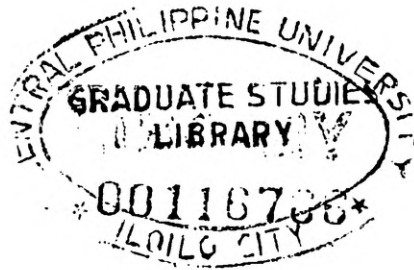


GENOTYPE – BY – ENVIRONMENT INTERACTIONS OF TRADITIONAL
CHICKEN (*Gallus gallus domesticus* L) GROUPS IN
WESTERN VISAYAS, PHILIPPINES

A Research Report
Presented to
The University Research Center
Central Philippine University
Jaro, Iloilo City



By

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March 2012

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ABSTRACT

There are three major groups of traditional chicken in Western Visayas, Philippines namely: Bisaya I, Bisaya II, and Jolo chickens. This study was conducted to determine the interactions of these groups with environmental parameters in the expression of production performance. This study employed purposive sampling covering the provinces of Aklan, Antique, Capiz, Guimaras, Iloilo, and Negros Occidental. A total of 270 raisers were surveyed and 810 chickens were characterized. Collected data were analyzed using correlation and general linear model. Results showed highly significant ($P < 0.01$) correlation between mean daily temperature with relative humidity ($r = -0.310$), rainfall ($r = -0.634$), and wind speed ($r = 0.341$); and, relative humidity with rainfall ($r = 0.275$) and wind speed ($r = -0.301$). Jolo chickens had heavier ($P < 0.01$) adult weight (1.65 kg) than Bisaya I (1.238 kg) and Bisaya II (1.504 kg). These chickens can be raised in any slope and production systems without significant effects in their performance in terms of hatching percentage and survival rate. On the other hand, only the Bisaya I adult liveweight becomes lighter when grown in warmer areas.

Keywords: *Traditional chickens, genotype by environment interactions, climatic parameters, production performance, and production systems.*