



Constant lightintensity gives more milk

A good lightinstallation in a dairy barn increases the milkproduction with 6 to 15%. This is said by Gelein Biewenga, researcher at PV Lelystad (the Dutch governmental organization for research with dairy cows). Next to that the cows will be easier and more often able to pair / able to be inseminated.

Light influences the hormones and throught that fertility, milkproduction, and behaviour. When cows receive 16 hours per day between 150 and 200 lux (15 – 20 footcandle) and after that 8 hours of darkness, the production can increase with 6 to 15% versus the average situation in a dairy barn. According to Mr. Biewenga it should be completely dark in the 8 hours of darkness, otherwise the results will be influenced negatively.

The advised intensity of light corresponds to one fluorescent tube fixture of 58 watt on 15 m²*. Manufacturer of fixtures, Agrilight b.v. from The Netherlands, distributes through Bedrijfstechniek Barneveld* (and other electrotechnical installers) high pressure sodium and metal halide fixtures for livestock buildings. The company also delivers optionally a dimmable version of the high pressure sodium fixture with a management unit that controls the light intensity in the barn.

Dairy farmer Wout van Zandbrink form Leusden is the first user of this fully automated system. In his barn of 15 meters wide and 22 meters long he has installed 6 high pressure sodium fixtures. Zandbrink choosed this lights, because the fixtures save 20 to 30% on energy (versus fluorescent tubes), according Agrilight b.v., and because of the longer lifetime of the bulbs. Next to that the distribution of the light is better with this fixtures. Because of the advantages he needs to use less fixtures to realise the same result as with fluorescent tube lighting.

The fixtures are equipped with a dimmer and are connected to a sensor who measures the insied and outside lightintensity. Because of the difference in wetter from day to day the incoming light in the barn differs, the sensor / management unit compensates this, to ensure a constant and sufficient light intensity in the barn.

A clock ensures the dark period of 8 hours. The fixtures simulates an upcoming sun in the morning, they take 20 minutes to come to a full burn. This completely automated system (optional) was some €2000 more expensive, according to Mr. Van Zandbrink, however he is very happy with the advantages after 7 weeks of operation.

* On a height of 5 meter, tube with reflector by Philips or Osram

* Bedrijfstechniek Barneveld = Electrotechnical installation company active in livestock

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Bright by nature

Mr. Van Zandbrink says that he remarks earlier when cows are able to pair / able to be inseminated, however he has not had any real problems with having the cows „tochtig“ before. Even the production per cow (BSK) is increased with 2.5 liter, however he is not completely sure if this is caused only by the light. He says: of course good feeding is important, if you do not have that you can install 1200 lux, but it will not help you. We have to look at the final results in a year, then you can see if this is really caused by the light, my idea is that it comes from the lights.