

EFFECT OF ADDING DIFFERENT LEVELS OF WATER EXTRACT OF THE PUMPKIN LEAVES AND PUMPKIN SEEDS POWDER (*Cucurbita moschata*) IN SOME OF THE PRODUCTIVE CHARACTERISTICS OF BROILER.

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ABSTARCT

This experiment was carried out in the poultry field of the agrical fural advisory office at the College of Agriculture / University of Basrah sin a 2017/11/13 to 2017/12/18 for 35 days as expermenet period . the prsent study aimed stady the effect of adding pumpkin seed powder and pumpkin water extract of leaves in the productive characteristics of meat.in by using (210) Ross. Strain broiler chicks(Aged one day) non naturalized from the mean weight about 44 g. These chicks were distributed randomly to seven treatments and three replicates per treatment, (10 chicks per CRD). The control treatment (T1) was additions. while (T2, T3 and T4) treatments basic and without any ditions were added to it added to a basic diat pumpkin seed s powder in levels (2, 4 and 6 g / kg) feed.the treatments (T5, T6 and T7) were added to their drinking water of the water extract of the pumpkin leaves with levels (2, 4 and 6 ml / liter) of water. The results showed a significant improvement ($p \leq 0.05$) in the rate of body weight, rate of increase in weight gain, feed consumption rate, food and food conversion efficiency, And Ayda for moral improvementin ($p \leq 0.05$) in the proportion of dressing at the age of 5 weeks as well moral improvement at the production guide and economic cost of all added transactions, while no significant effect in the mortality rate. Treatments (T4andT7) showed the best results.

INTRODUCTION

As a result of the rapid development of poultry breeding and the deterioration of the immune status of broilers requires, the use of many antibiotics and their impact on the human health (1) ; (2) medicinal plants were used instead of antibiotics because were natural and safe (3). Studies in feeding meat broiler have shown that they improve feed intake, stimulate self-enzymes and digestive juices, improved digestion and absorption of nutrients, immunoglobulin, and antimicrobial, inflammation and viral (4) (5)(6) and (7). So we selected pumpkin plant, which is distinguished by high oil from its content (42%), and rich in unsaturated fatty acids; such as linoleic and oleic and to the acids and saturated citric acid and palmitic acid (8), pumpkin has high protein (38%), and rich in essential amino acids (9) ; (10) and (11), Also several compounds such as tocophero and beta-carotene (12). pumpkin characterized by presence of biologically active compounds such as polysaccharides, P-aminobenzoic acid, fixed oils, sterols, proteins and peptides (13). Also the presence of soaps, flavonoids, tannins and alkaloids (14), And omega (3 and 6) and its role in the represent the food and absorbed a very of high concentration of vitamin E (15), (16), and (17). high level of iron, Zinc, phosphorus, calcium, and selenium (18) and (19). And its role in the various metabolic processes needed by the body of the bird (20) *studies showed a significant increase in ($p \leq 0.05$) final body weight, rate of weight gain, feed consumption rate and feed conversion efficiency of broilers added for it water extract of the pumpkin leaves at 15% and 30% of drinking water. Treatment with (%30) pumpkin showed The best results compared to control when age of 70 days (21). (22) through observation of a significant improvement ($p \leq 0.05$) in final body weight, daily weight increase rate, feed consumption rate, feed conversion efficiency and reflux ratio for birds fed on diets. Pumpkin seed powder was added of levels (5, 10, 15 and 20%) increased significantly with increasing level In addition to control at the of age (56) days. Giving the pumpkin seed with 33 and 66 g/kg oil levels, had good results compared with 100 g/kg and control at 49 days of age (23). This study was conducted to investigate the effect of adding water extract of pumpkin leaves and pumpkin seeds powder in some of the productive characteristics of broilers.

