

LED Light is life giving

A great light during the day has a lifegiving effect. This is confirmed by a pig producer, who added extra light in the mating section, right above the head of the sows. It gave about one extra pig per litter.

By Anne Wolfenberg

May 19th this year Henrik Basso Sørensen, Tylstrup, Brønderslev had an idea.

A light which showed that it had a bigger effect, then the 31-year-old farmer had ever imagined.

We are talking about an LED-light, who took Henrik Basso Sørensen about two hours to mount and install above the head of the sows in the mating and control section. Afterwards, an electrician used 1-2 hours to connect it all.

0,8-1,2 extra pigs per litter

Despite the good lighting, which there already was in the mating/control section, the new light did that the sows were bathed in light, which they hardly tried before. The effect of the new light showed it self for about 4 months ago, where the number of totals born piglets increased with 1,2 per litter.

- I never imagined this improvement, says Henrik Basso Sørensen who runs the sow property along with two mink properties and a pig fatteners property together with his brother Michael Sørensen, in the Northern part of Jutland.

The 1,2 piglets which was born extra per litter, is calculated in a period of six weeks from September 13th, which is the date for the biggest farrowing's with the sows who was exposed for the extra light.

- We now used the light in a longer period, and if I look at the numbers from September 13th and until now, the difference is 0,8 pigs per litter, compared to the same period, before we had the light set up. – However, it

is still a great difference, says Henrik Basso Sørensen.

