

Growth Performance of Rabbit Fed with *Salvinia* (*Salvinia molesta*) and Gotu Kola (*Centella asiatica*) as Feed Supplement in the Diet

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Abstract:- This study was conducted at Brgy. Palasan, Sta Cruz, Laguna on November 16, to February 23, 2022 to determine the performance of rabbit using different treatment in the ration. Specifically, it aimed determined the significant effect of different ration salvinia and gotu kola in the growth performance of rabbit in terms of average daily gain, weekly gain, and body weight. Feed conversion ratio and production income of rabbit production.

An experimental research in completely randomized design (CRD) was used in this study. Four treatments were used: Treatment 1 control, Treatment 2 fed with 60g salvinia, Treatment 3 fed with 60g gotu kola and Treatment 4 combination of 30g fed salvinia and 30g fed gotu kola. Each treatment replicates four times.

Data on feed conversion, body weight, average daily gain and weekly gain weight was analyzed with Analysis of Variance test at Statistical Tool for Agricultural Research (STAR) application.

Based on the result, the study showed that week 6 has significant effect while week 7 shows that there highly significant result on body weight, There was significant effect of treatment on the average daily gain on rabbit observed from week 6 and based on the data collected, there was significant effect on rabbit weight gain from week 6 and based on the data gathered there was highly significant effect on the feed conversion ratio of rabbits from week 6.

In production income must be high at Treatment 2 fed with (*Salvinia*) than Treatment 1 (Control) fed with rabbit commercial feed only. Therefore, salvinia and gotu kola could be utilized for rabbit as good source of fiber, reduced the feeding cost decrease in the concentrated portion of the diets, which is the most expensive for rabbit production.

Sensory analysis result show that the most accepted meat in terms or general acceptability same result, and all treatment show the least acceptable in appearance, taste, juiciness, texture, aroma and tenderness.

Keywords:- Gotu kola, Rabbit, *Salvinia*, Sensory Analysis.

I. INTRODUCTION

Rabbits are practically used as a source of meat for some countries as it is one of the healthiest meat compared to pork and poultry meat. It is also rich in proteins and has a source of vitamins and minerals, a low percentage of fat, and a few calories, making it a good source of meat. Although rabbit meat is edible, some people don't feel good to eat rabbit probably because they considered it as a pet for them and also they look adorable and very pleasing to look at.

Rabbits are among the most cost-effective and profitable livestock. They can survive on low-quality feed while still producing high-quality meat and fur. The fast-breeding characteristic of the female rabbit, low-capital feeding requirements, and strong demand for rabbit meat are the key commercial aspects of rabbit farming. Rabbit meat has a high protein level and is low in fat. Feeding rabbits does not require special fodder because they may be fed directly from the greenery in your surroundings.

According to Hernandez P. (2018), Meat quality has been generally dictated by tangible perspectives, as their appearance, surface, just as its fragrance and flavor. Notwithstanding, at present the healthy benefit and security have acquired extraordinary significance among the elements that decide meat quality. The wholesome job of meat is disputable in light of the fact that shoppers by and large consider that high ingestion of meat adds to overabundance fat, cholesterol and soaked unsaturated fats, which are unequivocally connected to corpulence and cardiovascular issues.

Giant *Salvinia* (*Salvinia molesta*) has small flat leaves. It is considered an aquatic weed because it covers slow-flowing water systems and can cause a clog to waterways. It spreads and grows very rapidly on the water surface. It requires a lot of space and sunlight to reproduce more. Some farmers used it as compost and mulch when they collect *Salvinia*.

Centella asiatica also known as Gotu kola or Indian pennywort has a stalk attached to its leaf. The leaves have a shape of a flat disc with small hairs below and a smooth upper surface. It grows in a swampy area in many regions, *Centella asiatica* is also recommended to treat several skin conditions. This plant was also used for skin treatment as it

contains active compounds that serve as an antioxidant.

The study aims to determine the Growth Performance of Rabbit fed with *Salvinia (Salvinia molesta)* and *Gotu kola (Centella asiatica)* as a feed supplement in the diet on November to February 2022. The Experimental area was Block 8 Lot 9 Linggapville Subdivision Brgy. Palasan, Sta. Cruz, Laguna.