MATERIALS AND METHODS

The birds were raised in cages like battery shape, divided by a distance of (150x120) cm for each cage. The cages were 75 cm high. All necessary administrative procedures were taken from the provide of heat and ventilation within the ideal limits gas incubators and electric heaters used to fix the temperature up to (35-34) c° at the first week of the study and then lowered the temperature (2c°) eah week until it reach (24 - 22) c° at the end of the experiment, The lighting lasted for (24) hours and the ventilation system was adopted in the ventilation using the fans were drawn at the end of the hall, With the holes in the windows openings at the beginning, The circular cylindrical plastic feeders were used until the second week. With a semicircular circular matrix that lasted until the end of the experiment. Ther were replaced by semi-automatic circular pumps which lasted until the end of the experiment period. We used to ground manhal or chicks drining water during the whole periodd exppriment , the chicks for each repeater collectively weight per week untl the eggs of (35) days were studied productivity characteristics were used the following treatments:

- 1- The first treatment (T1) was a treatment of basic control without any additives.
- 2- The second treatment (T2) was a basic diet supplemented with pumpkin seed powder (2g/kg feed) .
- 3-The third treatment (T3) was added to pumpkin seed powder (4g/kg) feed.
- 4- The fourth treatment (T4) was a basic diet supplemented with pumpkin seed powder (6g/kg feed) .
- 5- The fifth treatment (T5) was a addition of water extract of the pumpkin leaves (2 ml/liter of water).
- 6- The sixth treatment (T6) was a some addition of water extract of pumpkin leaves (4 ml /liter of water).
- 7- the seventh Treatment (T7) was a some addition of water extract of pumpkin leaves (6 ml / liter water) .

Preparation of pumpkin seed powder and water extract for pumpkin leaves: -

Pumpkin seeds were brought from the local markets, The crust were discarded and mixed with the basic diet by (2, 4 and 6 g / kg feed) The ratio was compared to global research. The

primary diets were grindery, and the growth and final diets were in the form of pelete. The water extract of pumpkin leaves was presented by method of (24).

Table (1) shows the percentage of the chemical composition of the diets used in the study.

| Forage materials% | Starter diet (7-1) days | growth 8-21) days | finisher diet (35-21) day |
|-------------------------------------|-------------------------|-------------------|---------------------------|
| Wheat | 57.0 | 61.0 | 61.5 |
| barley | .06 | 5.5 | 3.5 |
| Wheat bran | 5.0 | 0.4 | 3.0 |
| Soybean Meal | 22.0 | 20.0 | 20.0 |
| The center of Brutini provimi | 5.0 | 5.0 | 5.0 |
| oil | 2.5 | 2.0 | 2.5 |
| limestone | 2.0 | 2.0 | 2.0 |
| salt | 0.30 | 0.30 | 0.30 |
| Lysine | 0.10 | 0.1 | 0.1 |
| Methionine | 0.10 | 0.10 | 0.10 |
| Calculated chemical analysis | | | |
| Crude protein% | 20.35 | 19.75 | 30.20 |
| Energy represented (kcal / kg) | 2966 | 2968 | 3003 |
| %Ca | 1.186 | 1.181 | 1.184 |
| Sodium% | 0.173 | 0.174 | 0.173 |
| Available phosphorus% | 0.600 | 0.596 | 0.602 |
| Lysine% | 1.143 | 1.114 | 1.100 |
| Methionine and cysteine% | 0.591 | 0.586 | 0.593 |
| vitamin A IU / kg | 1000 | 1000 | 1000 |
| vitamin E IU / kg | 34.9 | 35.0 | 34.0 |

1- Protein concentratb used by the Jordanian company Provimi contains 40% crude protein, 2,100 cal/ kg. representative energy, 5% raw fat, lysine 3.83%, methionine + cysteine 4.2, methionine 3.7%, calcium 6.5%, phosphorus available 5%, sodium 2.2%, Vit-A 400 mg/kg.vit D3 mg/kg.vit k 2 mg/kg .vit B3 2 mg/kg. Vit B6 2 mg/kg. According to the chemical composition of feedstuffs contained in the reports of the National Council for National Research (NRC) (1994).

