



Rune Nielsen (on the left) and his business partner is seeing many opportunities in the flexible solution

The Northern Jutland sows is getting illuminated directly above their head

In the Netherlands this system has been used for many years – a system where sows get illuminated directly above their head, by LED tubes mounted above the boxes. Now this idea is launched in Denmark.

A Danish pig farmer in the Northern Jutland, have had the idea of increasing the light in the mating and control section for quite some time.

- It has been almost eight years since I first saw the concept in the Netherlands, Rune Nielsen says. At that time, it was “just” an ordinary fluorescent tube, which they used above the sows.

Now Rune Nielsen started RN Solutions Aps, where he started selling LED-lights which you can hang directly above the head of the sows. This way you both save energy and improve the reproduction.

- We are so lucky, that we have our own “test-crew” very close. Says Rune Nielsen. - We have had some issues to get the sows in heat and lots of sows that “skips”, so therefore this is very convenient, he elaborates.

The recommendation from VPS is a minimum of 100 lux in the mating section, however more and more advisors and veterinarians recommend up against 200 lux. – There are definitely some issues with the

lighting in mating sections. – Generally, there is just not enough light, especially by the sows, says Mads Waittløw, who is the team leader for the pigs counseling in Agrinord.

Significantly better light by the sow

If you measure the brightness in the passage, where we walk ourselves, there is often enough light, and this is often the main reason, why we forget the brightness in the box where the sow is, says Rune Nielsen.

The inventory along with the feeding tube, makes it almost impossible for the light to get through to the sow. If Rune Nielsen turns off the LED light and turns on the standard light in the ceiling and measure the brightness by the head of the sow, it shows only 30 lux, which is way under the recommendation of 200 lux. – Although you need to be aware that the measuring is done in the middle of a sow section, which is a long way from e.g. windows in the walls. However, there is still a problem.



When the light is placed right above the sow, it gives the opportunity to limit the number of lamps in the ceiling, as they are only to be used when there are staff/workers in the stable. Rune Nielsen is turning off the ceiling light and turns on the LED light above the sows, and then he does the same measure as earlier, and now there is more than 300 lux.

Simple and flexible

The LED fixtures is available in two different lengths, and they are very easy to connect, which means that you only must pay the electrician for connecting the end to the power supply in the stable. Everything else you can do by yourself. The LED luminaires can easily replace a standard fluorescent tube, as they are IP 65 approved and they scatter the light in the same way as a standard fixture.

When the stable is measured, RN Solutions makes a calculation of how many different lengths is needed. It all comes down to the length of the cables, as these are used to connect the different luminaires.

- The issue regarding the durability of LED lights in stable environments is hard to figure out. There are many opinions about it, but their solution where everything is cast together, so they are fast to mount, looks exciting, says Mads Waittløw.



Rune Nielsen consider that there is approximately 27 kilo watt hours to save per LED tube used compared to a standard fluorescent tube.

- We do not recommend the farmer to change all lighting in the stable, only to add the light above the sows and keep the standard light turned off as much as possible, says Rune Nielsen.

The money earnt in about two years

The LED light is not any new invention. Therefore, many knows that you save energy by using this light. This means that you can earn your investment in a new light system back in about two years.

- LED light saves a lot of power and with that reduces the operating costs, says Mads Waidtløw.

Therefore, RN Solutions started working with a Power Company called “Energinord”, which grants subsidies to companies, who invest in energy saving measures. For every kilo watt hour, saved annually, 30 pennies are granted. Rune Nielsen and his business partner has calculated, that this means a grant of approximately 50 Danish Kroner for one LED-light.

- We are the ones who apply for this grant from Energinord, says Rune Nielsen and continues: This doesn't commit the farmer to use Energinord on his farm.

Besides the grant, Energinord also offers to finance projects with an energy saving aspect. They offer to finance 80 % of the value which is invested. – With that both that and the grant, there will hardly be any payout.

Part time inventor

Rune Nielsen is actually a farmer. He is running a larger pig production with his sister and her husband.

Regarding the inventions, they occur during the daily work as he runs into the issues, which needs to be solved. – I am trying to always think simple solutions, to some of the issues which occur during the day, says Rune Nielsen. Neither him or his business partner thinks that the sale of their products is over.

– Besides our light, we also sell straw racks, which can be combined with light for sows, says Rune Nielsen. He is quite certain that more issues will occur in the future, which I have the idea to solve. I am the invention type, and I get inspired by the daily work in the stable. That is why I am working with a business partner, who is good at all the commercial stuff, Rune Nielsen explains.