

Graph plotting workshop I.

0. Install the Inkscape programme (download at <https://inkscape.org/>).
1. Import data describing lettuce varieties (lettuce.xlsx) to R
2. Create histograms of harvest days for both lettuce colours – combine them into a single two-panel plot, remove the histogram titles
3. Fix the ranges of y-axes to the same values.
4. Try direct exporting to PowerPoint. Save the result in pdf or svg format. Open the svg file in the Inkscape software, make some edits and save as pdf and export to png.
5. Reset the graphical parameters to single panel.
6. Create scatterplot of harvest mass ~ harvest days
7. Change the colors of the points to illustrate the leaf colour of the variety
8. Plot a faceted scatterplot with panels (facets) defined by the variety
9. Adjust point size
10. Export the graph to pdf/svg/powerpoint/word.

Graph plotting workshop II.

11. Draw a barplot showing the association between lettuce taste classes and leaf color. Draw both stacked and dodged barplot. Try various versions of the barplot and color schemes to code the variable levels.

12. Draw a boxplot of harvest mass ~ leaf color

13. Draw dotchart of mean harvest mass classified by leaf color, add error bars indicating standard errors/confidence intervals

14. Generate new data frame by:

```
big.data<-data.frame(y=rlnorm(30000, 4, 0.5)+sample(c(1,50, 8, 100, 9, 11, 20, 40, 20), 30000, replace=T), fact=c(rep("a", 12000), rep("b", 18000)))
```

15. Draw a boxplot of y ~ fact

16. Log scale the y-axis of the boxplot

17. Draw a beanplot of y ~ fact; examine scaling of the y-axis and then try both linear and log-scaled axis scaling

Homework (to be completed after the second graph plotting workshop): Create a graphically nice plot with nice axis labels – embed it into a word document with the code used to generate the figure pasted below. Convert the word file to pdf named *surname.pdf* and upload to Homework Vaults in IS. You can use your own real data or generate some imaginary data for this task.