

Warehouse receipt system for cashew nuts marketing and its contribution to the small scale farmers in Masasi District, Mtwara Region, Tanzania

Kidando, Noel and V Venkatakrishnan

Department of Development Studies, University of Dodoma, Tanzania

Abstract— Marketing of cashew nuts in Tanzania has been undergoing change. Direct sales from farmers to traders and delivery to the Primary Agricultural Cooperative Societies were in practice at different points of time. Since 2007, the warehouse receipt system was introduced in Tanzania cashew marketing. The warehouse operators accept the deposit of cashew nuts in the warehouses and provide a receipt to the farmers through the Agricultural Marketing Cooperatives (AMCOSs) and the farmers receive a part of the payments through bank financing based on these receipts. This study conducted in few selected AMCOSs on the performance of the warehouse receipt system has found out that the system has achieved some positive results in enabling the farmer members to receive better prices for their cashew nuts. These members were satisfied with the performance of their AMCOSs to a large extent. They have sought improvement in the provision of various services by the AMCOSs, particularly in the timely provision of pesticides and extension services. Indicative prices reflecting the actual cost of production, better accountability of the Cashew nut Board of Tanzania and closer supervision of cashew nut auction by the cooperative unions were suggested by the farmer members to make the warehouse receipt system more efficient.

Keywords: warehouse receipt system; cashew nut marketing; Masasi district, Tanzania; timely payments and effective supervision of auctioning

I. BACKGROUND

Cashew nuts represent a small portion of agricultural production in the United Republic of Tanzania (URT), with an average of 300,000 hectares cultivated (2 percent of total area) producing approximately 100,000 tonnes per year. The production is mainly centered in the southern coastal regions (Nkonya and Barreiro-Hurle, 2013:2). However, it is an important export crop for Tanzania. It is the main cash crop of southern regions particularly Lindi and Mtwara. It is also grown to a lesser extent in other regions along the coast. In southern regions, specifically, Mtwara, cashew nut production has been the main source of income and also a source of improving the livelihoods. It was amounting to over 80% of the regional gross domestic product (GDP). In early 1970s, when production of raw cashew was increasing, the World Bank assisted Tanzania in installing processing capacity (Kilama, 2013:123).

The Tanzanian government has been taking various measures to revive the cashew nut industry since 1987/88 marketing season. This included establishment of Cashew nut Production

Improvement Pilot Project (CPIPP) during 1987-89. Two other programs, namely the Cashew nut Improvement Programme (CIP-1990-96) and the Cashew nut Research Programme (CRP) were also implemented with the support from cashew levies (Tanzania Cashew nut Board, CBT, 2001:21). The average producer price of cashew nut increased substantially in 1994/95 after the agricultural marketing system was liberalized. The price continued to improve steadily and reached a record level of Tshs 600/= (US\$ 0.67) per kg (SG) in 1999/2000 (Sijaona, 2002:9).

Cashew nut marketing in Tanzania

The system of marketing raw cashew nuts in Tanzania has changed over time, and has included direct sales from farmers to traders and delivery of the raw nuts to the Primary Cooperative Society for marketing. The Primary Cooperative Societies were the sole marketers of farmers' cashew nuts from independence until 1991 when marketing was liberalized and farmers were allowed to sell to any buyer. It changed again in 2007 when the private sector was no longer allowed to buy cashews directly from farmers or Primary Societies and all raw cashew nuts were marketed through Primary Societies and Cooperative Unions by sale at auction (Nkonya and Barreiro-Hurle, 2013:9).

In further response to the liberalization, warehouse receipt system was developed in 1990s. In Tanzania, it was officially introduced since 2005 with the pilot crops of coffee and cotton in some areas such as Ruvuma and Mwanza as a response to farmers' income instability due to price fluctuations resulting from liberalization and in actual practice to a large extent since 2007. It is claimed that, the use of a warehouse receipt system allows a farmer to deposit his crop in a warehouse and to meet his short term needs for cash by borrowing from a bank or other lending institutions (UNIDO, 2011:29).

