Animal-Centric Lighting Systems for Breeders

OPTIMIZE PRODUCTION AND WELL-BEING IN BREEDERS

At ONCE® we understand that modern poultry production has evolved into a science. With every breeder flock placement growers face new challenges in reaching hatchability goals. Factors range from the number of hatching eggs produced to the unexpected, making it difficult to achieve optimal results. We want to help you maintain consistent success.

As the first company to pioneer animal lighting systems based on scientific research, we've developed innovative solutions that improve both production and animal welfare. Our scientific discoveries have not been simple, but our relentless effort to unlock the potential of light has revolutionized the industry to where it is today.

Based on photobiology and backed up by scientific proof, we have become an industry leader by focusing our efforts on finding solutions that show **proven, measurable results**†. These results leverage three key aspects of lighting needed to experience success when raising breeders indoors: spectrum, intensity and photoperiod.

www.once.lighting

breeders@onceteam.com • 15255 23rd Avenue North, Plymouth, MN 55447 • T +1 (763) 381-5621

Science is our secret

A thorough understanding of the way animals perceive and respond to the different characteristics of light matters. Here's why:

Animals see differently

The spectral characteristics, as well as the intensity, affect how light is perceived. What we see is made up of light reflected from the objects we look at. But eyes aren't the only organ that processes light. Poultry identify light through extra-retinal, non-visual, pathways as well.

The Photopic Spectral Response Graphs shown to the right demonstrate how most humans, who have three visual cones, see green and yellow colors more intensely than they see blue and red. The How Poultry See graph shows that chickens, who have four visual cones, are more sensitive to blue and red light. And what about the far left, smaller peak? It's in the UV spectrum. Chickens can see UV light, and humans cannot.

Experience the benefits today!

Our cutting-edge lighting systems optimize spectral output to target an animal's highest color sensitivity. They control spectrum, photoperiod and light intensity. This results in enhanced production metrics at every stage of life.

Increase the number of hatching eggs

Dim-to-Red® technology has been shown to decrease time to peak production by stimulating ovulation via the release of reproduction stimulating hormones. This encourages the desire to breed and increases the number of eggs hatched.

Enhance animal welfare

By providing a natural sunrise and sunset simulation, our lighting systems eliminate extreme changes in light, reducing multiple stress inputs and increasing hatchability rates, while improving immune response. This is supported by blood assays for short and long term stress indicators, as well as behavioral stress tests.

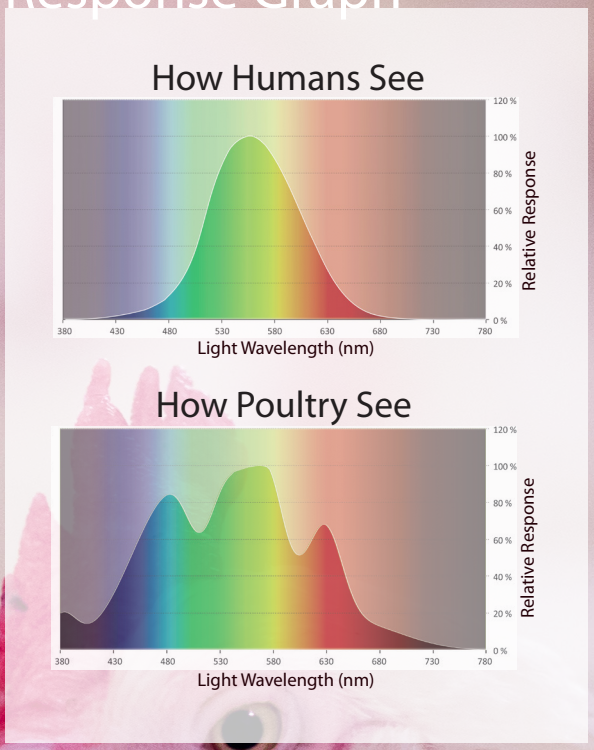
Reduce undesirable behaviors

Breeders under red light technology are calmer, less prone to flight and notably less aggressive. With innovative technology that provides uniform coverage and a consistent light pattern, as well as the sunrise and sunset functionality, corticosterone levels and other stress markers are minimized.

See the results

At ONCE®, we care about your animals and are dedicated to providing them with the best lighting possible. With our scientific approach to photobiology, along with our systems' rugged and durable design, we offer an optimal solution that addresses your flocks' needs. When supplied with the right tools, your hatchability will improve, floor eggs will be reduced and your number of hatching eggs will increase. Just as modern breeder production has evolved into a science, so has the animal-centric lighting they require.

Photopic Spectral Response Graph



†Patent spectral output for avian vision. Pat. www.once.lighting/patents and Other Worldwide Patents Pending