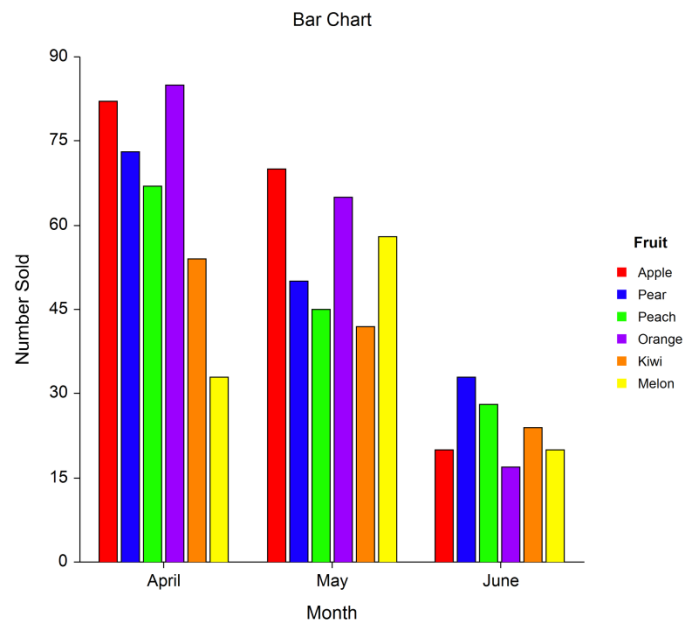


Chapter 141

Bar Charts

Introduction

Bar charts are used to visually compare values to each other. This chapter gives a brief overview and examples of simple bar charts and two-factor bar charts. The orientation of a bar chart may be vertical or horizontal. Below is an example of a vertical bar chart with two factors (fruit and month).



Data Structure

Data for a bar chart are entered in columns. Each numeric data value becomes a bar. The simple bar chart procedure gives a bar chart for each column of data. The two-factor bar chart combines columns of data into a single chart. Below is an example of data ready to be charted. These data are stored in the Fruit dataset.

Fruit Dataset

| Fruit | April | May | June | Total |
|--------|-------|-----|------|-------|
| Apple | 82 | 70 | 20 | 172 |
| Pear | 73 | 50 | 33 | 156 |
| Peach | 67 | 45 | 28 | 140 |
| Orange | 85 | 65 | 17 | 167 |
| Kiwi | 54 | 42 | 24 | 120 |
| Melon | 33 | 58 | 20 | 111 |

Bar Chart Window Options

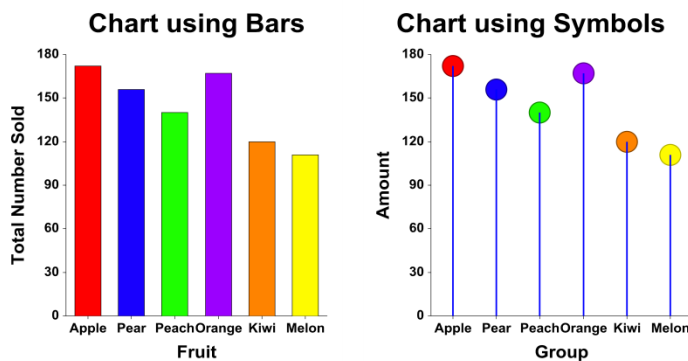
This section describes the specific options available on the Bar Chart window, which is displayed when the Bar Chart button is clicked. Common options, such as axes, labels, legends, and titles are documented in the Graphics Components chapter.

