

The effectiveness of supplements sponge *Clathria reinwardhti* the production and weight Broiler Chickens body

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Abstract: Digestibility and digestibility of feed is crucial in meeting the nutrient adequacy of the received body in promoting growth. The purpose of this study is fueling the growth of broiler chickens with the addition of *Sponge Clathria reinwardhti* into the feed. This study uses as much as 54 DOC tail, using a completely randomized design with 6 treatments and 3 replicates, each replicate consisting of 3 DOC broiler chickens. There are five levels of dose *Sponge Clathria reinwardhti* in treatment are: P0 = control without giving *Sponges Clathria reinwardhti*, P1 = feed + Prebiotics, P2 = feed + *Sponge Clathria reinwardhti* 100 g / 5 kg, P3 = feed + *Sponge Clathria reinwardhti* 200 g / 5 kg, P4 = feed + *Sponge Clathria reinwardhti* 300 g / 5 kg and P5 = feed + *Sponge Clathria reinwardhti* 400 g / 5 kg.

Parameters measured were feed intake, body weight gain and feed conversion. Every day, the chicken weighed to obtain weight gain, consumption and conversion of feed up to 6 weeks old. Weighing results obtained at the age of 6 weeks of 3047, 24 grams in addition the sponge 300 grams while the lowest was found in the control of 2971.42 grams. Results obtained at the lowest FCR best 1,683 and 1,640

Index Terms— *Sponges Clathria reinwardhti*, weight, FCR

I. INTRODUCTION

Broiler is one source of animal protein needed by the people of Indonesia, because the price is relatively affordable and broiler chicken growth relatively quickly with a shorter life cycle than other meat producing livestock. The cost of feed in livestock farming of poultry (broilers), is the largest component, at around 70% of total production costs. One effort to produce poultry feed at affordable prices

breeder is to use ingredients derived from plants. The addition of the feed additive in feed in order to help improve material utilization of plants as feed material. The use of chemical-based feed supplement that is now widely used tend to be less good for humans who consume them. This is due to the residues in meat of the chicken(1).

The rate of growth in chickens is supported by the adequacy of nutrients consumed by the chickens. The adequacy of nutrition is closely related to the nutrient content of the feed and the ability of the intestine to absorb nutrients contained in the feed. Poultry known bad in digesting crude fiber than ruminants. This is due to the digestive tract of poultry poor digestive enzyme cellulase which serves as digesting fiber. Feeding chickens should also pay attention to anti-nutritive substances contained in the feed, which can only occur in a few chickens that deficiency of minerals such as Ca, Zn, Fe, Mn and others. According Sumiati states that Zn deficiency occurs in many animals generally consume whole grains and high crude fiber in large quantities(2).

Poultry products are generally filled with chicken such as chicken, broiler chickens and laying hens, ducks and turkeys. The nutritionists believe that feed both in quality and quantity, will provide good growth as well. Based on these reasons, practitioners and researchers interested in using the

additive in poultry feed ingredients. Feed additives are materials that contain nutrients, deliberately added in animal feed in small amounts, in order to get a better animal performance (3), so that it can increase the productivity of livestock. Feed additives that are often used include: antibiotics, probiotics, fitobiotik This research aims to exploit the potential of *Sponge*

Clathria reinwardhti as a source in broiler chicken feed and benefits on production, feed intake, growth, body weight daily, Feed Conversion Ratio.

II. Findings

Rations and Treatment

This study using broiler chicks aged 1 day (DOC) as much as 54 tails, using a completely randomized design with 6 treatments and 3 replicates, each replicate consisting of 3 broiler chickens. DOC newly arrived weighed body weight to determine initial body weight, is labeled on the cage before being put into each cage treatment.

Chicken rations prepared with 18.97% crude protein and energy metabolism 3020.19 kcal / kg consisting of rice bran, maize, concentrate, fish meal, premix and adding some level of additive in the form of a sponge *Clathria reinwardhti*. Extra Sponges *Clathria reinwardhti* into the ration by mixing sponge *Clathria reinwardhti* on, 5 dose levels Sponge *Clathria reinwardhti* in treatment that; P0 = kotrol without giving Sponge *Clathria reinwardhti* P0 = control without giving Sponges *Clathria reinwardhti*, P1 = feed + probiotics, P2 = feed + Sponge *Clathria reinwardhti* 100 g / kg, P3 = feed + Sponge *Clathria reinwardhti* 200 g / kg, P4 = feed + Sponge *Clathria reinwardhti* 300 g / kg and P5 = feed + Sponge *Clathria reinwardhti* 400 g / kg. Parameters measured were feed intake, body weight and feed conversion.

