Information Systems of Eradication Pests and Diseases Crops for Agriculture Extension Instructor

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Abstract- Agricultural extension instructor of plant pests and diseases and tackling has been done by the trainers during the many difficulties and obstacles because of the location and the diversity of the problems faced. The limitations of distance and knowledge of the extension in their duties greatly affect the productivity results. To assist the government in resolving the issue, the need for a computer program information system that can be accessed in the location extension. The program should be able to address various issues of plant pests and diseases as well as mitigation. Program in accordance with the specific needs of course to be built specifically

The research result obtained is an application program that is easy to administer instructor and has been tested in the presence of pests at random extension. The test results were obtained, that the program has been good and it can be applied but need continued improvement to the development of pest control and plant diseases..

Index Terms- pests, diseases, plants, agriculutural extension

I. INTRODUCTION

Implementation of guidance and counseling to information about plant pests and diseases as well as to overcome is the condition of the area groups of farmers. In addition, the number of existing agricultural extension workers, especially in the province of Bengkulu pretty much extension fixed, contractual or non-educator but still require additional knowledge about the prevention of pests and plant diseases. The specific objective of this study was the establishment of software (Software) which has a function as teaching material for extension workers who will go into the field in the process of guidance and counseling prevention of pests and plant diseases. So knowledge of the extension can always be renewable, in accordance with the development of information about the prevention of pests and plant diseases.

The resulting software will be delivered master freely to the government through a coordinating body extension (Bakorluh) Bengkulu Province as a pilot project of the program management information systems to control pests and plant diseases. While the use of the training program will be held following the schedule set by Bakorlah after receiving instructions from the provincial government. The general objective of this study was to achieve an increase in productivity of agriculture in each area

farming groups get assistance from counselors who have been equipped with the knowledge of prevention of various pests and plant diseases. In other words, its relevance to the increase in household income after the farmers free of pests and plant diseases. So that the agricultural extension instructor can answer the various issues raised by farmers in terms of the symptoms caused by pests and diseases that attack the crop and countermeasures in accordance with the recommendations of experts through this program.

Based on the above facts, then that need attention later on is the level of completeness of the data and information relating to the issue of pests, diseases that attack the crop and at the same time various procedures for handling. Thus updating the data and the information was continuously indispensable for renewed (updatable) and delivered to farmers belonging to the groups of farmers.

II. MATERIAL AND METHODS

Information systems

Information is a collection of data that is processed into a form that is more useful and more meaningful for those who receive. Without the information, the system will not run smoothly and will eventually die, in other words, is the data source for the information. The information system is a system within an organization reconcile the needs of the processing of daily transactions that support the function of the organization's operations that are managerial in strategic activities of an organization to be able to provide to outside parties certain information necessary for decision-making and may also be information for all levels in such organizations whenever necessary. An information system is a collection of hardware and computer software and hardware man will cultivate and use. In addition the system can be defined following information:

1. A system created by humans which consists of components within the organization to achieve a goal that is present infornasi.
2. A set of organizational procedures when implemented will provide information for decision makers and or to control the organization.
3. Reconciling the needs of transaction processing, support the operation, managerial and strategic activities of an organization and provide certain outside parties with the necessary reports.

Plant Pests and Diseases

The pest is a plant cultivated vermin eg rice, wheat, potatoes, mangoes, apples and so on. While the disease is causing the plant to be sick, such as bacteria, fungi, viruses, lack or excess of water. While the pain is a condition deviating from normal. Having knowledge of pests and diseases has been held, further control of pests and diseases will provide very good impact on crops and productivity. While the action taken is in the form of biological by providing pest predators. (Pracaya, 2007).

Model designing a system reveals that there are several models that can be used, namely :

1). Waterfall Model (Waterfall), which is a model that describes the system design complete stages ranging from analysis and requirements definition, system design and software, implementation and unit testing, integration and system testing, operation and maintenance.

2). Evolutionary Development Model, which is a model which is based on the idea and initial diimplemetasi then offered to customers to be explored and commented upon. Then gradually revised in accordance with the wishes of the user.

3). Literature study, which searches a variety of information on plant pests and diseases that have been published by the experts and latest.

III.   RESULTS

The results obtained in this study was the establishment of an information system program pest control and plant diseases. The display of the program after the run looks as follows :
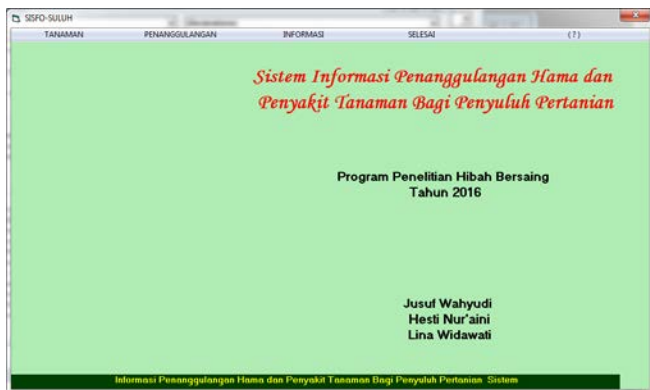

Figure 1: Main Program

Figure 1 above is a result of a program that has been created, in which the program is organized into the menu, namely: Plants, Prevention, Information and Done. Tanaman (Plants) submenus are provided to serve the various problems of the existing plant, submenus Penanggulangan (Eradication) provided to serve the needs of penanggulapungan both pests and diseases of plants is desired. Information submenu are provided to serve the needs in terms of information about the desired plants.

