

EFFECT OF THE USE OF DIFFERENT LEVELS OF GYNURA PROCUMBENS LEAF POWDER ON THE PRODUCTIVE QUALITIES OF ISA BROWN WHITE CHICKEN Esraa Caesar Faris, Ammar Qahtan Shanoon and Rashid H. Hameed AL-Dalawi

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Abstract

This experiment was conducted in the poultry field of the department of animal production at the faculty of Agriculture/Kirkuk University for the from 2019/10/1 until 2019/12/10 and for 70 days (10 weeks) with the aim of studying the effect of using different levels of *Gynura procumbens* leaf powder on the productive qualities of white chicken type ISA Brown use 144(24) week-old chickens randomly distributed on 6 transactions and by 4 repeaters/transactions and each repeater 6 birds placed in battery cages with four floors and each floor contains four chickens, distributed on 6 transactions T1(control), T2 Contains *Gynura procumbens* 0.5%, T3 Contains Gynura 1%, T4 Contains Gynura 1.5%, T5 Contains Gynura 2%, T6 T5 Contains Gynura 2.5%. The results of the statistical analysis showed a moral superiority ($p\leq0.05$) for gynura transactions we find the second and fourth period and the general rate exceed T3, T4, T5 and T6, and in the third period morally superior to the T4, T5 and T6, In the weight of the eggs, the weight of the eggs exceeded in the first and second period the T5 and T6, while the third, T4,T5 and T6, and emerged in the fourth period morally superior to the T4, T5 and T6, and emerged in the fourth period morally superior to the T4, T5 and T6, and emerged in the fourth period morally superior to the T4, T5 and T6, and emerged in the fourth period morally superior to the T4, T5 and T6, and emerged in the fourth period morally superior to the T4, T5 and T6 and in the general average the third T4, T5 and T6 , In the egg mass we find that the T4,T5 and T6, second, third and fourth period sits above the T3,T4,T5 and T6 and at the general rate is higher than the T6 , The rate feed consumption in the second period is higher than T6 and in the third period is higher the second T3,T4,T5 and T6 and the general rate is higher than the T5 and T6. The food conversion factor in the first period exceeds the T1, T2 and T3 in the second period exceeds T1,T4,T5 and T6 and in the period exceeds T1 and the general r

Keywords: Gynura procumbens, Egg production, Food conversion, Food conversion treatment.

Introduction

Eggs are considered important in human life because it is a good food source and most studies and research try to improve the mechanisms of egg production and discovered that increased use of antibiotics has side effects as a result of their accumulation in animal products and their negative impact on the health of consumers (Greedy and others, 2015), Avoid the use medicines and recent research and studies have tended to use herbs and medicinal plants to improve the production capacity of meat and eggs and their other beneficial effects of the overall health of chickens and humans (Stadelman and Cotterill, 1998), Food additives play a major role in improving the productive, physiological and immune performance of domestic birds (Aminzade, 2012). Gynura procumbens are medicinal plants and powerful antioxidants are important (Rosidah, 2008) for contains flavonoids, soaps and glycosides (Alownahal et al., 2002) Gynura procumbens is a plant that acts as a natural antioxidant and acts to inhibit free radicals (Mustafa, 2010) and the leaves of this plant are non-toxic (Rasidah, 2009) and anti-inflammatory (Iskander, 2002), and anti-cancer (Agusting, 2006), In poultry, it was used as an antioxidant and reduced cholesterol in egg (Ahn and Du, 2000) (Khan, 2007).

Material and Methods

This experiment was conducted in the poulty field of the department of animal production at the faculty of Agriculture/Kirkuk University for the from 2019/10/1 until 2019/12/10 and for 70 days he used 144 (24) week-old ISA Brwon chicken sat in it, which was brought from a private company in diyala province of riyadh, after 14 days of breeding, the chicken was randomly distributed to 6 transactions at 4 repeaters per 6- repeater 6 chicken, repeater, and the T1 were fed on a standard bead-free. T2 was fed on attic containing 0.5 kg/ton gynura leaf. T3 was fed on attic containing 1 kg/ton gynura leaf. T4 was fed on attic containing 1.5 kg/ton gynura leaf. T5 was fed on attic containing 2 kg/ton gynura leaf. T6 was fed on attic containing 2.5 kg/ton gynura leaf. The 56- day trial period was divided in to four equal periods of 14 days per term, daily egg production, egg weight every, egg mass, weekly feed consumption rate and food conversion coefficient were calculated, analyzed using SAS (2005) the moral differences between averages were tested using the multi-level Duncan (1955) test al amoral level of 0.05.

