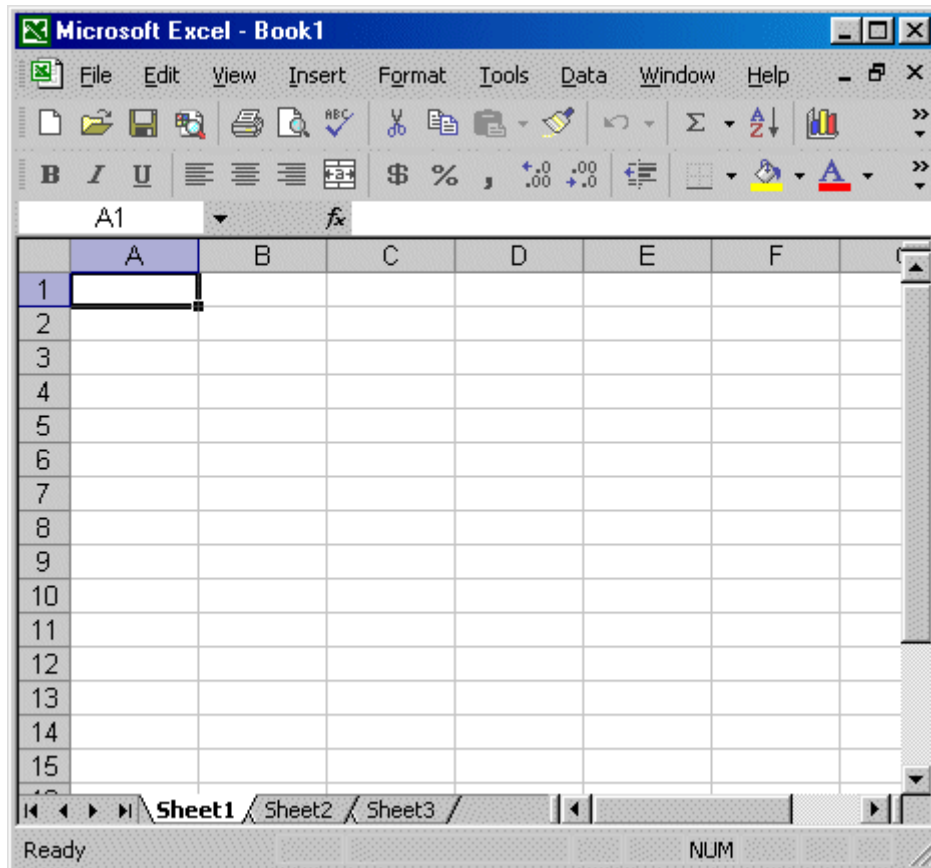
BASIC FEATURES

Title Bar:

The Title Bar is located at the top of every screen. On the Title Bar, the name of the workbook you are currently using will be displayed.
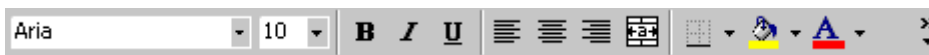
Menu Bar:

The Menu bar is located on top of the spreadsheet (File, Edit, View, Insert, Format, Tools, Table, Window and Help) directly below the title bar. You use the menu to give instructions to the program. When you point with the mouse on a menu option and click the left mouse button, a drop-down menu will appear. You can use the left and right arrow keys on the keyboard to move across the menu bar and the up and down arrow keys to move up and down the drop-down menu. To choose an option, highlight the item on the drop-down menu by left clicking the mouse.

