Designing Seasoning Information Systems for Processed Meat Production at PT. Aromaduta Rasaprima

I Nyoman Astawa*[1], Putu Sugiartawan[2], Komang Trisnadewi[3]
[1,2,3]Teknik Informatika, STMIK STIKOM, Indonesia; Jl. Tukad Pakerisan 97 Denpasar, Bali,
0361 – 256 995/ 0361 – 246 875, Indonesia
e-mail: *[1]**nyoman.astawa@gmail.com**, [2]xxx@xxxx.xxx, [3]xxx@xxxx.xxx

Abstract

The revolution of technology and knowledgement embarks human to resources re new their technology as easy as the can aplicate in their environment. The company the new computerized and communication technology. We could make information depends on conclution of some datas.

The best information is the conclution of some problems that could have benefits for humans to solve their environments problems and also support them to make some decision.

Keywords— *Seience and Information*

1. INTRODUCTION

In the times, technology is needed in various aspects of life. Because the usefulness of technology can make it easier for humans to shorten the time to do work. But not only that, technology has an important role in providing the accuracy of data processed using systems from the progress of a technology. From the rapid progress of technology, it must also be balanced from the development of human resources (HR). Because humans as technology users must be able to take advantage of existing technology, as well as further technological developments. Human adaptation to new technologies that have developed in various fields such as offices, education, industry and so on.

The usefulness of technological advancements from a computer or PC device in the work environment we can see the use of a computer has developed used in various parts of an office, such as accounting, stock, personnel, purchasing, sales and production. However, the use of computers is still not evenly distributed in the field of offices, and production, even though they already use computers, but some companies still use manual systems that still use the recording or bookkeeping system.

When using the recording or bookkeeping system has a lot of weaknesses, including paper materials that are easily damaged quickly, the calculation process requires a long time, a manual system has no back up data because the data that is owned is only one, so if there is no data loss or have replacement data. With these problems, we meet many companies without exception in the company PT Aromaduta Rasaprima.

PT Aromaduta Rasaprima is a company engaged in processed meat that has been established since 1980. This company produces goods using sophisticated machines made from Germany. In this company has produced more than 900 items of this type of product, and is able

to produce 500 tons of products every the month, the seasoning of each product item is always different from the other products. However, as given by the owner himself, in the process of making spices in the company it still uses a manual system, namely by calculating and recording done by the owner itself. So that the problems that arise in terms of quality experience a decline such as the example of complaints from consumers about the taste, texture, color changes due to changes in seasonings that are not in accordance with the product items to be produced. In checking when the process is produced there is also no report to check the item code when the production process to examine products that have problems. Therefore I took the title "Designing a Spice Information System for Processed Meat Production at PT Aromaduta Rasaprima"

2. METHODS

Designing Processed Meat Production Systems at PT Aromaduta Rasaprima is a system capable of processing seasoned process calculation transactions produced. This information system is able to process item data, process material data, add spice recipe data, conduct production event transactions, this system is also capable of printing notes seasoning recipes, provide item data reports, provide raw material data reports, provide seasoning recipe reports, provide production event transaction reports, and estimate earnings reports.

2.1 State Of Te Art

The first research is a final project entitled "Designing Management Information Systems and Selection of Human Resources (Case Study: PT. Apta Selaras Abadi)" compiled by Risna Retna Sari (2013) in the study saying information systems are used to present information which is used to support operations, management and decision making in an organization. Usually SIM generates information to monitor performance, maintain coordination, and provide information for the organization's operations. So an information management system is needed.
In the journal entitled "Development of Pharmacy Information Systems (Case Study: Leuwi Sehat Majalengka Pharmacy) compiled by Shyarul Mauluddin in the study said the need for accurate, complete and relevant information is needed by a pharmacy business entity, Leuwi Sehat Majalengka pharmacy, but in the system the ongoing thing has not been obtained optimally. On a system that is running recording is still done on notes or transaction books, this causes difficulties for employees in searching transaction data and making reports.

