

Extracting within-experiment precision of horticultural experiments useful for meta-analysis

Guido Knapp, Bimal Sinha, Dihua Xu

For combining results from independent experiments, it is essential that information about the precision of the estimates of treatment effects is available. In publications of horticultural experiments, the results of multiple comparisons tests are often reported without sufficient information about the precision of the experiments. Based on limited information of the precision of an experiment such as treatments with the same letter are not significantly different, we develop a method for extracting a possible range of the precision of the experiment which can then be used for meta-analysis. The procedure is demonstrated using a real data example where alternatives to methyl bromide are studied in pre-plant soil fumigation. We also provide an R program which computes the possible range of the precision.