

The Effect of Ration with Antibiotics (Virginiamycin) and Temulawak (Curcuma Xanthorrhiza Roxb.) to Broiler Performances

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ABSTRACT

The purpose of this research is to learn about the effect of Virginiamycin and Temulawak addition to performance. The research used 100 broiler chickens from Cobb CP 707 strain. The research used Completely Randomized Design (RAL-Rancangan Acak Lengkap) with four treatments. R0: Control; R1: ration with 15 ppm Virginiamycin; R2: ration with 9% Temulawak; R3: ration with 15 ppm Virginiamycin and 9% Temulawak. Duncan's Multiple Range Test is used to indicate the difference between treatments. Variable being observed is performance and income over feed cost. The results of the research showed that temulawak and virginiamycin addition does not provide significant difference on final body weight and carcass weight.

Key words: Virginiamycin, temulawak, carcass and final body weight, broilers

INTRODUCTION

The preventive deceases and enhancement of growth, feed intake and feed efficiency are importance factor. Most antibiotic is a feed additive requires alternative ways to stabilize the health and growth performance as antibiotic as a feed additive Virginiamycin as antibiotic used to growth promoter. Antibiotic is feed additive

Used virginiamycin in true composition, effected to restraining pathogen bacteria population in intestinal and decreasing negative effect of normal flora population that over in the gastrointestinal.

Combinations of vitamin and amino acid which is be able do together to prevent micro nutrient deficiency, increasing growing and not caused if used at all times. Despitefully of antibiotic, utilizing herbal be also a choice as feed additive.

Utilizing herbal contribute to increasing appetite and also growing. Herbal used occasionally is *Curcuma xanthorrhiza* (temulawak). Temulawak as far back is medicine concoction matter. Contents of temulawak consist of *curcumin*, colagoga, atsiri oil (volatile oil).

Curcumin is substance that protected of oxidation on erythrocyte and hemoglobin by 55Hnitrite compounds. *Curcumin* can be increasing hepatohlobin and haemopexin

protein synthesis in the liver, so lead which is bonding with haemoglobin be able to destruction in the liver. Kolagoga is substance that to increasing role of gall and decreasing body fat, so we get low fat meat and high meat composition.

Volatile oil also called essential oils, that formed at reticulum endoplasmic in the plan cells and providable by distillation. Volatile oil not effected on microorganism population, but positive effected on digestion enzymes. Now, volatile oils getting popular in the agriculture and animal livestock sector, because this oils used as digestion and metabolism promoters, and not giving rise to resistance in animal.

Based on description above, there is need to do research The Effect of Ration with Antibiotics (Virginiamycin) and Temulawak (*Curcuma xanthorrhiza roxb.*) to Broiler Performance.

MATERIALS AND METHODS

The experiment was carried out in the Experimental poultry unit of the Faculty of Animal Husbandry, Padjadaran University. One hundred, day old chick, Cobb broiler were chosen. The research used Completely Randomized Design (CRD). They were consisting four different treatments, with four replications in one treatment. Chicken were fed *ad libitum* with four ratios. The compositions of the ration were:

- R₀ = Control
- R₁ = Ration with 15 ppm virginiamycin
- R₂ = Ration with 9 % temulawak
- R₃ = Ration with 15 ppm virginiamycin and 9% temulawak

The analysis of the treatment were body weight, and carcass weight.

RESULTS AND DISCUSSION

The Effect of Treatment on Final Body Weight in Broiler

In Table 1. were presented the results of the treatment, the data were followed with statistic analysis.

Tabel 1. Average final body weight on each treatment

Replication	Treatment			
	R0	R1	R2	R3
	(g)			
1	1320	1300	1180	1300
2	1320	1280	1270	1120
3	1500	1300	1420	1300
4	1160	1320	1580	1400
5	1200	1250	1250	1540
Total	6500	6450	6700	6660
Average	1300	1290	1340	1332

Results indicated that all treatments have no significantcy on the final body weight. 9% *Curcuma xanthorrhiza* Roxb/temulawak) combined with 15 ppm virginiamycin, have no significantcy, even the Virginiamycin effectively as anti bacteria and content cystein and lysine (Komisi obat Hewan, Departemen Pertanian, 2006). According to Rofiq, 2003, using 15 ppp virginiamycin will affected the gastrointestinal tract, and the ration added with antibiotic for a long term even in low dosage will disturb the balance of acid-base in small intestine and intestinal damage, also l affected the nutrient absorbtion at least will results the lower of final body weight. According to Lesson and Summers, 2001), virginiamicyn will change the instestinal microflora, and the ceca will be oedema and filled with humid excrete and the epithelium will lysis.

Antimicrobial growth promoters (virginiamycin) are antibiotics added to the feed of food animals to enhance their growth rate and production performance. The mechanism by virginiamycin work is not clear. Virginiamycin reduces normal intestinal flora and harmful gut

bacteria. The effect on growth may be due to a combination of both fewer normal intestinal flora and fewer harmful bacteria.

The combination between virginiamycin and temulawak has advantages, because the anti inflammatory effect, reduce the diarrhea effect and to improvethe villi and mucosa structure, and the inflammation of intestine.

The Influence of the Treatment on the Broiler Carcass Weight

In Table 2. Results indicated that 9% virginiamycin in ration (R1), have the lowest average than other treatment (R2 and R3) although have no significant on the final body weight.

Tabel 2. The influence of the treatment on the broiler carcass weight

Replication	Treatment			
	R0	R1	R2	R3
	(g)			
1	850	900	700	900
2	900	770	700	650
3	1000	750	825	870
4	700	700	1000	900
5	750	700	1200	1000
Total	4200	3820	4425	4320
Average	840	764	885	864

The function of colagoga in temulawak in ration (R2), is to change the lipid became energy and increased the muscle, at least could increased the carcass weight.

The choleric properties and cinarina colagoga, could stimulates the production of bile in the liver and facilitates the clearing later in the gallbladder, which helps digestion of fats. Bile, made up of bile salts and cholesterol, is secreted by hepatocytes and is stored in the gallbladder. It is excreted after ingestion of food to metabolize and digest. By action of bile, fats from oily foods and fried foods are emulsified (broken up into small molecules), transformed into droplets that are degraded by pancreatic and intestinal lipases, being apt to be degraded by enzymes secreted by lipases pancreas. The bile, prepared digestion of fatty substances and later digestion occurs through the pancreatic juice, the only way to proceed with the breakdown of fats. Digestive enzymes are secreted by the pancreas and comprise lipases, colesterolasas, glucidasas and proteases (Jakobsen, dkk, 2009). The use of

choloretic and Bile means in case of non-ulcer dyspepsia and there are heavy and slow digestion.

CONCLUSIONS

Temulawak and virginiamycin has positive response to body weight, and carcass weight. R2 (9% temulawak) and R3 (9% temulawak and 15pp virginiamycin), was better than R0 (control) and R1 (virginiamycin 15 ppm)

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