Toolbars:

Standard Toolbar

Formatting Toolbar

Toolbars provide shortcuts to the commands found on the menu bar. They are generally located just below the Menu Bar. The two most commonly used toolbars are *Standard and Formatting.* To ensure that these toolbars are available, follow the steps outlined:

1. Point to *View,* located on the menu bar.
2. Click the left mouse button.
3. Press the down arrow key until *Toolbars* is highlighted.
4. Press the right arrow key.
5. *Standard and Formatting* should have a check mark next to them. If both have a checkmark, this means that they are available and you can press Esc. two times to close the menu. If they do not have checkmarks, left click next to the name and a check mark will appear.
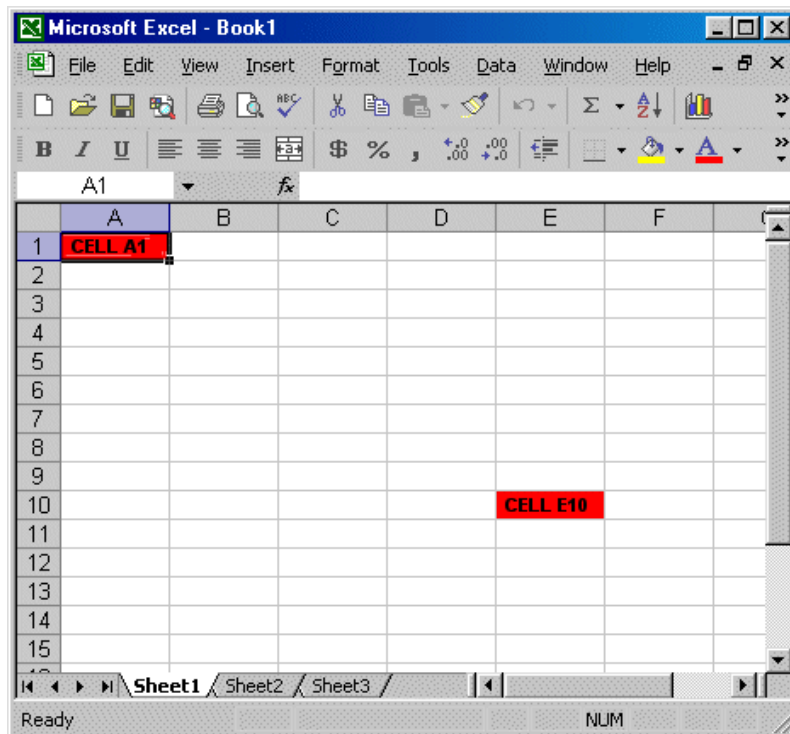
The Formula Bar:

The Formula bar is found just below the toolbar. It should be turned on at all times as it displays cell entries and allows you to edit cells if you need to make changes.

On the left side of the formula bar, you will see a box stating what cell you are in (in this example it is A1) and on the other side of this bar, you will see the formula shown.

Worksheets:

Spreadsheets are made up of worksheets. You will see at the bottom of the screen that there are different sheets (Sheet 1, Sheet 2, Sheet 3). You can go back and forth to different sheets within the same file by clicking on the sheet tabs at the bottom of the screen. As mentioned earlier, each worksheet is made up of columns and rows. The combination of a row and a column make up a "cell". As you can see in the above diagram, the cell located in the upper left hand corner of the document is cell A1 (column A and row 1). Cell E10 is under column E and row 10 as shown in the above example.

FUNCTIONS/FORMATTING

Important Keys for Moving Around the Spreadsheet:

The Up and Down Arrow Keys – Use the up and down arrow keys to move up and down the spreadsheet one cell at a time.

The Right and Left Arrow Keys – Use the right and left arrow keys to move to the right and left of the spreadsheet.
OR:
The Tab Key – The tab key can also be used to move across the page to the right, one cell at a time. To move to the left, hold down the shift key and then press Tab.

Page Up and Page Down Key – The Page Up and Page Down keys move the spreadsheet one page at a time.

