

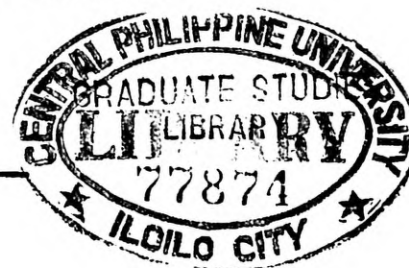
INFLUENCE OF NITROGEN AND ZINC FERTILIZATION ON THE  
AGRONOMIC PERFORMANCE AND ON THE CRUDE  
PROTEIN AND ZINC CONCENTRATION OF  
IPB VAR 1 CORN VARIETY

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A Thesis  
Presented to  
the Faculty of the School of Graduate Studies  
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In Partial Fulfillment  
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MASTER OF SCIENCE MAJOR IN AGRONOMY



by  
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AN ABSTRACT OF A THESIS

INFLUENCE OF NITROGEN AND ZINC FERTILIZATION ON THE  
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The effects of zinc and nitrogen fertilization on the agronomic characteristics of corn; the relationship between nitrogen and zinc fertilization, and the uptake of nitrogen and zinc by the plant as indicated by the concentrations of protein and zinc in leaves and grain; and the effects of nitrogen and zinc fertilization on zinc concentrations in leaves and grain at different growth stages were studied at the experimental field and the chemical laboratory of the College of Agriculture, Central Philippine University, Iloilo City, Philippines, from December 12, 1981 to April 12, 1982.

The results of the study revealed that except on the number of days from planting to seedling emergence, number of days from seedling emergence to tasseling and silking, plant height and zinc concentrations in flag leaf

and grain, the levels of applied nitrogen significantly affected the agronomic characteristics of corn, such as the number of days from seedling emergence to maturity, length and weight of cobs, shelling percentage, stover and root weight, grain yield, and protein concentration of ear leaf at silking and maturity and of the grains. However, varying levels of applied zinc did not show any significant effect on the above-mentioned agronomic characteristics except on shelling percentage.

Statistical analyses further showed that except on length of cob and shelling percentage, the levels of nitrogen and zinc had no interaction effects on the other agronomic characteristics of IPB 1 corn variety.

The results of the cost and return analysis further revealed that regardless of applied zinc levels, the net returns obtained and the corresponding return on investment increased continuously with increasing levels of applied nitrogen. At increasing levels of applied zinc, the net returns and return on investment decreased continuously because zinc levels did not have any significant effect on yield.