The research about “The Effect of Ration with Antibiotics (Virginiamycin) and Temulawak (Curcuma xanthorrhiza roxb.) to Broiler Performance” has been conducted at Faculty of Animal Husbandry, Padjadjaran University, Jatinangor, that started from 11th of March to 15th of April, 2009. The purpose of this research is to learn about the effect of Virginiamycin and Temulawak addition to performance. The research used 100 broiler chicken 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, feed consumption, weight gain, income over feed cost. Result of the research showed that temulawak and virginiamycin addition does not provide significant difference on performance feed consumption, weight gain.

**Keywords:** Virginiamycin, temulawak, weight gain, carcass final weight, broilers

**INTRODUCTION**

The preventive diseases and enhancement of growth, feed intake and feed efficiency are importance factor. Most antibiotic as 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 as medicine
concoction matter. Contents of temulawak consist of *curcumin*, colagoga, atsiri oil (volatile oil).

*Curcumin* is substance that protected of oxidasi on eritrocite and haemoglobin by nitrite
compounds. *Curcumin* can be increasing hepathoglobin 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, so 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. Chiken were fed ad libitum with four ration. The composition of the ration were:

\[R_0 = \text{Control}\]
\[R_1 = \text{Ration with } 15 \text{ ppm virginiamycin}\]
\[R_2 = \text{Ration with } 9\% \text{ temulawak}\]
\[R_3 = \text{Ration with } 15 \text{ ppm virginiamycin and } 9\% \text{ temulawak}\]

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

**RESULT AND DISCUSSION**

1. The Effect of Treatment on Final Body Weight in Broiler

<table>
<thead>
<tr>
<th>Replication</th>
<th>Treatment</th>
<th>R0</th>
<th>R1</th>
<th>R2</th>
<th>R3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<td>(g)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>1</td>
<td></td>
<td>1320</td>
<td>1300</td>
<td>1180</td>
<td>1300</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>1320</td>
<td>1280</td>
<td>1270</td>
<td>1120</td>
</tr>
<tr>
<td>3</td>
<td></td>
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<td></td>
<td>1160</td>
<td>1320</td>
<td>1580</td>
<td>1400</td>
</tr>
<tr>
<td>5</td>
<td></td>
<td>1200</td>
<td>1250</td>
<td>1250</td>
<td>1540</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>6500</td>
<td>6450</td>
<td>6700</td>
<td>6660</td>
</tr>
<tr>
<td>Average</td>
<td></td>
<td>1300</td>
<td>1290</td>
<td>1340</td>
<td>1332</td>
</tr>
</tbody>
</table>

In Table 1. are presented the results of the treatment, the data were followed with statistic analysis. Results indicated that all treatments have no significancty on the final body weight.

9% **Curcuma xanthorriza Roxb**/ temulawak) combined with 15 ppm virginiamycin, have no significance, 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 absorption at least will results the lower of final body weight. .. According to Lesson and Summers, 2001), virginiamicyn will change the intestinal microflora, and the ceca will be oedema and filled with humid excrete and the epithelium will lysis.

Antimicrobial growth promoters (virginiamicyn) are antibiotics added to the feed of food animals to enhance their growth rate and production performance. The mechanism by which virginiamicyn work is not clear. Virginiamycin reduce 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 virginiamicyn and temulawak has advantages, because the anti inflammatory effect, reduce the diarrhea effect and to improve the villi and mucosa structure, and the inflammation of intestine.

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

<table>
<thead>
<tr>
<th>Replication</th>
<th>Treatment</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>R0</td>
</tr>
<tr>
<td>1</td>
<td>850</td>
</tr>
<tr>
<td>2</td>
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<tr>
<td>3</td>
<td>1000</td>
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<tr>
<td>4</td>
<td>700</td>
</tr>
<tr>
<td>5</td>
<td>750</td>
</tr>
<tr>
<td>Total</td>
<td>4200</td>
</tr>
<tr>
<td>Average</td>
<td>840</td>
</tr>
</tbody>
</table>

In Table 2.. results indicated that 9% virginiamicyn in ration (R1), have the lowest average than other treatment (R2 and R3) although have no significant on the final body weight. 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 choleretic properties and cinarina colagoga, could stimulate 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. (Doymafarma, 2009). The use of choleretic and Bile means in case of non-ulcer dyspepsia and there are heavy and slow digestion.

**CONCLUSION**

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 15ppm)

**REFERENCES**


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13. Jakobsen BM, Skou M, Hammerum AM, Jensen LB. In vivo transfer of the satA gene between isogenic strains of Enterococcus faecium in the mammalian gastrointestinal