

Plant Physiology Independent project expectation

Objective of study: We investigated whether photorespiration varies with infection status in our endophytic tall fescue grasses growing at high and low light levels.

Data to be analyzed and discussed: Analyze A:Ci and A:I curves and immunoblot impressions.

1. Does photosynthesis saturate at the same light levels in high and low light-grown tall fescue grasses? Discuss
2. Is the quantum efficiency of photosynthesis the same in high and low light-grown plants.
3. Does quantum efficiency correlate with photorespiration rates estimated from $v_o:v_c$ ratios among plants with different levels of infection?
4. Does V_{cmax} vary between high and low light grown grasses?
5. Does V_{cmax} vary with infection status?
6. Does g_m vary with infection status and between different light levels?
7. Does TPU vary with infection status and between different light levels?
8. Does J vary with infection status and between different light levels?
9. Does dark respiration vary with infection status and between different light levels?
10. I will have RWC data available on Monday if you wish to have it.

You are expected to write a scientific manuscript following the format of Plant, Cell and Environment on your data set.

You should make use of appropriate statistics to analyze your data.

You should choose to present the relevant figures and tables to show your main findings.

You should discuss your findings with at least three other studies available in the literature.

The paper is due on Tuesday 11 December at 5pm.

Your oral presentations will take place on Tuesday 11 December at 2:00pm.

You will give independent oral presentations of your paper.

Each assignment is worth 50 points.