Productivity was measured by the following attributes:

1-the rate Live body weight (g) = total live weight of the birds at the end of the week (g) / number of birds at the end of the week (\bar{x})

2-weight gain = (living body weight at the end of the end period -live body weight at the beginning of the period) (25) .

3-feed intake (g) = feed amount provided for the period beginning _ feed amount of remaining at the end of the same period). (26)

4- Food conversion efficiency = (amount of feed consumer / g increase the weight in the same time period)

5- Dressing ratio (gm) = carcass weight without uneaten intestines / live body weight \times 100. (27)

6-Maortality rate = number of mortality / total number of birds \times 100.

7-Index guide = Average body weight (g) \times Vital Ratio / study days \times Food conversion factor \times 10 .

Vital Ratio = 100 - mortality . (28)

8- Economical efficiency = (Cost of feed) D / ton) \times Food conversion factor).

The experimental data were analyzed using CRD SPSS 2012 Version 19.

RESULTS AND DISCUSSION

Table (2) showed a significant effect ($P < 0.05$) on the average body weight of broilers During weeks 2, 3, 4 and 5. the cumulative received significant improvement ($P < 0.05$) for each added treatment. At age of (2,3and 4) week, the forth and seventh treatment had Significant exceeded compared with control. the fourth hand seventh treatment and did not differ Significantly from the fifth and sixth treatments. at age 2, 3, and 4 week, Compared with However, the fifth and sixth treatments groups didn't have any significant change compare with other treatments and control, results were agreed with (19, 21 and 27). who indicated a significant improvement in the live body weight of the broilers added to her

water the water extract of the pumpkin leaves or the Pumpkin seed powder compared to control. As for the weight gain, the results of Table (3) shows a significant improvement ($p \leq 0.05$) for all addition treatments compared with control group. the fourth and seventh treatments significantly exceeded all you experimentation groups, our results agreed with (21), (22) and (30) who indicated that a significant increase in the rates of weight gain of birds fed on a diets containing added pumpkin seed powder or water extract for pumpkin leaves to drinking water compared to control. The reason for the significant increase in body weight and weight gain for the treatments added to their diet pumpkin seed powder may be due to the presence of active substances that have proved effective in improving of metabolic processes of the body of the bird, which is reflcted positively on the increase in body weight and rate increasing (13). As the presence of active substances in the body of the bird acts as a good stimulant to improve digestion and absorption, thereby increasing the utilization of existing nutrients in the mixture (7), (32). Or perhaps due to the presence of many antioxidants, ingredients and beneficial nutrients in pumpkin seeds and water extract of pumpkin leaves such as essential fatty acids and amino acids (13) ; (31).

Table (2): Effect of adding levels of pumpkin seed powder and water extract of pumpkin leaves in average weekly and total body weight (g) for broiler (35) days \pm se.

| treatments | Live body weight (g) in weeks | | | | | cumulative weight |
|-------------|-------------------------------|------------------------------------|-----------------------------------|------------------------------------|-------------------------------------|-------------------------------------|
| | 1 | 2 | 3 | 4 | 5 | |
| T1 | 44 \pm 0.00 | 144.33 ^b 4.48 | 360.33 ^c \pm 3.75 | 752.333 ^b \pm 4.09 | 1205.33 ^b \pm 6.38 | 1655.67 ^d \pm 5.23 |
| T2 | 44 \pm 0.00 | 147.00 ^b \pm 1.73 | 386.67 ^b \pm 7.26 | 751.00 ^b \pm 6.08 | 1211.00 ^b \pm 6.35 | 1681.00 ^{cd} \pm 6.65 |
| T3 | 44 \pm 0.00 | 148.33 ^b 3.38 | 388.00 ^b \pm 4.93 | 755.67 ^b \pm 4.91 | 1235.00 ^b \pm 4.04 | 1714.67 ^c \pm 3.52 |
| T4 | 44 \pm 0.00 | 158.00 ^{ab} \pm 2.88 | 428.83 ^a \pm 5.35 | 863.67 ^a \pm 4.05 | 1351.00 ^a \pm 5.50 | 1840.67 ^a \pm 5.78 |
| T5 | 44 \pm 0.00 | 154.67 ^b \pm 1.45 | 424.00 ^a \pm 4.04 | 856.00 ^a \pm 5.50 | 1333.667 ^a \pm 3.17 | 1810.33 ^b \pm 7.68 |
| T6 | 44 \pm 0.00 | 147.00 ^b \pm 2.08 | 426.33 ^a \pm 4.33 | 861.67 ^a \pm 4.05 | 1341.67 ^a \pm 4.97 | 1810.33 ^b \pm 4.33 |
| T7 | 44 \pm 0.00 | 166.33 ^a \pm 4.63 | 439.67 ^a \pm 4.33 | 892.33 ^a \pm 6.38 | 1387.00 ^a \pm 6.08 | 1871.67 ^a \pm 5.23 |
| significant | N.S | ** | * | * | * | * |