Since 2007, the marketing of raw cashew nuts in Tanzania is organized through the warehouse receipt system with auctioning taking place on weekly or bi-weekly basis during the harvesting season. The new system of warehouse receipts was introduced in order to remove various problems. After the introduction of the warehouse receipt system, the expectation of the majority was to step forward from the low to high in the cashew nut production. It is claimed that 'still this system is surrounded by many problems that led to the poor performance of the cashew nut sector and hence a low production equilibrium' (Kilama, 2013:112).

Global overview of the warehouse receipt system

The system has been in operation for more than 100 years in U.S.A and Canada. One of the purposes of its establishment is to achieve price stability. In Africa, the system has been gaining popularity and success has been reported in many countries e.g. South Africa, Zambia, Uganda and Tanzania (URT, 2009:2). The warehouse receipt was introduced to the farmers as a new and profitable system of crops marketing. Due to the warehouse receipt system, the countries that are agricultural based transformed their marketing systems especially on how to sell the produces to ensure that farmers can get profit to sustain their livelihoods. The use of a warehouse receipt system allows a farmer to deposit her/his crop in a warehouse and to meet his short term needs for cash by borrowing from a bank or other lending institutions. Also, the system allows the farmer to avoid selling her/his crop immediately at harvest when the supply of the commodity is usually at the highest and therefore, the prices tend to be low. It is felt that the warehouse receipt systems seemed to be very helpful especially when the price of the crops was low. But consequences that accompanied this system were sometimes creating disturbances to the farmers depending on the government or country arrangements. In the case of many developing countries, it was reported that there were problems in supervising the implementation of the system and this resulted in the poor performance of the system. For instance, the banks in Uganda were not interested in lending against warehouse receipts (Robbins, 2010 and van der Vyver and Nordier, 2013:12).

Warehouse receipt system in cashew nut in Tanzania

It is reported that, since it is introduction in 2007 in Tanzania, warehouse receipt system under the Agricultural Marketing Systems Development Programme (AMSDP), has played a significant role in improving marketing of agricultural products. This has also been considered to have improved agricultural production and productivity, farmers’ confidence, stability of producer prices and technological uptake in Tanzania, despite indications of dissatisfaction among some farmers. This system operates through primary societies, farmers’ groups (organizations), cooperative unions and Savings and Credit Cooperatives (SACCOs) and the farmers are normally paid 70 percent of the price as an advance. It is reported that farmers retain the receipt and, after sale at the auction by the warehouse management several months later, the farmer is given the remaining 30 percent plus any bonus (less costs of storage, interest, transport and administration) (Mashindano et al, 2011:26).

There are differing views on the benefits of the warehouse receipt system. It is claimed that, the warehouse receipt system reduced anti-competitive behavior of large purchasers / processors by forcing them to purchase cashews through auction instead of directly from primary societies and cooperative unions. Introduction of this system has reportedly

brought additional bank financing into the sector, as primary societies and cooperative unions have access to independent bank financing. Evidence from the operations of warehouse receipt system in cashew nut districts via Agricultural Marketing Cooperative Societies (AMCOS) and paddy districts via SACCOs revealed that this system had been a useful marketing tool that has benefited members in terms of market outlets, price stability, and better prices. Farm-gate prices have risen in line with export prices, but not fully. It was cited that, in Nchinga and Nkangala (Mtwara district), farm-gate prices of cashew nut rose from TSh 250 per kg in 2000 to TSh 800 per kg with the introduction of the warehouse receipt system in 2007/08. Apart from its benefit to the farmers, particularly to small farmers in cashew nut production in Tanzania, the system has not been without problems. Some farmers did not want to receive their payment in two installments. As the system they were practicing, farmers were paid in installments: a first installment is paid using money obtained from banks (bank loans) before cashew nuts are sold to traders and the remaining part of the price is paid after auction. If auction prices are above expectations, farmers are paid an additional price bonus (CBT, 2012 and Nkonya and Barreiro, 2013: 14). But some farmers, especially small farmers were said to have preferred 100 percent payment immediately at the time of harvest in order to pay off pressing labour costs, school fees and other essentials.

