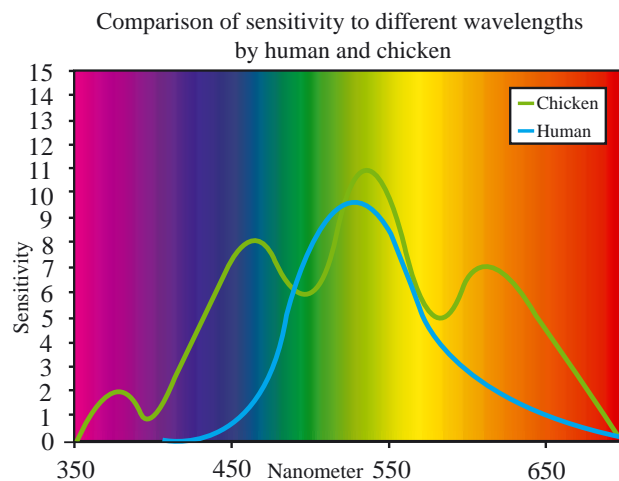


PRINCIPLES OF MONOCHROMATIC LIGHT



The effect of monochromatic light on animals is becoming more appreciated by poultry producers. New insights, new approaches and new applications have been revealed during recent years.

Birds perceive light in a different way than human beings do. The sensitivity for the wavelengths of the light spectrum from a bird eye is different from the human eye. A bird sees in the blue area of the spectrum up to 13 times as much as a human being and in the red area up to 3.5 times.

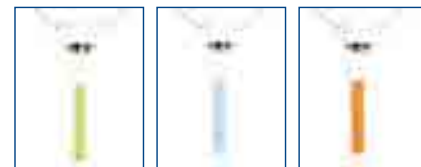
Green and blue light go through the eyes to the nerves of the bird, where it stimulates the growth hormones. Red light penetrates deeply not only through the eye, but also through the skin of the bird.

In general the birds become much quieter when exposed to monochromatic light, this is NOT only an issue of giving the right color, but as much of eliminating unwanted colors.

Poultec has available Green, Blue and Red monochromatic Compact Fluorescent lamps

- The **GREEN** monochromatic 11W lamp produces about 1200 Lumen.
- The **BLUE** monochromatic 11W lamp produces about 300 Lumen.
- The **RED** monochromatic 11W lamp produces about 600 Lumen.

To increase the visibility for the farmer an Extra Warm White lamp is available.



COMMERCIAL LAYERS

For the rearing period, using the **POULTEC Lighting System** with a combination of Green and Blue lamps gives best results

For the production period, Layer houses with cages have as basic options:

- Using the Gasolec Orion Light System with Red lamps
- Using the Gasolec Orion Light System with a combination of Red and White lamps.

The usage of only red lamps gives good results, although some farmers prefer a combination with white lamps to have the advantage of a better inspection and extra stimuli during the first weeks of the laying period.

- Monochromatic RED stimulates the hypothalamus, which makes hormones for reproduction, which stimulates the egg production and increases the fertility

Most frequent demonstrated advantages:

- Reduction of stress
- Reduction of cannibalism
- Stimulating egg production
- Improved Feed Conversion Rate
- Improved uniformity of the birds
- Less mortality
- Tremendous savings on electricity consumption



BROILERS

The most successful lighting option for broiler farms is using the **POULTEC Lighting System** with a combination of Green and Blue lamps.

During the first period the intensity of monochromatic green light is certainly needed to activate the birds to start drinking and eating, but in the second phase the blue light is preferred. The combination of green and blue light gives the best results.

- Monochromatic **GREEN** light stimulates the number of muscle cells and building of skeleton
- Monochromatic **BLUE** light stimulates the production of testosterone in plasma, which generates proteins to make the muscle cells bigger

Most frequent demonstrated advantages:

- Improved Feed Conversion Rate
- Increased uniformity of the birds
- Increased body weight
- Better spreading of the birds over the whole house
- Less mortality
- Reduction of stress
- Reduced waste of drinking water
- Tremendous savings on electricity consumption



PARENTSTOCK

For the rearing period, the best results are reached by using the **POULTEC Lighting System** with a combination of Green and Blue lamps

In breeder houses the red monochromatic light is used to increase the number of chicks per hen and cock produced. The main tool to achieve this is by increasing the fertility of the eggs. It is crucial to realize the desired light intensity and not to create shadows.

By using the colored monochromatic red light the cock is more active which leads to an improved fertility of the eggs, so the number of chicks per hen is improved.

Most frequent demonstrated advantages:

- Higher fertility of eggs
- The egg production remains higher after reaching peak production
- Reduced stress and cannibalism
- Less mortality
- Extended productivity of both hen and cock
- Tremendous savings on electricity consumption



LIGHT EQUIPMENT

POULTEC IP34 light unit

The adapter, in combination with the special silicon fitting and the long lasting PCP Festoon cable, can be installed easily. Although the IP34 lamp unit comes with a lamp cover, this system is not 100 % water resistant.



POULTEC IP54 light unit

This system is especially developed and designed for usage in surroundings in severe circumstances, like poultry houses that are cleaned with high-pressure water pumps. The system is watertight.

POULTEC delivers three types of the IP54 unit:

- The IP54 for round cable going through the unit.
- The HIP54 that is hanging at a round cable.
- The FIP54 which is based on using the festoon cable for easier installation.



A complete IP54 POULTEC Light Unit consists of an adapter + monochromatic lamp + lamp-screw-on cover and a fixture, everything except the cable.

POULTEC Horizontal Light Unit (HLU)



This unit is designed to mount the lamp in a horizontal position, perfect for lighting corridors and for lower area's.

The Horizontal Light Unit is available as:

- HLU - a complete fixture with possibility to position the lamp horizontal and vertical.
- HLU DA - a complete fixture for burning of 2 lamps separately



Dimming

The lamps of POULTEC are dimmable, which is a crucial function needed for breeding chickens. Special dimmers were designed for this reason, which are able to dim from 100% to 70%, 60% or 50% depending on the conditions.

We deliver different types of dimmers depending on the local voltage, the local frequency and the number and type of lamps in the house.



3-stage Dimmer

Electronic Dimmer



Lighting System

