

High-quality images for graphs in MS Excel.

For WINDOWS users ONLY (this procedure is not compatible with Excel running on Linux Wine and Excel for Mac)

A free Excel extension permits to export graphs displaying a resolution which is appropriate for printing and visualizing in the *Studi AISV* series.

The required resolution is at least 300 (or 600) DPI (dot per inch | pixel per inch). The extension is available at the following link: <https://www.xltoolbox.net/>

Once the extension is installed, the procedure to obtain high resolutions images is easy (see below).

The screenshot shows the Microsoft Excel interface with the XL Toolbox NG extension installed. The 'STRUMENTI GRAFICO' (GRAPHIC TOOLS) tab is active, showing various export options. A 3D bar chart is selected, and the 'Export selection' option is highlighted. The 'Single graphic export' dialog box is open, showing the 'Preset' dropdown set to 'Png, 600 dpi, RGB, White canvas'. The 'Output' section shows 'Width' as 10, 'Height' as 6.25, and 'Unit' as 'mm'. The 'Image size' is displayed as 0,03 megapixels/0,10 MB uncompressed. The 'Export' button is visible. The 'Edit export preset' dialog box is also open, showing the 'Preset' dropdown and the 'Details' section with 'Name' as 'Png, 600 dpi, RGB, White canvas', 'File type' as 'PNG', 'Resolution' as 600, 'Color space' as 'RGB', 'Transparency' as 'White canvas', and 'Color profile' as 'ewrgb18'. The 'Close' button is visible.

1. Select the graph

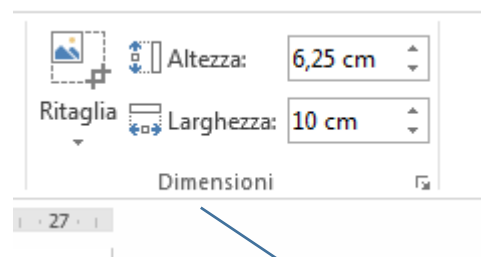
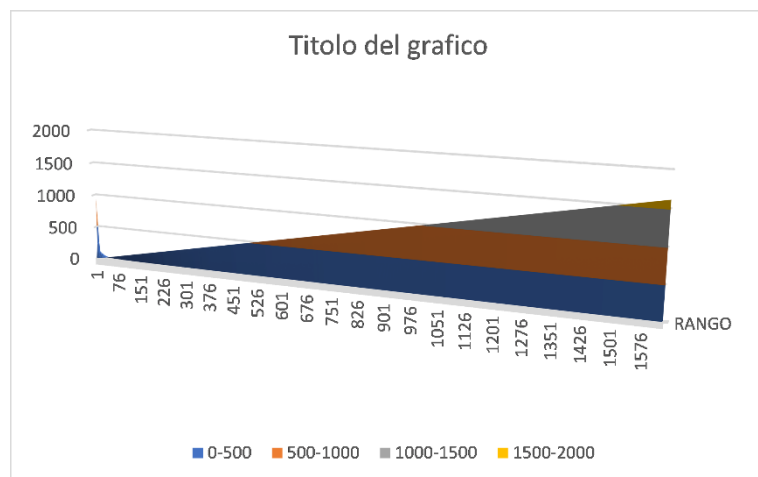
2. Click on "Export selection"

3. Set the desired image size (the print size corresponds to the measures displayed on the screen)

4. If you want to change the "Preset" print size, click on "Edit" to modify the desired parameters

If the "Preset" print size is the desired one, click on "Export"

The graph will be exported as a *.png file with the requested preset print size. This solution avoids the distortions caused by MS Word resizing the images. Please note that the dimensions displayed for MS Word resized images do not correspond to the real size of exported images: therefore, resized images cannot be used by the publisher.



The size displayed on the screen is the real size of the image.

Print a test page to check the quality of the image



High-quality images for graphs in PowerPoint

First, you need to change the PowerPoint system registry parameters in order to save slides as 300 DPI images. Watch the following video for step-by-step instructions:

<https://www.youtube.com/watch?v=TEFJBeZmsCI>.

Once the system registry parameters have been modified, paste the image in a PowerPoint slide and save it as a *.png file.

The final step is then to open the *.png file with an image/photo editor (e.g., GIMP, IrfanView, Xnview etc.) and to change the actual print size without changing any other parameter.

High-quality images for graphs in R

a) If you want to save the image in the working directory, please follow these steps:

```
ppi <- 300 ## set resolution for output images  
png(file = "filename.png", width=4*ppi, height=4*ppi, res=ppi) ## in "file" specify the name of your image,  
image size: ca. 10cm*10cm  
ggplot(df, aes(gp, y)) + geom_point() ## create your image  
dev.off()
```

b) If you want to save the image in a folder different from the working directory, please follow these steps:

```
ppi <- 300 ## set resolution for output images  
png(filename = "C:/Users/XXX/Desktop/image.png", width=4*ppi, height=4*ppi, res=ppi) ## in "filename"  
specify the path of the desired folder  
ggplot(df, aes(gp, y)) + geom_point()  
dev.off()
```

#For further information: <https://www.rdocumentation.org/packages/grDevices/versions/3.4.1/topics/png>