

OBJECTS AND FOOD COLOR RECOGNITION BY CHICKS

RECONHECIMENTO DE CORES DE OBJETOS E DE ALIMENTO POR PINTOS

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The study of cognitive abilities of newborn broiler chicks using different colors of objects and foods allows to check the level of perception of the animal related to the environment in which the animal finds himself, to understand its ability to retain memory and learning, contributing for the recognition of objects that are around the animal. The objective of this research was to evaluate by preference tests, the ability of perception of broiler chicks in the recognition of objects and foods of different colors. The survey consisted in conditioning of 60 sexed broiler (30 males and 30 females chicks) one-day-old for three days with blue balls and red food colors chosen for having opposed chromaticities. After the conditioning phase, a preference test was performed, in which the animals were placed individually in the center of an arena test with four options: red food, blue food, red balls and blue balls. Latency to the first peck and the number of pecks, the number of sequential pecks the total time the bird in each compartment occupied and the first occupied slot were recorded. According to this study, it was observed that females had a shorter latency period to choose the first compartment to be occupied, remained for a longer period inside the compartments and interacted more with the food or object preference compared to males (Table 1).

Table 1. Mean values of observed behaviors for different types of compartments and between females and males

Subjects/ Compartments	Behaviors				
	Latency period (seconds)	Number of pecks	Number of sequential pecks	Total time (seconds)	Occupancy rate
Females	90.52 b	0.009 a	0.003 a	101.83 a	2.22 a
Males	95.78 a	0.007 b	0.003 a	98.56 b	2.17 a
<i>Chi-square test</i> (χ^2)	18.54*	40.31*	0.01ns	7.61*	0.07ns
Red object	143.54 a	0.00 d	0.00 d	46.53 d	1.98 bc
Blue object	95.78 b	0.23 c	0.02 c	226.22 a	2.55 a
Red food	79.90 c	31.98 a	1.29 a	128.56 b	2.79 a
Blue food	67.67 d	4.02 b	0.20 b	74.45 c	1.66 c
<i>Chi-square test</i> (χ^2)	1954.65*	4387.86*	170.61*	9227.38*	27.73*

Means with different letters in the column differ at 0.05 level of probability by chi-square test. ns: not significant, *: significant at 0.05 (P < 0.05).

Chicks took less time for decision making on the food and blue ball. The chicks remained for a longer period of time, interacted more and visited more frequently the compartments with the blue object and the red food. According to the results, it is concluded that the birds recognized the red and blue food object, with the blue color of the greater attractiveness for broiler chicks related to red.

Key words: animal cognition, color perception, conditioning, broiler chicks.