

AGENCY FOR INTERNATIONAL DEVELOPMENT
 WASHINGTON, D. C. 20523
BIBLIOGRAPHIC INPUT SHEET

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1. SUBJECT CLASSIFICATION	A. PRIMARY	
	ECONOMICS	
	D. SECONDARY	
	AGRICULTURAL MARKETING	
2. TITLE AND SUBTITLE		
PROBLEMS OF RICE MARKETING IN SIERRA LEONE		
3. AUTHOR(S)		
I. I. MAY-PARKER		
4. DOCUMENT DATE	5. NUMBER OF PAGES	6. ARC NUMBER
DECEMBER 1973	13 PAGES	ARC SL-658-80963318-M473
7. REFERENCE ORGANIZATION NAME AND ADDRESS		
MICHIGAN STATE UNIVERSITY DEPT. OF AGRICULTURAL ECONOMICS EAST LANSING, MICHIGAN 48823		
8. SUPPLEMENTARY NOTES (Sponsoring Organization, Publishers, Availability)		

9. ABSTRACT

Because of its significance in the economic, social and political life of the people of Sierra Leone, the Government has expressed its desire to rapidly expand the domestic rice production to attain self-sufficiency as soon as possible. Present estimates of rice production puts the annual production of husk rice at about 600,000 tons per annum. In addition, an average of 20,000 tons milled rice which represents about 5% of the national production is imported annually.

As movement towards self-sufficiency progresses, imports will fall, and the marketing system must adapt itself to the functions and services needed to cope with the increase of locally produced rice. This paper examines the importance of marketing in adding productivity and some of the present facilities existing and suggest ways of improving them in order to achieve an efficient rice marketing structure in the future.

10. CONTROL NUMBER	11. PRICE OF DOCUMENT
PN-AAB-023	
12. DESCRIPTORS	13. PROJECT NUMBER
	931-17-190-543
	14. CONTRACT NUMBER
SELF-SUFFICIENCY, NATIONAL PRODUCTION, IMPORTS, MARKETING SYSTEM, PRODUCTIVITY, EFFICIENCY	ATD/CSD-3625
	15. TYPE OF DOCUMENT
	RESEARCH PAPER

PROBLEMS OF RICE MARKETING IN SIERRA LEONE

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S I E R R A L E O N E .

INTRODUCTION:

In Sierra Leone rice is by far the most important agricultural crop both from production and consumption aspects. This importance is due firstly to the fact that about 86% of farmers produce rice and depend on it for their livelihood in the form of food, and from its sale for income to finance other commitments.¹ Secondly rice is the primary staple food-stuff of the entire population. Because of the dominant position it holds, rice price policy has strong economic, social and political implication.

Because of its significance in the economic, social and political life of the people of Sierra Leone, the Government has expressed its desire to rapidly expand the domestic rice production to attain self-sufficiency as soon as possible. Present estimates of rice production puts the annual production of husk rice at about 600,000 tons per annum. In addition, an average of 20,000 tons milled rice which represents about 5% of the national production is imported annually.

The following diagram is a flow chart of rice from producer to consumers. There is no rigid separation of the distributive functions and stages. About 80% of the rice that enters the market is produced in the swamps.

Rice from the producers enters the market in three main forms:

- (a) Husk rice
- (b) Native cleaned rice
- (c) Milled rice

The native and milled rice could either be "parboiled" or "rough". Approximately, 90% being parboiled rice

As movement towards self-sufficiency progresses, imports will fall, and the marketing system must adapt itself to the functions and services needed to cope with the increase of locally produced rice. This paper examines the importance of marketing in aiding productivity and some of the present facilities existing and suggest ways of improving them in order to achieve an efficient rice marketing structure in the future.

MARKETING AND PRODUCTIVITY

Efficient marketing should be an essential requirement for raising productivity and thereby enhancing economic development. Until recently in Sierra Leone, agricultural marketing has not been fully accepted as an essential component in raising agricultural productivity and has therefore failed to develop simultaneously with agricultural production. When marketing is accepted to involve more than just buying and selling it would then aid productivity.