II. MATERIALS AND METHOD

The Upgraded New Zealand rabbit was used as experimental animal, approximate 7-8 weeks. Study was conducted in Block 8 Lot 9 Linggapville Subdivision Brgy. Palasan, Sta. Cruz, Laguna. All animals were randomly placed and kept in Welded wire mesh used to build cages (24x24x18) with clay pot for feeds and automatic nipple

drinker. Digital weighing scale was used in the study to measure the initial and weekly body weight.

Based on the results, the study showed that week 6 had a significant effect, while week 7 showed a highly significant result on body weight. From the 6 week, based on the collected data, a significant effect of the treatment on the average daily weight gain of the rabbit was observed, and from the 6 week, there was a significant effect on the weight gain of the rabbit, and it was collected. Based on the data gathered there was highly significant effect from the 6 week on the feed conversion ratio of rabbits. Findings of data contradict the study of Sunarno et al. 2019. Stated that can increased protein availability effect the metabolic process more efficiently so that it can increase the growth and productivity of animal.

Table 1. Summary Results of Performance of Rabbit

Performance Indicator (week 1-13)	Treatment 1	Treatment 2	Treatment 3	Treatment 4	F	P
Body weight						
Week 6	1074.00	1015.00	1150.62	1046.12	8.49	0.0027**
Week 7	1250.12	1165.00	1252.25	1195.12	3.49	0.0499*
Daily weight gain						
Week 6	7.59	4.16	11.93	6.54	6.54	0.0388*
Gain weight						
Week 6	53.12	29.12	83.50	45.75	3.84	0.0388*
Feed conversion ratio						
Week 6	0.6330	0.6906	0.6070	0.6688	7.17	0.0051**
ns not significant *significant at $p \leq 0.05$ **highly significant at $p \leq 0.01$						

Data show that the highest total sale was observed from Treatment 2 with median of 620.18 and treatment 1 got the lowest median with 579.53 results. The analysis of variance shows that there was not significant among

different treatment. In production income T1 Treatment lead as the highest income with median of 585.48 and treatment 2 got the lowest median with 467.32 results.

Table 2. Cumulative mean of Total sale and Production income of Rabbit (Php.)

Item	Treatment 1	Treatment 2	Treatment 3	Treatment 4	P Value
Total Sale	579.53	620.18	598.84	593.36	0.3675 ^{ns}
Production Income	585.48	467.32	488.66	494.14	0.0005**
ns not significant *significant at $p \leq 0.05$ **highly significant at $p \leq 0.01$					

Based on the results as evaluated by the respondents, the meat sensory analysis for Appearance, Taste, Juiciness and General acceptability got the same median results of 7.000. The highest median which is 8.000 was obtained from Aroma in treatments 2 and 3, as well as Tenderness in treatments 1 and 4. Generally speaking, meat sensory analysis for verbal interpretation is like moderately.

Finding agreed to the study of Tariq et.al (2016) quality depends on quantity, nutritional value, other hidden attributes, and sensory quality. The results of the sensory evaluation are presented using data that have shown very significant effects across all treatments in terms of color, appearance, taste, texture, and general acceptability. Muscle fiber properties affect appearance quality characteristics such as meat color, juiciness, and marbling of meat.

Table 3. Summary of Sensory Analysis

Sensory Analysis	Treatment 1	Treatment 2	Treatment 3	Treatment 4	Verbal Interpretation
Appearance	7.000	7.000	7.000	7.000	Like Moderately
Taste	7.000	7.000	7.000	7.000	Like Moderately
Aroma	7.000 ^b	8.000 ^a	8.000 ^a	7.000 ^b	Like Moderately
Texture	6.000 ^b	7.000 ^a	7.000 ^a	7.000 ^a	Like Slightly
Juiciness	7.000	7.000	7.000	7.000	Like Moderately
Tenderness	8.000 ^a	7.000 ^b	7.000 ^b	8.000 ^a	Like Moderately
General Acceptability	7.000	7.000	7.000	7.000	Like Moderately

III. CONCLUSION

The application of Salvinia and Gotu kola, separate treatments, produces the same effect on the growth performance of rabbits in terms average daily gain and weight gain, according to the analysis of data.

RECOMMENDATIONS

Higher levels of inclusion rate used in the experiment can be used in future studies to obtain a positive response to rabbit performance. Salvinia and Gotu kola are recommended in feeding rabbits gain and improve weight gain.

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