Bar Chart Tab

Plot Type Section

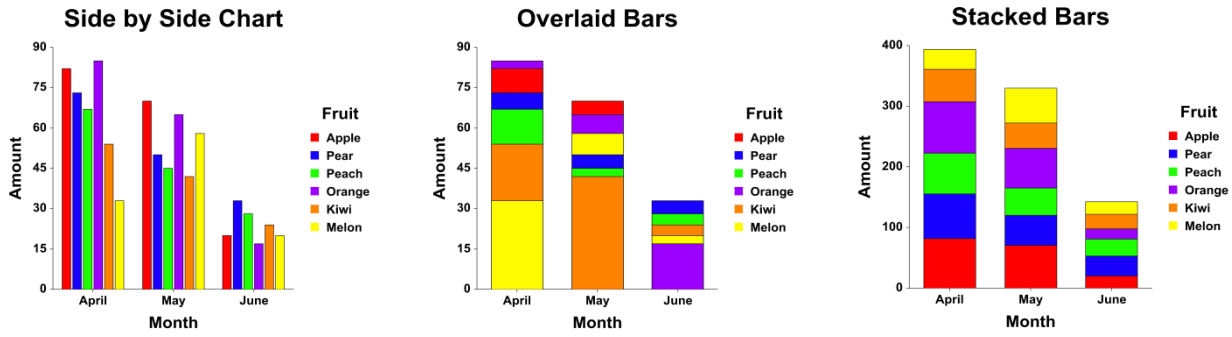
You can create a chart that displays either bars or symbols using the options in this section.

One Factor



Bar Charts

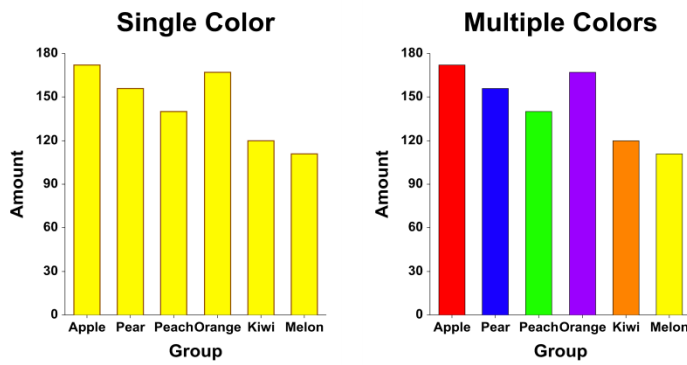
Two Factors



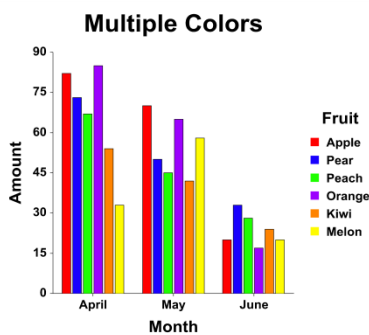
Bars or Symbols Section

You can specify the format of either the bars or symbols using the options in this section.

One Factor



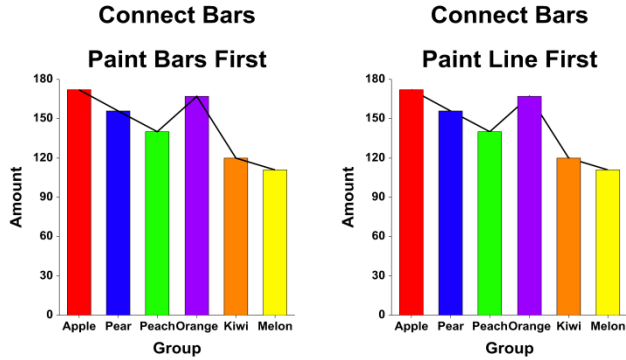
Two Factors



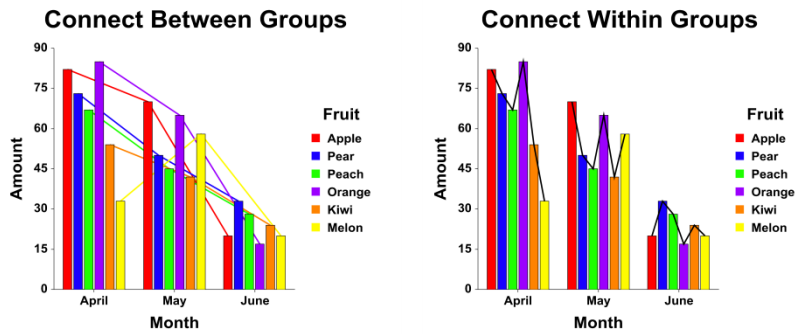
Connecting Lines Section

You can add connecting lines either between or within groups using the options in this section.

