

633 .84

B 11

1987

MUSTARD SEED PRODUCTION AS AFFECTED
BY PLANTING DISTANCE

A STUDY

(APPLIED RESEARCH IV)

MARLON C. BARTAN

DON SEVERINO AGRICULTURAL COLLEGE

INDIANG, CAVITE

APRIL, 1987

C
MUSTARD SEED PRODUCTION AS AFFECTED
BY PLANTING DISTANCE

A Study (Applied Research-IV)
Presented to the Faculty of the
Agricultural Science Department
Don Severino Agricultural College
Indang, Cavite

In Partial Fulfillment of the Requirements
for Graduation in Applied Research-IV



Mustard seed production as affected by
planting distance
633 84 B11 1987
R-13

MARLON C. BABAAN

April, 1987

A B S T R A C T

The study, "Mustard Seed Production As Affected By Planting Distance" was conducted at the Experimental area of the Don Severino Agricultural College, Indang, Cavite from September 1986 to March 1987. This study was performed to determine whether planting distance of mustard affects the production of harvested seeds.

A land with an area of 100 square meters was divided into 4 equal blocks representing 4 replications. Each block was further subdivided into 5 plots constituting 5 treatments with an area of 3 square meters. A Randomized Complete Block Design was used in laying out and in distribution of treatments.

Mustard seeds were sown in a wooden seedbox and transplanted 10 days after sowing at different planting distances which were as follow : Treatment 1, 18 cm by 10 cm; Treatment 2, 18 cm by 14 cm; Treatment 3, 18 cm by 18 cm; Treatment 4, 18 cm by 22 cm; and Treatment 5, 18 cm by 26 cm.

Watering was done everyday while weeding and cultivations were done upon the occurrence of weeds or when the soil appeared compacted. Similarly, pests and diseases were controlled by spraying three kinds of insecticides and by disposing infected plants.

Data gathered were the following:

- a) Number of days from transplanting to flowering;
- b) Number of days from flowering to pod maturity;
- c) Average number of leaves of plants at flowering;
- d) Weight of pods per treatment;
- e) Weight of clean seeds per treatment;
- f) Computed yield per hectare of harvested seeds.

Based on the results of this study, mustard plants transplanted at the distance of 18 cm by 26 cm produced largest number of leaves at flowering and the heaviest weight of pods and clean seeds per treatment.

With these findings the author concluded that the best planting distance in raising mustard for seed production was 18 cm by 26 cm and it is therefore recommended.

TABLE OF CONTENTS

	Page
BIOGRAPHICAL DATA	iii
ACKNOWLEDGMENT	iv
ABSTRACT	v
LIST OF TABLES	ix
LIST OF FIGURES	x
INTRODUCTION	1
Importance of the Study	3
Objectives of the Study	4
Time and Place of the Study	4
REVIEW OF RELATED LITERATURE.	5
MATERIALS AND METHODS	7
Materials	7
Methods	7
Land Preparation	7
Experimental Field Layout	7
Seed Germination	7
Transplanting of Seedlings	8
Watering and Replanting	9
Control of Pests and Diseases	9
Harvesting of Pods	9
Data Gathering	9
DISCUSSION OF RESULTS	11
Number of Days from Transplanting to Flowering	11

	Page
Number of Days From Flowering to Pod Maturity	13
Average Number of Leaves Per Plant Sample in Each Treatment	15
Weight of Pods Per Treatment	17
Weight of Clean Seeds Per Plant	19
Computed Yield Per Hectare of Harvested Seeds	20
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS	22
Summary	22
Conclusions	22
Recommendations.	23
BIBLIOGRAPHY	25
APPENDICES	

LIST OF TABLES

Table		Page
1	Number of Days From Transplanting to Flowering	11
2	Number of Days from Flowering to Pod Maturity.	13
3	Average Number of Leaves Per Plant Sample in Each Treatment	15
4	Weight of Pods Per Treatment (Grams)	17
5	Weight of Clean Seeds Per Treatment (Grams) .	19
6	Computed Yield Per Hectare of Harvested Seeds	20

LIST OF FIGURES

Figures		Page
1	Field Layout	27
2	General View of the Experiment	28
3	Pods Harvested in Each Treatment	29
4	Comparison of Clean Seeds Taken From Different Treatments	30

MUSTARD SEED PRODUCTION AS AFFECTED
BY PLANTING DISTANCE^{1/}

by

MARLON C. BABAAN

^{1/} A research study presented to the faculty of the Don Severino Agricultural College, Indang, Cavite, in partial fulfillment of the requirements for graduation in Applied Research IV, Contribution No. AR/CS 86-008, under the advisorship of Mr. Epifanio H. Feraer.

INTRODUCTION

Brassica juncea Goss., popularly known as mustard or "mustasa" as termed in Tagalog provinces, belongs to the Mustard Family or Cruciferae (Brassicaceae) under Dicotyledonea and is one of the most common leaf vegetables grown in the Philippines. Mustard is a cool-season crop usually planted from September to December and grows in any kind of well-drained soil especially in rich sandy loam. Its seeds germinates at cooler temperature and produces a shallow root system (Knott, 1966).²

^{2/} Knott, J.E., 1966. Handbook for Vegetable Growers. Fifth Print, Copyright 1957 by John Wiley and Sons, Inc., pp. 2, 17. 22.