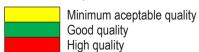
5

## Table 2. DLI Requirements for Various Greenhouse Crops



- 1=Requires ample water to perform well at high-light levels.
- 2=Requires cool or moderate temperatures to perform well at high-light levels. 3=Stock plants perform well under higher light levels than finished plants.

Species	Average Daily Light Integral (Moles/Day)														
	Greenhouse  2													20	30
Ferns (Pteris Adiantum)		4	0	0	10	12	14	10	10	20		24	20	20	30
Maranta				-											-
Phalaenopsis (orchid)															$\vdash$
Saintpaulia															$\vdash$
															$\vdash$
Spathiphyllum															
Forced hyacinth				-											
Forced narcissus					-										-
Forced tulip					-										
Aglaonema															<u> </u>
Bromeliads															
Caladium													1	1	1
Dieffenbachia															<u> </u>
Dracaena															_
Nephrolepsis															
Streptocarpus															
Hosta													1	1	1
Hedera (English ivy)															
Begonia (heimalis)															
Sinningia															
Schlumbergera									2	2	2	2	2	2	2
Cyclamen															
Exacum															
Heuchera															
Coleus (shade)															
Impatiens, New Guinea															
Iris, Dutch (cut flowers)															
Kalanchoe															
Lobelia												2	2	2	2
Primula															
Impatiens															
Pelargonium peltatum (Ivy geranium)															
Begonia (fibrous)															
Senecia (dusty miller)															
Fuchsia												2	2	2	2
Euphorbia (poinsettia)													3	3	3
Hydrangea															

6

Table 2. DLI Requirements for Various Greenhouse Crops (continued)

Species	Average Daily Light Integral (Moles/Day)  Greenhouse														
	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30
Lilium (asiatic and oriental)															
Lilium longiflorum (easter lily)															
Ageratum															
Antirrhinum															
Chrysanthemum (potted)															
Dianthus															
Gazania															
Gerbera															
Hibiscus rosa-siniensis															
Lobularia															
Pelargonium hororum (zonal gera- nium)															
Rose (miniature potted)															
Salvia splendens															
Schefflera															
Angelonia															
Aster															
Salvia farinacea															
Iberis															
Catharanthus (vinca)															
Celosia															
Chrysanthemum (garden)															
Coleus (sun)															
Coreopsis															
Cosmos															
Croton															
Dahlia															
Echinacea															
Ficus bejaminia															
Gaura															
Gomphrena															
Hemerocallis															
Lantana															
Lavendula (lavender)															
Tagetes (marigold)															
Petunia															
Phlox (creeping)															
Rudbeckia															
Scaevola															
Sedum															
Thymus															
Verbena															
Viola (pansy)														2	2

## Table 2. DLI Requirements for Various Greenhouse Crops (continued)

Species	Average Daily Light Integral (Moles/Day)														
	Greenhouse														
	2	4	6	8	10	12	14	16	18	20	22	24	26	28	30
Zinnia															
Alstroemeria (cut flower)															
Capsicum (pepper)															
Chrysanthemum (cut flower)															
Dianthus (carnation)															
Gladiolus (cut flower)															
Lycopersicon (tomato)															
Rose (cut flower)															

Source: James E. Faust, Ball Red Book.

## References

Department of primary industries. 2005. Light in greenhouses. NSW Australia. 24 February 2009. www.dpi.nsw.gov.au/agriculture/horticulture/greenhouse/structures/light.

Fausey, B.A., R.D. Heins, and A.C. Cameron. 2005. Daily light integral affects flowering and quality of greenhouse-grown *Achillea*, *Gaula*, and *Lavandula*. HortScience 40:114–118.

Faust, J.E. 2001. Light, p. 71–84. D.Hamrick, (ed.). Ball Redbook: Crop Production, Ball Publishing, Batavia, IL.

Fisher, P., C. Donelly and J. Faust. 2001. Evaluating supplemental light for your greenhouse. 24 February 2009. http://extension.unh.edu/Agric/AGGHFL/OFAlight.pdf.

Korczynski, P.M., J. Logan, and J.E. Faust. 2002. Mapping monthly distribution of daily light integrals across the contiguous United States. HortTechnology 12:12–16.

Lopez, R.G. and E.S. Runkle. 2008. Photosyntetic daily light integral during propagation influences rooting and growth of cuttings and subsequent development of New Guinea impatiens and petunia. HortScience 43:2052–2059.

Pramuk, L.A. and E.S. Runkle. 2005. Photosynthetic daily light integral during the seedling stage influences subsequent growth and flowering of *Celosia*, *Impatiens*, *Salvia*, *Tagetes*, and *Viola*. HortScience 40:1336-1339.

Runkle, E. 2006. Technically speaking: Daily light integral defined. Greenhouse Product News. 24 February 2009. www.gpnmag.com/articles/070\_gpn1106.pdf.

Runkle, E. 2006. Technically speaking: Do you know what your DLI is? Greenhouse Product News 24 February 2009. www.gpnmag.com/Do-You-Know-What-Your-DLI-Is-article7530.

Runkle, E. 2006. Technically speaking: Light it up! Greenhouse Product News 24 February 2009. www.gpnmag.com/articles/lightitupjuly2006.pdf.

To see other publications in this series, visit the Purdue Extension Education Store, www.extension. purdue.edu/store.

Reference to products in this publication is not intended to be an endorsement to the exclusion of others which may be similar. Persons using such products assume responsibility for their use in accordance with current directions of the manufacturer.

## **PURDUE AGRICULTURE**

1/10