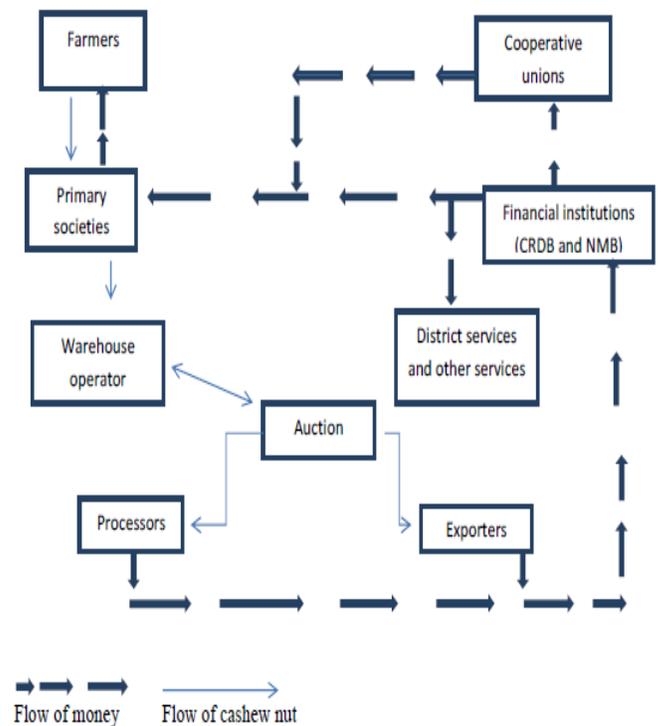


Figure 1: Marketing of raw cashew nut through warehouse receipt system in Tanzania
 Source: UNIDO (2011:29)

II. THE STUDY

Statement of the problem

Since the Tanzanian government introduced agriculture reforms especially in cash crops and particularly in cashew nut, some changes were seen. With regard to warehouse receipt system, despite some success, there were also a few challenges that resulted in some difficulties for the cashew farmers to sustain and benefit from cashew nut production. Initiating a warehouse receipt as a trading instrument, lending procedures and availability of financial services close to farmers were not always easy. Low level of production, poor quality and standard of commodities produced, poor grades, and resistance from the existing marketing systems and channels cartels and sabotage were some of the issues that needed attention (URT, 2009:29). All these were likely to have an influence on the warehouse receipt system aimed at the cashew nut farmers.

It was believed that, in Tanzanian context, lack of knowledge on how the system works was another constraint facing the warehouse receipt system whereby most farmers and other stakeholders in general were still unfamiliar with system. The other constraints were delayed payments, low price of cashew nut, and payment to the farmers effected in installments. These situations were cited by many stakeholders as issues that needed urgent intervention.

Before introduction of this warehouse system in cashew nut, there was a purchasing system in which farmers could sell and receive his/her money in a single installment (period). It was quite different from the new model of purchasing known as warehouse receipt system whereby the farmer was paid in atleast two different periods, the first payment initially on supplying the cashew nut to the primary society and second payment being made after cashew nuts were sold. If auction prices were above the expectations, farmers were paid an additional bonus (Cashew nut Board of Tanzania, CBT, 2012:14).

Although the government's intention was to help the farmers through this system, the result was not as it was expected especially for the small farmers. The resistances from the farmers and other stakeholders were noticed in the southern region and there were differences of opinion about the contribution of the system. This has increased due to the fact that, the performance of the warehouse receipt system chain to deliver what the farmers were expecting was considered unsatisfactory. It was stated that "Politicking distorts the performance of the warehouse receipt system because it allows inclusion of personal interests for personal gains at the expense of farmers" (Mtweve, 2013:19).

Some members of the cooperatives, during unofficial interviews with them, claimed that warehouse receipt system in itself was not bad, but it was the way that was being

executed made the farmers reluctant to adopt it. Though the system was well accepted by farmers, but since there had been a number of constraints associated with it, it has been discouraging farmers from continuing with this system. It means that, although warehouse receipt system has been operational since 2007, still many stakeholders, particularly small farmers had limited knowledge on how it worked and there were other problems associated with it (personal preliminary interviews with a few cashew nut farmers, Mpowora, Feb 2014).