Table 1: Of the components of the black berry and its chemical composition calculated in the nutrition of the white chicken.

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T6	T5	T4	T3	T2	T1	Blackberry components
52	52	52	52	52	52	Maize
11.75	11.80	11.85	11.90	11.95	12	Wheat
21.38	21.38	21.38	21.38	21.38	21.38	Soybean gain (47%)
2.70	2.70	2.70	2.70	2.70	2.70	Vegetable oil
9.13	9.13	9.13	9.13	9.13	9.13	Limestone
2.22	2.22	2.22	2.22	2.22	2.22	Dicalcium phosphate
0.17	0.17	0.17	0.17	0.17	0.17	Table salt
0.10	0.10	0.10	0.10	0.10	0.10	Blended vitamins and minerals
0.10	0.10	0.10	0.10	0.10	0.10	Choline (60%)
0.20	0.20	0.20	0.20	0.20	0.20	Methionine

Calculated chemical composition

16.29%	Protein raw%
2812	Energy represented kilo price/kg
0.40%	Methionine%
4 %	Calcium%
0.40%	Available phosphorus%

Chemical composition of relational components (NRC, 1994).

Results and Discussion

Table 2 shows that there was no moral superiority in the percentage of egg production in the first period, but in the second period it hap moral superiority ($p \le 0.05$) for the third, fourth, fifth and sixth experiment transactions 94.94, 91.66, 91.07, 90.47% on the first, second and in the third period the fourth, fifth, sixth, 95.23, 93.15, 91.96% of the rest of the transactions and in the fourth period exceeded the third, fourth, fifth and sixth transactions 97.88, 97.44, 97.02, 96.72% on the first and second and in the general average the third, fourth, fifth and sixth transactions exceed 92.89, 91.84, 91.14, 90.32% on the remaining transactions.

Table 2 : Effect using different levels of *Gynura procumbens* leaf powder at the H.D% average egg production rate ±standard error of chicken white ISA brown.

Transactions Duration per week	T1	T2	Т3	T4	Т5	T6
First term 25-26	79.46±4.7	82.44±1.4	83.33±2.5	84.52±4.3	85.11±2.2	87.20±3.3
Second term	86.30±2.5	89.88±0.7	90.47±0.6	91.07±2.6	91.66±1.7	94.94±2.6
27-28	b	ab	а	а	а	а
The third term	89.28±1.0	88.98±1.0	90.77±1.5	91.96±1.1	93.15±2.5	95.23±1.7
29-30	b	ab	ab	а	а	а
The four term	92.26±2.2	94.94±1.7	96.72±1.4	97.02±1.1	97.44±1.0	97.88±1.0
31-32	а	ab	а	а	а	а
General rate	86.83±2.8	89.06±0.8	90.32±0.7	91.14±2.2	91.84±2.5	92.89±0.1
25-32	b	ab	а	а	а	а

1. The first transaction is the control transaction, which is normally fed without adding, the second transaction, the third transaction, the fourth, the fifth, the sixth, the transactions add *G. procumbens* 0.5, 1, 1.5, 2, 2.5% respectively.

2. Each period represents 14 days, and the different letters indicate that there are differences of moral ($p \le 0.05$).

We note in Table 2 that there are moral differences $P \le 0.05$ in the egg weight in the first and second periods above the fifth and sixth transaction 69.83, 69.64, 63.61, 63.28, (g) on remaining transactions but in the third period gynura overvalued transactions on the control transaction

74.35, 71.85, 71.26, 70.45, 69.88 (g) in the fourth period, the fourth, fifth and sixth transactions exceeded 81.38, 80.90, 78.94 (g) and in the general average the third, fourth, fifth and sixth treatment of the first and second treatment 72.29, 71.41, 70.34, 69.81 (g).

Table 3 : Effect of using different levels of leaf powder *Gynura procumbens* in the average egg weight rate ±standard error of chicken whiteness ISA Brown.