One Factor

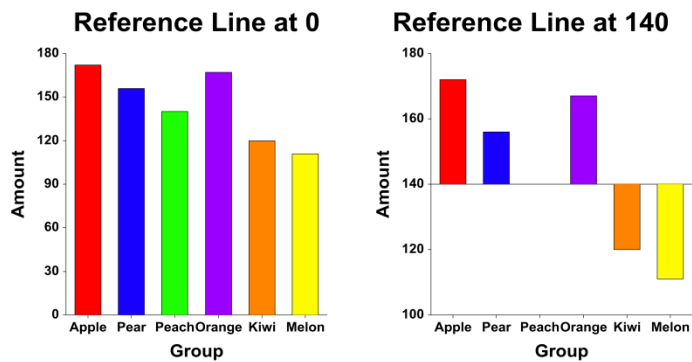


Two Factors



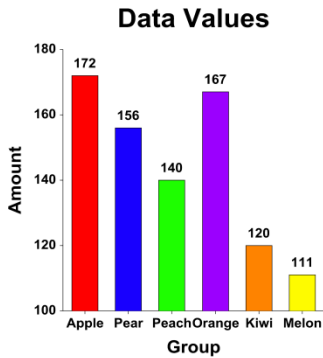
Reference Line Section

The Reference Line is the line from which the bars are drawn. You can specify the value from which the bars originate using the options in this section.



Data Values Section

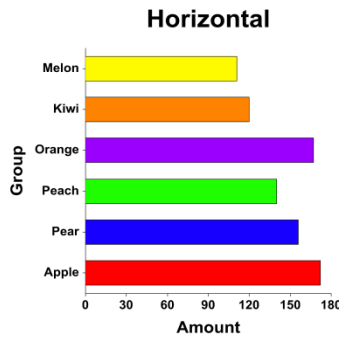
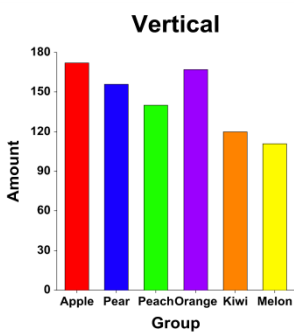
You can add data values above the bars using the options in this section.



Layout Tab

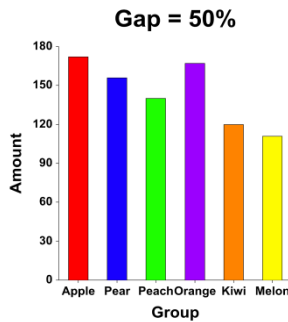
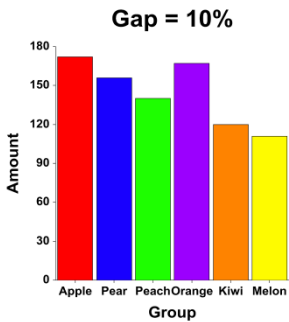
Orientation Section

You can orient the chart vertically or horizontally.



Object Spacing and Size Section

You can change the size of the gap between individual bars.



Titles, Legend, Numeric Axis, Group Axis, Grid Lines, and Background Tabs

Details on setting the options in these tabs are given in the Graphics Components chapter.

Example 1 – Creating a Simple Bar Chart

This section presents an example of how to create a bar chart of the data stored in the Fruit dataset.

Setup

To run this example, complete the following steps:

1 Open the Fruit example dataset

- From the File menu of the NCSS Data window, select **Open Example Data**.
- Select **Fruit** and click **OK**.

2 Specify the Bar Charts procedure options

- Find and open the **Bar Charts** procedure using the menus or the Procedure Navigator.
- The settings for this example are listed below and are stored in the **Example 1** settings file. To load these settings to the procedure window, click **Open Example Settings File** in the Help Center or File menu.

