



Pampered inside, pestered outside? Ways to bridge the gap between lab and field experiments

Hendrik Poorter

Plant Sciences (IBG2), Research Centre Jülich, Germany

Plants grown under controlled conditions (growth chamber, glasshouse) may not necessarily be phenotypically similar to those growing in the field. In this talk I will discuss 6 issues.

1. How similar/different are plants from lab and field in a range of traits?
2. What are the environmental conditions applied in lab and field, with special emphasis on the photo-thermal ratio (daily amount of light / temperature).
3. The consequences this has for a plant's physiology.
4. What is the effect of plant density (which is much higher in the field) on individual plant performance?
5. To what extent are lab and field measurements correlated?
6. Ways to improve the lab-field correlation.

- Poorter & 7 colleagues (2016) Pampered inside, pestered outside? Differences and similarities between plants growing in controlled conditions and in the field. *New Phytol.* 212: 838.