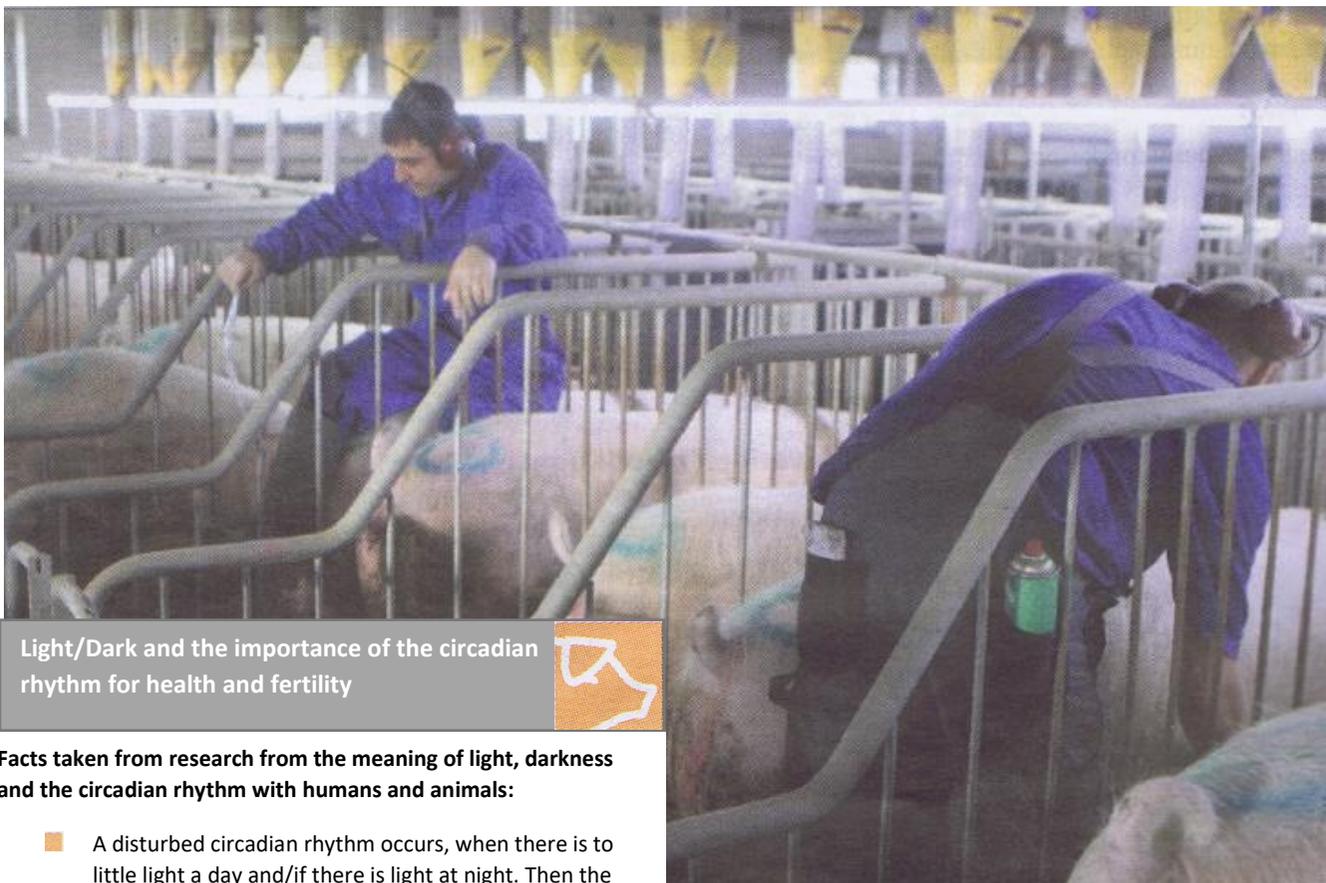
More than 600 extra pigs

- The difference in the number of live born piglets in the same period is ½ a pig per litter. With 2,3 more litter per pig, there is 1,15 more live born piglets per sow, and it will be 632 extra pigs a year in our crew with our 550 sows, he says.

- However, there must be added a possible difference in the farrowing and gestation manufacturer. We experienced a difference in the gestation percentage from 85,6 to 91,3 % which I never imagined, however I should have, he says.

The extra light is an investment who will be cost of approximately 25.000 Danish Kroner. However, the light is so energy saving, that the investment is earned back in 1 ½ - 2 year, says Henrik Basso Sørensen.

- It is seldom that an investment in the agriculture business is earned back so quickly. This is extremely appealing, the pig producer notes.



Light/Dark and the importance of the circadian rhythm for health and fertility



Facts taken from research from the meaning of light, darkness and the circadian rhythm with humans and animals:

- A disturbed circadian rhythm occurs, when there is to little light a day and/if there is light at night. Then the boundaries between day and night will get blurred and this will have a negative effect on the fertility, lifetime and overall health.
- The special wavelength range, which in the morning has a positive effect on the circadian rhythm and the body's functions are found, among others in fluorescent lamps and most definitely in LED light bulbs, computers, smart-phones and Ipad's. – It should be avoided when the darkness comes, and the body should prepare to go to sleep.
- The hormone melatonin is called >>the darkness-hormone<<, because it is produced when it is dark at night and more during the winter than during the summer, if it isn't supplemented with daylight. In the summer, where there is lighter, the level of melatonin is lower, and therefore there is a higher stimulation of the reproductive function.
- With humans a blurred circadian rhythm gives bigger risk of infertility.
- A disturbed circadian rhythm enhances the response to stressful and anxiety provoking experiences



Nothing left to chance at the mating, where there will be in simulated exactly 1 minute after the sow stands. With extra LED light, it is now excluded that, the sows don't get enough light in the important period in the heat.

I have never experienced an investment in the agriculture business, which have been earned back in one and a half year, says Henrik Basso Sørensen, who only used a few hours on mounting the LED light in the mating and control section.

Photo: Anne Wolfenberg

**The effect of extra light added
In the mating section**



| Sows + / - extra light in the mating section | Before* | After** |
|---|----------------|----------------|
| Total born piglets per litter, pcs. | 16,8 | 17,6 |
| Alive born piglets per litter, pcs. | 15,1 | 15,6 |
| Gestation percentage | 85,6 | 91,3 |

**) Farrowing's in 11 weeks (week 27-38) to September 13th, where the first piglets from sows with extra light is born*

****) Farrowing's in 11 weeks from September 13th (week 38-49)*