Marketing involves the movement of goods and services from point of production to the final consumer. Marketing therefore consists of buying and selling or the economic exchange activities as well as the physical activities such as transport, storage, grading and processing. It is therefore wrong to divorce the physical activities from the economic exchange activities if efficient marketing is envisaged. Without adequate marketing services such as transport, storage, processing etc. the whole marketing operation becomes wasteful, costly, risky and the full economic advantage of production and distribution would not be realised.

Generally, the marketing system for most commodities in Sierra Leone suits the subsistence production whereby producers sell surpluses over and above those needed for consumption. Now that production is generally for the market there is the need for a drastic change to a system of marketing that benefits the production. As production per sea is dynamic so is marketing. Consumers change their demands for commodities now and then. Through relative changes in the prices for commodities changes in consumers demands and wants are transmitted via the marketing system to producers. Relative changes in

prices brought about their changes in demand constitute a signal to producers to reallocate their resources accordingly to take advantage of the new opportunities. If due to inefficient marketing, inaccurate signals are transmitted to producers, malallocation of scarce resources may be expected to occur.

One generally hears the cry for eliminating the middlemen who perform some of the services in marketing as though they are intruders in the system. It is important to appreciate that whether these middlemen be processors, owners of transport or storage, ordinary traders, they are active NOT passive participants in the marketing system; and that they not only transmit but also initiate some desirable changes which could ultimately lead to increase of productivity. In order to aid agricultural development the close relationship between efficient and increased productivity should be fully utilised.

STORAGE

Storage is generally a major constraint in the determination of price during and between seasons. At the moment about 80% of the total rice produced is stored by the farmers themselves for their own consumption. Generally the methods used in the farms for storing the rice are largely traditional. The barn on the farmers plot is generally used. The rice sheaves are tied together and stack up the roof where fire used for cooking dries the rice thereby reducing the possibility of insect infestation. Alternatively storage is done in wooden boxes, cribs and pots. Most of the traditional methods have been shown to be inefficient.

For the remaining 20% of the rice produced which goes into the market a high percentage is generally sold during and immediately after harvest partly because of the lack of adequate store. Only a few farmers with adequate storage could afford to store some of their rice to sell later in the season when prices are higher.

Time of Selling	Sierra Leone %	Bonthe Dist. %	Port Loko District	Kambia District
January	12	8	15	19
February	23	29	31	3
March	19	19	12	41
April	6	5	9	17
May	7	3	5	17
June	4	2	6	7
July	11	19	3	-
August	< 1	1	-	-
September	< 1	0	-	-
October	0	0	-	-
November	< 1	1	-	-
December	12	17	19	-

The above table indicates the time of the year when farmers in three major rice producing areas sold their rice during the 1971/72 season. Harvesting of rice in the three areas is done between December and February. As is indicated over 70% of all the rice in the regions are sold between December and April when prices are low. 37% of all farmers indicated that with adequate storage they would be willing to store the rice and sell later when the prices are generally high. Therefore improvement in storage capacity of adequate standard will not only reduce loss due to poor storage but also enable farmers to get higher prices for their supply during the hungry season April to October. Preliminary study undertaken by the author indicates that farmers are conscious of their lack of adequate storage and are anxious to get adequate storage in their farms or are willing to use a rice bank with all facilities for the protection of their rice on condition the banks are managed by trustworthy organisation, and that the bank is located not more than two miles from their farms.

It is now necessary for researchers to evaluate simple storage devices suitable for the use of small-scale farmers on their farms. Where adequate storage are provided for producers and traders, current losses which might average about 10% or more of the annual output would be saved thereby increasing the effective market supply.

