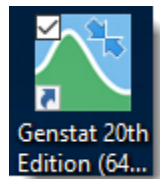
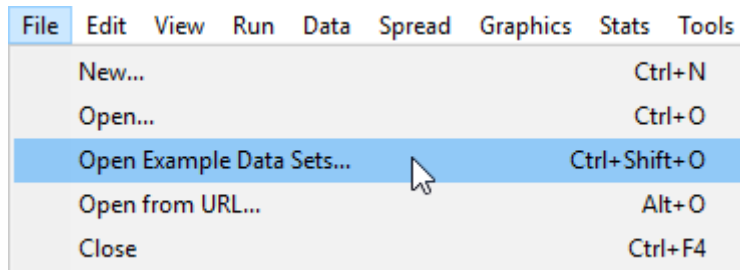


IMPORT YOUR DATA

1. Run Genstat by double-clicking the desktop shortcut.



2. Select an example data set to work with. From the menu select **File | Open Example Data Sets**.



3. Type `sulphur.gsh` into the **Look for file** field then click **Open data** to display this spreadsheet.

The 'Example Data Sets' dialog box shows the following content:

Look for file:
sulphur.gsh

Filter by topic:
(None)

| File | Description |
|--------------------|--|
| Schizophrenia.gsh | Schizophrenia data (Section 12.4.2, pages 206-208) |
| Seeds.gsh | Number of viable seeds recovered in soil cores 0-3 years |
| Semiconductor.gsh | Semiconductor data (Section 7.3.2, pages 219-221) |
| SheepLiveWeight... | Sheep live weights from 2 lines with 2 treatments over 8 dates |
| Skull.gsh | Data on 100 male Egyptian skulls from 100 epochs |
| Statcoll.gsh | Study of 25 varieties of wheat at State rail farm |
| Smoking.gsh | Number of male deaths from lung cancer and cigarettes smoked |
| Statlines.gsh | Statlines data (Section 2.4.1, pages 53-55) |
| Students.gsh | Assessment of the tolerance of students to statistics lectures |
| Sulphur.gsh | Measurements of sulphur in the air |

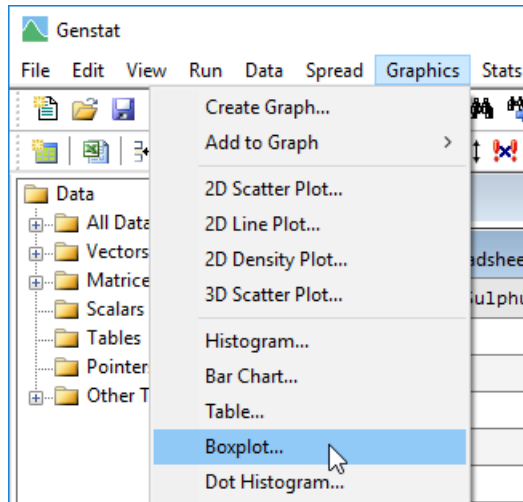
The 'Open data' button is highlighted in green. An arrow points from this button to the 'Spreadsheet [Sulphur.gsh]' window.

The 'Spreadsheet [Sulphur.gsh]' window displays the following data:

