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PROCESSING COMPONENT OF THE RURAL EMPLOYMENT RESEARCH PROJECT,
NJALA UNIVERSITY COLLEGE:

RESEARCH STATEMENT***

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PROCESSING COMPONENT OF THE RURAL EMPLOYMENT RESEARCH PROJECT,
NJALA UNIVERSITY COLLEGE:

RESEARCH STATEMENT

I. I. May-Parker and C. Liedholm

The purpose of the report is to outline the processing component of the Rural Employment Research Project, Njala University College. It is envisaged that the processing of rice, palm oil and palm kernel will be studied in detail. These commodities have been selected because of their importance in the rural economy and because of the variety of processing techniques employed. The research will be carried out in two stages--Phase I and Phase II--the details of which will be discussed below.

Phase I

The primary objective of Phase I is to obtain and estimate the total population of rice and palm processing in Sierra Leone. The population estimate will be used as the basis for selecting those firms and activities that will be studied in detail during the subsequent Phase II portion of the study. The rice milling component of Phase I will be discussed first, followed by a discussion of palm processing.

Rice Milling

The three general types of rice processing in Sierra Leone are (a) hand processing, (b) small hullers and (c) large mills. The Phase I data for each of these activities will be obtained in the following fashion.

For hand processing or rice (parboiling and milling), the Phase I data will be obtained from the farm level study of the Rural Employment Research

Project. These data are currently being collected in the twenty-four selected enumeration areas in Sierra Leone.

For the small hullers, on the other hand, the data must be collected from a number of different sources. According to D. S. Spencer ("The Operations of Small Mills in Sierra Leone") and I. I. May-Parker ("Problems of Rice Marketing in Sierra Leone"), there were 145 small mills operating in 1967 and 216 mills operating in 1973. In order to update these figures, however, it is envisaged that various follow-up procedures will be undertaken. First, a letter will be sent through the District Officers to the 148 Paramount Chiefs requesting that they furnish various information relating to the mills operating in their Chiefdoms. In particular, data relating to the names and addresses of the owners, as well as the make, employment in, capacity and type of mill, will be requested (see Form A in Appendix). Secondly, a letter will be sent through the Permanent Secretary, Ministry of Agriculture and Natural Resources, to all Agricultural Officers requesting that similar information be supplied for mills operating in their circles. Thirdly, data will be obtained from the Phase I component of the rural non-farm study. Finally, these sources will be supplemented by details supplied by the major importers of rice hullers into Sierra Leone.

For the larger mills, the details on the only three large mills operating in Sierra Leone (two in Kissy and one in Torma Bum) will be forthcoming from the Rice Corporation, which operates these mills. These data will be checked by the research team.

Palm Processing

In addition to rice milling, palm processing will also be investigated during Phase I. As with rice processing, there are three general types of palm processing in Sierra Leone: (a) hand processing, (b) small hand-operated, mechanical mills, and (c) large pioneer oil mills.

For hand processing of palm, the Phase I data will be obtained from the farm level study. As with the hand processing of rice, these data are currently being collected in the twenty-four randomly selected enumeration areas.

For the small hand-operated, mechanical mills, the same sources used to obtain the data on the small rice mills will be employed. It should be noted, however, that there are currently only a small number of these mills in Sierra Leone. There is a screw press in Newton and in Bo, as well as some demonstration units operated by the Peace Corps and C.A.R.E. In addition, a hydraulic hand press is operating in Njala. Information on these activities will be obtained directly from these locations.

For the large palm oil mills, data will be obtained directly from the Sierra Leone Produce Marketing Board, which operates the 9 pioneer oil mills in the country. The company has already agreed to supply the required Phase I data and welcomes further investigations by the research team. Finally, it should be noted that data on the large palm kernel crushing mill in Wellington will be obtained directly from that firm.

It is envisaged that the Phase I data will be collected over the entire year. However, for purposes of choosing a sample of firms for more detailed study in Phase II, the existing population of firms enumerated by the third week of August will be used as the sampling frame.

Phase II

The main objective of Phase II is to obtain more detailed information on the operation of a sample of the processing enterprises over a period of a year. It is planned that this phase of the research project will last from September 1, 1974 to August 31, 1975. In the following section, the details of the rice processing activity will be discussed first, followed by a discussion of palm processing.

Rice Milling

Although the types of Phase II data collected from the differing kinds of rice processing will be similar, the method of data collection will vary depending on the kind of activity examined. For the hand processors, for example, the data will be obtained directly from the farm level questionnaire currently being administered in the enumeration areas. These questionnaires currently produce data on the quantities of the inputs and outputs relating to these activities as well as the corresponding values. It will perhaps be necessary, however, to supplement the information with data on par-boiling activity, as well as capital data relating to these activities.