2.2 Sistem Informasi

According to Bodnar and Hopwood (2003: 5) information systems lead to the use of computer technology in organizations to present information to users. "Computer-based" information system is a collection of hardware (software) and software (software) designed to convert data into useful information. Information systems can be classified into sections such as the following.
   a. Accounting information systems (AIS) are collections of resources such as people and equipment, designed to convert financial data and other data into information. This information is communicated to various decision makers. Accounting information systems deliver this change, either manually or with the help of a computer.
   b. Management information systems (SIMs) describe the use of computer technology to provide decision-oriented information to managers. SIM provides a variety of information beyond those related to DP in the organization. SIM is aware that managers in organizations use and need information for the basis of decision making, and that information systems are computer-based to provide information to managers.

c.   A marketing information system is a SIM that provides information for use by fung in marketing. Much of the information is provided by accounting information systems. For example sales summary and cost information. Other information must be generated from the organization's environment. Examples of environmental information are customer taste data, customer profiles, and information about competing products.

d.   Production information system is a SIM that provides information to be used by the production function. Much of the information is provided by the organization's accounting information system. An example is the inventory summary and cost information. Other information must be generated from the organization's environment. An example of information from the environment is raw material data, the profile of the new prospective supplier, and information about new production techniques.

2. 3 Produksi

In general the production of goods (Production) can be interpreted as all activities which include the utilization of various quantities and types of resources to produce goods - services or services. In this case, the production and operations system is a process design (process design) in which various resources are changed and or combined into something that is needed by humans. The function or system of operation and production is a series of organizations that are primarily intended as a container for the creation of goods or services whose manufacture is the reason for the establishment of the company. The main purpose of this operating and production system is to create added value for various types of resources so that the goods or services made by the company have a value greater than the total value of all resources used in processing activities. (Pardede, 2003, 24-25)

2. 4 ERD

Entity (Entity) is something real or abstract where we will store data. There are 4 entity classes, for example employees, payment, campus and books. For example, an entity is called an agency, for example an employee, payment for joko, and so on.

Relationship is a natural relationship that occurs between one or more entities, for example the employee payment process, cardinality determines the occurrence of an entity for one event in a related entity. For example students can take many courses.

Attributes are general characteristics of all or most agencies in a particular entity. The other attributes are property, data elements, and fields. For example names, addresses, employee numbers, and salaries are employee entity attributes. An attribute or combination of attributes that identifies one and only one agency, an entity is called a primary key or identifier. For example, employee numbers are the main key for employees.

Entity Relationship Diagram is the main data modeling tool funds will help organize data in a project into entities - entities and determine relationships between entities. The process allows analysis to produce a good database structure so that data can be stored and retrieved efficiently (simarmata and paryudi, 2006, 67).

An ER / ER_D diagram is composed of three components, namely entities, attributes, and relationships between entities. Broadly speaking, entities are the basic objects involved in the system. Attributes act as explanatory entities, while flexibility shows the relationships that occur between two entities (silberschatz, et al, 2011 in 2011, 92). The symbols in ERD can be seen in Figure 1.

Notasi	Keterangan
	Entitas, yaitu kumpulan dari objek yang dapat diidentifikasi secara unik.
	Relasi, yaitu hubungan yang terjadi antara satu atau lebih entitas. Jenis hubungan antara lain: satu ke satu, satu ke banyak, dan banyak ke banyak.
	Atribut, yaitu karakteristik dari entity atau relasi yang merupakan penjelasan detail tentang entitas.
	Garis, hubungan antara entity dengan atributnya dan himpunan entitas dengan himpunan relasi.
	Input/output data, yaitu proses input/output data, parameter, informasi.

