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Utilization of Chickpeas cull in laying hens of second cycle

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To determinate the effect of inclusion of Chickpeas cull in laying hens of second cycle, in substitution of soybean meal and corn grain in production performance, and flavor egg, 180 hens (BW = 1.70 ± 0.15 kg; white leghorn laying) were used in partial enclosed and natural fan-ventilated building with elevated wire cages (3 hens were placed wire cage), were used in a totally randomized design, hens were fed one of three diets: 1). Diet with 17.17 % de CP and 3.01 Mcal of ME/kg, containing corn grain 63 %, soybean meal 27 %, and premix 10 % (CONT, n=60); 2) diet with 16.96 % of CP and 2.98 Mcal of ME/kg, with corn grain 57 %, soybean meal 23 %, Chickpeas cull 10 %, and premix 10 % (CHP10, n=60), and 3). Diet with 17.10 % of CP and 2.95 Mcal of ME/kg with corn grain 50 %, soybean meal 20.0 %, Chickpeas cull 20 %, and premix 10 % (CHP20, n=60). Hens were weighed at days 0 and 140 of the test, the feed intake was recorded daily, and egg production was measured daily (hen-day production); egg weight, egg flavor was recorded weekly, and feed intake/kg egg gain were calculated. Body weight at day 0 (1.70, 1.71 and 1.69 kg) were not affected ($P < 0.05$) by CONT, CHP10 and CHP20 respectively. Feed intake (102, 103 and 103 g) were similar ($P > 0.05$) between dietary treatments. The egg production (71.05, 70.40 and 71.10 %) was not modified ($P > 0.05$) between treatments. Egg weight (60.20, 59.95 and 60.90 g) was similar ($P > 0.05$) between treatments. Feed intake ratio/kg egg produced (2.45, 2.52 and 2.49 kg) were no affected by treatments ($P < 0.05$). It is concluded, that Chickpeas cull can be used up 20 % in substitution of soybean meal and corn grain in diets for laying hens without affecting production performance and egg quality.

Key words: Chickpeas cull, soybean meal, egg production