

**RULE-BASED EXPERT SYSTEM: FARMING GUIDE FOR SWINE RAISING WITH SWINE DISEASE IDENTIFIER USING FORWARD CHAINING METHOD**

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# HOMEPAGE

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# INTRODUCTION

Rule-Based Expert System: Farming Guide for Swine Raising with Swine Disease Identifier Using Forward Chaining Method is a mobile application that identifies common swine diseases based on the signs and symptoms observed towards the swine and then automatically saved the identified swine disease once it reaches a conclusion. This application also provides a manual to assist swine farmers in cultivating or raising swine from birth to commercialization. The gui of the system is web based, and the algorithm and method were written in JavaScript. The system was compiled and converted into mobile application (apk) using Cordova.

# SYSTEM REQUIREMENTS

This part is divided into two sections, the hardware requirements, and the software requirements.

## Hardware Requirements

The hardware requirements to use the mobile application is listed below:

* Smart Phone (Android Based Platform)

A mobile phone that can access and download the application.

* Tablet (Android Based Platform)

A tablet that can access and download the application.

## Software Requirements

The software requirements needed to run the application

* 4gb RAM (Random access memory) or Higher

The minimum RAM for the application to run.

* Android Version 4.4.4 or Higher

The minimum android version for the application to run.

# HOME

This is the home page; this page contains all the functions of the application.

**Figure 1 - Homepage Topics**

**TOPICS**

**1.** This is where you can view on how to start **raising swine** from birth to commercialization as well as the preparations and things to be needed.

**2.** This page contains the **basic symptoms** that usually occurs in swine.

**3.** This contains other **information** that are related in raising swine, tools and more.

**Figure 1.1 – Homepage Features**

**FEATURES**

**4.** This page contains of the **saved problems** that are being conclude in the problem identifier.

**5.** This contains all the **common disease** that may occur in the process of raising swine as well as the names of disease, descriptions, preventions, and more.

# MANUAL INTERFACE

This is manual interface where it shows the step-by-step procedure in raising swine from birth to commercialization.

**Figure 2 – Manual Interface**

The manual page contains the necessary requirements and information on raising swine. Each statement has its own Tagalog translation button called “**See translation**” for convenience.

# SICKNESS INTERFACE

This is the sickness interface where it shows the most common symptoms behaviors and more.

**Figure 3 – Sickness Interface**

The sickness page contains the most common signs of sickness and its information with Tagalog translation button each statement.

# INFORMATION MANAGEMENT INTERFACE

This is the information management interface where it shows the various information, suggestions and ideas in raising your swine more efficiently.

**Figure 4 – Information Management Interface**

The information management page contains the list of possible information’s that may help you understand more on the process of raising swine.

# DISEASE IDENTIFIER FEATURE

This page contains the problem identifier feature that will determine the disease of the swine.

**Figure 5 – Disease Identifier Feature**

1. Click the **tap here** button to proceed in the problem identifier page

2. This is the first question that the system asks and the parenthesis sentence is the Tagalog translate of the question.

***Note: The system will provide a series of questions based on signs and symptoms.***

3. Condition, you may answer base on your observation of signs or symptoms of your swine by answering yes or no.

4. After the you selected either yes or no click next to proceed into the next question.

5. Reset button

6. Exit Button

***Note: System error POP UP this occurs if your answers are not within our systems rules.***

**Figure 5.1 - System Error POP UP**

**1**. Button that shows the diseases that are only available in the system.

**2.** Button that shows the recently chosen symptoms.

**3.** Exit button

# CONCLUSION – (DISEASE IDENTIFIED)

Conclusion page is the result of your answers when all chosen question is valid and present of the system.

**The conclusion contains*:***

Disease name, description of the disease, observed symptoms and signs, cause of the disease, treatment and prevention.

***Note:*** *You can’t go back once you are in this page.*

**Figure 6 – Conclusion Disease Identified**

**1.** The Disease name

**2.** View button to view the translation.

**3.** Tappable buttons to view the information of each information.

**Figure 6.1 Conclusion Disease Identified**

4.Tagalog translation buttons

5. Exit button

# SAVED PROBLEMS

You can view your recently identified disease in the Saved Disease Page.

**Figure 7 – Saved Disease**

**1.** Click this button to proceed in the save problem page

**2.** Identified Swine disease name

**3.** Date identified of the problem

**4.** Delete button (Deletes the specific saved problem)

**5.** View Button (Views the specific saved problem)

**6.** Deletes all saved problems.