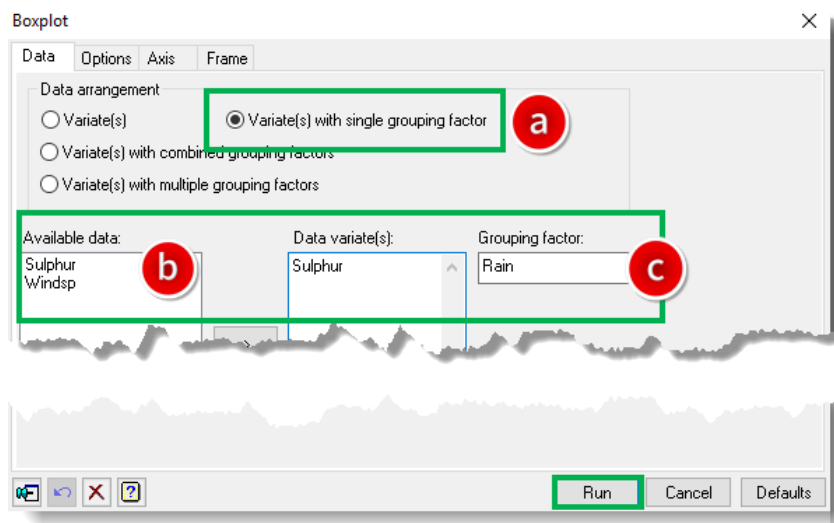
| Row | Sulphur | Windsp | Winddir | Rain |
|-----|---------|--------|---------|------|
| 1 | 0 | 14.8 | W | no |
| 2 | 13 | 14.3 | N | no |
| 3 | 12 | 5.5 | W | no |
| 4 | 22 | 5 | NW | no |
| 5 | 12 | 4.5 | W | no |
| 6 | 6 | 4.8 | NE | no |
| 7 | 2 | 4.3 | E | no |
| 8 | 24 | 4 | SE | no |
| 9 | 36 | 9.3 | S | no |
| 10 | 6 | 6.3 | NE | no |
| 11 | 10 | 5.8 | SW | yes |
| 12 | 4 | 8.3 | W | yes |
| 13 | 3 | 16 | SW | yes |
| 14 | 7 | 15.8 | W | no |
| 15 | 2 | 16 | SW | yes |
| 16 | 3 | 16.7 | W | yes |

CREATE A GRAPH

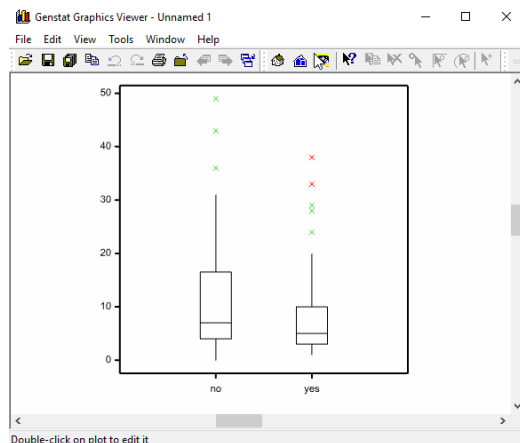
1. From the menu select **Graphics | Boxplot**.



2. a) Select **Variate(s) with single grouping factor**. b) Double-click Sulphur to move it to the **Data variate(s)** field. c) Move the mouse cursor to **Grouping factor** and double-click Rain to use this as the group factor.

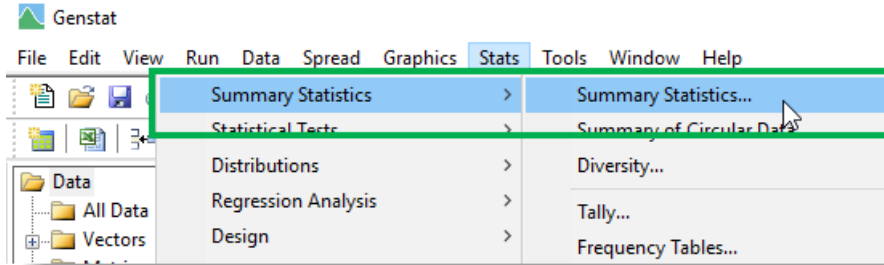


3. Click **Run** to open the Graphics Viewer, which will plot your graph.

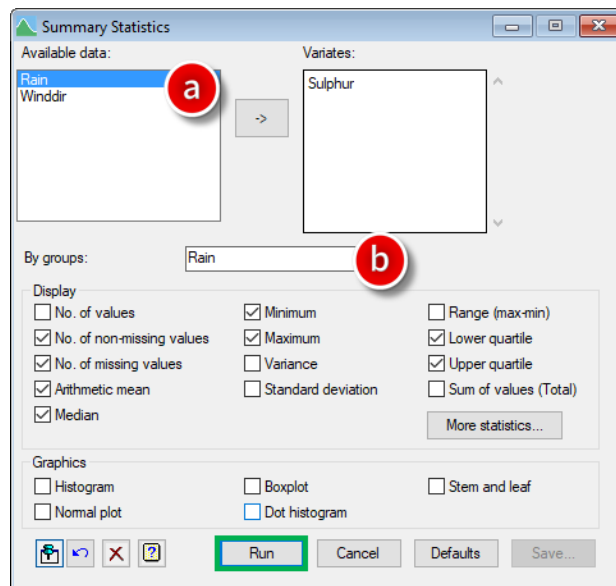


RUN A STATISTICAL ANALYSIS

1. Compare two samples in `sulphur.gsh` – sulphur in the air on dry days and sulphur in the air on rainy days. From the menu select **Stats | Summary Statistics | Summary Statistics**.