Selecting Cells:
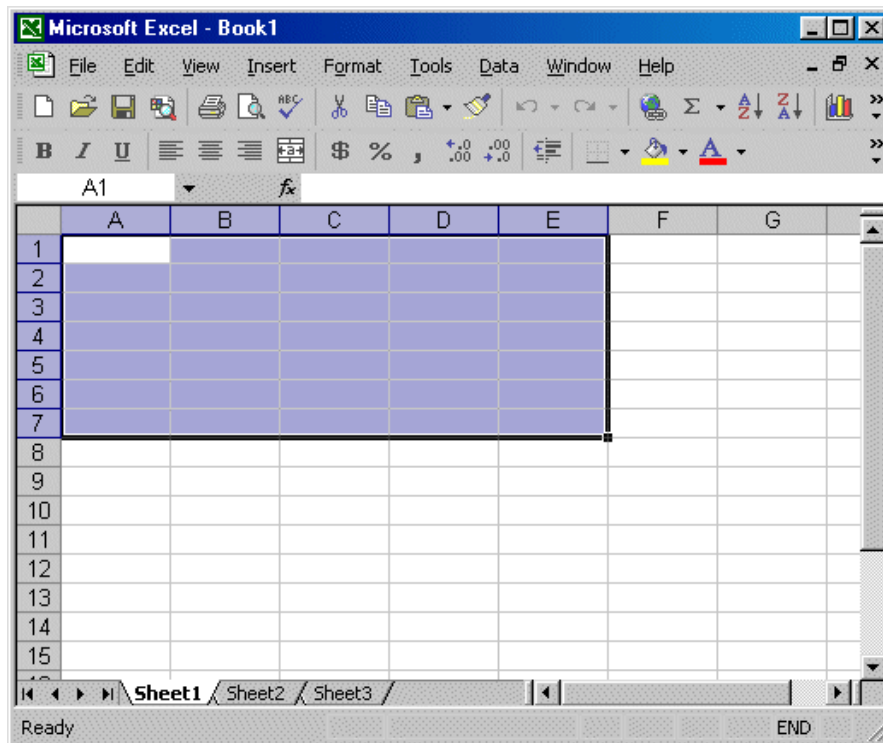
If you want to perform an action on a group of cells, you must select the cells by highlighting them. You can do this by holding down the left mouse button and dragging the mouse over the area that you wish to select.

Entering Data Into a Cell:

Place the cursor in the cell of your choice and type the text. The backspace key will erase characters if necessary. Press Enter when you are finished.

- Once you type a word into excel once, it will memorize that word and the next time you type the first two letters of that word, it will automatically appear in the cell as a suggestion. If you wish to accept the suggestion, press Enter and the word will remain in the cell. If you wish to reject the suggestion, press Delete and type in the new word. This is a great time saver!
- When you enter text into a cell, it will automatically go to the left hand side of the cell.
- When you enter a number into a cell, it will automatically go to the right hand side of the cell.
- If you want to centre the data, you can click on the following icon:

- If you want to change the data to the left side, you can use the following icon:

- If you want to change the data to the right side, you can use the following icon:

Adding Bold, Italic and Underline:

You can bold, underline, or italicise text in Microsoft Excel. This is useful to make headings and titles stand out. Once you have entered the information in the cell, highlight the word by clicking the left mouse button and pressing any of the following buttons on the toolbar:
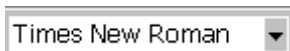

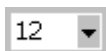**Bold**

Italic

Underline

OR
You can also use the menu option (*Format>Font*)

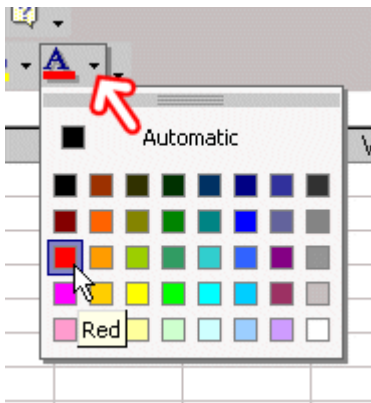**Changing the Font, Font Size and Font Color:**
Click on the cell you wish to change and click on the appropriate button on the toolbar:

To change the font style

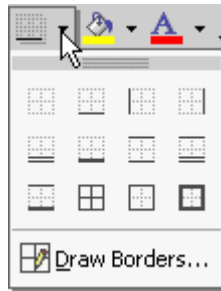To change the font size

To change the font color
OR
You can also use the menu option (*Format>Font*)

Autoformat:

Go to *Format>AutoFormat* if you wish to highlight some rows and smarten up the appearance of your spreadsheet. There are many templates to choose from. Select one and press OK. Your spreadsheet will automatically be formatted in this style.