From the smaller mills, the data will be collected from a sample of firms operating in various localities of Sierra Leone. In particular, a sample of mills will be chosen from those localities being studied intensively in the nonfarm component of the research project (i.e., Bo, Makeni, Kenema, Port Loko, Segbwema, Koidu, Rotifunk, Pendembu, Pujehun, Mattru, Kabala, Kamakwie and Rokupr). In addition, a sample of these small mills found in the enumeration areas (e.g., Tikonko) will also be studied.

It is envisaged that the majority of the mills operating in these localities will be studied. Indeed, in most of the localities all the rice mills will be examined during Phase II. The only exception would occur in those localities (e.g., Makeni) where there are more than 10 mills operating, since 10 mills would be the maximum number that one enumerator could regularly visit in these areas. In such cases, it is proposed that six mills would be randomly selected and four would be chosen in a purposeful fashion to ensure that the differing production techniques are covered.

Specifically, it is imperative that mills using rubber as well as steel rollers be included in the samples. In addition, those mills using diesel power as well as those using electric power should be covered. An important reason for examining the diesel versus electric power distinction is that the lack of electric power may be an effective constraint on the operation of these electrically operated mills. Finally, it is proposed that in Freetown 15 small mills be studied, 10 such mills to be chosen randomly and 5 to be chosen in a purposeful fashion.

For the larger mills, detailed data will be obtained on the three large mills operated by the Rice Corporation. The Rice Corporation has already agreed to supply the required input and output data as well as capital and value data on a regular basis. The data supplied, however, will be checked through monthly visits to these mills by the research team.

Palm Processing

As with rice processing data, the method of data collection for palm processing will also vary depending on the processing technique studied. For hand processing, for example, the required Phase II data will be

obtained from the farm level questionnaire. However, supplementary information relating to "sterilization" and capital investment in processing may have to be also obtained.

For the small, hand-operated, mechanical mills, on the other hand, the data will be obtained from those enterprises employing these processing techniques. Since the number of such enterprises appears to be very limited, it is envisaged that data will be obtained from every enterprise using these techniques.

Finally, for the large palm oil mills, the detailed data will be obtained on the nine pioneer oil mills operated by the Sierra Leone Produce Marketing Board. The S.L.P.M.B. has already agreed to supply the required input and output, as well as capital and value data on a regular basis. These data, however, will be checked through periodic visits to these mills by the research team.

Questionnaires for Phase II

In order to obtain the needed Phase II data, various questionnaires will be required. For the hand processing component of Phase II, the questionnaires currently being used in the farm level study will generally be sufficient. However, it may be necessary to supplement these forms with a small questionnaire designed to elicit some additional information. For the small and large mills, on the other hand, it will be necessary to use a different set of questionnaires than that used at the farm level. In general, the questionnaire designed for the nonfarm component of the research project will be satisfactory for the small and large mills. Specifically, the forms on inventory of buildings (Form I), inventory of equipment and furniture (Form II),

inventory of materials and output (Form III), labour input data (Form IV), miscellaneous input data (Form V) and general characteristics of entrepreneurs can be used directly. Indeed, it is proposed that only one additional form is needed, a form designed to elicit information on the input and output of rice. The details of this form (VI-A) are provided in the appendix. It should be noted, however, that the enumerator may have to weigh the husk rice to obtain the required input data.

Finally, it is envisaged that the rice input-output form, the miscellaneous input data form and the labour input form will be administered twice weekly. The other forms need to be administered only once or twice a year. With these data, a detailed picture of processing activity in Sierra Leone will be obtained.

SURVEY OF MILLS

District _____

Chiefdom _____

Name of Owner	Address	Make of Huller	Capacity	Rubber or Steel Cylinder	Source of Power	Agents for Spare Parts	Number of Persons Operating Huller

APPENDIX - FORM VI-A

INPUT-OUTPUT RICE DATA

(Twice Weekly)

Date of Visit _____ Locality _____ Enterprise _____ Establishment _____

Name of Enumerator _____

Date of Visit	Husk Rice Input					Milled Rice - Output					Remarks
	Quantity Milled	Value £e	Owner of Rice	Source of Husk Rice	Polisher Used (Yes, No)	Quantity Produced	Value £e	Destination	By Products		
									Quantity (Specify Type, e.g., Bran Broken Rice)	Value £e	