



LED light in poultry houses

Recent developments in lighting technique made LED-lighting available for use in animal husbandry. LED-lights are durable, shockproof and low in energy use, which makes them very attractive to install in laying hen houses. As they are in small sizes, they do fit easily in aviary or colony systems.

What colour?

By combining various types of LED many colours of light can be produced. Even the UV spectrum is possible.

Red light is often used to stop or reduce problems with injurious pecking.

- Red light does not stop the pecking, but it masks the red colour of blood and wounds
- Red light probably has a lower intensity, making the whole environment darker, which makes it harder for the birds to see their environment.

Colour temperature

The most common LED tubes produce white light. White light comes in various colour temperatures:

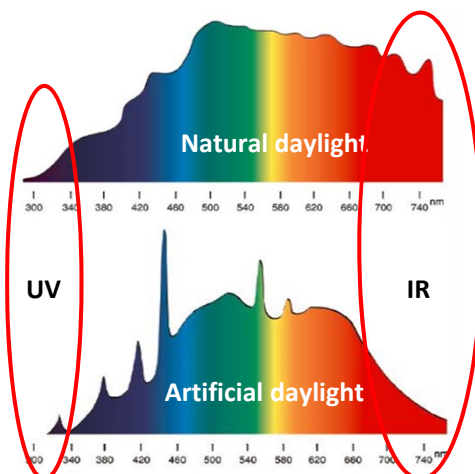
- A more warm light (max 3000K) is advised for egg producing animals.
- For rearing pullets a cooler light (4000-6000K) is advised.



Cool (top) versus warm light

Daylight

Daylight is thought to be the best type of light as it resembles best the natural situation. Because of this artificial lights have been developed that resemble the daylight spectrum as much as possible. However, most of these lights lack the UV spectrum and also have much less output in the infrared. UV is thought to have a positive effect on preventing injurious pecking. A possible effect of Infrared is unknown.



Natural daylight

Natural daylight enters a henhouse through ventilation openings, popholes and windows. The effect of daylight on feather pecking is very variable. This can be explained by the absence or presence of UV:

- Daylight coming through a window is filtered and does not contain the UV spectrum.
- Daylight coming through ventilation openings and popholes is not filtered and contains UV, which is thought to reduce injurious pecking.

Research in commercial henhouses indicated better feather cover, more foraging behaviour and higher egg production in houses with more unfiltered daylight.