Figure 1 Symbols in ERD

2. 5 Conteks Diagram

The context diagram in Figure 2 is a general description of the design that will be built. In this system in covering several 2 actors involved include: Employees and Owners as the head of the company. Owner only input or process seasoning recipe data and conduct production transaction transactions, while employees can only refer to and process goods data, and raw material data.
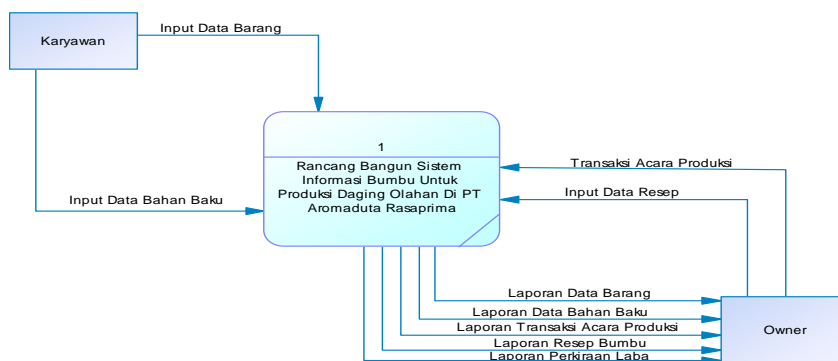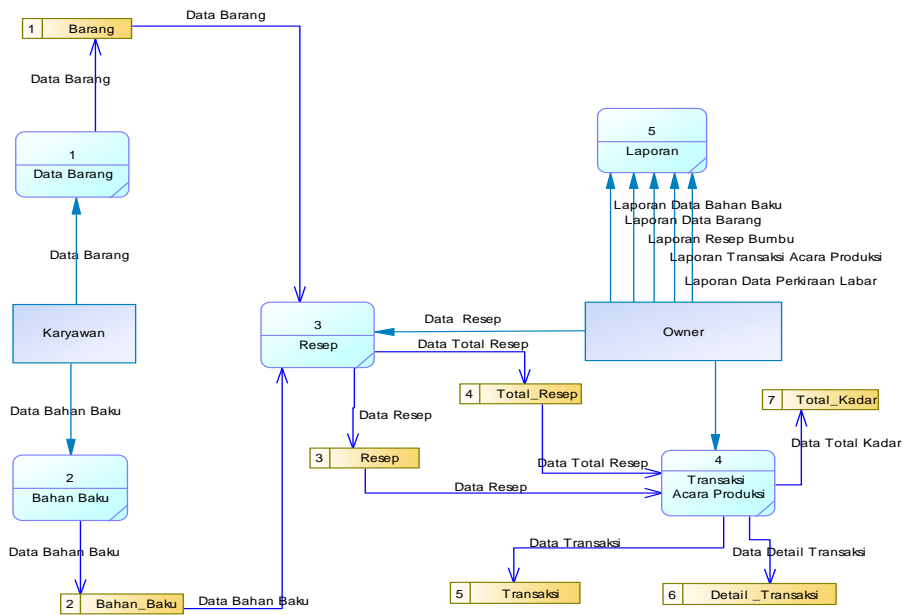

Figure 2 Context Diagram

2.6 DFD Level 0

DFD Level 0 is a description of the context diagram where DFD Level 0 has several processes, namely data items, raw material data, recipe data, transaction data for production events and reports. Picture of DFD Level 0 can be seen in Figure 3.

Gambar 3 DFD Level 0

2.7 DFD Level 1 Data Barang

DFD Level 1 item data is a translation of the DFD Level 0 process. This process is used to input and process data items. Picture DFD Level 1 item data can be seen in Figure 4.
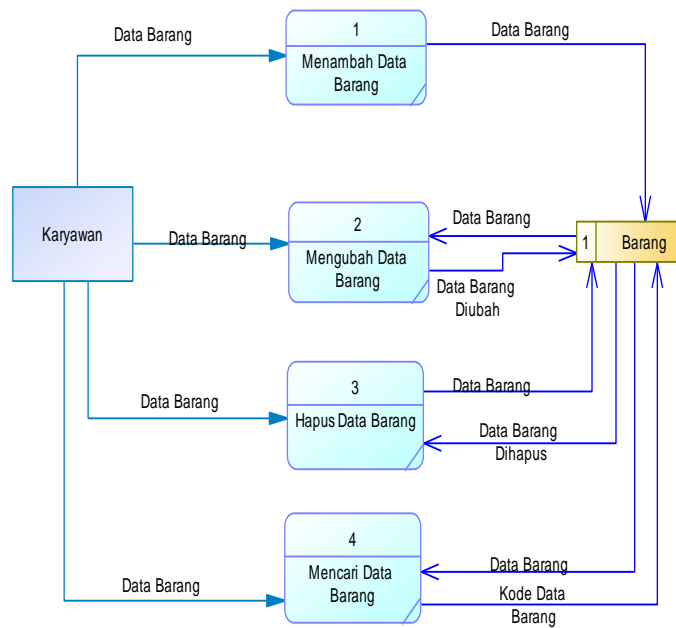

Figure 4 DFD Level 1 Goods Data

2. 8 Entitas Relationship Diagram (ERD)