Variables Tab

Data Variables **Total**

Label Variable **Fruit**

Report Options (*in the Toolbar*)

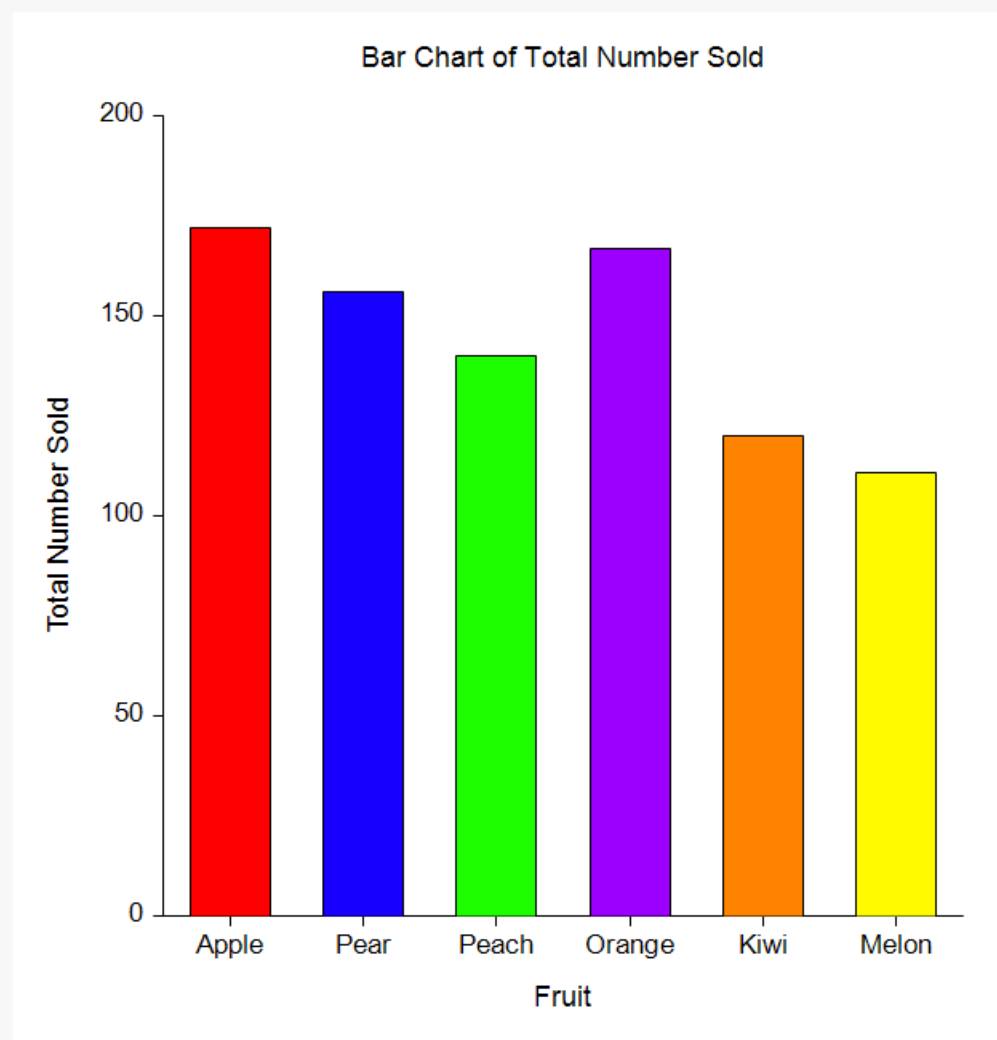
Variable Labels **Column Labels**

3 Run the procedure

- Click the **Run** button to perform the calculations and generate the output.