N.S : None significant

*: Significant(different letters vertically represent Significant differences at level of(p< 0.05).

T1- Control treatment without additions .(T2, T3, and T4). Addition of pumpkin seeds by (2, 4 and 6) g / kg feed, (T5, T6 and T7).the addition of the water extract by (2, 4 and 6) ml / liter water.

Table (3): Effect of adding levels of pumpkin seed powder or water extract to pumpkin leaves in the weekly and cumulative in broilers weight gain (35) days \pm se.

| treatments | weight gain (g) in weeks | | | | | Cumulative weight gain |
|---------------|------------------------------------|-----------------------------------|-----------------------------------|------------------------------------|------------------------------------|------------------------------------|
| | 1 | 2 | 3 | 4 | 5 | |
| T1 | 100.33 ^b \pm 4.48 | 216.00 ^d \pm 1.15 | 392.00 ^c \pm 3.21 | 453.00 ^c \pm 4.50 | 450.33 ^c \pm 1.76 | 1611.67 ^d \pm 5.2 |
| T2 | 103.00 ^b \pm 1.73 | 239.67 ^c \pm 5.54 | 364.33 ^d \pm 7.83 | 460.00 ^c \pm .57 | 470.00 ^b \pm 8.14 | 1637.00 ^c \pm 6.65 |
| T3 | 104.33 ^b \pm 3.38 | 239.67 ^c \pm 6.17 | 367.67 ^d \pm 3.33 | 479.33 ^b \pm 4.66 | 479.67 ^b \pm 4.40 | 1670.67 ^b \pm 3.52 |
| T4 | 114.00 ^{ab} \pm 2.88 | 270.67 ^a \pm 4.33 | 435.00 ^b \pm 1.15 | 487.33 ^a \pm 1.45 | 489.67 ^a \pm 3.3 | 1796.67 ^a \pm 5.78 |
| T5 | 110.67 ^{ab} \pm 1.45 | 269.33 ^a \pm 3.38 | 432.00 ^b \pm 1.52 | 477.67 ^b \pm 3.17 | 476.67 ^b \pm 8.68 | 1766.33 ^b \pm 7.68 |
| T6 | 103.00 ^b \pm 2.08 | 279.33 ^a \pm 3.33 | 435.28 ^b \pm .33 | 481.06 ^{ab} \pm 1.00 | 480.00 ^b \pm .88 | 1778.67 ^b \pm 4.33 |
| T7 | 122.33 ^a \pm 4.63 | 273.33 ^a \pm 4.05 | 452.67 ^a \pm 2.18 | 494.67 ^a \pm 5.20 | 484.67 ^{ab} \pm 5.92 | 1797.67 ^a \pm 5.23 |
| significant t | * | * | * | * | * | * |

N.S : None significant

*: Significant(different letters vertically represent Significant differences at level of($p < 0.05$)).

T1- Control treatment without additions .(T2, T3, and T4). Addition of pumpkin seeds by (2, 4 and 6) g / kg feed, (T5, T6 and T7).the addition of the water extract by (2, 4 and 6) ml / liter water.

