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SECRETARIA DE RECURSOS NATURALES
UNIDAD DE PLANEAMIENTO, EVALUACIÓN Y GESTIÓN (UPEG)

DESIGN OF THE SIMPAH DATABASE AND REPORTING SYSTEM

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LIST OF ACRONYMS

CPD	Commodity Price Database
FHIA	Fundación Hondureña de Investigación Agrícola
MicroDIS	USAID microcomputer program for managing libraries
MicroISIS	United Nations microcomputer system for classifying documents and searching the resulting database
MIP	Millions of instructions per second
OICD	USAID's Washington office for information dissemination
PRODEPAH	Proyecto para el Desarrollo de Políticas de Honduras
SIMPAH	Sistema de Información de Mercado de Honduras - This is an anticipatory name for the unit which will be established with the implementation of this plan.
SPS	San Pedro Sula
TEG	Tegucigalpa
UPSA	Unidad de Planificación Sectorial
UPEG	Unidad de Planeamiento, Evaluación y Gestión, new name ('96) for UPSA
URPLA	Unidad Regional de Planificación
USAID	United States Agency for International Development
USDA	United States Department of Agriculture

SECTION I INTRODUCTION

A. Purpose of the Report

Starting in early 1995, the PRODEPAH project began the process of designing and implementing an agricultural market information system in conjunction with the Ministry of Natural Resources of Honduras. The project is known as SIMPAH (Sistema de Información de Productos Agrícolas de Honduras - Honduras Agricultural Market Information System). This report describes the activities associated with a short term consulting assignment that is in support of those activities.

This assignment advanced the process of establishing a computerized system for managing the data generated by the SIMPAH project. It is closely linked to prior work and to subsequent assignments, all related to the establishment of the data gathering and reporting system of SIMPAH.

B. Aspects of the Assignment

This assignment had seven major components. They included:

1. Work with UPEG and PRODEPAH to design a data storage and reporting system adequate to the needs of the SIMPAH. The Commodity Price Database was used as the foundation for the system.
2. Exchange rates. Currently, the CPD is capable of handling currencies and exchange rates from different countries. The system is currently capable of producing reports that adjust according to the value of the Lempira against the U.S. dollar. The changes implemented included allowing the reports to be output as unadjusted Lempiras. Changes also included the added ability to handle multiple exchange rates for the Lempira (parallel, black market) and the option for selecting specific dates or rates to be used as a base.
3. Report formats. The CPD is currently capable of producing price histories for selected product-market combinations. It has a module, which was updated to the Honduras - SIMPAH needs, for producing a daily report, where the user selects date-market combinations and the report produces a listing of all products for the selected market(s).
4. The interface was changed to reflect its link to SIMPAH.
5. A module was added which allows the user to work only from menus and not the codebook and which allows for interactive additions and updates to product lists, markets, reporter identification, and other qualifiers.

6. A module was added which analyses and reports quality control data against the performance of standard reporters.

7. Control codes were added for the desired printers to be used for the reports.

In the following section, the work on each of these components are reported as well as additional support activities which were accomplished in support of the continued development of the SIMPAH.

SECTION II ACCOMPLISHMENTS

The close of this assignment finds SIMPAH operational. Two markets in Tegucigalpa are currently being reported on a daily basis. Dissemination is being done by radio, several times per day, and being published in the newspapers. Preliminary indications are that the reports are being noticed by growers, transporters, wholesalers and other participants in the markets. For the relatively short period of time that the system has been in operation, there is a high percentage of people who participate in the markets who report that they are aware of the SIMPAH information.

Anecdotal evidence suggests that the reports are having an impact. There are reports of growers who have negotiated higher prices for their product, based on the evidence of the reports of the previous day market activities. There are accounts of increased negotiation in the markets, based on the SIMPAH reports.

The SIMPAH staff is mostly in place and functioning. While there are many aspects of the program yet to be implemented, the initial project success suggests SIMPAH will fulfill its anticipated role as a catalyst to making the concepts of free markets function in most, if not all, of the perishable agricultural markets of Honduras.

This assignment was specifically designed to support the establishment and functioning of the computerized data base for SIMPAH. However, as reported below, a number of additional activities were also accomplished in support of the establishment and functioning of SIMPAH.

A. Design of Data Storage and Reporting System

The design of the data base system is complete. It consists of the following variables:

1. Sale date. This variable records the date of the sale of the product being registered.
2. Product. This is a code which indicates the product. There are currently over 2,000 products identified by codes. The programming includes options for expanding this number and including alternative names.
3. Market. Each market is coded. In addition to the markets of Honduras, international markets are also coded.
4. Demand. This variable codes the general market demand for the product in question on the day of the sale. A number of subjective categories are included to allow the reporters to describe the nature of the market demand for the product.
5. Quality. Various subjective categories are coded which allow the reporters to qualify the nature of the product according to its quality.
6. Condition. As with quality, the reporter is given various categories with which to distinguish the product being reported.
7. Quantity. Several descriptors are provided which allow the reporter to distinguish the prices given according to the quantity of product in the market.
8. Processed. This variable allows the user to qualify whether the product was fresh or processed.
9. Sale Unit and Package Unit. These variables use the same codes, though a given record may not find them coded the same. These describe the unit used for the sale as well as the unit used for packaging the item.

