CLOUD SEEDING EXPERIMENT

11. Checking the Normality Assumption

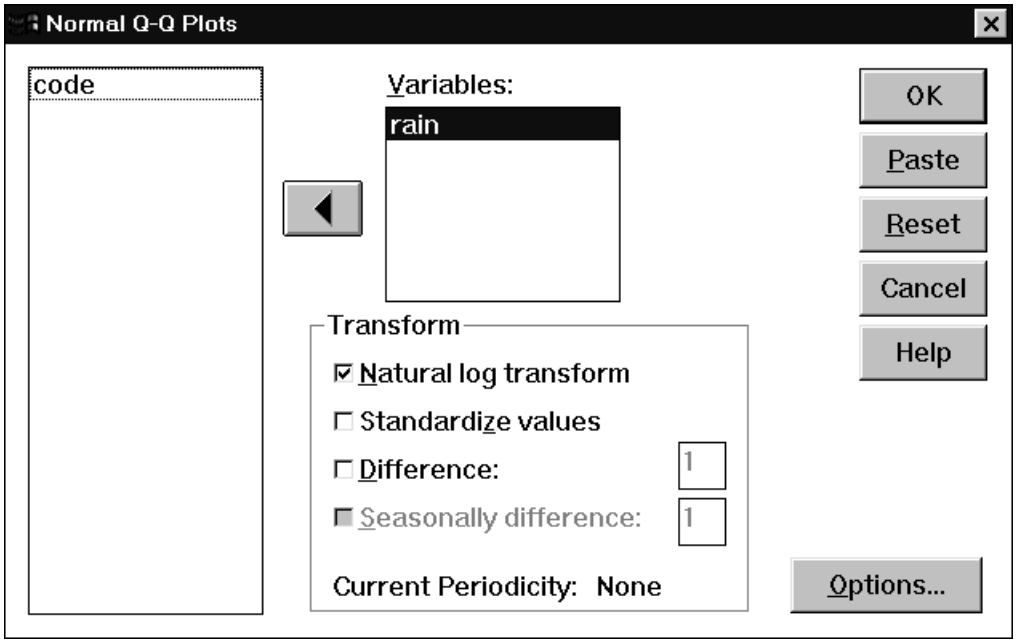
The assumptions of the t-tools (test and confidence interval) in the randomized experiment are that both treatment groups are independent of one another, and the treatment distributions are normal.

We will demonstrate how to verify the normality assumption for the observations on the log scale because the log-transformed rainfalls have distributions that appear to be symmetric.

In order to determine whether or not a variable is normally distributed, you can use one of the two available procedures: *Normal Q-Q* plot or *Normal P-P* plot from the *Graphs* submenu.

The *Normal Q-Q* plot plots the quantiles of a variable's distribution against the quantiles of the normal distribution. If the data come from a normal distribution, the plot should resemble a straight line. The *Normal P-P* plot plots the cumulative proportions of a variable's distribution against the cumulative proportions of the normal distribution. Similarly, if the sample is from a normal distribution, points will cluster around a straight line.

The P-P Plots and Q-Q Plots dialog boxes are identical.



The normal probability plots for our data for each treatment group (code=1 and code=2) will be displayed (Section 7, click here to access it).