These challenges had been contributing to the inefficient performance of the warehouse receipt system in the cashew nut although there was considerable success. Hence, this study was trying to learn about the contributions of the warehouse receipt system to farmers of Masasi district in Nanganga, Luatala and Mwena wards as the cashew nut was their main cash crop and the main source of income to many people who lived in these areas.

General objective

The general objective of the study was to assess the contribution of warehouse receipt system to the small scale cashew nut farmers' development in Masasi district.

Specific objectives

- 1) To identify the roles of stakeholders in implementation of the warehouse receipt system in cashew nut marketing
- 2) To examine the contribution of key stakeholders in implementation of warehouse receipt system for the benefit of farmers
- 3) To assess the overall performance of the warehouse receipt system in cashew nut marketing

III. RESEARCH METHODOLOGY

Research design

In this study, the cross sectional survey design was used. The applicability of cross sectional research design was considered appropriate because data were being collected at once from different groups of respondents. It was also easier and adequate for the researcher to organize and inter relate the data collected at a single point of time for processing, analysis and presentation.

Study sites and justification

This study was conducted in Masasi District in Mtwara region particularly in three wards of Nanganga, Mwena, and Luatala. Masasi District is found in the West-South of Mtwara Region and in the south, Masasi District is bordered by Mozambique, in the north by Ruangwa District, to the east by Newala District and to the west by a new district of Nanyumbu. The

selection of this area for study was due to the fact that the system of warehouse receipt has been used here since it was introduced in 2007. Thus it was the expectation of the researcher that the cashew nut farmers from the selected AMCOSs may have many things to share about the contribution of the warehouse receipt system to them. Further, Masasi District is among the best producers of cashew nut with active primary cooperative societies in Mtwara Region. This study was basically conducted in three AMCOSs from the selected wards wherein warehouse receipt system was the only system used for purchasing cashew nuts at the end of the season.

The wards and AMCOSs in which this study was conducted were Mwena (Mpowora AMCOS), Nanganga (Nanganga AMCOS), and Luatala (Luatala AMCOS). These were among the large, medium and small AMCOSs in Masasi District. Their selection was based on the amount of cashew nut sold in the particular AMCOS during the last four years. Data show that Nanganga was the leading one, followed by Mpowora and lastly Luatala AMCOSs.

Sampling design

These three selected AMCOS had a total of 1418 members in the 2012/2013 season. The study population included all selected AMCOSs' cashew farmers, AMCOSs leaders, District Cooperative Officers, District Agriculture Officer, Matwara Masasi Cooperative union (MAMCU) leaders, financial institution officers, Ward Agriculture Officers, Cashew buyers, Ward Councilors, and Women farmers' group members. All these selected members usually were the key stakeholders in the sector. Hence, it was easy for them to provide the needed responses leading to accurate results. For this study, both probability and non-probability sampling methods were used. The reason of adopting these two sampling methods was due to the fact that, they provided the opportunity to select respondents with similar characteristics randomly and those with considerable knowledge in the subject purposively. The sample size of 96 respondents was obtained by selecting from their groups according to their position, total numbers of that group and the role played in society/locality and how do they get affected by the warehouse receipt system. The sample size of 96 respondents was considered adequate for application of the various statistical techniques.

The stratified random sampling was applied for selecting the sample from a diverse population. The application of this stratified sampling was by dividing the population and their cooperative society members into small, medium and large farmers in the study area. Also, there were different sizes of cooperatives in terms of cashew nut production and the total number of members. The members and leaders of AMCOSs were selected by using the stratified random sampling. In this study, purposive sampling was also used. The reason for using purposive sampling was that, there was a possibility that

important information needed by a researcher can be obtained from these key respondents and leaders to meet the objectives of the study. The district and ward level officials, cashew nut buyers and financial institution officials were selected purposively as they were expected to have in-depth knowledge about the warehouse receipt system. The research considered the members, AMCOSs leaders and the cooperative union leaders together as the unit of analysis to recognize the contrast and summarize the descriptions. The parameters of interest were the number of cashew nut buyers, cashew nut price, cashew nut market, cashew nut farmers, performance of cashew nut marketing system and other cashew nut stakeholders such as financial institutions.