PROCESSING AND TRANSPORTATION

With the development of swamp rice cultivation, there has been a growth in the number of small privately owned rice mills. The following table illustrate changes in the number of hullers particularly in the swamp rice cultivation areas since 1967(Mutti et al 1967)

LOCATION OF RICE HULLERS IN SIERRA LEONE

<u>District</u>	<u>Number of Hullers</u>	
	<u>1967</u>	<u>1972/73</u>
Bo	14	16
Bombali	4	14
Bonthe	15	19
Kailahun	2	5
Kenema	1	9
Kambia	32	42
Koinadugu	2	4
Kono	2	3
Moyamba	21	16
Port Loko	10	12
Pujehun	8	12
Tonkolili	2	9
Freetown	32	36

It is apparent from the study carried out by Mutti et al. (1967) that the small rice mills if adequately supplied with rice could operate profitably and serve a very useful purpose in meeting the demand for milled rice. Though most of these small mills have the advantage of being located in the areas of production there are various difficulties which confront them. The main difficulty is the lack of adequate servicing facilities and the availability, of spare parts. In addition where spare parts are available, they are very expensive. Because of the usefulness of these mills in the areas where they are located it is important that they are in serviceable conditions always. Marketing efficiency would be improved if the responsibility for supplying and servicing of the mills is passed over to few interested firms with adequate equipment, spare parts and well trained technical staff. With the present mills large quantities of bran which could be used for animal feed is wasted because the mills cannot separate bran from husk. In addition

One of the common complaints of the owners of mills is damage to sieves and rollers by stones, metals and other hard extraneous matter mixed with the rice. It is therefore important that mills should also be fitted with precleaners to remove all extraneous matters. A committee set up by the Rice Corporation has recently identified a small Japanese mill with $\frac{1}{4}$ ton per hour capacity that could be fitted with a precleaner and could separate husk from bran.

Once these small types of mills have been identified there would be need to standardise them in order to simplify the problems of spare parts and maintenance. In addition it is important that new mills are installed by experienced technical personnel as a recent survey of some of the mills in the Western Area, Makeni, and Kambia indicated that their alignments were wrong and that this has been partly responsible for the frequent breakdown of mills.

Another marketing problem which rice marketing faces is transportation. Transportation cost accounts for a reasonable share of the high marketing cost. For example the difference in price between Freetown and Kono for a bag of rice sold by the Rice Corporation is Le1.23 which is due to transport cost. In this connection the location of mills to avoid double movement of rice from production area to mills and then to producing areas again should be avoided.

The problems of transportation are mainly two fold. The first is the poor or inadequate feeder roads, and the second is inadequate supply of good vehicles. It is well known that during the rainy season cost of transportation between Makeni and Magburaka for example could be doubled due to the poor conditions of the roads. In a study carried out by Mr. G.O. Nwafor on the "Economics of Production and Marketing of Rice in the Scarce Area" he found out that due to the lack of market information and good transport facilities the marketing situation was poor. He stated in connection with poor transportation facilities "The farmer preferred to sell cheaper in his home or farm rather than take the trouble of transporting his rice to the nearest market or the Rice Corporation depot at Mambolo which offers Le2.00 per bushel of paddy throughout the year." As much as 36% of the rice marketed by farmers in the three areas studied are transported by foot. See table.

Mode of Transport	Sierra Leone	Bonthe	Port Loko	Kambia
By foot :	36%	22%	32%	15%
By River	24.5%	24%	7%	72%
By Lorry	19.5%	13%	38%	6%
By River and Lorry	21%	27%	23%	6%
Collected by Bayer	9%	12%	-	-

Due to the high migration of young men from villages, the cost of transporting rice by foot is constantly increasing and producers in some remote areas are discouraged to produce a large quantity for the market. There is the need therefore for motorable feeder roads to areas of high production. With improved transportation, facilities, farmers would be able to secure better bargains, and thereby increase their incentive to produce more. Any effort therefore to improve the efficiency of rice marketing should include measures for reducing the cost of transportation.

