

## Appropriate Sky Conditions for Using the LAI 2000

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For users of the LAI-2000 Plant Canopy Analyzers, just a reminder that an overcast sky is the best condition in which to use the instrument.

Under cloudy skies, the contribution of scattered radiation is low; when the direct beam of the sun is shining on foliage, scattered radiation is significantly increased. The LAI-2000 optical sensor is filtered to reject radiation above 450 nm, which minimizes the influence of radiation scattered by the foliage. If scattered radiation is present, however, the below canopy readings are increased, resulting in underestimates of LAI.

The photos below were taken with a camera on the same day, under different sky conditions of a tree canopy. Although the camera lens and the LAI-2000 optical sensor have different fields of view, the two photos do illustrate the effects of bright light shining on the foliage. Note the highlighted areas of the photos; the effects of scattered radiation are readily apparent, as the foliage in the second (sunny) photo appears to be less dense in some places.



To avoid under-estimating leaf area, avoid conditions where the direct beam of the sun is illuminating the leaves. Taking measurements when the sun is near the horizon, where a nearby hill may shade the measurement site, is another suitable time for making measurements.