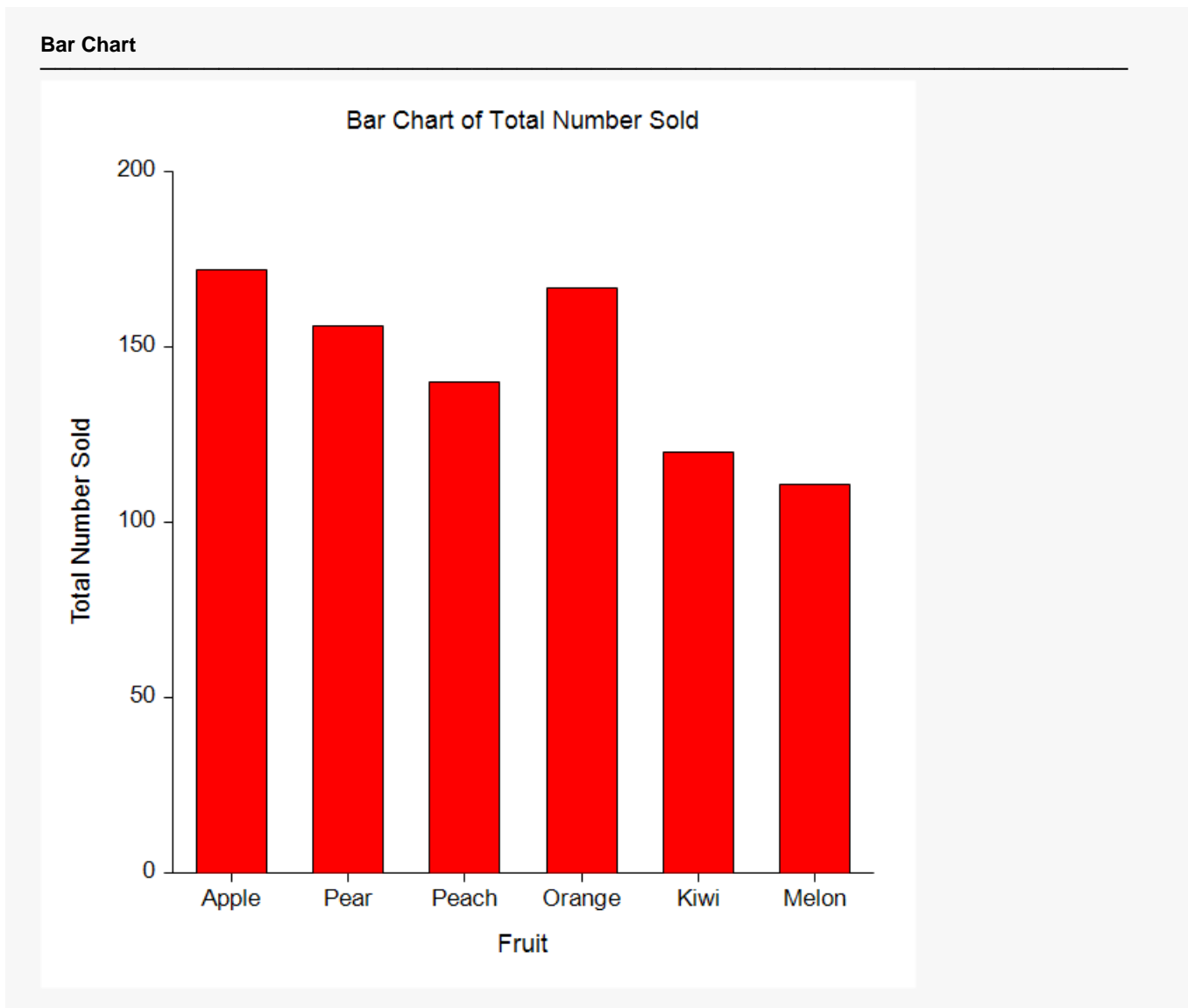
Bar Chart Output

Bar Chart



Bar Charts

You could make all the bars the same color by clicking on the **Bar Chart Format** button. There you would click on the **Bar Fill** format button and change the **Fill Mode** from **Multiple Fills** to **Single Fill**. The result is shown below.



Example 2 – Creating a Two-Factor Bar Chart

This section presents an example of how to create a two-factor bar chart of the data stored in the Fruit dataset.

Setup

To run this example, complete the following steps:

1 Open the Fruit example dataset

- From the File menu of the NCSS Data window, select **Open Example Data**.
- Select **Fruit** and click **OK**.

2 Specify the Bar Charts (2 Factors) procedure options

- Find and open the **Bar Charts (2 Factors)** procedure using the menus or the Procedure Navigator.
- The settings for this example are listed below and are stored in the **Example 2** settings file. To load these settings to the procedure window, click **Open Example Settings File** in the Help Center or File menu.