Feed intake and feed conversion efficiency

Table (4) shows no significant differences ($p \leq 0.05$) in the feed consumption and feed conversion efficiency at the first week, while Significant differences were observed in feed consumption and feed conversion efficiency in the fourth, fifth and sixth treatments at age 2 weeks. During the weeks (3, 4 and 5) and cumulative, there was a significant improvement ($P \leq 0.05$) for all addition treatments, where The fourth and seventh treatments, gave the best results compared to control and other treatments Our results agreed with (8), (21), (23), (33) and (34), who pointed to a significant increase in the rate of feed intake by birds fed on diets added pumpkin seed powder or added their water (water extract) of the pumpkin leaves compared to the control groups. a result of containing pumpkin seeds on active substances

which improve appetite and increased consumption of feed, which is reflected in better weight. Pumpkin works to protect lining of the gastrointestinal tract, improve digestion factor, increase the secretion of infectious enzymes and juices, thus feed consumption and improve feed conversion efficiency (16) and (32). The effect of unsaturated fatty acids in vegetable oils, which increase the efficiency of absorption of other nutrients in the diet, leading to improves the efficiency of food conversion (35). perhaps due to the fact that the pumpkin plant contains active substances that improve metabolic processes in the body of the bird, which is reflected in the rate weight gain and the efficiency of feed conversion (34), (36).

Table (4) Effect of adding levels of pumpkin seed powder and water extract of pumpkin leaves weekly and total feed consumption of broilers (35) days ± se.

| Treatments | Feed consumption (g) age in weeks | | | | | Total Feed consumption |
|-------------|-----------------------------------|--------------------------------|-------------------------------|--------------------------------|--------------------------------|---------------------------------|
| | 1 | 2 | 3 | 4 | 5 | |
| T1 | 131.67 ± 6.66 | 324.33 ^c ± 3.84 | 664.00 ^b ± 7.21 | 854.67 ^b ± 6.93 | 987.67 ^b ± 7.68 | 2961.33 ^b ± 23.05 |
| T2 | 130.67 ± 2.18 | 347.00 ^b ± 4.04 | 604.00 ^b ± 6.42 | 848.33 ^b ± 5.78 | 1005.33 ^b ± 7.12 | 2935.33 ^b ± 33.67 |
| T3 | 131.33 ± 4.91 | 348.33 ^b ± 5.45 | 602.00 ^b ± 7.00 | 872.00 ^a ± 6.35 | 1018.00 ^a ± 7.00 | 2971.67 ^b ± 7.62 |
| T4 | 140.00 ± 3.21 | 367.00 ^{ab} ± 7.93 | 692.00 ^a ± 7.00 | 865.00 ^{ab} ± 4.61 | 1016.33 ^a ± 5.04 | 3080.03 ^a ± 36.67 |
| T5 | 138.67 ± 2.02 | 378.33 ^a ± 4.63± | 708.67 ^a ± 5.78 | 866.33 ^{ab} ± 7.31 | 1034.67 ^a ± 8.14 | 3146.67 ^a ± 29.05 |
| T6 | 127.33 ± 5.60 | 374.33 ^{ab} ± 6.69 | 707.33 ^a ± 6.76 | 875.33 ^a ± 6.65 | 1040.00 ^a 6.24 | 3124.32 ^a ±32.00 |
| T7 | 144.000 ± 6.08 | 359.33 ^b ± 4.97 | 693.67 ^a ± 5.54 | 871.67 ^a ± 7.21 | 1014.00 ^a ± 5.92 | 3074.67 ^a ± 25.34 |
| significant | N.S | * | * | * | * | * |

N.S : None significant

*: Significant(different letters vertically represent Significant differences at level of(p< 0.0 5).

T1- Control treatment without additions .(T2, T3, and T4). Addition of pumpkin seeds by (2, 4 and 6) g / kg feed, (T5, T6 and T7).the addition of the water extract by (2, 4 and 6) ml / liter water.

