Sorting Data

The simplest method of analysing data in Excel is to organise the data by sorting it. As a result of sorting similar items in a list appear adjacent to each other in a particular order that you specify. A block of data can be sorted by one or more of its columns. The data shown below (*Fig.1*) is unsorted, the rows appearing in random order down the sheet. This data can be simply organised by *Year*, for example, by sorting by the *Year* column (column *A*). This arranges the data in ascending (A-Z) or descending (Z-A) order. Sorting a block of data by a column causes the entire block to be rearranged so, in this example, the rows containing the oldest year come first (*Fig.2*).

	A	B	C	D	E	F	
1	*Year*	*Month*	*CountryFrom*	*CountryTo*	*Commodity*	*Tonnes*	
2	2000	1	USA	United Kingdom	Wheat	16182	
3	2005	2	USA	United Kingdom	Rice	11398	
4	2002	6	Mexico	Portugal	Wheat	17497	
5	2005	3	Canada	Netherlands	Soybeans	15627	
6	2004	9	Brazil	Italy	Maize	10748	
7	2000	12	Argentina	Germany	Maize	11875	
8	2000	12	Mexico	Netherlands	Rice	11370	
9	2006	5	Mexico	Netherlands	Barley	8325	
10	2005	10	USA	Belgium	Barley	8834	

Fig.1 Unsorted data.

	A	B	C	D	E	F	
1	*Year*	*Month*	*CountryFrom*	*CountryTo*	*Commodity*	*Tonnes*	
2	2000	1	USA	United Kingdom	Wheat	16182	
3	2000	12	Argentina	Germany	Maize	11875	
4	2000	12	Mexico	Netherlands	Rice	11370	
5	2000	8	USA	Germany	Rye	5980	
6	2000	6	Argentina	Spain	Wheat	16809	
7	2000	7	Argentina	France	Rice	8534	
8	2000	4	Canada	Spain	Barley	6900	
9	2000	9	Argentina	Netherlands	Wheat	19837	
10	2000	9	Argentina	Netherlands	Wheat	15065	

Fig.2 Data sorted by Column A (Year).

To sort by a single column simply select a single cell in the column by which you want to sort then click the **Sort A-Z** button on the **Data** tab of the ribbon (*Fig.3*). There is also a **Sort & Filter** button on the **Home** tab of the ribbon which expands to offer the same options (*Fig.4*).
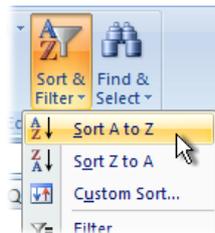

Fig.3 Sorting via the Data tab.

Fig.4 Sorting via the Home tab.

It is very important to remember to select just a single cell when sorting this way. Excel automatically expands the selection to select the entire block. If you select more than one cell there is a danger that only the selected cells will be sorted and the remainder of the block will remain unsorted. In Excel 2007 a warning is displayed (*Fig.5*) when there is additional data adjacent to the cells you selected and you are offered the option to expand the selection. Sometimes you might have good reason to want only the selected cells sorted. (NOTE: Versions prior to Excel 2003 did not reliably warn the user.)
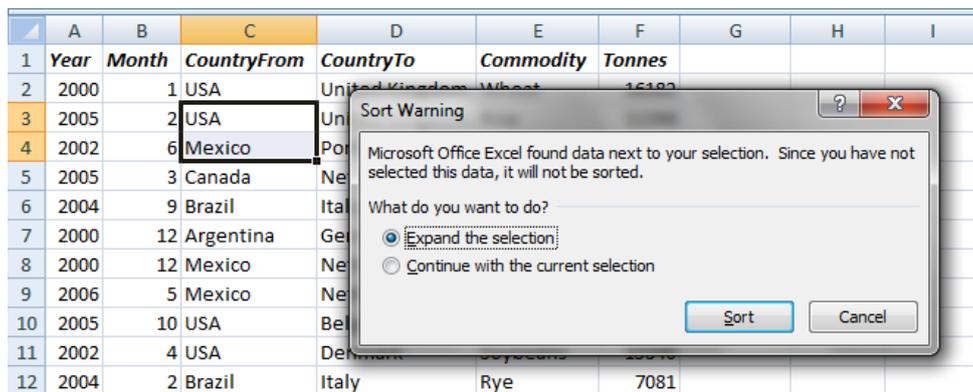

Fig.5 Excel displays a Sort Warning.