Data collection design

Both primary and secondary data were collected and used in this study. The data collection was conducted through field survey and interview whereby questionnaires and interview guide were the respective tools applied in data collection. Generally, Kiswahili language was used in asking questions and then all the answers were translated into English language.

The cashew nut farmers, Cooperative Union leaders, buyers, financial institutions official and other stakeholders provided primary data needed in the study. All those people had detailed knowledge about this study and everyone has shared information and experiences about the contribution of the warehouse receipt system to the farmers. The questionnaire was used because it provided the respondents a wide scope and space for expressing his/her knowledge or experiences about the study since both open ended as well as close ended questions were used. This enabled the researcher to get all important and needed information for the study.

Interview method was also applied for collecting data from key informants. The interview guide containing mostly open ended questions was prepared by the researcher. Those questions were raised by the researcher and were answered by all the selected key respondents from the study area. The method was being employed because it was assured that the questions were answered only by the intended respondents. This improved the reliability of the data collected.

Analytical design

All data obtained during interviews were presented as field notes and interview transcriptions. The researcher evaluated interview responses and all these data were identified and arranged according to the questions. The analysis of data was done by using scientific methods. Tabulation, coding, and drawing of statistical inferences were some of the steps in the data analysis process. The raw data collected, particularly in surveys needed to be processed before they could be subjected to any useful analysis. This organization included identifying (and correcting) errors in the data, coding the data and storing them in appropriate forms. The data were analyzed both by

using software and some were analyzed manually. Both quantitative and qualitative techniques of data analysis were applied. Statistical Package for Social Sciences was employed to analyze data particularly the quantitative data. Other software packages such as Ms-Excel were also used in data interpretation. All results were presented by using graphical techniques and combination of charts, tables and figures. With regard to the pilot study, the researcher distributed the questionnaires to a few potential respondents and later those questionnaires were used to re-formulate the questions for the actual study. Through pilot study, the researcher was able to make some corrections in his tools and learn about his respondents.

Research ethics

While conducting this study, the researcher got approvals from the supervisor and the University of Dodoma in various stages of the research process. Respondents were informed about the purpose of the research and the type of data needed. They were assured of their confidentiality. All secondary sources used have been cited properly.

IV. STUDY RESULTS

Profile of the respondents

The respondents profile included sex, age and level of education of the 74 cashew nut farmers, eight AMCOSs leaders, and three MAMCU leaders. Most of the farmers (54) who were covered in the study (63.5%) were men, while the remaining 31 (36.5%) were women. Many women were not involved in the cashew nut production as compared to other crops such as maize and cassava. It was also noticed that, Mtwara is among the regions in which women are not considerably involved in economic activities, compared to other regions.

It was necessary for the researcher to know the age of the respondents to see the age composition of those who were involved in cashew nut production. Majority (65.9%) of the farmers (56) had the age between 36-55 years, while 24.7% (21) were above 55 years and the remaining 9.4% were the youth between 18-35 years. There is a need to motivate more youth to involve in cashew nut production as the participation of youth in cashew nut production will not only increase the production of cashew nut but also reduce the problem of unemployment particularly in the rural areas. Different levels of education might have an influence on the cashew nut related knowledge, ideas as well as experiences. It is generally considered that education increases someone's understanding on many issues. The researcher found that 77 farmers (90.6%) had primary level of education, while seven (8.2%) had the secondary level of education and only one (1.2%) farmer had a college level of education. Thus, most (77) of the respondents (90.6%) who used warehouse receipt system in cashew nut in Masasi District have obtained only primary level of education.

Generally, many cashew nut farmers in these areas have reached only that level of education.

Size of cashew nut farms, number of trees and presently yielding cashew nut trees

The size of cashew nut farms of all these respondents, number of cashew nut trees they owned and the number of the cashew nut trees yielding at present were considered relevant for this study. These data enabled the researcher to understand the economic status of the respondents to some extent.

Size of the farm: The data indicated that 92.9% (79) farmers owned 0-20 acres of cashew nut trees, while 5.9% (5) owned 21-40 acres. Only one (1.2%) owned above 40 acres of cashew nut trees. The researcher found out that, most of the cashew nut farmers in Nanganga, Mpowora and Luatala AMCOSs were small scale farmers who owned only about 0-20 acres.

