

CHAPTER I INTRODUCTION

This chapter will describe the reasons made for the application and review several things: the background of the project, then proceed with a problem statement as a basis for why this project was developed and the project objectives to be achieved, the study explains the target user of this application. the project's significance and limitations briefly describe what must be accomplished to meet user needs

1.2 Project Background

Food crops are all types of plants in which carbohydrates and proteins are found as a source of human energy. Food plants can also be said to be the main plants consumed by humans as food to provide energy intake for the body (Eva a., 2021). However, there are several types of diseases in food crops that can be must be known. Diseases of food crops can be divided into two the major groups are biotic and abiotic diseases. Best effort for overcome soybean plant diseases by monitoring, resistant varieties disease, disease control by cultivation, as well as mechanical, biological, vegetable and chemical.

An expert system or commonly known as an expert system is a computer program or information system in which it contains a variety of knowledge from one or more human experts related to a field and usually tends to be specific (Yusuf Abdhul., 2022). Expert systems are only known to an expert and experts from the field his. Ordinary farmers and farmers in remote areas have not understand the diseases experienced by food crops. Farmers only know the diseases experienced by food crops due to insect attacks, mushrooms and weather. So that farmers always spray

insecticides on food crops. But spraying insecticides on plants doesn't can completely reduce the attack on plants, the right attitude in to deal with disease in plants is to establish disease prevention well for the next planting by paying attention to processing soil, selection of plant seeds, fertilization, plant treatment, and care plant.

Methods on expert systems are very important for diagnosing diseases. By diagnosing the symptoms of each food plant, matching with existing rules, and generating a diagnosis based on the knowledge base. In the expert system there are many methods, namely: forward chaining, backward chaining. Researchers use the forward method chaining. Forward chaining method is a method that performs forward tracking, starting from a set of facts and ending at a conclusion. The forward chaining method starts from facts that are already known or defined in an expert system. Then use the premises determined by the user, which later the premises will be adjusted to the facts using a certain rule. The results of this process will produce new facts, which will later be used to continue the process and get a final conclusion after there are no more rules whose premise matches the facts (Ulti Desi Arni., 2019).

By using an expert system, it is expected to accelerate in diagnose a type of food plant disease, so it can be easily the type of disease is known.

1.2 Problem Statement

The way to implement this system is in an effort to utilize the expertise of a food crop expert, to get information about diseases/medicines you have to do it by visiting a plant expert first, this is one of the ways in today's society to get detailed

information. It is difficult to find a drug that is suitable for the disease your plant suffers from and also limits understanding of prevention due to the difficulty in identifying the type of disease, the cause is the symptoms and forms of the disease which are caused by several diseases that are almost the same. With this application, it is hoped that it can help and make it easier for the public to get information on how to prevent, treat and care for food plants. So, some port related issues in this system are:

1. Recognize the type of food plant disease from the symptoms it suffers. Because many of the symptoms and forms of the disease are almost the same but with different types of disease.
2. Know the correct drug name for food plants because so far ordinary farmers can only know medicine from an expert.
3. Lack of understanding about prevention in order to avoid disease and lack of knowledge in dealing with a food plant disease.

I got the problem statement from the Indonesian campus agriculture lecturer and direct observation of what problems exist in the Indonesian agricultural sector.

1.3 Objective of The Project

This project has the following objectives:

1. To make it easier to know the disease from the symptoms suffered by food plants.
2. Give appropriate drug advice, and
3. Provide ways of prevention and how to act.

1.4 Significance of The Project

In this project, the importance of this research includes:

1. Web-based application that is able to detect types of diseases in food plants from the symptoms they suffer.
2. A web-based application capable of providing appropriate treatment and drug advice.
3. Web-based applications that are able to provide prevention and action to users.

1.5 Scope of The Project

1.5.1 System Scope

The system must respond to the user.

1. There are various symptoms of the disease for the user to input
2. Able to identify food plant diseases after the user inputs the symptoms of the disease
3. Able to produce solutions automatically to overcome food plant diseases

1.5.2 User Scope

User Scope

1. Users can use the application to detect diseases in food plant
2. Users can input symptoms of diseases that exist in food plant
3. Users can find out the disease after inputting the symptoms of the disease

1.5.3 Admin Scope

Admin Scope

1. Admin can use the application to manage data on the web application

2. Admin can enter admin menu through admin login

3. Admin can use the user menu

1.6 Assumption and Limitation

Assumption with the construction of this system, it is hoped that it will facilitate ordinary farmers in detecting food crop diseases and can be used as a means to manage various kinds of expert information, especially for diagnosing various types of food plant diseases through the symptoms they are suffering from.

The focus of this project is limited to:

1. This system is made in the form of an expert system and web-based.
2. This application contains several questions about symptoms that may be experienced.
3. This system is intended to be able to diagnose early on diseases that arise due to symptoms suffered.