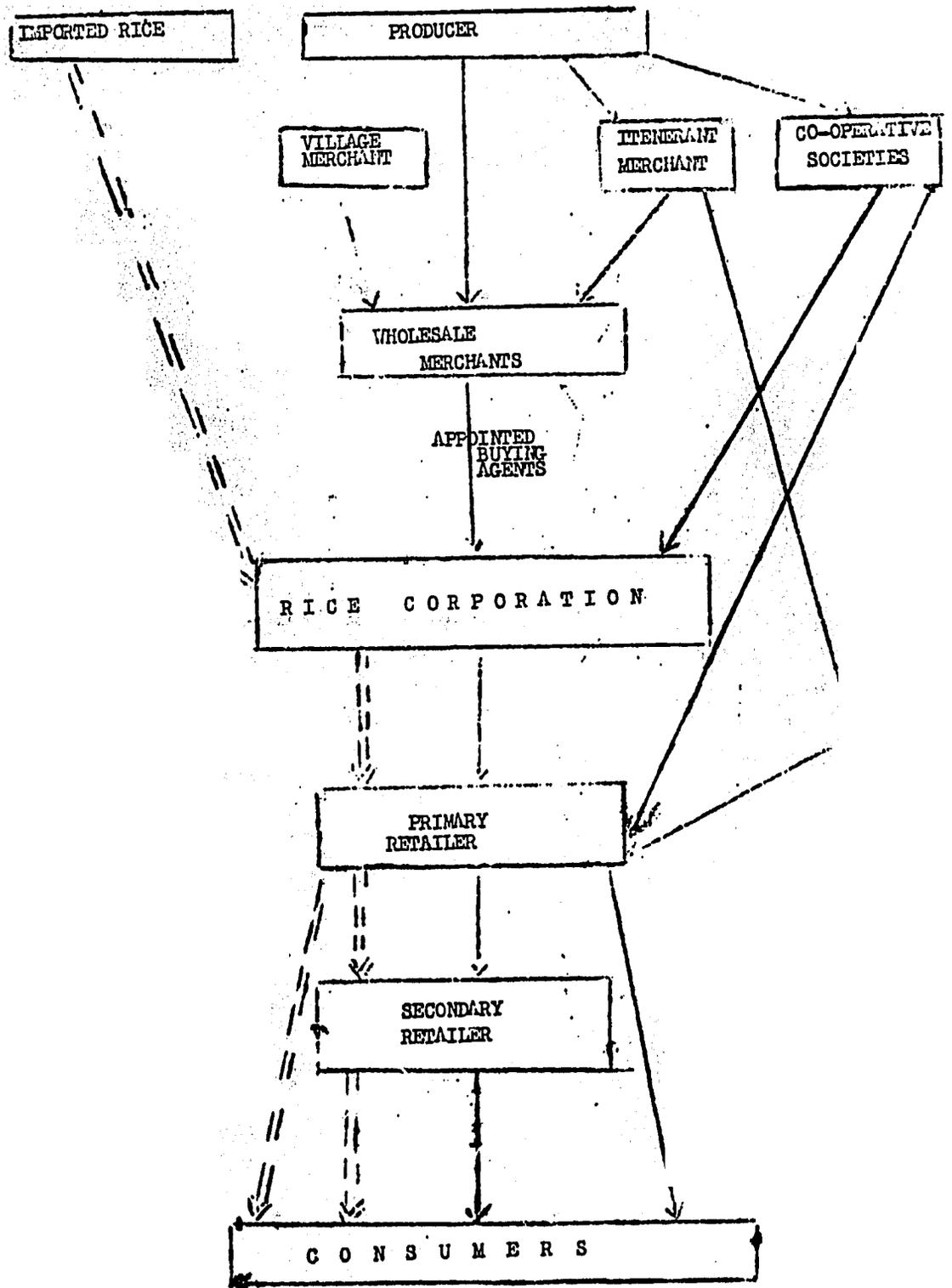
As has been stated, economic information is indispensable if efficient marketing should be achieved. It is important that all those participating in the market should have up to date knowledge of production, supply and demand in various areas at various times, prices prevailing for different quantities and quantities and also know the various institutions operating in the market. For farmers to respond positively to high prices they must be able to get accurate information of the prices so that they can sell at the high prices. In a survey conducted by the author in the Torma Bum and Scarcies areas over 70% of the farmers reported that they had never heard about the Rice Corporation or its buying policy. What is required is for the Ministry of Agriculture in conjunction with the Ministry of Trade and Industry to set up a statistics department to collect and disseminate market information not only on rice but on other agricultural commodities. It is important in order to allow prices to affect production that emphasis be put on prices that farmers are likely to get rather than on prices prevailing in the primary or secondary retail markets of which farmers know very little about.