Transactions Duration per week	T1	T2	Т3	T4	Т5	Т6
First term	61.68±0.5	62.58±0.3	62.64±0.3	62.70±0.3	63.28±0.7	63.61±0.4
25-26	b	ab	ab	ab	а	а
Second term	65.54±1.4	67.46±2.5	68.33±1.1	68.48±1.1	69.64±1.8	69.83±0.9
27-28	b	ab	ab	ab	а	а
The third term	66.45±2.03	69.88±2.0	70.45±1.1	71.26±0.4	71.85±1.5	74.35±2.3
29-30	b	а	а	а	а	а
The four term	69.67±1.9	74.31±2.0	77.83±0.6	78.94±0.9	80.90±0.2	81.38±0.4
31-32	с	b	ab	а	а	а
General rate	65.83±1.3	68.55±2.0	69.81±1.9	70.34±1.0	71.41±1.2	72.29±0.3
25-32	b	ab	а	а	а	а

1. The first transaction is the control transaction, which is normally fed without adding, the second transaction, the third transaction, the fourth, the fifth, the sixth, the transactions add *G. procumbens* 0.5, 1, 1.5, 2, 2.5% respectively.

2. Each period represents 14 days, and the different letters indicate that there are differences of moral ($p \le 0.05$).

Table 4 shows that there are moral differences ($p \le 0.05$) in the first period above the fourth, fifth and sixth transactions 55.46, 53.85, 52.99 (g/chicken/day) however, in the second, third and fourth periods, the third, fourth, fifth and sixth transactions exceeded 79.65, 78.82, 76.58, 75.27, 70.80, 66.92, 65.53, 63.94, 66.29, 63.83, 62.36, 61.81, (g/chicken/day) on the rest of the transactions and at the general rate the transaction exceeded the sixth transaction exceeded 68.05 (g/chicken/day) over the rest of the transactions.

Transactions Duration per week	T1	T2	Т3	T4	Т5	T6
First term	49.01±1.2	51.59±0.6	52.16±1.0	52.99±1.5	53.85±1.0	55.46±1.5
25-26	b	ab	ab	a	a	a
Second term 27-28	56.56±1.1	60.74±0.1	61.81±1.0	62.36±1.3	63.83±2.0	66.29±2.1
	b	ab	a	a	a	a
The third term 29-30	59.32±2.0	62.17±0.6	63.94±1.1	65.53±1.1	66.92±0.7	70.80±2.9
	b	ab	a	a	a	a
The four term 31-32	64.27±2.0	70.54±0.4	75.27±2.0	76.58±1.5	78.82±1.5	79.65±3.1
	c	b	a	a	a	a
General rate	57.29±1.5	61.26±1.8	63.29±0.9	64.36±2.5	65.85±3.1	68.05±2.2
25-32	c	b	b	ab	ab	a

Table 4 : Effect using different levels of *Gynura procumbens* leaf powder in egg mass product g medium ±standard error of chicken whiteness ISA Brown.

1. The first transaction is the control transaction, which is normally fed without adding, the second transaction, the third transaction, the fourth, the fifth, the sixth, the transactions add *G. procumbens* 0.5, 1, 1.5, 2, 2.5% respectively.

2. Each period represents 14 days, and the different letters indicate that there are differences of moral ($p \le 0.05$).

Table 5 shows that there are no moral differences in the feed consumption rate in the first and fourth periods, but in the second period the moral is higher than $P \le 0.05$ the sixth transaction 121.78 (g) on the remaining transactions and in the third period exceeded the second, third, fourth, fifth and

sixth transaction on the first transaction 108.25, 104.37, 103.67, 102.14, 99.26 (g) at the general rate, the fifth and sixth transactions exceeded the rest of the transactions of 104.28, 101.34 (g).

Table 5 : Effect using different levels of *Gynura procumbens* leaf powder in the average feed consumption rate ±standard error of chicken whiteness ISA Brown.

Transactions Duration per week	T1	T2	Т3	T4	Т5	T6
First term 25-26	93.10±2.8	97.08±2.5	97.17±0.5	±1.897.42	100.1±3.9	101.2±3.1
Second term 27-28	103.32±3.5	108.19±5.5	110.92±3.6	113.19±2.2	115.33±3.4	121.78±2.7
	b	b	ab	ab	ab	a
The third term 29-30	87.33±1.6	99.26±3.6	102.14±1.3	103.67±3.4	104.37±4.1	108.25±2.6
	b	a	a	a	a	a
The four term 31-32	107.67±3.2	108.44±4.5	108.48±3.4	109.05±4.9	115.57±1.7	115.89±2.5
General rate	90.35±2.5	95.74±2.0	97.17±0.5	98.33±0.6	101.34±3.0	104.28±4.0
25-32	b	ab	ab	ab	a	a

1. The first transaction is the control transaction, which is normally fed without adding, the second transaction, the third transaction, the fourth, the fifth, the sixth, the transactions add *G. procumbens* 0.5, 1, 1.5, 2, 2.5% respectively.