10. Size. The user can qualify the product characteristics according to the size of the product, or the size range.
11. Currency. This variable allows for recording cases in which the sale is in a currency other than the currency of the market.
12. Sale Type. The data base, using this variable, can distinguish among types of sale, including wholesale, FOB, CIF, and retail.
13. Information Source. This variable allows for distinguishing the source of the information.
14. Transport. The reporters can discriminate among products according to the transport mode, which can help distinguish differences in prices.
15. Storage. Some products can be stored. Whether or not a product in the market has been in storage can affect its selling price. This variable permits distinguishing among offerings.
16. Grade. This variable is for discriminating among product according to the product grade.
17. Reporter and Data Inputer. These variables allow for tracking data according to who gathered the data and who input the data. The most important use of this information is for conducting quality control analyses.
18. Data Organization. This system will be installed both at SIMPAH as well as FHIA. This variable allows for distinguishing the data according to the organization which input the information into the database.

This set of variables fully complies with the usage made by USDA in its market information system. This makes it possible for SIMPAH to fully interchange information with the USDA. For those variables which are part of the USDA system, the USDA definitions of terms are used.

In addition, the base programing is completed for managing the information and extracting various types of reports. The program is currently installed at SIMPAH.

B. Exchange Rates

The system is implemented so that SIMPAH can input data in the currency of the sale and output the reports in any selected currency. The program adjusts all currencies against the U.S. dollar. This means that international prices, whether from the U.S., Europe or Asia, can be input using the currency in which they were reported, but the reports can be in Lempiras. Furthermore, the program allows for reports using the official exchange rates or those of the black market. Reports of products sold in Honduras can be sent to other countries of Central America, but adjusted to the currency of the receiving country.

C. Report Formats

The system is programmed to allow for several report formats. The basic division is between price histories and market reports. In the case of price histories, the normal format is to select one product, one market, and a range of dates. The report shows the high and low price for each date for the selected product market combination. The market report generally consists of selecting one market, one date, and reporting many products for that market date combination. While these are broad descriptions of the price history and market reports, in practice, the number of combinations of options is very large. The user can discriminate the report based on any of the variables listed above, or combinations of variables. The reports can be output to a printer, kept for viewing on the screen, sent to a spreadsheet, or in the case of price histories, output as a graph.

D. Interface

The program interface was adjusted to reflect the installation at SIMPAH. In addition, it was altered so that, when installed at FHIA, it will reflect that organization's affiliation. This programming is not only related to the interface, but also to the underlying defaults which automatically recognize data input by the host organization and record it as such in the permanent data. This makes it possible, in the future, to distinguish the source of the data, in the event, for instance, that there is a need to track the source of a consistent error.

E. Menus

The programming makes extensive use of pull down and pop up menus. There are several reasons for this. In the first case, the use of such menus reduces the rate of errors since users are selecting from among options rather than typing in text or numbers. In the second case, the process of using the system is facilitated. Reports and system maintenance is done with greater ease and speed.

Incorporated along with the system of menus is also a maintenance system which allows the user to modify and update options, guaranteeing future flexibility for necessary alterations.

F. Quality Control

The quality control system consists of a system of statistical checks for testing for quality control problems. In general, it involves selecting out a reporter or data inputter and tabulating variances which are compared with other reporters or data inputters. The variances and ranges are tested for patterns which could suggest misunderstanding of concepts or data fabrication. While the design is in place, the implementation is not yet completed since SIMPAH is just beginning to input data into the system. Once a quantity of data are input, then the tests for quality control can be conducted.

G. Printer Control

The system now incorporates definitions for important printer groups, including those being used by SIMPAH. These include the Hewlett Packard LaserJet series, the bubble jet series, also of Hewlett Packard, and Epson printers, including the fx, lq and ex series.

The user can select the printer of choice through a series of menus. He is also allowed to select the printing port.

In addition, the option was included to hold reports for viewing on the screen prior to printing. This will save paper, because it allows the user to review a report prior to printing and make adjustments in the report request until the desired report is obtained and prepared for printing. The exception to this is when a graph is selected for output. Graphs go directly to the printer. The amount of programming necessary to change the graphing options is far greater than would be warranted since the report can easily be output in a spreadsheet format and graphed with sophisticated graphics packages.

H. Additional Activities

As part of the on going support of the development of SIMPAH, a number of collaborative activities were included in the execution of this assignment.

Assistance was provided to the director in the process of selecting staff. This including developing criteria for evaluating candidates, developing spreadsheets for tabulating the results of interviewer evaluations and presenting finished summaries for presentation to the SIMPAH managing committee for their final selection of candidates. In addition, as requested, this process included participation in the process of interviewing and evaluating candidates.

Continuing training was provided to new market analysts both in Tegucigalpa and San Pedro Sula. This training included both formal classes as well as informal assistance in helping individuals understand the nature of their work as well as the concepts associated with the processes of gathering, storing and reporting data.

Design criteria were developed for the data inputting system being implemented by the SIMPAH programmer. His work was reviewed and suggestions were made for improved implementation.

Administrative assistance was provided in a number of ways, including training and assistance in the use of various software packages and in the design of the office network. Suggestions were provided for many aspects of the project implementation from the layout of the physical office to refinement of the information flow, to the development and greater specification of the concepts and principles used for SIMPAH operations.

Continued interaction was carried out with USAID, particularly with regard to the computer equipment specifications, during the process of equipment purchase and installation.

The close of this assignment finds SIMPAH operational and having an impact. For this point in its development, SIMPAH is carrying out those activities anticipated and is on schedule to continue to meet its objectives in terms of markets covered, types of reports generated and services provided.

A follow-up assignment to this work is currently underway and will later report on further developments in the progress of the implementation of the SIMPAH project.