Feed conversion

Feed efficiency, expressed in the calculation of FCR (Feed Conversion Ratio). How to calculate the number of feed during maintenance divided by the total weight of chickens harvested. The lower the number Feed Conversion Ratio, the better the quality of feed because it is more efficient, with little feed to produce a high body weight(4).

Table 1. Patterns of body weight weekly

Age	Weight Control	prebiotics	F1 = 100 gr	F2 = 200 gr	F3 = 300 gr	F4 = 400 gr
1 weeka	184,05	191,17	195,12	200,11	220,34	217,14
2 weeka	477,21	485,31	489,07	495,19	515,22	511,31
3 weeka	943,21	950,01	955,62	962,31	981,09	979,12
4 weeka	1550,14	1556,23	1560,34	1566,42	1587,07	1583,18

weeka						
5 weeka	2246,71	2254,25	2257,27	2262,29	2284,05	2280,17
6 weeka	2971,42	2978,65	2982,21	2992,19	3047,24	3035,19

Feed conversion value

Table 2: calculating the value of FCR

Age	Cont rol FCR	FCR Preb iotic s	FCR F1 = 100 gr	FCR F2 = 200 gr	FCR F3 = 300 gr	FCR F4 = 400 gr
1 weeks	0,880	0,848	0,830	0,812	0,736	0,746
2 weeks	1,134	1,115	1,106	1,109	1,050	1,053
3 weeks	1,290	1,281	1,274	1,265	1,240	1,243
4 weeks	1,435	1,429	1,426	1,420	1,462	1,405
5 weeks	1,577	1,571	1,569	1,566	1,551	1,553
6 weeks	1,683	1,679	1,676	1,671	1,640	1,647

Feed

Feed given to broiler chickens is an animal feed with a complete ratio. Broiler feeds are generally provided in the form crumble to phase starters and pellets for a period of growth of finisher. In the maintenance of broiler chickens, feed the energy source can be derived from carbohydrates, fats, and protein. The energy consumption of the ration can be used to meet the needs of working, able to be converted into heat energy, and can be stored as a fat body. The higher the energy feed, the lower the consumption of feed, because the chickens eat to meet their energy needs. Broiler chickens for the purpose of his life requires nutrients such as carbohydrates, fats, minerals, protein, vitamins, and water(5).

Rations have an important role in relation to the economic aspects that is equal to 65-70% of total production costs incurred. Feed given should provide needed nutrients substances chicken feed, namely carbohydrates, proteins, fats, vitamins and minerals, so the weight gain per day (Average Daily Gain / ADG) high. The feeding system with ad libitum (always available / unrestricted). When using feed from the plant, the type of feed adjusted to the growth rate of chicken, which is divided into two (2) phases.

The first stage is called the stage of enlargement (aged 1 to 20 days), which must contain a minimum protein content of 23%. The second stage is called fattening (age over 20 days), taking feed protein yield of 20%. This type of feed is usually written on the packaging.

Feed consumption

Feed consumption is the ability of cattle to consume a diet that is used in the metabolic processes of the body. The level of feed intake will affect the growth rate and final weight due to the formation of the weight, shape and body composition is essentially the accumulation of feed consumed into the body of livestock (6). Factors affecting feed intake were age, nutritional diet, health, weight, temperature and humidity as well as the pace of growth. Feed consumption is calculated by deducting the remainder of feed given feed. Feed starter (starter) should be given after the chickens obtain a drink, the first few days feed can be given by way of the DOC or a baby chick feed for chicks. In broiler chickens starter phase energy requirement is 3200 kcal / kg with the amino acids methionine 0.38%. While at the same finisher energy needs but the needs of reduced protein and essential amino acids methionine also reduced to 0.32%.

