Blackberry Responses to Light: How Much is Too Much?

Juan Carlos Melgar* Brian Lawrence, Katlynn Scammon





Blackberry are native from and commonly found along the woodland edge

Commercially, we grow them in full sun for maximum production











How do blackberry cultivars response to light? Are there differences among them? How much is too much?

We carried out two trials:

1) Photosynthetic response to light of 6 cultivars at peak harvest:

Apache, Natchez, Navaho, Ouachita, Triple Crown, Von

Influence of the fruit development
stage on photosynthetic response to
light with a focus on four of them
(Apache, Natchez, Navaho and Von)

Measurements taken i) before harvest; ii) peak harvest; iii) post harvest



Measuring gas exchange in the field













Conclusions

The photosynthetic light response of blackberry depended on the stage of fruit development and cultivar

Across all cultivars, leaves before harvest had greater CO2 assimilation than after harvest

Some cultivars like 'Natchez' perform best in regions with greater irradiance whereas 'Navaho' may adapt better to areas with lower irradiance

Overall, light saturation can be from 1/3 to 1/2 of maximum irradiance at our conditions

Acknowledgements

SC EPSCoR/IDeA

CLEMSON[®]

REU Program - Research Experiences for Undergraduates