

RESPONSE OF CORN TO AZOSPIRILLUM INOCULATION  
WITH DIFFERENT LEVELS OF STARTER NITROGEN  
FERTILIZER UNDER UPLAND  
CAVITE CONDITION

Thesis

Submitted to the Faculty of the  
Don Severino Agricultural College  
Indang, Cavite



00002098

*Response of corn to azospirillum  
inoculation with different levels of  
633.15 J32 1989  
T-1027*

In Partial Fulfillment  
of the Requirements for the Degree of  
Bachelor of Science in Agriculture  
(Major in Agronomy)

TSO  
by

DELIA AMBION JAVIER

April 1989

## A B S T R A C T

JAVIER, DELIA J. AMBION, "Response of Corn to Azospirillum Inoculation with Different Levels of Starter Nitrogen Fertilizer Under Upland Cavite Condition". B.S. Thesis, Agronomy, Don Severino Agricultural College, Indang, Cavite, April, 1989. Advisor: MR. ADOLFO C. MANUEL, JR.

The experiment was conducted at the experimental field of the Don Severino Agricultural College, Indang, Cavite to determine the growth and yield responses of corn inoculated with Azospirillum applied with different levels of starter fertilizer.

A 437.5 square meter land was divided equally into three parts to represent the three replications. Each part was divided into two parts to constitute the two main plots. Each main plot was further divided to three parts to compose the three levels of starter nitrogen fertilizer. The treatments were randomly arranged following the split plot design. All plant characters studied were insignificantly affected by Azospirillum inoculation and application of starter nitrogen fertilizer. Likewise, interaction of the factors failed to significantly affect the plant characters observed.

The failure of inoculation and level of starter nitrogen fertilizer to increase plant height, stem dry and leaf dry mass may be attributed to the adverse

climatic condition during most part of the growing period of the plant.

The total plant dry matter ear dry mass and yield were insignificantly influenced by nitrogen fertilization and Azospirillum application.

## TABLE OF CONTENTS

	Page
BIOGRAPHICAL DATA . . . . .	iii
ACKNOWLEDGMENT . . . . .	iv
ABSTRACT . . . . .	vi
LIST OF TABLES . . . . .	x
LIST OF FIGURES . . . . .	xi
LIST OF APPENDICES . . . . .	xii
INTRODUCTION . . . . .	11
Importance of the Study . . . . .	2
Objectives of the Study . . . . .	3
Time and Place of the Study . . . . .	3
REVIEW OF RELATED LITERATURE . . . . .	4
MATERIALS AND METHODS . . . . .	7
Materials . . . . .	7
Methods . . . . .	7
Land preparation . . . . .	7
Experimental design . . . . .	7
Preparation of planting materials . . . . .	8
Planting . . . . .	8
Thinning and replanting . . . . .	8
Weeding . . . . .	8
Cultivation . . . . .	9

	Page
Fertilization . . . . .	9
Control of insect pests and diseases . . . . .	9
Harvesting . . . . .	9
Collection of samples and data gathering . . . . .	10
DISCUSSION OF RESULTS . . . . .	13
Plant Height . . . . .	13
Stem Dry Mass . . . . .	15
Leaf Dry Mass . . . . .	17
Ear Dry Mass . . . . .	19
Total Dry Matter . . . . .	21
Yield per Hectare . . . . .	23
SUMMARY, CONCLUSION AND RECOMMENDATION . . . . .	25
Summary . . . . .	25
Conclusion . . . . .	26
Recommendation . . . . .	26
LITERATURE CITED . . . . .	27
FIGURES . . . . .	28
APPENDICES . . . . .	32