So with these programs, agricultural extension can freely assist farmers who need a variety of information related to pests and diseases as well as ways to overcome them.

IV.   DISCUSSION

Based on the display as figure 1 above, visible program has several menu options like Crops, Eradication, Information and Done. The following:

Figure 2: Submenu Crops - Horticulture - Vegetables
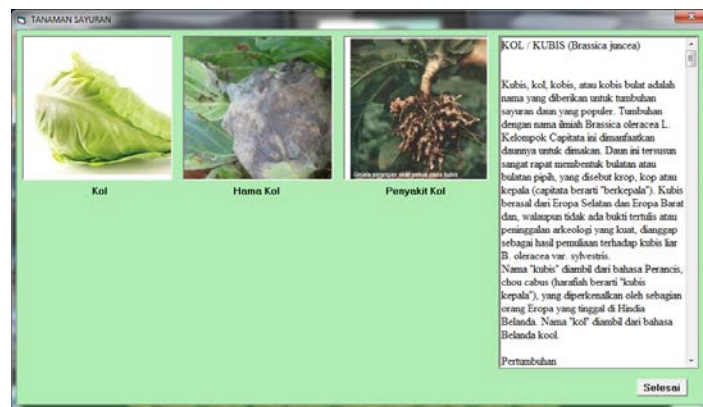

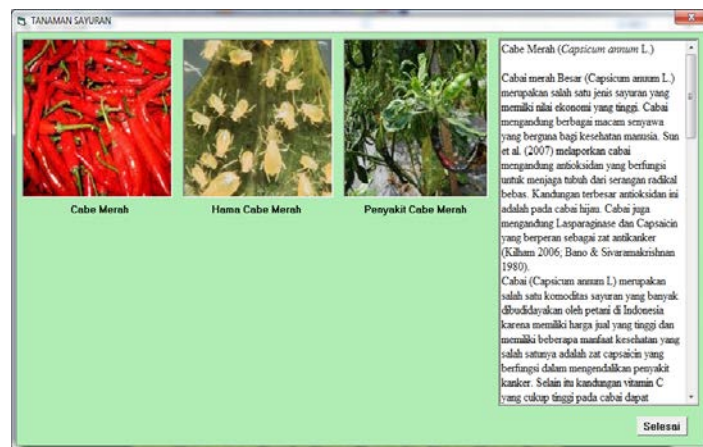Figure 3: Example of Vegetable Cabbage with Pests, Diseases and short explanation

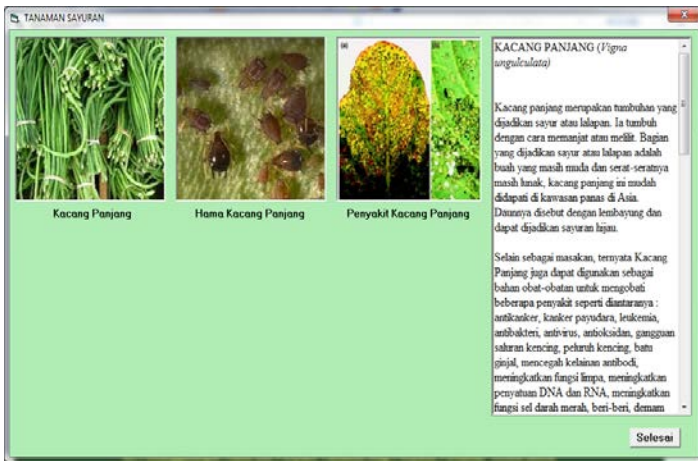Figure 4: Example of the Red Chili Plant Pests, Diseases and short explanation

