

## LED Lighting for Common Bedding Plants

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### Resources

Slides from this presentation [dcsmithgreenhouse.cals.wisc.edu/resources](http://dcsmithgreenhouse.cals.wisc.edu/resources)

Publications from The LED Project: <http://leds.hrt.msu.edu/>

- [Measuring daily light integral in a greenhouse](#) (2010) by Ariana Torres and Roberto Lopez
- [Comparing LED lighting to HPS lamps for plug production](#) (2013) by Wes Randall and Roberto Lopez
- [Lighting the future of young plants](#) (2014) by Wes Randall and Roberto Lopez

Webinar: LED Lighting as a Commercial Possibility: Myth or Reality?

<http://www.ballpublishing.com/BallPub/Webinars.aspx>

### Estimating Your Supplemental Light Needs

What is your local Daylight Duration? [http://aa.usno.navy.mil/data/docs/Dur\\_OneYear.php](http://aa.usno.navy.mil/data/docs/Dur_OneYear.php)

Online DLI calculator <http://extension.unh.edu/Agric/AGGHFL/dlicalc/index.cfm>

### Other uses for LEDs

Energy-Efficient Agricultural Lighting by Scott Sanford

<https://learningstore.uwex.edu/Assets/pdfs/A3784-14.pdf>

Lighting Technology: LED Lamps for Home, Farm and Small Business by Scott Sanford

<https://learningstore.uwex.edu/Assets/pdfs/A4050.pdf>

### Cutting the cost of LED fixtures

Federal grant program – Rural Energy for America Program (REAP):

<https://www.rd.usda.gov/programs-services/rural-energy-america-program-renewable-energy-systems-energy-efficiency>

Focus on Energy: <https://focusonenergy.com/business/ag-and-farms>

Other Grants: <http://www.dsireusa.org/>

Disclaimer: Mention of specific products are intended as examples only and do not signify endorsement either by the speaker or UW-Extension.

## Are LEDs Worth it for MY Business?

1. Grower Objectives
2. Crop Type
3. Geographic location
4. Time of Year
5. Outdoor vs. Indoor DLI
6. Supplemental DLI needs
7. Dimensions of Growing Area
8. Cost per kwh

$$(\text{Energy use/fixture}) \times (\# \text{ of fixtures}) \times (\$/\text{kwh})$$

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