Number of cashew nut trees: It was observed that about 44.7% respondents (38) had 0-100 cashew nut trees, 21.2% (18) owned 101-200 cashew nut trees and 18.8% (16) owned 201-300 cashew trees. Those eight farmers who owned more than 500 constituted about 9.4% of these respondents. The researcher discovered that most of the cashew nut farmers in the study areas and who were using the warehouse receipt system to sell their cashew nuts were not large scale farmers. It could be noticed that only 15.3% (13) of the respondents owned more than 300 cashew nut trees in their farms.

Number of yielding cashew nut trees: The researcher wanted to know the number of cashew nut trees actually yielding at present. This was to find out, even if many respondents might be small scale farmers, are they more active by making many trees yield at present. The data further showed that, only three farmers (3.5%) said that a quarter of all cashew nut trees were yielding at present and five (5.9%) informed that half of all their cashew nut trees were yielding similarly. A considerable number (60) of farmers (70.6%), mentioned that three-fourths of their cashew nut trees were yielding. About 20% of the farmers (17 out of 85) were having yields from all the trees. Thus, the researcher found that most of the cashew nut trees were yielding as 77 farmers (90.6%) mentioned that three-quarters or all cashew nut trees were yielding. This means that majority of farmers covered for this study had productive cashew nut trees.

Output of the farms in the last four years

Learning about the output of the cashew nut in their farms in the last four years helped the researcher to know the level of output for the respondents. It also facilitated the researcher to understand if there was an increasing or decreasing cashew nut output in the recent period. The data show that, the output of cashew nut in the last four years was not varying much across the years. Over 80% of the farmers' outputs were under upto 2000 Kgs. As Table 4 shows, the researcher found out that,

under this output category of upto 2000 Kgs, in 2010/2011, there were 87.1% of the farmers, while in 2011/2012, it was 81.2%, and in 2012/2013 it was 85.9% of the farmers. In the last year, 2013/2014 it was 87.1% farmers who were falling in this output category.

The researcher found out that, most of the farmers had limited outputs as they produced few kilograms at the end of the cashew nut seasons. As the researcher noticed earlier, most of the farmers in these areas were small scale farmers. That is why majority of the farmers produced low quantity of cashew nuts in the last four years. Further, low production was contributed by the presence of some other factors such as limited access to inputs and extension services, high charges levied for services as well as low quality of inputs and others. These can be contributing for the low production of cashew nut in Masasi District, particularly the study areas.

Services provided by AMCOSs and Cooperative Unions

It was essential to learn about some of the services provided to the farmers by AMCOSs in addition to the implementation of the Warehouse Receipt System (WRS). This helped the researcher to know to the extent the farmers have been satisfied with the services provided by AMCOSs and whether those services were provided on time to fulfill the farmers' needs. Further, it also enabled the researcher to understand the quality of those services and whether the charges levied to get these services were affordable to the farmers.

Pesticides supply by AMCOSs: The Table 5 shows that majority of the cashew nut farmers availed pesticides supply and 61 farmers (71.8%) used it. But, with regard to the availability of pesticides on time, only 34 farmers (40.0%) said that they were available on time. However, considerable number of (51) farmers (60.0%) said that they were not available on time. Thus, the researcher found out that many cashew nut farmers in Nanganga, Mpowora, and Luatala AMCOS did not get pesticides on time. This situation might have led to poor production due to the fact that cashew nut trees need care at the right time soon after preparation to avoid pests and diseases.

Fungicides supply by the AMCOSs: The Table 5 indicates that 51 farmers (60.0%) availed fungicides supplied by AMCOS. It was found out that availability of fungicides was not a problem but the time of receiving it was a problem as indicated by 50 farmers (58.8%). There is a need for the government to have an additional emphasize on the timely provision of inputs particularly fungicides in order to maintain the quality of cashew nut and thus obtain good prices and market.

Extension services provided by AMCOS: The extension services for cashew nut production were being provided to the farmers by sharing the agricultural expertise through consultations and imparting new skills in order to produce

more cashew nut with desired quality. Table 5 shows that 48 farmers (56.5%) availed extension services. However, 68 (80%) farmers mentioned that extension services were not available at the right time. The researcher found that majority of farmers received extension services but not on time. This means that this service usually may not bring the desired changes to the cashew nut farmers because it is provided very late in the production processes.