Borders:

You can divide your spreadsheet up into appropriate areas by using borders (lines). Highlight the cells you wish to border and click the icon shown above on the Toolbar. You can then choose from a variety of borders and lines.

Deleting/Changing a Cell Entry:
To delete an entry in a cell or a group of cells, place the cursor in the cell and press delete or backspace. To change the data, type the new data over the old and it will be replaced. If you wish to change only part of the data, press the F2 key or click on the formula bar to make the changes.

Changing the Size of a Column/Row:
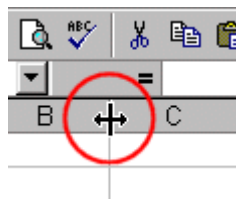
If the data you have typed into a cell is too long to fit, you may wish to increase the size of the column/row. To do this, place the cursor on the line in between the A and B columns (for example). The cursor will turn into two arrows and this will allow you to drag the column by pressing the left mouse button. The same action can be performed on rows.

Copying/Cutting/Pasting Information:
If you wish to delete or copy information from one cell to another, you can do this by choosing *Edit>Cut/Copy* from the menu bar. When you move to the cell that you wish to copy the entry, choose *Edit>Paste* from the menu.

Filling Cells Automatically:

You can use Microsoft Excel to automatically fill a column with a series. For example, if you type Sunday in cell A1 and then find the small black square in the lower right corner of the highlighted area and drag it downward with your mouse, the remainder of the days of the week will automatically appear. You can also do this with months, times, etc.

Inserting Rows/Columns:

There will be times when you need to insert a row or a column. This can be done by clicking the column/row beside where you want to add to and choosing *Insert>Rows/Columns*. In the same way, if you wish to delete a column/row, simply click on the row/column and click *Edit>Delete* from the Menu Bar.

MATHEMATICAL CALCULATIONS

In Microsoft Excel, you can enter numbers and mathematical formulas into cells. This will enable the program to automatically make calculations for you. Excel always tries to interpret your data as text, numbers, dates or times. If you mix text and numbers, your data will be understood as text. The following are the symbols for the calculations:

+ Addition
- Subtraction
* Multiplication
/ Division
^ Exponential

Notice that as you type formulas, they will appear on the Formula Bar (*fx)* above.

WHEN YOU TYPE A FORMULA, YOU MUST ALWAYS TYPE = FIRST

Addition:
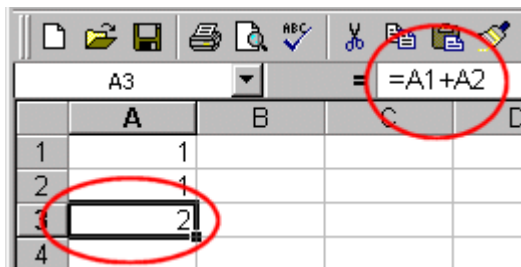
If you are typing numbers into cells A1 and A2 and want to have the sum of the two cells, type =A1+A2 in cell A3. Press Enter. The program will automatically add the numbers. (Notice that the formula is displayed on the Formula Bar above)

OR
You can use the AutoSum Icon on the Standard Toolbar. Type the numbers into cells A1 and A2 and highlight them with your left mouse. Click the AutoSum button as shown below and the program will automatically add the numbers.
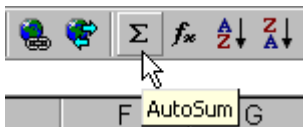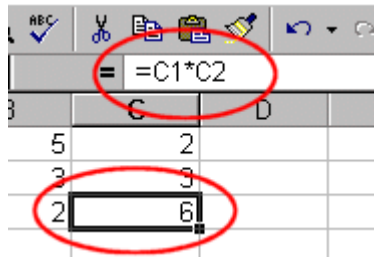

Subtraction:
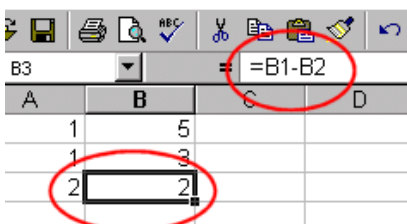
If you are typing numbers into cells B1 and B2 and want to subtract the two cells, go to cell B3 and type =B1-B2. Press Enter. The program will automatically subtract the numbers in the cell underneath.

