

FOTOSTIMULASI CAHAYA MONOKROMATIK UNTUK OPTIMASI REPRODUKSI DAN KARAKTERISTIK KAS PUYUH (*Coturnix coturnix japonica*) MASAK KELAMIN

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ABSTRACT

Light treatment such as light schedule, intensity, and color are important factor that influence avian productivity. Two hundred and seventy quails were divided into nine treatments of light, with thirty replications. The treatments were without light, controls with 15 and 25 W, red, green, and blue lights with intensities of 15 and 25 lux. Control treatment used incandescent bulb. The red, green, and blue lights were provided by light emitting diodes (LED). All lights treatment were given for 14 h daily, started from 17.00 to 07.00. All of the parameters measured on sexual maturation were the weights of the body, the weights of the carcass, the weights of the abdominal fat, the weights of the ovary and oviduct, the weights of the breast muscle, serum estrogen concentration, cholesterol, and triglyceride, total of the yellow follicles and diameters of the follicles. All of the data analyzed were done GLM (general linear model) procedure in the SAS program. Quails exposed to monochromatic light had higher serum estrogen concentrations, body weights of the sexual maturity, weights of the breast muscle, the ovary and the oviduct weights, total of the yellow follicles, and diameters follicles ($P < 0,05$). The Red and blue monochromatic lights potential to increase reproduction profile and carcass quantity of the sexual maturation.

Keywords: monochromatic light, ovary and oviduct, sexual maturation, carcass quantity