

Dahl, G. June 29, 2001

From: Geoff Dahl <dahlg@mail.aces.uiuc.edu>
To: Victor Frankenthaler <Vpf@tamsconsultants.com>
Date: 6/29/01 1:57PM
Subject: Re: nighttime lighting impacts on dairy cattle

DocID 80219

on 6/27/01 10:54 AM, Victor Frankenthaler at Vpf@tamsconsultants.com wrote:

I am involved in assessing the impacts of a proposed project that would involve nighttime river dredging and onshore sediment processing, also at night. The project would use nighttime lighting to illuminate some work areas.

The project is located in a dairy farming area. Under what circumstances, if any, could the nighttime lighting adversely impact milk production?

Thank you for your assistance.

Victor P. Frankenthaler
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Mr. Frankenthaler,

Responses of cattle to lighting are critically dependent on the duration of light exposure. For example, cows under natural lighting conditions (i.e. 13 hours/day) can be induced to increase milk production by exposure to greater duration of light (i.e. 16-18 hours/day). This response, however, is not linear. On constant lighting animals do not produce more milk, in fact they are not different from the natural exposure animals. Therefore, the nighttime lighting could eliminate the ability for cows to respond to extended photoperiod, a management technique that is gaining popularity.

Without knowing all the specifics of your project it is difficult to make more than a general statement, but certainly there could be some effects.

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