**Description of data ‘Hoophouse Data LumiGrow’**

Excel data file ‘Hoophouse Data LumiGrow.xlsx’ contains biological and environmental data collected inside a 39 foot by 21 foot hoophouse during an experiment comparing plants that propagated under different photoperiod treatments. For a complete description, please see the Word file ‘Protocol LumiGrow’.

Objective of this data collection: to determine if varying the photoperiod during propagation affects lettuce growth throughout the remainder of the production cycle.

Funding source: LumiGrow and Cabrillo College (Aptos, CA)

Data collected by: Eli Weissman and Melanie Yelton

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Data collection site: Cabrillo College Horticulture Department, Hoophouse #4 (Aptos, CA)

Experiment: *Lactuca sativa* ‘Cherokee’ plants propagated in grow tents under LumiGrow fixtures (75R:5G:20B) irradiating different photoperiods (15-hrs, 18-hrs, or 21-hrs). After 12 days, plants were then transplanted to a hoophouse and grew below light-sensor controlled LumiGrow fixtures (17 mols\*m-2\*d-1, and a 22-hr photoperiod).

Data collected:

Sheets “Growth Data, 9-day harvest”, “Growth Data, 26-day harvest”, and “Growth Data, 33-day harvest”

* Side of Hoophouse (Block, two levels: East and West)
* NFT Channel Number (channels numbered west to east, 30 total, 18 sampled from)
* Plant Hole Number (channel holes numbered north to south, 1 through 18)
* Tent Propagated In (15-, 18-, or 21-hr treatments, hours)
* Lettuce fresh weight at 9-, 26-days, and 33-days after transplant from the grow tents to the hoophouse (g)
* Lettuce volume 26-days after transplant from the grow tents to the hoophouse (cm3)
* Notes

Sheets “Environmental Data, East Hoop” and “Environmental Data, West Hoop”

* Date
* Daily energy consumption (kWh)
* Solar DLI (mols\*m-2\*d-1)
* Supplemental DLI (mols\*m-2\*d-1)
* Crop DLI (mols\*m-2\*d-1)
* Target DLI via Light Sensor (mols\*m-2\*d-1)

Data collection methods and quality:

* Sensors were placed on top of each fixture (roughly 4 feet above the plant canopy). LumiGrow’s light sensors, connected to a wifi-module and actuated by LumiGrow’s smartPAR DLI control algorithm, measured DLI values and assured the DLI was close to the 17 mol\*m-2\*d-1 target over a 22-hr photoperiod. The maximum PPFD was 400 µmols\*m-2\*s-1 and minimum PPFD was 50 µmols\*m-2\*s-1.
* A balance was used to obtain fresh weights (g) and a square to measure lettuce width and height (cm).

Data collection: 10/18/2018 - 11/19/2018

Data collection frequency: 9-days, 26-days, and 33-days after transplanting from grow tents to NFT channels in a hoophouse

Data notation used:

N/A

Date the data set was last modified: 01/17/19

Non-published internal dataset