Level of satisfaction on the charges levied for the services provided by AMCOSs

After ascertaining about the provision and timely availability of all those services, the researcher also wanted to know about the charges levied for those services provided to the farmers. This helped to know if these charges levied by the primary cooperatives through the warehouse receipt system were considered appropriate by the cashew nut farmers.

Charges levied for pesticides supply: Data showed that only 10 farmers (11.8%) were highly satisfied and 15 farmers (17.6%) were satisfied about the charges levied for pesticides supply. A considerable number (33) of farmers (38.8%) were dissatisfied. Thus a reasonable number of the farmers were dissatisfied with the charges levied for the pesticides. This means that the charges levied on the pesticides seem to be relatively high according to many cashew nut farmers. This could be due to the fact that most of them were small scale farmers. Their income at the end of the cashew nut season was not adequate enough to buy pesticides at a high price/charge as compared to a few large scale farmers.

Charges levied for the supply of fungicides: The Table 6 further indicated that only eight (9.4%) farmers were highly satisfied with the charges levied on fungicides, and about 19 (22.4%) were satisfied. Those who were dissatisfied were 38 (44.7%) and about 6 (7.1%) were highly dissatisfied. There is a need to ensure that the charges levied on these inputs such as fungicides are made affordable in order to help the small scale cashew nut farmers to be able to purchase inputs as most of these farmers depend much on the cashew nut as their only major cash crop.

Satisfaction on the charges levied for the extension services: A majority of the farmers were either satisfied or neutral about the charges levied on the extension services while 26 farmers (30.6%) were satisfied, about 43 farmers (50.6%) were neutral in this regard. Very few farmers were either dissatisfied or highly dissatisfied. If these services are provided on time at this cost, it might have enabled the farmers to increase the productivity.

Implementation of the warehouse receipt system and its performance

The researcher wanted to ascertain the contributions of some of the key stakeholders in warehouse receipt system for the

benefit of the farmers. This was considered important because the knowledge and information on how they performed their tasks and provided services will enable the appropriate assessment of its performance.

Facilities at the warehouse to sustain the quality of cashew nut:

The respondents were queried whether the warehouses and the facilities were good enough to maintain the quality of the cashew nut. A reasonable number (48) of farmers (56.5%) said that the facilities available at the warehouses were good enough to maintain the quality of the cashew nut. However, considerable number (37) farmers, (43.5%) felt that the facilities and the quality of the warehouses were not appropriate. The facilities available at some warehouses were suitable to maintain the quality of cashew nut before the auctioning processes. The researcher discovered that the facilities and the quality of a few other warehouses were not good especially those owned by the primary cooperatives. Efforts may have to be made to support these primary cooperatives to improve these warehouses.

The supervision of the auctioning conducted at the cooperative unions:

It was essential to learn whether the supervision of the auctioning conducted at the cooperative unions was adequate to fetch better prices for the cashew nuts. This question was specially addressed to the nine AMCOS leaders only. Though the researcher found out that seven of these leaders felt that the supervision was sufficient during the auctioning processes, still there is a need for the government to ensure attentive supervision of cashew nut auctioning in order to address the problems which might be affecting the performance of the warehouse receipt system.

Performance of AMCOSs in the warehouse receipt system:

The researcher further wanted to know the level of farmers' satisfaction on the performance of AMCOSs in the warehouse receipt system. The purpose was to ascertain whether AMCOSs' efforts delivered benefits to the cashew nut farmers under the warehouse receipt system. On this aspect, 33 farmers (38.8%) were highly satisfied and 30 farmers (35.3%) were satisfied. Thus, the researcher found out that an overwhelming (63) farmers (74.1%) were either satisfied or highly satisfied with the performance of AMCOS in the warehouse receipt system. This means that AMCOSs as the representatives of cashew nut farmers have become as an effective bridge between them and other stakeholders to address various problems for the benefit of the farmers. It is gratifying to note that only one farmer was dissatisfied and 21 farmers (24.7%) were neutral. Efforts might be made to improve the services of AMCOSs to ensure that those were neutral are also satisfied with the AMCOSs.