Table (5) Effect of addition of levels of pumpkin seed powder and water extract of pumpkin leaves in the weekly conversion efficiency of broilers (35 days) \pm s e.

| Treatments | Food conversion efficiency, age in weeks | | | | | Cumulative conversion Efficiency |
|-------------|--|---------------------------------|---------------------------------|--------------------------------|---------------------------------|----------------------------------|
| | 1 | 2 | 3 | 4 | 5 | |
| T1 | 1.30 \pm .05 | 1.50 ^a \pm .02 | 1.69 ^a \pm .02 | 1.88 ^a \pm .01 | 2.19 ^a \pm .02 | 1.84 ^a \pm .01 |
| T2 | 1.26 \pm .08 | 1.44 ^a \pm .03 | 1.66 ^{eb} \pm .04 | 1.84 ^b \pm .01 | 2.14 ^b \pm .03 | 1.80 ^b \pm .01 |
| T3 | 1.25 \pm .03 | 1.45 ^b \pm .01 | 1.63 ^{bc} \pm .03 | 1.81 ^c \pm .02 | 2.12 ^b \pm .01 | 1.78 ^{bc} \pm .00 |
| T4 | 1.22 \pm .03 | 1.35 ^c \pm .01 | 1.59 ^{ab} \pm .04 | 1.77 ^d \pm .00 | 2.07 ^c \pm .01 | 1.71 ^d \pm .00 |
| T5 | 1.25 \pm .04 | 1.40 ^{bc} \pm .01 | 1.64 ^{bc} \pm .03 | 1.81 ^c \pm .02 | 2.17 ^{ab} \pm .02 | 1.78 ^{cd} \pm .01 |
| T6 | 1.24 \pm .04 | 1.30 ^c \pm .01 | 1.62 ^c \pm .01 | 1.81 ^c \pm .01 | 2.16 ^{ab} \pm .01 | 1.75 ^c \pm .00 |
| T7 | 1.17 \pm .05 | 1.31 ^c \pm .00 | 1.53 ^d \pm .04 | 1.76 ^d \pm .00 | 2.09 ^c \pm .02 | 1.71 ^d \pm .00 |
| significant | N .S | * | * | * | * | * |

N.S : None significant

*: Significant(different letters vertically represent Significant differences at level of(p< 0.0 5).

T1- Control treatment without additions .(T2, T3, and T4). Addition of pumpkin seeds by (2, 4 and 6) g / kg feed, (T5, T6 and T7).the addition of the water extract by (2, 4 and 6) ml / liter water.

Dressing percentage and guide production and economic efficiency.

The results of Table (6) indicate a significant improvement ($p \leq 0.05$) in the dressing percentage of carcasses for all birds added treatments, Which significantly exceeded the seventh treatment while no significant different between the fourth treatment other treatments and control which agreed with (22), (23) and (34) which indicated a significant improvement in the ratio the dressing percentage of carcasses broilers chickens fed diets containing added pumpkin seed powder or water extract of the pumpkin leaves leaves added to drinking water compared with control. this can be due to the superiority of this attribute to the height of the weights of birds, the body weight higher increased in dressing percentage (29). Table (6)

shows significant improvement of ($p \leq 0.05$) in the productivity index and economic efficiency of all added treatments. Where significantly excelled ($P \leq 0.05$) birds (T4) and (T7) on the rest of the other control treatments, The results of the present study were consistent with waht mentioned (30). a significant improvement ($P \leq 0.05$) in the economic cost of one (kg) of feed additives of birds added to it drink water (water extract) of the pumpkin leaves compared to control at the age of (56) days. The improvement in the production index for birds may due to the improvement in the rate of i live weight, weight gain, the increase in the vitality rate and decrease in the rate of mortality. As evidence, the production index is proportional to the rate of body weight and the proportion of vitality rate (28), (37). Or perhaps due to lower economic cost due to improved food conversion efficiency and increased live bird weight (37).