Multiplication:

If you are typing numbers into cells C1 and C2 and want to multiply them, go to cell C3 and type =C1*C2. Press Enter. The program will automatically multiply the numbers.

Division:
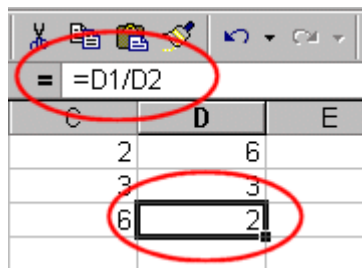
If you are typing numbers into cells D1 and D2 and want to divide them, go to cell D3 and type =D1/D2. Press Enter. The program will automatically divide the numbers.

Formatting Numbers:
Numbers should be formatted so that they all have the same number of decimal places. To do this, click on the Increase/Decrease Decimal Icons as show below. The standard number of decimal places to use is usually two.

You can also change the form of your numbers (percentage, currency, etc.) by using the following buttons on the toolbar:

Functions
Functions allow you to quickly and easily find an average or a count of the number of items in a list, etc. The colon implies that you are including all the cells in between the two that are mentioned.

Here are some examples of functions and their purpose:

=SUM(A1:A17)	A quicker method of adding numbers in a series
=AVERAGE(B1:B3)	Finds the average of all the numbers in the series
=MIN (B1:B3)	Finds lowest number in a series of numbers
=MAX(B1:B7)	Finds highest number In a series of numbers

CREATING CHARTS

In Microsoft Excel, you can represent numbers in a chart. It is sometimes hard to understand and interpret data taken from a spreadsheet alone and a chart can help to make the data clear. You can choose from a variety of chart types and the Chart Wizard will help you. As you change your data, the chart will be automatically updated.

For example, the following entry in Microsoft Excel creates the chart shown below:

Sections	Number of Employees
Administration	4
Finance & Revenue	6
Infrastructure	3
Health & Social Services	4

Madang Urban Local Level Government

Number of Employees

- Administration
- Finance & Revenue
- Infrastructure
- Health & Social Services
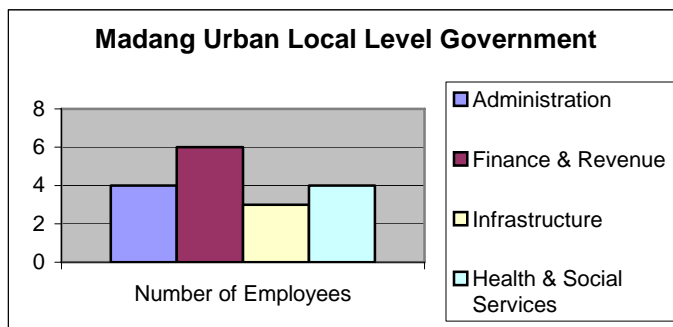
Creating a column chart:
1. Begin by creating the spreadsheet that you wish to chart. Once this is created, you are ready to start your chart.
2. Highlight the cells that you wish to have in your chart by left clicking and dragging the mouse to select the appropriate area.
3. Choose *Insert>Chart* from the menu.
4. The Personal Guide will appear in the bottom right hand corner of your spreadsheet asking if you want help. If you do not want help, choose No and he will disappear.

