

# Improved Lighting In Dairy Barns

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Improved barn lights operated according to a specific schedule can improve both the profitability and working conditions on dairy farms. Increased milk production and heifer growth are the main benefits of using a practice known as long-day lighting (LDL). To stimulate milk production, a minimum of 10 footcandles of light are required where cows spend most of their time. More light is recommended for easy work in other parts of the barn. The recommended light program is a consistent 16- to 18-hour light period and a 6- to 8-hour dark period each day. Studies have shown that using supplemental light during the short days in fall and winter months can increase milk production by 5 to 16%. The increased milk yield pays for the extra feed as well as the cost of the lights--and leaves a substantial net profit.

### Estimated profitability of long-day lighting (1)

	50 cows (2)	100 cows (1)	150 cows (3)	300 cows (3)
Annual profit per cow	\$62	\$62	\$67	\$67
Total annual profit	\$3,100	\$6,200	\$10,050	\$20,100

- 1) After one time start-up costs are paid off.
- 2) Cows housed in tie-stall barn with fluorescent lamps.
- 3) Cows housed in freestall barn with high pressure sodium lamps.

Long-day lighting appears to be among the most profitable investments available to dairy farmers. As an added bonus, good lights can help to reduce accidents such as slips and falls during barn chores. Better lighting also helps to improve productivity in other ways, such as easier monitoring of cows in heat, health problems, cows off feed, low feed quality, etc. Most people appreciate and work better in a well-lit workplace.

The following fact sheets (10 to 12 pages each) have been prepared on the practice of LDL: *Long-Day Lighting--More Lights for Brighter Profits: A Guide for Freestall Barns* and *Long-Day Lighting--More Lights for Brighter Profits: A Guide for Tie-stall Barns*. A two-page summary flyer is also available. These publications can be downloaded (Acrobat files) from the UW Center for Dairy Profitability homepage (<http://www.wisc.edu/dairy-profit/pubs.html>). In cases where the electronic files are not accessible, a photocopy can be ordered from Biological Systems Engineering, UW-Madison, 460 Henry Mall, Madison, WI 53706, telephone (608) 262-3310.

Sometimes new technologies are profitable and applicable only to larger herds or newer barns. Long-day lighting, however, can be implemented successfully by operations of all sizes, whether they use conventional stall barns or freestall barns.

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