



Effect of Ixora Coccinea on Performance Characteristics of American Chinchilla Rabbit

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Keywords: *ixora coccinea, plant extract, growth performance, ameriac chinchilla and rabbit 1.0.*

GJSFR-D Classification: FOR Code: 070799



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I. INTRODUCTION

The ever increasing population of Nigeria, Africa and the whole world has brought about farmers to increase their production both in Animal and crop production so as to support the increasing population, so that every Nigerian will be able to take the required minimum protein to avoid malnutrition and lack of food insecurity (Lawal et al., 2019).

The continuous rise in human population all over the world with annual average of 7 billion has brought an increase in demand for animal protein. The current level of consumption of animal protein is estimated at 7g per caput per day (Lara, Baião, Rocha, Lana, Cançado and Fontes, (2008).

Apart from Poultry, cattle, sheep and goat meat, that are mainly used in supplying the required meat to Nigerian, the use of micron live stock should also be put into use so as to further improve the availability of meat to Nigerians

It is an unfortunate fact that small animals don't have the prestige among third World farmers that large animals do. Even sheep and goats are not accorded the same stature as cattle Hugh (2010), therefore development of family micro live stock farms is regarded as an alternative way to alleviate poverty and ensure food security for socially and economically

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disadvantaged rural households (Branckaert and Gue'ye, 1999).

Despite the zeal to support the continuous increase in population by expanding the production by farmers, the health of these animals are very important, consumption of only healthy animals will result to healthy nation.

To ensure healthy animals, the normal drugs and vaccine programme for the animals has to be fully followed, to reduce rate of mortality and improve their performance but it has been discovered that the use of antibiotics for birds has a residual effect on the consumers of the meat of the animals, both the FAO and EU has strongly advised against the use of antibiotics and instead the use of herbs as an alternatives is advised by an animal nutritionist. (Murray et al., 2001, Ifon and Basir, 1980).

In Africa, there are several herbs that has been suggested by animal nutritionist that can replace antibiotics medically and will even supply some missing nutrients in the feed. (Lawal, W. S 2019).

In this experiment, extract of Ixora Coccine a will be fed to Rabbit and the performance characteristics of rabbit will be study.

a) Objectives

- Prepare the extract of ixora coccinea.
- Feed the extract on the experimental animals.
- Study the effect of the extract on their feed intake, weight gain, feed to weight gain.

b) Justification

- Availability of ixora coccinea almost everywhere.
- It could be acquired without any cost.
- Ixora coccinea is known for its medicinal value.

II. MATERIAL AND METHODS

Site of Experiment: The experiment will be carried out in Agricultural garden of Agricultural technology department.

Construction of Pen: The rabbit is a social animal and their pen is contrasted as such using iron and making sure there is a living and resting room.

Sources of Ixora coccinea: The ixora leaves will be harvested around the school garden.

Preparation of ixora extract: This will be done in the laboratory using methanol chemicals.



Purchase of Animals: The America Chinchilla Rabbit will be purchase from the Rabbit farm of Ladoke Akintola University, Ogbomoso.

Preparation of feed and fodder: The feed for the experiment will be compounded by buying the feed ingredients, formulate and mill and will be fed only in the morning while the fodder (Tridaxprocubeans) will be served in the afternoon for Rabbit and Grasscutter.

Management of animals: The feeder and drinkers will be washed every morning and fresh feed and water is served ad-libitum, the animals are monitored for their health status. Ixora coccinea will take care of those on

treatment while the control will be treated using antibiotics. The ixora coccinea will be added to their drinking water in graded level at 1ml, 2ml, 3ml, 4ml, and 0ml is the control.

Parameters taken: Parameters taken include Feed intake, weight gain, feed to weight gain.

Statistical analysis: All data taken will be subjected to statistically analysis using CRD (Complete randomized design) while the means will be separated using Duncan multiple range.

Conclusion: The discussion will be based on result of the experiment and will be made available.

III. RESULTS AND DISCUSSIONS

Table 3.1: Performance characteristics of America Chinchilla Rabbit fed Ixora coccinea

Parameter	Feed intake	Weight gain	Feed to Weight gain
0ml	60 ^b	1256.5 ^b	0.13 ^c
1ml	59 ^c	1142.6 ^c	0.06 ^e
2ml	93 ^a	1400.0 ^a	0.19 ^a
3ml	59 ^c	1095.0 ^d	0.05 ^f
4ml	59 ^c	801.1 ^e	0.18 ^b
SME	3.04	11.09	0.07

ato e mean within the same column with different superscript are significantly different at ($P<0.05$)

There was a significant difference ($P<0.05$) in feed intake with the 2ml inclusion level being the highest while the 4ml inclusion level is the lowest, from first week to third week of the experiment, from first week to end of the experiment, the 3ml inclusion level was the least and the 4ml inclusion level became the highest.

The weight gain shows a significant difference with 2ml inclusion level being the highest (1400g) and 4ml (801.1g) being the lowest. In first and second week of the experiment, there was no significant difference.

Feed to weight gain shows a significant difference ($P<0.05$) in the first week with 2ml being the lowest and 1ml being the highest, in second week only 4ml shows a significant difference from others and no significant difference occurred between all other inclusion levels. In the third week there was a significant ($P<0.05$) difference between 4ml, 3ml and 1ml but the 0ml (control) and 2ml and this continues till the end of the experiment.

The 2ml inclusion level had the highest value may be as a result of the fact that the value is the right dose for optimum performance, any value above (3ml & 4ml) may just be a waste that will not give the expected return while a lower value will not be enough to give the required performance.

IV. CONCLUSION AND RECOMMENDATION

a) Conclusion

- The value of 2ml of Ixora Coccinean is the required value to give an optimum performance.
- The extract should be done in an hygienic condition.
- Farmers should use the extract in place of antibiotics and should be used only three (3) times in a week.
- Extract alone should be and not be missed with any antibiotics, some farmers will start with antibiotics and will again use extract on same set of birds whenever they are sick.

b) Recommendation

- Extract should be tried on other types of livestock.
- Same concentration of extract should be used throughout the experiment.

REFERENCES RÉFÉRENCES REFERENCIAS

- Lawal, et, al., (2019) Performance and meat quality of Broiler birds fed treated Jatropha, an unpublished paper of M. Phil from Ladoke Akintola University, Ogbomoso, Nigeria.

2. Hugh Popenoe (2010), Sheep and Goat Management Ethiopia Sheep and Goat Productivity Improvement Program.
3. Branckaert, R. D. S. and Gue'ye, E. F. (1999.) FAO's program for support to family Poultry production. *Proceedings of a Workshop: Poultry as a Tool in Poverty.*
4. Lara, L. J. C, Baião, N. C, Rocha, J. S, R, Lana, A. M. Q, Cançado, S. V, Fontes, D. O, (2008). Influence of physical form of ration and line on the performance and yield of broiler cuts.
5. Arquivo Brasileiro de Medicina Veterinária e Zootecnia; 60(4): 970-978.