STANDARD OF GRADES AND MEASURES:

Generally, secondary retail in home-produced foodstuffs is mostly in units of volume rather than weights. The Standard measures for rice used by petty traders are 'cigarette cups', 'penny pan' and 'three pence pan'. In the Western Area, the cigarette cup is the measure which is usually used while the provincial towns use the 'penny pan' and three pence pan'. The conventional way of measuring is the heaped measure in which the cup or pan is filled until no more can be added. This method of measuring leads to variations in weight per cupful. Chart 1 depicts the variation in weight of rice measured by the above method, on a weekly basis over a period of six months. (1) By random sampling, five sellers of each type of rice - Burma imported, locally produced parboiled, 'rough rice' - were selected each week and asked to measure five cupful of rice in the way they normally measure out to customers. The weights were then taken and the average weight found. The imported rice had the widest variation, ranging from 8.3 oza. to 10.9 oza. Apart from two weeks - that of the 14th of July and the 17th of November, the average weight of the 'rough rice' per week was between 8.5 oza. and 9.0 oza. The variation shown by the locally produced parboiled rice, were similar to those of the imported rice, but the range was not as high - being only 8.14 oza. to 9.9 oza. Under normal conditions there could be a very slight variation in the weekly average weight per cupful for each type of rice, this depending on the moisture content of the grains. For this, a variation of about 0.1 oz. could be allowed; any variation greater than 0.1 oz. is therefore due to external factors. The main external factors responsible for the variations, are as follows:

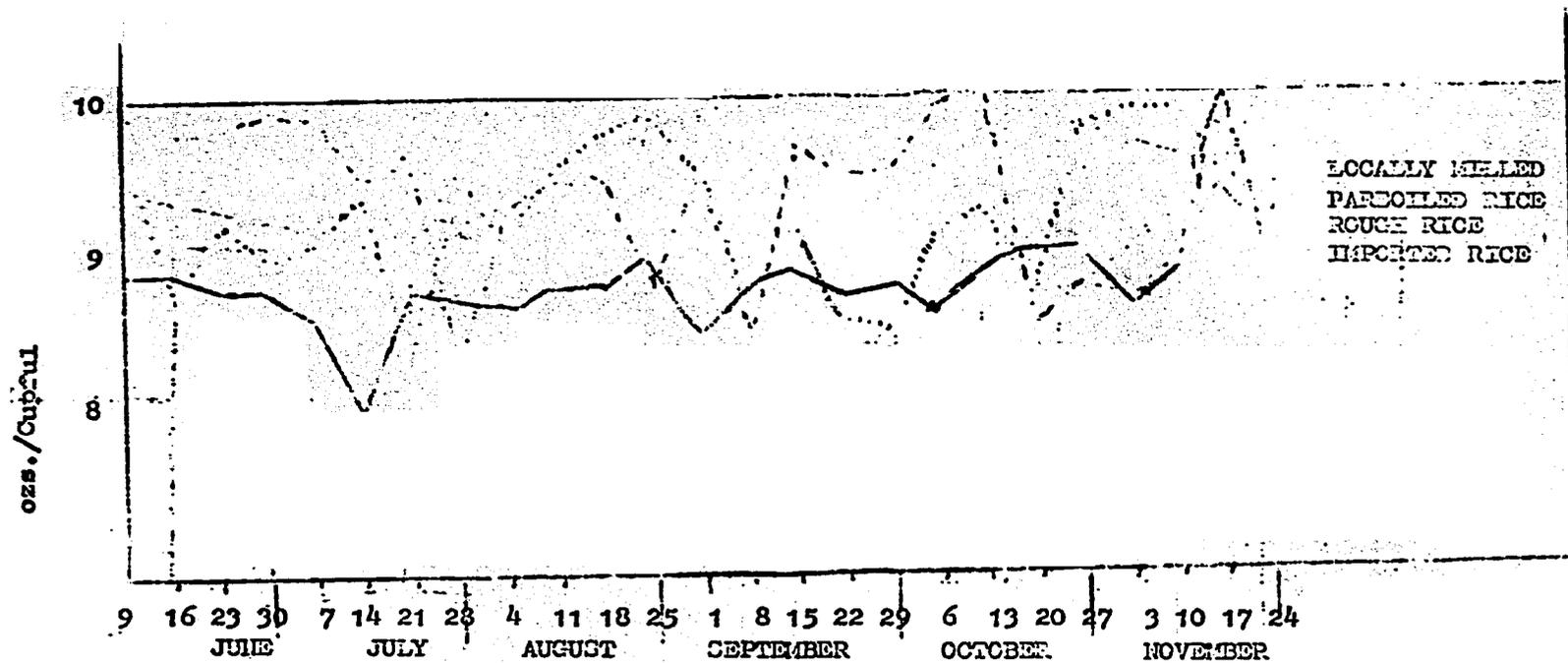
1. The size of the cup used. In the Western Area, the accepted type of cup for imported Burma rice and locally produced milled parboiled rice is the 'Churchmans cigarette cup' while the 'Senior Service cigarette cup' is used for the 'rough rice'. The former being a bigger cup than the latter, hence the lower average weight for the rough rice in Chart 1. From observation it became clear that traders at times changed