Variables Tab

Data Variables **April-June**
 Label Variable **Fruit**
 Data Orientation **Horizontal: Columns as Groups (Axis), Rows as Subgroups (Legend)**

Bar Chart Format (*Click the Button*)

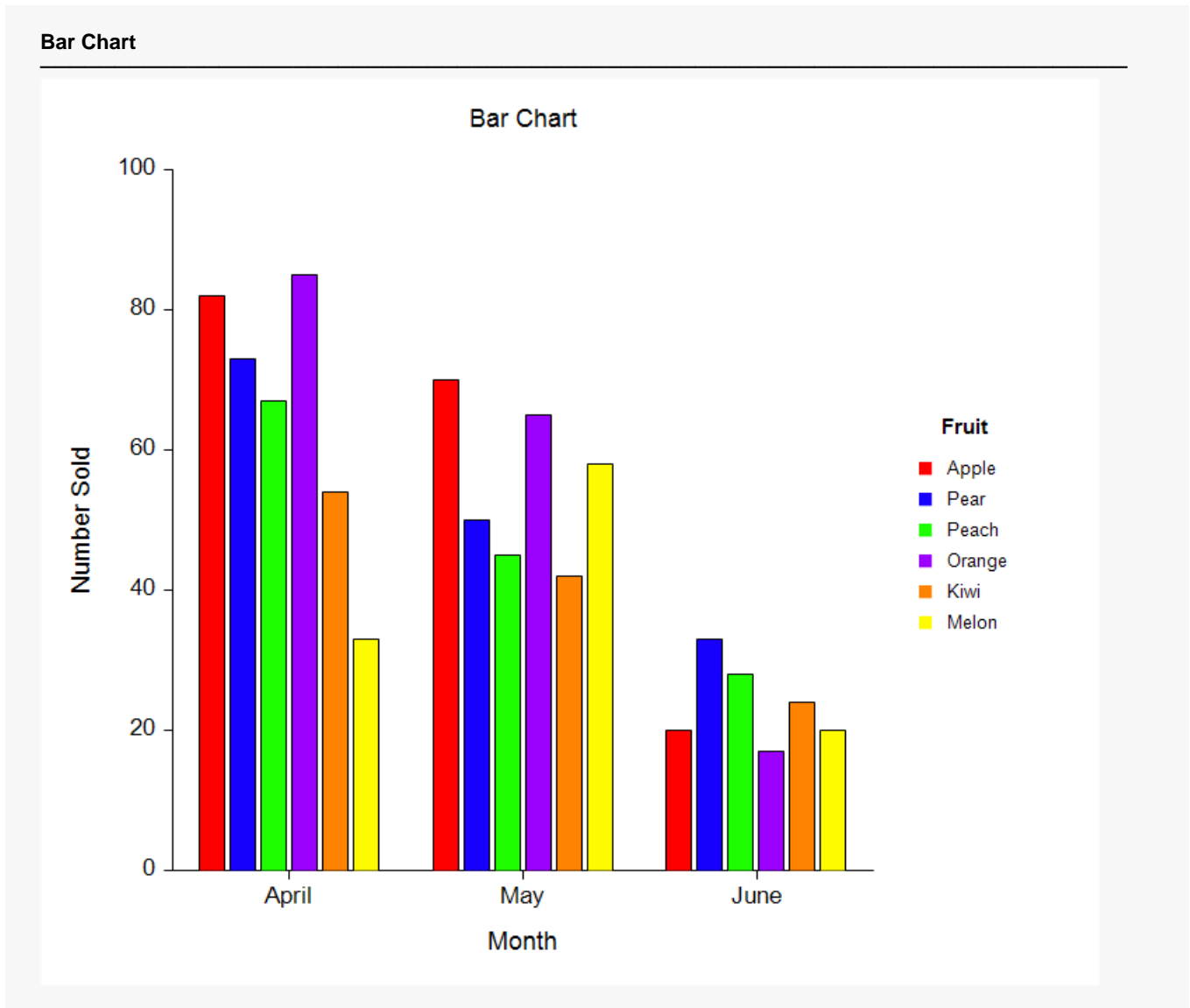
Numeric Axis Tab
 Lower Axis Label **Number Sold**

Group Axis Tab
 Lower Axis Label **Month**

3 Run the procedure

- Click the **Run** button to perform the calculations and generate the output.

Bar Chart Output



Bar Charts

You can switch the factors by changing the **Data Orientation** to **Vertical**, changing the **Group Axis Label** to **Fruit**, and changing the **Legend Title** to **Month** (**Example 2b** settings template). The result is shown below.