If you need to sort your data by more than one column you need to provide Excel with additional information. As well as specifying the sort direction you need to tell Excel which columns you want to sort by and in what order. For a multi-column sort select any cell within the data and click the **Sort** button on the **Data** tab or choose **Sort & Filter > Custom Sort** on the **Home** tab. This displays the **Sort** dialog box (*Fig.6*) in which you can choose the parameters for your sort. Excel 2007 can apply up to 64 sort levels. Earlier versions of Excel were limited to just 3 sort levels.
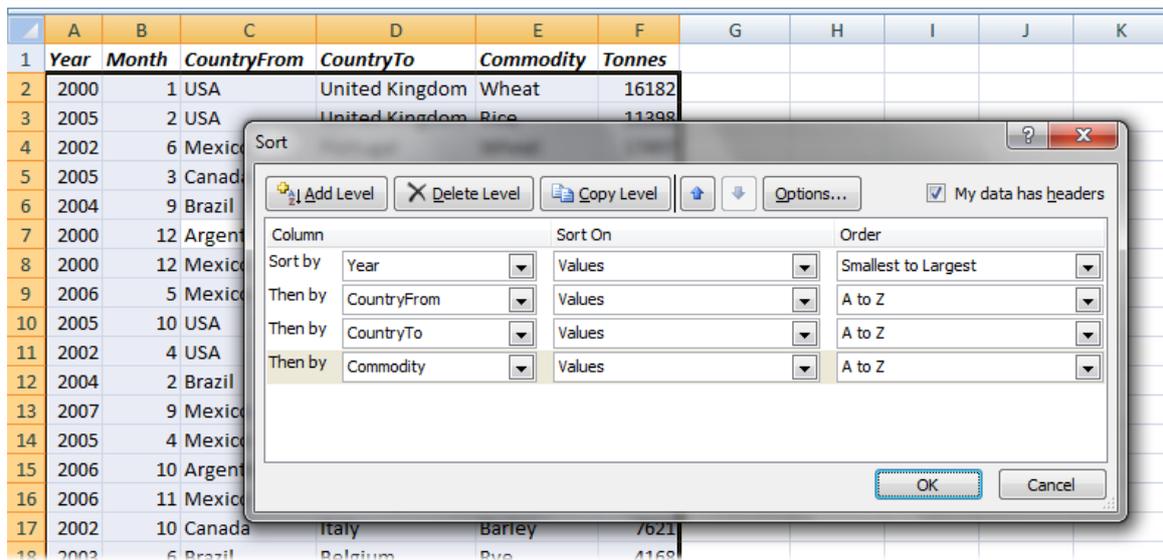
Fig.6 Sorting by multiple columns.

In this example (*Fig.7*) the data has been sorted by four of its columns (4 levels): *Year*, *CountryFrom*, *CountryTo* and *Commodity*. Excel automatically detects whether or not the data has a header row. It does this by comparing the first row of data with the rest. If the data types are different, the first row is text but the remainder of the column is numeric, or if the first row is formatted differently Excel guesses that the first row is a header and does not include it in the sort. This method is quite reliable but it is always wise to check in case Excel has guessed wrongly.

Fig.7 The data has been sorted by four columns.

Additional sort options are available. Data can be sorted left-to-right instead of the usual top-to-bottom, and a sort can be made case sensitive where upper and lower case letters are regarded as different. Find these commands by clicking the **Options** button of the **Sort** dialog box.