(1) Data collected in conjunction with the Njala University College Market Research Team in 1966.



_____ LOCALLY PRODUCED RICE
 ===== IMPORTED RICE

CHART I WEIGHT OF RICE PER CUPFUL



SOURCE: COMPILED FROM UNPUBLISHED DATA
 COLLECTED IN CONJUNCTION WITH
 NJALA UNIVERSITY COLLEGE
 MARKET RESEARCH TEAM, 1966.

the Churchmans cup for the smaller Senior Service cup. During the last six weeks of the period under review, except for the 17th of November, traders were said to have used the smaller cup for the imported rice thus resulting in the low average weight between the 20th of October and the 24th November. The same reason will be responsible for low average weights for the 28th of July, the 25th of August and the 8th of September. The same factor will also be responsible for the lower average weights for the locally produced parboiled rice.

2. The second factor which is sometimes responsible for the variation in weight, is that although the accepted type of cup is used, its volume has been physically reduced in such a way that it cannot be easily detected. For example, false bottoms are added. This factor could be partly responsible for similar variations discussed in the preceding paragraph.

3. The third factor depends on the rate at which traders measure out successive cupsful. When traders have to measure out a number of cups of rice, they do so in such rapid succession that no cupful is properly heaped. This factor is responsible for the smaller variation.

Thus the variation in the average weekly weights as shown in Chart 1 could be due to a combination of the above factors or to a specific one. Therefore the actual weight of rice a customer takes home depends to a certain extent on his bargaining ability to see that the trader does not employ any of the above external factors. Similarly there are no stand bags for selling rice at primary level. The weight of rice in bags vary from trader to trader. Normally a bag full of milled rice should weigh 160 lbs. but in practice the weight will vary from 120 lbs. to 160 depending on who is selling and who is buying. Because of the variation in weight both at the primary and secondary retail levels, one is tempted to recommend the use of weight as standard measure. Although the use of scales might eliminate some of the irregularities the idea is hampered by the high degree of illiteracy amongst consumers and traders.

In order to avoid the defects of the present measures, the measures adopted should be different from those in operation and they should be nationally prescribed and enforced. It is thoro-

fore suggested that a rectangular measure with lid preferably made of steel or plastic with official stamps be introduced for compulsory use in all markets for the sale of rice. Traders should be asked to use level measures instead of heaped measures, the measuring being done by first heaping the rice into the containers and then using the lid to level it out.¹

At the moment rice is not graded mainly because the demand for rice is greater than supply. As self-sufficiency is reached there would be the need to introduce a grading system.

Research into possible grading systems for rice should be undertaken immediately to determine which varieties and qualities or rice consumers would demand.

