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EFFECT OF DIFFERENT CONCENTRATIONS OF LOCALLY  
PRODUCED EM (EFFECTIVE MICROORGANISMS)  
BOKASHI AS FEED ADDITIVE ON PRODUCTION  
PERFORMANCE, MORTALITY AND MORBIDITY  
RATES OF BROILER CHICKENS

*Thesis*

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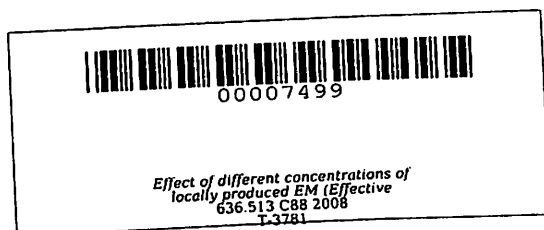
*Indang, Cavite*

*April 2008*

**EFFECT OF DIFFERENT CONCENTRATIONS OF LOCALLY PRODUCED  
EM (EFFECTIVE MICROORGANISMS) *BOKASHI* AS FEED ADDITIVE  
ON PRODUCTION PERFORMANCE, MORTALITY AND  
MORBIDITY RATES OF BROILER CHICKENS**

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Doctor of Veterinary Medicine



**NORMAN ANABO CRUCIDO**  
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## ABSTRACT

CRUCIDO, NORMAN ANABO, “EFFECT OF DIFFERENT CONCENTRATIONS OF LOCALLY PRODUCED EM (EFFECTIVE MICROORGANISMS) *BOKASHI* AS FEED ADDITIVE ON PRODUCTION PERFORMANCE, MORTALITY AND MORBIDITY RATES OF BROILER CHICKENS”. Undergraduate Thesis. Doctor of Veterinary Medicine, Indang, Cavite March 2008. Adviser: Eugene M. Principe, DVM.

The study determined the effect of different concentrations of locally produced EM (effective microorganisms) *bokashi* as feed additive on production performance, mortality and morbidity rates of broiler chickens. The study used 150 day-old Cobb strain chicks that were divided into 5 groups: treatment 1 (fed with plain ratio), treatment 2 (fed with 2% EM feed additive), treatment 3 (fed with 3% EM feed additive), treatment 4 (fed with 4% EM feed additive) and treatment 5 (fed with 5% EM feed additive), using complete randomized block design.

Broiler chickens fed in T5 showed better average daily gain than the other treatments on day 30 (32.37). But at day 45, T1 was slightly higher at 37.1.

Feed conversion ratio values of broiler chickens with EM *Bokashi* was slightly better (T5: 2.13, T4: 2.38, T3: 2.48, T2: 2.79) at day 30 relative to the control group (2.94). However at day 45, the FCR of T5 (2.65) was better and followed by T1 (2.82), T4 (2.83), T2 (2.9) and T3 (2.91).

Slight difference on total feed consumed between treatments at day 30 and day 45 was not significant.

The occurrence of respiratory and gastrointestinal diseases was not observed in all the treatment groups.

The cost and return analysis revealed that broiler chickens raised with EM *Bokashi* is more profitable compared to those fed with commercial feeds with a net on gross profit difference of Php 36.41 per bird.

In conclusion, the results of the study showed that using EM *Bokashi* can have an effect on the production performance of broiler chickens. However, during the study, some performance indicators such as FCR values did not meet Philippine standards.

The researcher recommends further study on EM bokashi and its use.

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A Thesis Manuscript submitted to the faculty of the College of Doctor of Veterinary Medicine and Biomedical Sciences, Cavite State University, Indang, Cavite in partial fulfillment of the requirements for the degree of Doctor of Veterinary Medicine with contribution no. \_\_\_\_\_. Prepared under the supervision of Dr. Eugene Principe.

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**INTRODUCTION**

The Philippine chicken industry is a significant contributor to the country's agriculture sector. It is third after palay and hog in terms of value of output. Chicken production in 2007 increased by 0.31% from 1.2 tons live weight production in 2004 and shared 14.02% of total agricultural production<sup>1</sup>. Among the Asian countries, China, Japan and Thailand have consistently been the top producers. The Philippines is way behind producing an average of only 570,000 tons per year. (Sevilla, 2005)

Problems including inefficient management and the prevalence of diseases and parasites are some of the predisposing factors why our country is lagging behind inspite of new health programs, vaccines and improved feed ration (Sangatanan and Sangatanan, 2000). To address these problems, more and more farmers resort in the use of probiotics as feed and water additive, among these are Enriched Microorganisms (EM). Studies

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<sup>1</sup> <http://www.bas.gov.ph/perflastyer.php?id=3>