The quality of broiler chicken feed there are two (2) phases which starter (age 0-3 weeks) and finisher phase (age 3-6 weeks):

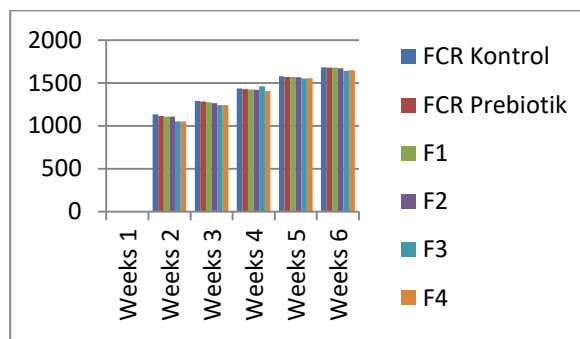
1. Feed quality starter phase is composed of 22-24% protein, 2.5% fat, 4% crude fiber, calcium (Ca) 1%, Phosphorous (P) 0.7-0.9%, ME 2800-3500 kcal.
2. Feed quality finisher phase is composed of protein 18,1-21,2%; 2.5% fat, 4.5% crude fiber, calcium (Ca) 1%, Phosphorous (P) 0.7-0.9% and energy (ME) 2900-3400 Kcal (7).

The results showed that the average consumption of broiler chicken feed used in this study is relatively good, which is between 5000 g / head. Giving the addition of prebiotics in drinking water provides a slight increase in body weight gain, namely, and in 2971 became 3047 g / head. Furthermore, the addition of 300 grams of sponges in the ration turns down the feed conversion of 1,640

Weight gain

Body weight gain during the 42-day maintenance period in the range of 2971-3047 g / tail. According to Siregar (1989), which contains protein ration higher

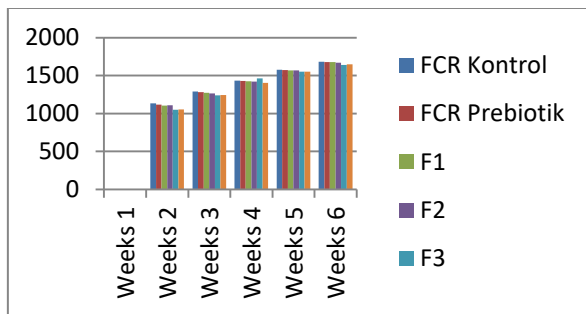
than the other tends to give weight gain higher. The protein content in each treatment is relatively the same ration and meets the standards required protein broiler chickens. The condition causes the average body weight were no different. According to Scott diet containing low protein and consumed in small amounts can cause a deficiency or imbalance of 22 amino acids which inhibit the growth. The resulting feed intake during the study did not differ. Total intake of broiler chicken rations with nutrients that are no different and distinct accumulation of consumption that does not cause weight gain is different.



Weight gain on average generated each ration research from week 1 to week three is not much different, whereas at week 4 to week 6 occur extensional pattern body weight on average. The average growth of broiler chickens were used as experimental material is pretty good. The highest rate of

weight gain during the study accomplished by a group of chickens who get extra sponge (3047 g / head) and a group of chickens fed supplementary feed 100 grams has the lowest growth rate (2972 g / head). Group broiler get additional food rations sponge 300 grams in body weight gain to rates higher than other groups because of sponge lead to digestive processes (digestion) have been more favorable. The addition of sponges in the ration allegedly also causes digestion of feed stimulated, so the conversion of feed into meat run more optimally. If the process of converting feed into meat goes well, then the rate of growth (weight gain) would be better (8).

Feed conversion



Chicken flocks that get additional feed sponge 300 grams had better feed conversion rate of 1,646. Groups of chickens fed an additional 400 grams had a good feed conversion also 1,652 when compared with the group not fed 1,683 additional sponge.

III.CONCLUSION

Weighing results obtained at the age of 6 weeks of 3047, 24 grams in addition the sponge 300 grams while the lowest was found in the control of 2971.42 grams. Results obtained at the lowest FCR best 1,683 and 1,640

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Some of the factors that affect the value of Feed Conversion Ratio in broiler chickens: Conversion ration research achieved during the 42-day maintenance period in the range of 1.683 to 1.640. The addition of anti-microbial agents are generally provided in the rations and drinking water to cope with the microbes in the digestive tract. Extra flour sponge is intended to reduce the number of microbes in the digestive tract. Decreasing the number of microbes is expected to give better conversion by killing or inhibiting the growth rate of bacteria in the digestive tract.

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