(*NOTE: To undo any step and return to the previous stage, click on the **Back** button. If you press Enter by accident instead of Next, the chart will automatically be created. If this happens, press delete and start the chart from the beginning again.*)

5. Next you must select the type of chart you wish to create. "Column" is the most common. Then you must choose the Chart Sub-Type. "Clustered column" is the most common.
6. Click on Next.

7. Type the title of the chart in the "Chart Title" field.
8. Click on Finish
9. Your chart will appear on the spreadsheet
10. It is possible to copy the chart into a word document if you wish. Just right click with your mouse on the graph, click "copy" and then go into the word document and right click again and click "paste". Your image will then appear in the word document.
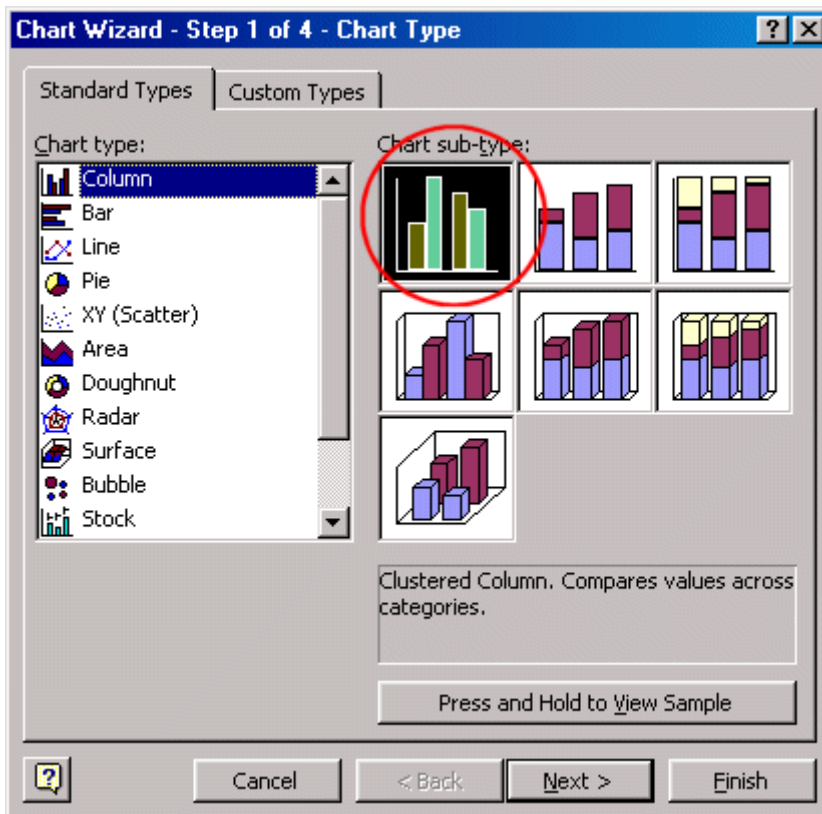
This is what the Chart Wizard Looks Like

Changing the Size and Position of a Chart:
When you select a chart, squares will appear on the right and left sides, top and bottom, and the corners of the chart. If you click on any of these squares, you can increase/decrease the chart proportionally. If you wish to move the chart, you must click on the chart and drag it with your mouse.

Editing your Chart:

Once your chart has been created, you can edit it by using the Chart toolbar. If the Chart toolbar is not already available, you can choose *View>Toolbars>Chart* from the menu.

Saving/Opening a File:

To save a file, choose *File>Save as* from the menu and type in the name of the file. Click Save and then you can close the program. To open the file, choose *File>Open* from the menu, select the name of the spreadsheet you wish to open and double click on it.

Printing a File:

The simplest way to print is to click on the Print icon located on the Standard toolbar however the standard print layout might not be especially suited to a spreadsheet. It is recommended to go *File>Print Preview* as this will show you exactly how your printer will print the document. There are various print options. In *Print Preview*, you can use the "Setup" option to select the "Landscape" printing option. It is much wider and is better for spreadsheet printing. You can use the scaling area of this dialog box to fit your printout onto a single page (Select Fit to one page wide by one page tall and click OK).