

SEPTEMBER 2000 – LARGE ANIMAL NEWSLETTER

LONG DAY LIGHTING: It has been proven that upgrading barns with ‘comfort enhancing’ technology either helps cows stay healthier, or helps cows remain more productive for a longer time. Up until now, these technologies have included items such as tunnel ventilation, free-stall housing, stall mattresses, TMR mixers, and the like. Lights have now been proven to not only create a better work environment for those people in the barn. Effective use of lighting also will improve production, or better maintain productivity of cows in dark barns, and in barns darkened by the seasons.

Long day lighting is used to manipulate the photo-period response system built into the bodies of not only cows, but also ourselves. Many of us experience depression or sluggishness during seasons of short daylight. This includes our cattle! Recently concluded research has determined that providing lactating cows with constant **16-18 hours of light, AND a mandatory dark period of 6-8 hours** will result in:

1.) an increase or maintenance of production of around 8%, 2.) 6% increase in feed intakes, and 3.) a possible enhancement in reproductive development of heifers. The response has been achieved with as little as 10-12 foot-candles of intensity. Because of environmental dust and dirt present in barns a minimum of 15-20 foot-candles is recommended. As a guideline to compare, a well-lit office typically has an intensity of 35-50 foot-candles. A sunny day may exceed 1000. You should be able to easily read a newspaper in your barn at necessary locations at 20 foot-candles of light intensity.

Where is the lighting needed? The essential place to be lit in conventional stall barns is the feed alley up front by the cows’ head. For free-stall barns, the whole barn is the cows’ living space. Lighting must include the feed alley and stall spaces. The formula to determine how much light is needed in your barn is simple, and based on formula results, you choose lighting fixtures appropriate for your barn. Lights are then mounted at appropriate heights and distances based on fixture specifications and calculated needs. The lighting system is set on a timer to come on at 4-5 a.m., and turn off at approximately 9 p.m. Leaving the lights on 24 hours of the day definitely is not recommended. Farms who milk around the clock have a problem reaching 6 hours of uninterrupted dark. There are recommendations available to try to allow those farms to move and work in the barn while not using white full spectrum lights.

Most importantly for those farms with lighting already installed: Long day lighting is not recommended for dry cows. Research has shown that dry cows on long day light do not respond as well in the following lactation as those dry cows on short day light. For the present time it is recommended that your dry cows be kept housed separately, away from long day lighting. Further research is ongoing to determine if a 2-3 week lead-feeding period for transition cows on long day lighting will affect those cows negatively in their next lactation.

We have the calculations and specifications available for those people interested in investigating long day lighting for their barn.

Orbenin DC® will be discontinued for the time being through our practice. Pfizer recently tacked a 30% increase to the cost. As a replacement we have **Dry-clox®**. This product is less costly when compared to Orbenin DC®, but is identical in composition and effectiveness.

GVS STAFF

Mike Strobush DVM

Kevin Ratka DVM

Tammy Zickert Recpet

Jessie Scholl VA

Al Harmening DVM

Jean Liljegren DVM

Wendy Lindner CVT

Jeff Engrav DVM

Jeannette Bymers Off Mgr

Ginny Mesar VA