Entity Relationship Diagram (ERD) is the main data modeling that is arranged based on the entity used for data storage. Each entity is interconnected with another entity called a relation. Image Entity Relationship Diagram (ERD) can be seen in Figure 5.
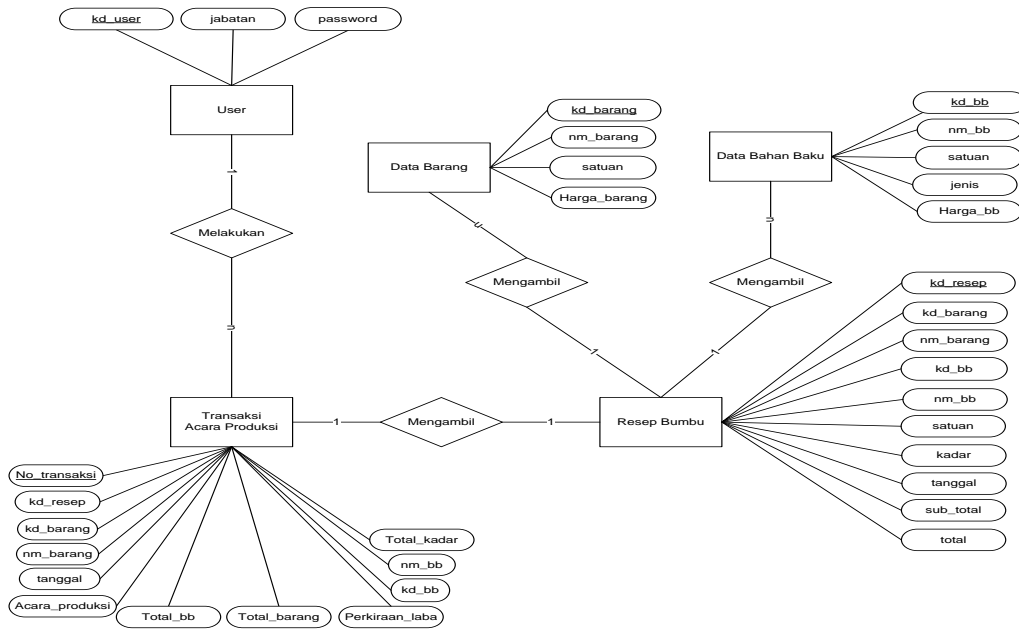
Figure 5 Entity Relationship Diagram (ERD)

2.9 Proses perancangan Conceptual Data Model (CDM)

At the stage of the Conceptual Data Model (CDM) it is based on data collection and analysis of requirements on database structure. Conceptual Data Model (CDM) is a detailed description of database structure in a logical form, where there are entities that are interconnected with other entities. Figure Conceptual Data Model (CDM) can be seen in Figure 6
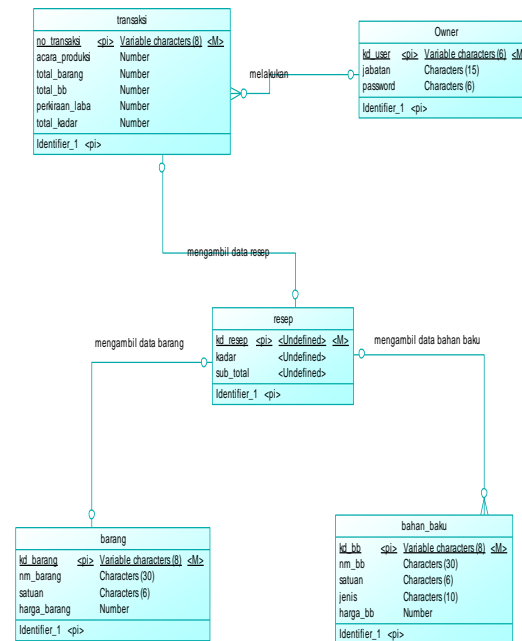

Figure 6 CDM (Conceptual Data Model)