2. Each period represents 14 days, and the different letters indicate that there are differences of moral ($p \le 0.05$).

We note from Table 5 that there are moral differences $p \le 0.05$ in the first period above the first, second and third transaction 1.89, 1.88, 1.86 (g feed/g egg) on the rest of the transactions and in the second period exceeds the transaction of the first, fourth, fifth and sixth 1.83, 1.82, 1.81, 1.80 (g feed /g egg) On the rest of the transactions and in the third period the third, fourth and sixth transactions exceed 1.59,

1.58, 1.52 (g feed/g egg) on the rest of the transactions and in the third period the third, fourth and sixth transactions exceed 1.59, 1.58, 1.52 (g feed/g egg) on the rest of the transactions and in the fourth period the first transaction exceeds 1.67 (g feed/g egg) and the general rate exceeds the first and second transactions 1.58, 1.57 (g feed/g egg) over the rest of the transactions

Transactions Duration per week	T1	T2	Т3	T4	Т5	T6
First term	1.89±0.03	1.88±0.02	1.86±0.02	1.83±0.01	1.85 ± 0.01	1.82±0.00
25-26	а	а	а	b	b	b
Second term	1.82 ± 0.02	1.78±0.02	1.79±0.00	1.81±0.01	1.80 ± 0.00	1.83±0.01
27-28	а	b	ab	а	а	а
The third term	1.47±0.02	1.59±0.03	1.59±0.04	1.58±0.04	1.55 ± 0.04	1.52±0.03
29-30	с	b	а	а	b	а
The four term	1.67±0.02	1.53±0.01	1.44±0.00	1.42±0.00	1.46±0.01	1.45±0.00
31-32	а	b	ab	ab	b	ab
General rate	1.58±0.01	1.57±0.01	1.54±0.00	1.54±0.00	1.54±0.00	1.54±0.00
25-32	а	а	b	b	b	b

Table 6 : Effect using different levels of *Gynura procumbens* leaf powder in the food conversion coefficient g feed/g medium eggs ±standard error of chicken white ISA brown.

1. The first transaction is the control transaction, which is normally fed without adding, the second transaction, the third transaction, the fourth, the fifth, the sixth, the transactions add *G. procumbens* 0.5, 1, 1.5, 2, 2.5% respectively.

2. Each period represents 14 days, and the different letters indicate that there are differences of moral ($p \le 0.05$).

Through the results that included the productive qualities studied in the experiment represented by (egg production, egg weight, egg mass produced, food conversion coefficient, feed consumption rate) the moral improvement of Gynura procumbens are important economic characteristics that the GP plant attributes to its biologically active containing flavonoids and glycosides (Akowuahal, 2002) Flavonoids are similar to steroid hormones (Harborn and others, 1975) Steroid hormones work by increasing the rate of primary metabolism because the hormones are built, including estrogen, which plays an important role in promoting the growth of the egg channel and the formation of a large number of proteins important to the formation of the egg (Sturkie, 2000) In turn, flavonoids activate thyroid secretion, thereby stimulating the increased secretion of thyroxine, which affects the metabolism of proteins and increases the flow of security acids into ovarian cells and increases its concentration within ovarian cells. Lead from the process of protein synthesis (Khodary and others, 1996). Our experience has improved egg production and egg weight, and this is consistent with the findings of the Researcher Park and others, 2016). When using the additive feed contains procumbens Gynura in brown chicken when adding 1 and 2% exceeded the percentage of egg production and the weight of the eggs and this is consistent with our study, while the findings of the researcher (Lokhande and others, 2014) differed when the addition of Gynura procumbens in brown chicken at 2.5, 5,0 and 7.5 showed no moral differences and this did not correspond to the results of our study, It may be due to the good health of birds and, in particular, the intestines, which are caused by flavonoid compounds to reduce the incidence of diseases and prolong the susceptibility of vitamin C they act as anti-inflammatory substances, enabling birds to benefit from spent feed, converting them into living body weight and improving the food conversion coefficient (Cook and Sarmman, 1996) and (Craig, 1999) our study is consistent with the findings of researcher (Jeong and Kim, 2015) in increasing the consumption of fodder consumed in Ross chicks and pigs when using added feed containing Gynura procumbens and increases the rate of conversion of food to feed and increase the percentage of live body weight at 1 and 2%, and our study contradicts the results of the researcher (Jeong and Kim, 2018) When adding the fenugreek plant in the white chicken did not affect the production of eggs and food conversion plants in all transactions.

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