Table (6) Effect of levels of pumpkin seeds and water extract of pumpkin leaves in the production index and economic efficiency for the diet and the dressing percentage the rate of mortality (35) days \pm s e.

| treatments | Production index | Economic efficiency Ratio | dressing percentage% | % Mortality |
|-------------|------------------------------------|-------------------------------------|----------------------------------|--------------------|
| T1 | 248.53 ^d \pm 9.63 | 1380.00 ^a \pm 10.89 | 71.25 ^c \pm .03 | 3.33 \pm 3.33 |
| T2 | 262.39 ^c \pm 7.81 | 1335.00 ^b \pm 9.01 | 71.41 ^c \pm .09 | 3.33 \pm 3.33 |
| T3 | 270.66 ^{bc} \pm 9.77 | 1325.00 ^c \pm 4.33 | 71.67 ^c \pm .17 | 3.33 \pm 3.33 |
| T4 | 295.21 ^{ab} 9.85 \pm | 1282.5 ^d \pm 6.614 | 72.17 ^{ab} \pm .03 | 3.33 \pm 3.33 |
| T5 | 280.91 ^b \pm 10.40 | 1335.00 ^b \pm 9.01 | 71.82 ^{bc} \pm .12 | 3.33 \pm 3.33 |
| T6 | 275.85 ^b \pm 8.41 | 1312.5 ^c \pm 6.61 | 71.74 ^{bc} \pm .06 | 6.67 \pm 3.33 |
| T7 | 303.93 ^a \pm 9.54 | 1282.5 ^d \pm 4.33 | 72.55 ^a \pm .06 | 3.33 \pm 3.33 |
| significant | * | * | * | N.S |

N.S : None significant

T1- Control *: Significant(different letters vertically rpresent Significant differenes at level of ($p < 0.05$). treatmnt without additons .(T2, T3, and T4). Addition of pumpkin seeds by (2, 4 and 6) g / kg feed, (T5, T6 and T7).the addition of the water extract by (2, 4 and 6) ml / liter water.

تأثير إضافة مستويات مختلفة من المستخلص المائي لأوراق اليقطين ومسحوق بذور اليقطين (*Cucurbita moschata*) في بعض الصفات الإنتاجية لفروج اللحم .

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الخلاصة

أجريت هذه التجربة في حقل دواجن المكتب الاستشاري التابع الى كلية الزراعة/ جامعة البصرة للفترة من 2017/11/13 ولغاية 2017/12/18 ولمدة (35) يوماً لدراسة تأثير إضافة مسحوق بذور اليقطين والمستخلص المائي لأوراق اليقطين في الصفات الإنتاجية لفروج اللحم. استخدم في هذه التجربة (210) فروج اللحم غير مجنس من سلالة Ross بعمر يوم واحد وبمعدل وزن 44 غم. ووزعت الافراخ عشوائيا على سبع معاملات وبواقع ثلاث مكررات للمعاملة الواحدة (10 افراخ للمكرر الواحد وفق التصميم العشوائي الكامل CRD) كانت معاملة السيطرة (T1) عليقة اساسية وبدون اي إضافات، في حين كانت المعاملات (T2، T3 و T4) عليقة اساسية أضيف اليها مسحوق بذور اليقطين بنسبة (٢، ٤ و ٦) غم/كغم علف. اما المعاملات (T5، T6 و T7) اضيف الى ماء شربها المستخلص المائي لأوراق اليقطين بتركيز (٢، ٤ و ٦) مل/لتر ماء. أظهرت النتائج تحسنا معنويا ($p < 0.05$) في معدل وزن الجسم الحي ومعدل الزيادة الوزنية ومعدل استهلاك العلف وكفاءة التحويل الغذائي ونسبة التصافي والتراكمية، وايضاً حصول تحسن معنوي ($p < 0.05$) في نسبة التصافي عند عمر (5) أسابيع بالإضافة الى تحسن المعنوي في الدليل الانتاجي والكلفة الاقتصادية لجميع معاملات الاضافة، في حين لم يكن تأثيرا معنويا في نسبة الهلاكات. وظهرت المعاملات (T٤ و T٧) أفضل النتائج للصفات المدروسة .

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