2.10 Proses perancangan Physical Data Model (PDM)

Phiysical Data Model (PDM) is based on physical data base design. The data type is more specific and specific where it describes the data and the relationship between these data. Physical Data Model (PDM) can be seen in Figure 7.
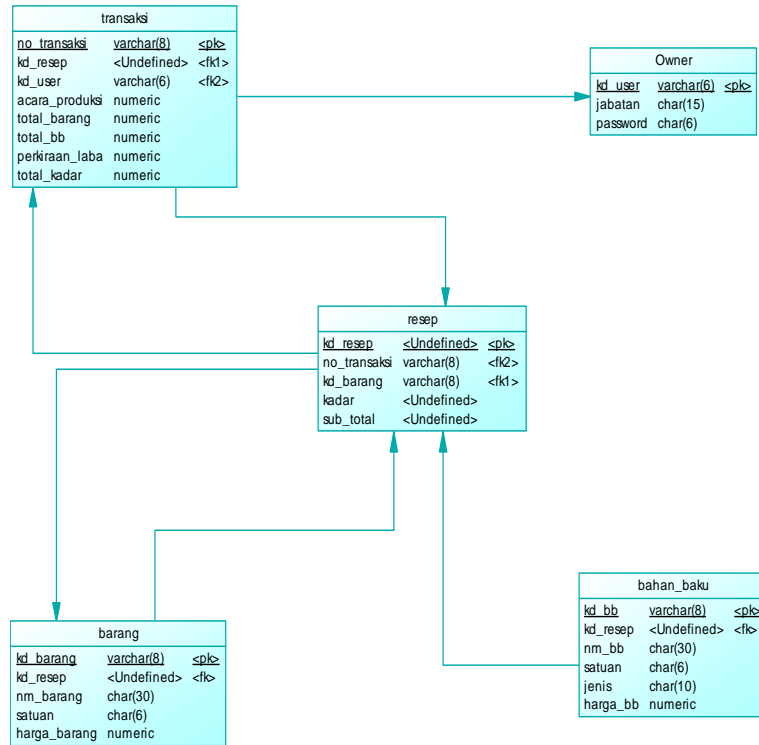
Figure 7 PDM (Physical Data Model)

2.11 Rancangan Form Menu Utama

In the main menu form there are 5 main menu buttons that appear, namely the item data menu button is the button that will direct to open the item data form, the raw material data menu button is the button that says to open the default data form, the recipe data menu button is the directing to open the recipe data form, the transaction button is the button that directs to open the transaction button for the production event and the report data menu button is the directional button to open the report.
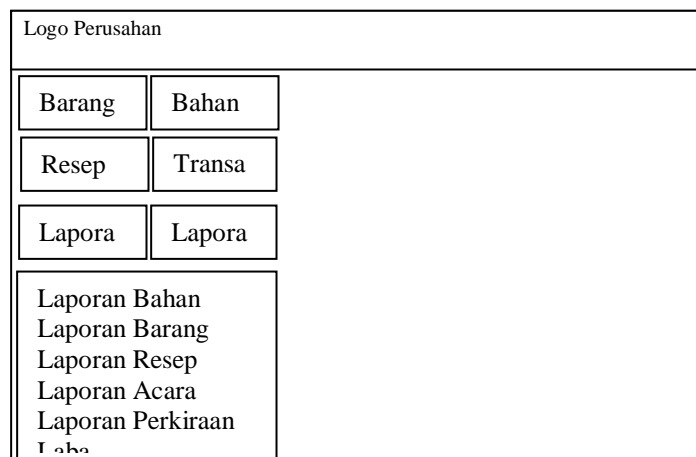

Figure 8 Draft the Main Menu Form

3. RESULTS AND DISCUSSION

System implementation is the stage to realize the application through programming activities. In the implementation phase of this system, the system designed starts to be implemented by building components that have been designed. After all the system components needed are installed, the next process is the implementation of the system. The following is the implementation of the system that has been made

3.1 Main Menu Form
This form is the main page of the seasoning information system for production. Where on this menu there are all control menus that make it easy for users to access menus based on the permissions granted based on their position.
Displayed menus:
1. File
    a. Log out
    b. Exit
2. Master
    a. Goods
    b. Raw material
3. Process
    a. Recipe
    b. Production program
4. Report
    a. Item Data Report
    b. Raw Material Data Report
    c. Seasoning Recipe Report
    d. Report on Transaction of Production Events
    e. Estimated Profit Report
5. About

But there is a little difference from the control button when the user logs in with the access rights they have. After successfully accessing the login form, then the screen appears on the main menu. The main menu form can be seen in Figure 9.