2. a) Double-click Sulphur to move it to the **Variates** field. b) Place the cursor in the **By Groups** field then double-click Rain use this as the group factor.



3. Click **Run** to display the results in the Output window.

```

Summary statistics for Sulphur: Rain no
Number of observations = 64
Number of missing values = 0
Mean = 12.09
Median = 7
Minimum = 0
Maximum = 49
Lower quartile = 4
Upper quartile = 16.5

Summary statistics for Sulphur: Rain yes
Number of observations = 50
Number of missing values = 0
Mean = 8.38
Median = 5
Minimum = 1
Maximum = 38
Lower quartile = 3
Upper quartile = 10
    
```

This numerical summary indicates that there is a higher than average sulphur content in the air on dry days:

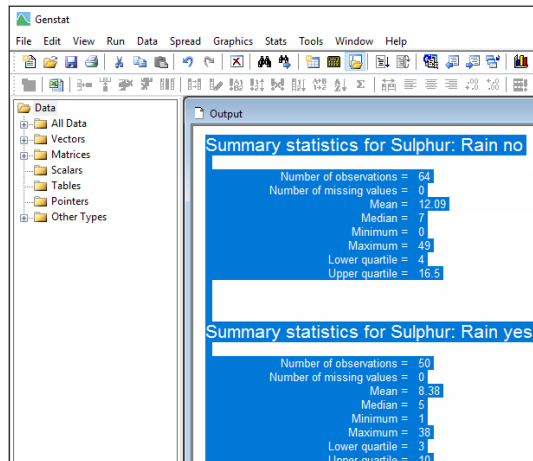
Rain no Mean = 12.09


vs

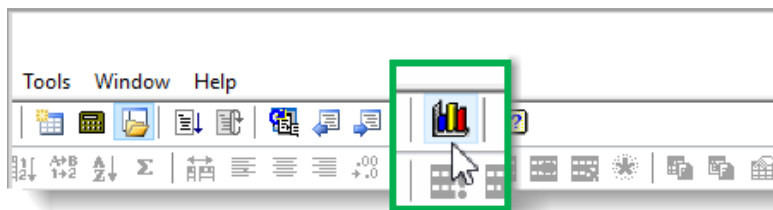
Rain yes Mean = 8.38

SHARE YOUR RESULTS

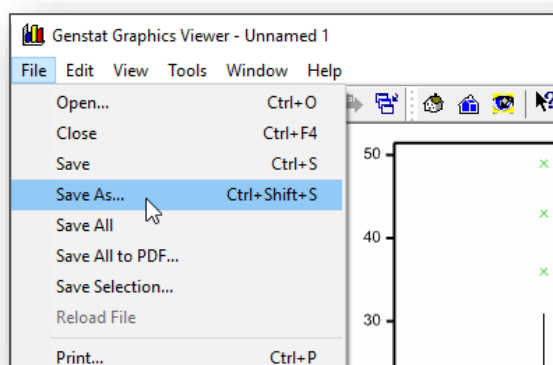
1. We'll save our Output window results and the boxplot into a Microsoft Word file so we can share it with colleagues. Place your mouse cursor within the Output window text and drag the mouse to highlight the parts you wish to copy – use the Windows shortcut keys **CTRL+C** to copy the text. Now open Microsoft Word and use the Windows shortcut keys **CTRL+V** to paste the summary results into your document.



2. Next we'll save the boxplot as an image file so we can insert it into Word. From the Genstat toolbar click  to re-display the Graphics Viewer.



3. From the Graphics Viewer menu, select **File | Save As...** then save the boxplot as a .png or file type of your choice. You can now insert this into your Word file.



WANT TO LEARN MORE?

All of the tasks in this document are explained in more detail in the *Introduction to Genstat for Windows* guide, which you can access from the Genstat Help menu:

Help | Genstat Guides | Introduction to Genstat for Windows.