Producers sell their rice either at the farm gate or transport them to big towns where they sell to traders. Sales at the farm gate is increasing over the years as traders in the big towns are sending itinerant merchants to procure their consignments at the farm gate. Most sales are done by measure rather than by weight, and about 90% of such transactions are made for cash. Because of their involvement in contract sales, mainly based on credit farmers dispose of their rice at very low prices. Of 904 farmers interviewed on their methods of sales, 45.6% reported that they had contracts for the sale of their rice. The following table gives a breakdown of such contract sales.

Contract based	Sierra Leone	Bonthe District	Port Loko District	Kambia District
ON CREDIT	86%	100%	76%	81%
Cash CREDIT	81.5%	93.7%	55.0%	61.0%
KIND	12.5%	3.8%	37.0%	38.5%
BOTH	6%	2.5%	14.0%	0.5%

The general practice for Cash Credit is for the farmer to receive Le1.00 during the growing season to return a bushel of rice at harvest when a bushel of rice would sell for an average price of Le2.30. This contract agreement varies from area to area.

Contract in Kind is made for different types of goods ranging from food to building materials. During the hungry season farmers receive a bushel of rice to return two bushels at harvest time. Recent contracts in Kind have been involved with fertilizers.

1. The DIMINCO supplies its employees with rice weekly using a wooden box of 6"x6"x4" which when filled to the top level contains 4.2 lbs. There are negligible differences in weight when several measures were used and weighed.

Traders purchase fertilizers and give a bag of rice fertilizer to farmers at planting time to receive a bushel of rice at harvest. Due to the contracts which farmers make, they receive on average about half the prevailing market price at harvest. Farmers who do not sale on contract bases are able to get for higher prices for their supplies particularly if they could store the rice to sell later in the season.

Because of the importance of rice in the economy of Sierra Leone a statutory body has been enacted to deal in rice -

The Rice Corporation purchases locally produced rice through Buying Agents who are appointed annually. The Corporation has guaranteed prices for the purchases of husk rice and native cleaned rice. At the present, price level of Le2.30 per bushel of husk rice the Corporation has great difficulty in attracting substantial supplies of husk rice because the open market price is generally higher than the Corporation's guaranteed price for most of the season and its present buying system is far from efficient. Nevertheless, during the last buying season the Corporation has introduced changes in its buying policy. Instead of depending on the farmers and buying agents to bring in their supplies, the Corporation now goes out to the field to purchase rice, and has appointed field officers in various Districts to help with procurement. The field officers are now in the field throughout the year scouting as the itinerant traders do. They identify producers who have rice to sell, negotiate with them to purchase the rice and then arrange for the rice to be transported to their depot. In addition the Corporation ensures that cash is paid on the delivery of the rice. The following table shows the effect of the change in the Corporation's buying policy.

<u>Corporation Purchases of Husk Rice</u>		
<u>YEAR</u>	<u>BAGS</u>	<u>TONS</u>
1969	50,510	2525½
1970	12,259	613
1971	51,550	2577½
1972	108,978	3448½

During the last season, the Corporation was able to buy only a very small quantity of rice due mainly to the increase in the open market price which farmers were offered.

The answer to the farmers problems of receiving low prices for their production seem to lie with the future improvement of the Co-operative movement. In the past Co-operatives have failed due to poor organisation and lack of adequate capital to finance their operations. With the recent formation of the Co-operative Bank there has been a rapid change in the prices farmers receive for their production of the export crops which the Bank has been sponsoring. The Bank gives loans to Societies at 10% interest and Societies are therefore able to lend to their members at 15% thus preventing them taking loans of over 100% interest. Now that the Bank is extending the loan scheme to rice producing Societies it is hoped that farmers would be able to take fully advantage of the scheme. It is hoped that the increase income received from the sale of rice would act as incentives to them to increase production.

The paper has attempted to highlight some of the major problems areas in the marketing of rice. The suggestions put forward are ones which in the opinion of the author would enhance efficient marketing of rice and could lead to farmers getting higher prices for their supplies and consumers getting rice to buy at all times and at reasonable price. It is important to stress that before farmers would be able to derive the maximum benefits from their production, there will be the need for them to acquire their needed capital at reasonable rate of interest.

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