Figure 5: Example Vegetable Long Bean with Pests, Diseases and short explanation
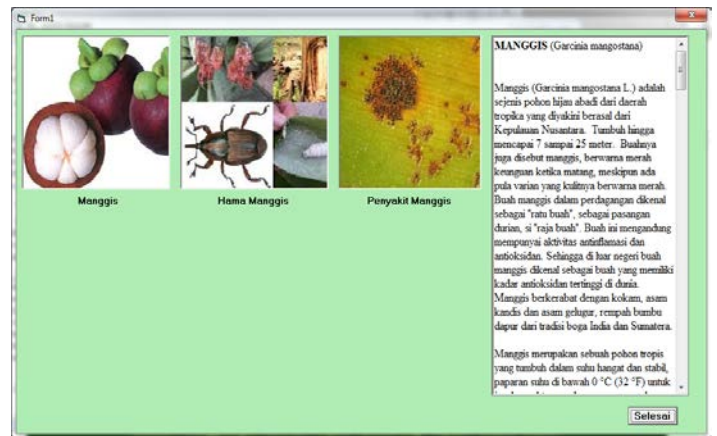
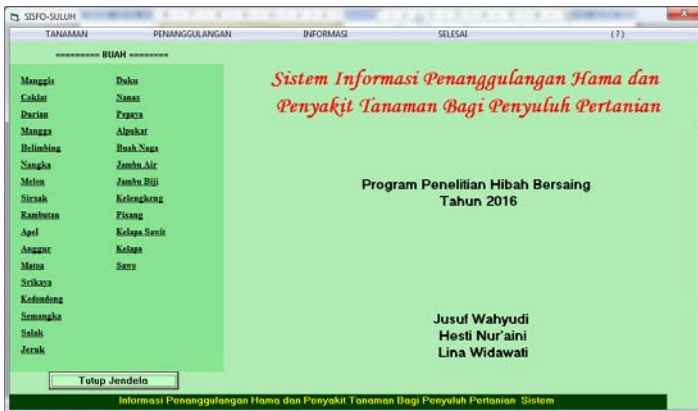The following figures are shown some examples for fruit crops:
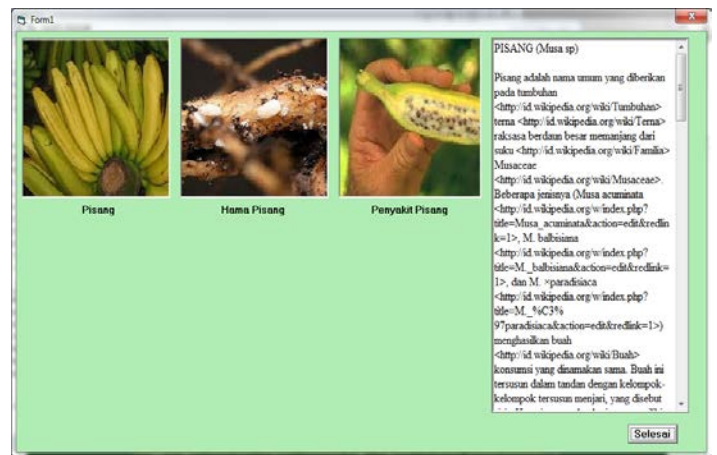

Figure 6: Example Display sub-menu At Fruit Program

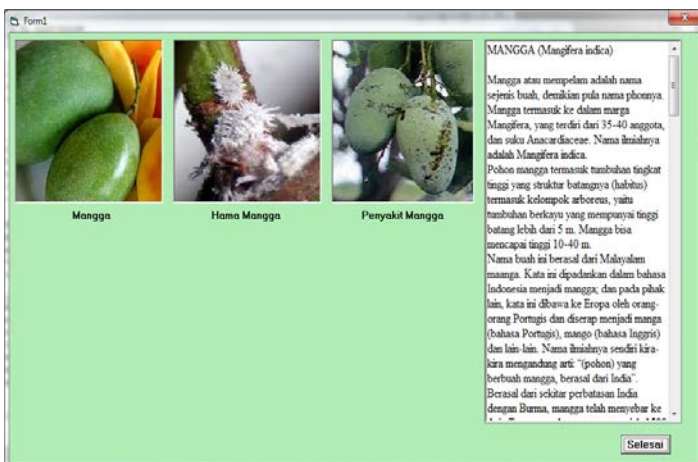Figure 7: Example Fruit Mango with Pests, Diseases and short explanation

Figure 8: Example Fruit Mangosteen with Pests, Diseases and short explanation

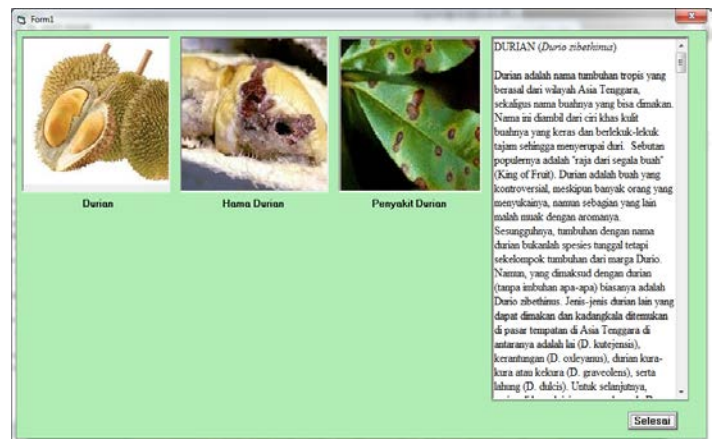Figure 9: Example Fruit Banana with Pests, Diseases and short explanation

Figure 10: Example Fruit Durian with Pests, Diseases and short explanation

V. CONCLUSION

Based on the results of the testing program that has been created, the comments provided by the extension of plant pests and diseases can be described as follows:

1). Need additional information related to pests and diseases and tackling the various other plants.

2). So that the program can be optimized, it is necessary the addition of some facilities, such as printing brochures concise, facility updates and discussion forums

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