Figure 9 Main Menu Form

3.2 Pengujian Pengolahan Data Barang

The following is the testing of goods data, where the test results are in accordance with what is applied. This testing is done by inputting goods, data that is not allowed and the correct data. The test results on empty item data can be seen in Figure 10.
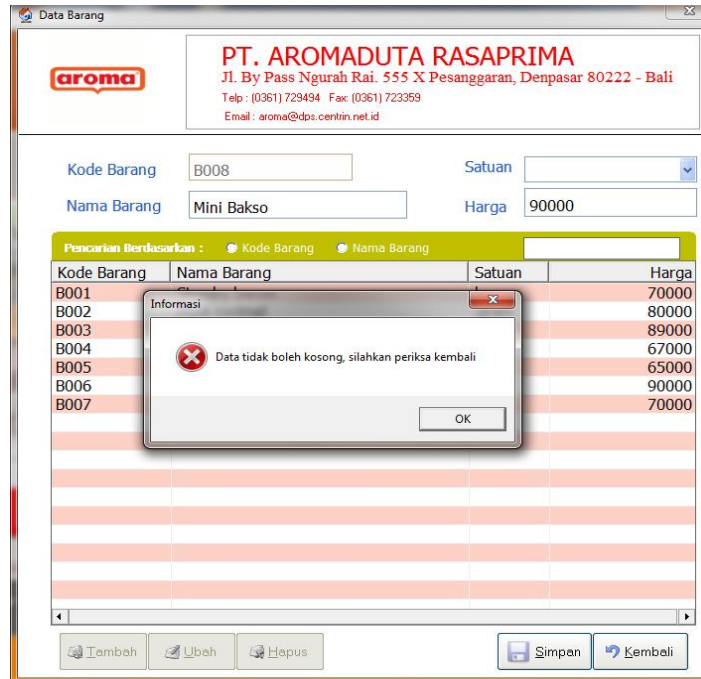

Figure 10 Blank Product Data Test Form

3.3 Pengujian Pengolahan Data Bahan Baku

The following is the testing of item data, where the test results are in accordance with what is applied. This test is done by inputting items, data that is not allowed and the correct data. The results of testing on empty raw material data can be seen in Figure 11.
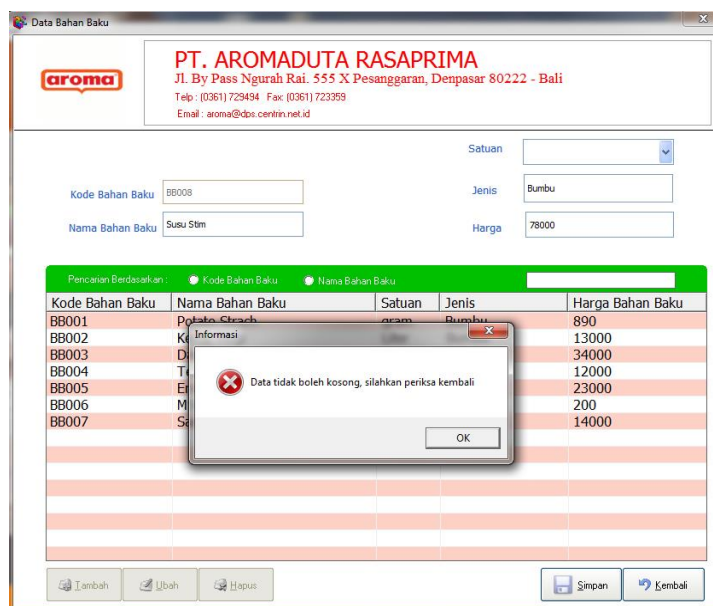

