

Birds get the green (and red) light

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Japanese quail grow and breed best under green and red lighting. An important bird in the poultry industry, quail thrive better under these conditions than in white and blue light, according to recent research carried out at Banaras Hindu University, India.

Research group leader, Dr Suneeta Yadav explains: "We monitored these [quail](#) over 35 weeks and found that birds grown in red or [green light](#) ended up with higher body weights than those grown in white or [blue light](#) at the same intensity and day lengths."

Red and green light also increased the reproductive development of the quail. "Female quail generally prefer to mate with males with larger cloacal glands, which are also linked with higher fertility," Dr Yadav says. "By 35 weeks, quail raised under red and green light had larger cloacal glands, suggesting that they had better [reproductive development](#)."

Intriguingly, the group also found that blue light had the opposite effect. "The quail raised in blue light were generally less healthy than other groups; it was an unusual discovery," remarks Dr Yadav.

The group plan to discover the reasons for these surprising results, investigating biological aspects such as light wavelength perception and hormonal levels. Dr Yadav explains: "I am keen to discover why Japanese quail displayed such interesting responses to these wavelengths. We need to carry out molecular analyses of their eye photoreceptors and also figure out what happens to their reproductive hormones in more

detail."

This research may have applications across the spectrum, particularly in the [poultry industry](#). Expanding on this, Dr Yadav says: "I have big plans to apply these findings to different fields such as poultry production at the industrial level, cancer and endocrine research, and many others."

This work will be presented by Dr Suneeta Yadav (Banaras Hindu University, India) at the annual meeting of the Society for Experimental Biology (SEB) in Brighton at 11.00 on Wednesday July 6, 2016.

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