## DESIGN OF AN AGRICULTURAL MOBILE SPRAYING SYSTEM

BY

## TASOS A. STAVRIDES

Project Report
submitted to
the Department of Mechanical Engineering
of the Higher Technical Institute
Nicosia - Cyprus
in partial fulfillment of the requirements
for the diploma of
TECHNICIAN ENGINEER

in

MECHANICAL ENGINEERING

**JUNE 1992** 

Project Supervisor: Dr. Panayiotis Tramountanellis



## **ABSTRACT**

The project deals with the design of an agricultural mobile spraying system.

The system proposed satisfies the requirements of an existing farm and it can be used outside in the fields or on the mountains by only one person.

The main equipment used for surveying include a tank, water pump, elastic tubes, nozzles, metallic basis. Selection of the above items was carried out.

A cost analysis of the proposed system was carried out and compared with conventional systems which indicated that such a system is applicable in Cyprus.

## TABLE OF CONTENTS

		<u>Page</u>
ABSTRACT		Ĭ
ACKNOWLED	GEMENTS	ii
CHAPTER	1 - Introduction	1
CHAPTER	2 - Spraying Machines	4
CHAPTER	3 - Main Components of Spraying Machines	9
CHAPTER	4 - Needs Analysis Selection of the suitable spraying machine	30
CHAPTER	5 - Calculations	39
CHAPTER	6 - Presentation	46
CHAPTER	7 - Operation and care of spraying machines	53
CHAPTER	8 - Benefits and use of plant Protection machines	59
CHAPTER	<ul> <li>9 - Safety considerations in the use of pesticide chemicals</li> </ul>	62

**APPENDICES**