Figure 11 Blank Raw Material Data Test Form

3.4 Pengujian Resep Bumbu

The following is testing the recipe data, where the test results are in accordance with what is applied. This testing is done by inputting recipes, data that is not allowed and the correct data. The results of testing on the empty seasoning recipe data can be seen in Figure 12.
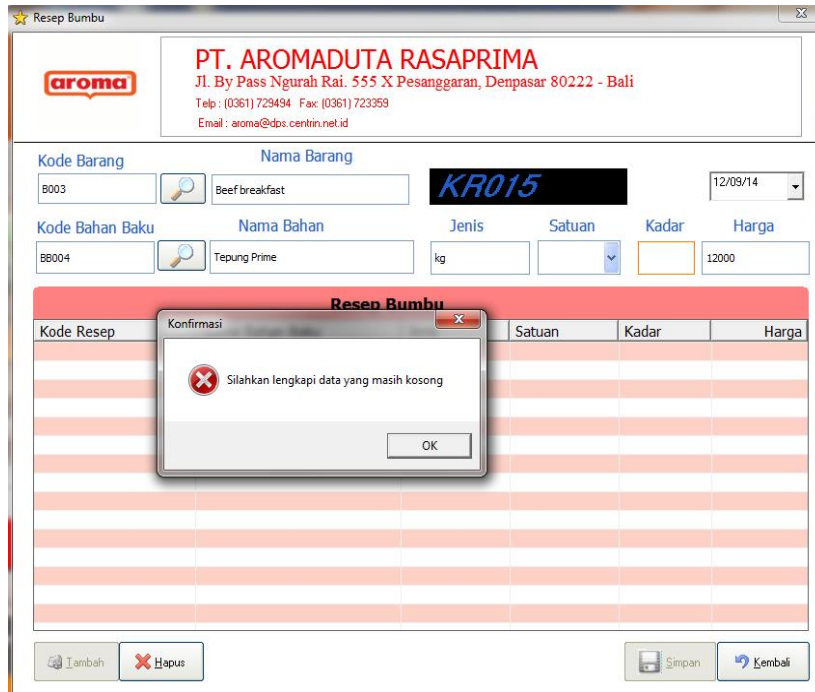

Figure 12 Form of Blank Seasoning Recipe Data Test Result Form

3.5 Pengujian Transaksi Acara Produksi

The following is testing the recipe data, where the test results are in accordance with what is applied. This testing is done by inputting recipes, data that is not allowed and the correct data. The results of testing on empty production event transaction data can be seen in Figure 13.
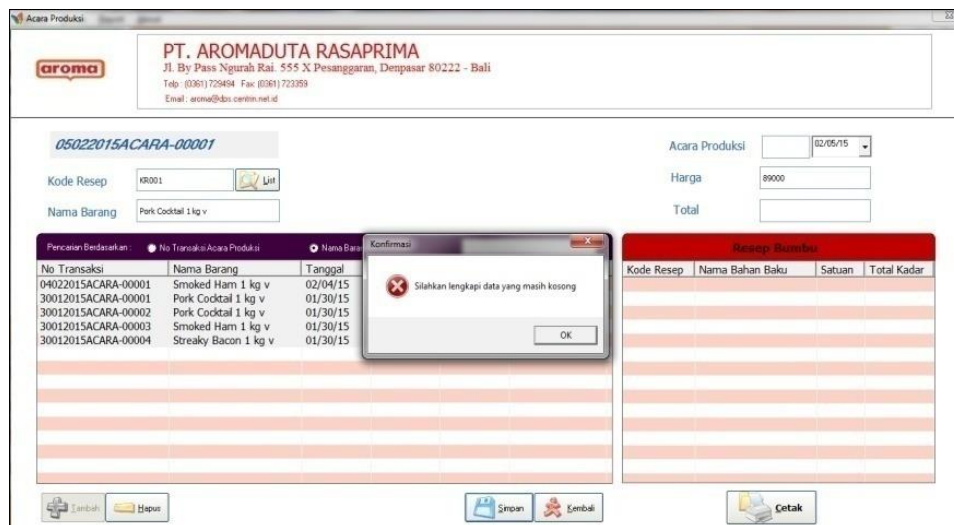

Figure 13 Data Form for Transaction Test Results for Blank Production Events

4. CONCLUSION

Based on the results of the trial design of the system that the author has done, it can be concluded that the spice information system for production at PT Aromaduta Rasaprima was built in accordance with the design that began with the literature study, required data collection, analysis and design and then continued with system development and testing . The spice information system for production at PT Aromaduta Rasaprima can be used as a solution in solving problems to facilitate the preparation of seasoning recipes by the owner itself

This spice information system for production at PT Aromaduta Rasaprima has succeeded in minimizing the occurrence of errors in the production of spices produced, because with this system the owner does not have to calculate the recipe manually.

This spice information system for production at PT Aromaduta Rasaprima can help the company to check when production errors occur by looking at the production code to match the transaction date of the production event.

Based on the results of the black-box test, it was concluded that this seasoning information system for production at PT Aromaduta Rasaprima was as expected, meeting user needs so that it was feasible to use.

5. SUGGESTION

Based on the results of trials of the seasoning information system for production at PT Aromaduta Rasaprma, the suggestions that can be considered for further research are:
1. To get a better decision result, a graph of increasing production event transactions should be added.
2. In the next development, the application needs to be connected with the application of stock of goods and raw materials.

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