Cooperative unions and the warehouse receipt system:

Assessing the performance of the Cooperative unions was relevant as they are the representatives of the farmers particularly in the auctioning process. The data indicated that, 16.5% of the farmers (14) were highly satisfied and 37.6%

(32) were satisfied. Unlike AMCOSs, where there was only one farmer who was dissatisfied, there were eight farmers (9.4%) each who were either dissatisfied or highly dissatisfied with the performance of the cooperative unions with regard to the WRS. This is in contradiction to the opinion of the AMCOSs leaders who opined that the supervision of auctioning at cooperative unions was good.

Performance of warehouse operators:

The farmers' opinion about the performance of the warehouse operators was also sought because they were responsible for the storing of cashew nut before auctioning. The data showed that 15.3% farmers (13) were highly satisfied while 29.4% farmers (25) were satisfied. While 25.9% farmers (22) were neutral, 21.2% farmers (18) were dissatisfied and 8.2% (7) were highly dissatisfied about the performance of the warehouse operators in the warehouse receipt system. This shows that there is a large scope to improve the performance of the warehouse operators in the implementation of warehouse receipt system for the benefit of farmers by ensuring quality warehouses with enough space for cashew nut storing.

Cashew nut Board of Tanzania and warehouse receipt system:

The Cashew nut Board of Tanzania's performance on the warehouse receipt system was also rated by the respondents. It was among the responsibilities of the board to supervise the cashew nut sector. The data indicated that only four farmers (4.7%) were highly satisfied and eight (9.4%) were satisfied with the performance of the CBT. An almost equal number of the farmers, i.e. 28 farmers (32.9%) were dissatisfied and 25 farmers (29.4%) were highly dissatisfied with the performance of the CBT on the warehouse receipt system. Thus a majority of the farmers (53) were either dissatisfied or highly dissatisfied with the performance of the Cashew nut board of Tanzania in the implementation of the system. Many of these cashew nut farmers were not satisfied with the indicative price fixed by the Government of Tanzania through the CBT.

Bidders' performance in the warehouse receipt system:

An effective performance of the bidders in the implementation of the warehouse receipt system is considered essential. Only when they perform well, it will ensure that there is a win-win situation to all especially cashew nut farmers. In this regard, 18 farmers (21.2%) were dissatisfied and 29 farmers (34.1%) were highly dissatisfied with the performance of the bidders in the warehouse receipt system for cashew nut. It was discovered that many farmers were dissatisfied with the performance of the bidders in this system, because normally these buyers were said to be trying to depress the prices during the auctioning of cashew nut.

Performance of financial institutions:

The good performance of the financial institutions will ensure the success of WRS. The farmers were queried whether their performance and contribution were satisfactory to the cashew nut farmers. Data showed that with regard to the financial

institutions, 14 farmers (16.5%) were highly satisfied and 23 farmers (27.1%) were satisfied. Though only 12 farmers (14.1%) were dissatisfied and 10 farmers (11.8%) were highly dissatisfied, it can be concluded that there is a scope to improve the performance of the financial institutions. Though they provided credit to AMCOSs, it usually took a long time for the AMCOSs to receive credit from the banks. Thus, it resulted in late payments to cashew nut farmers.

Reasons for dissatisfaction with various stakeholders

The researcher further wanted to probe the reasons for dissatisfaction with any key stakeholder mentioned above in the implementation of the warehouse receipt system. The farmers were asked to indicate the most important reason for their dissatisfaction. A considerable number (31) of farmers (36.5%) were dissatisfied with the CBT as they felt that it was not accountable to them. The Table 8 indicates that five farmers (5.9%) were dissatisfied with the financial institutions due to the high interest rate charged by the bank on AMCOSs and three (3.5%) were dissatisfied because of delay in the availability of credit from the banks to the AMCOSs. There was an expression of dissatisfaction with the buyers as they were considered exploitative by 16 farmers (18.8%). There was dissatisfaction on the performance of the cooperation union and AMCOSs leaders as expressed by seven farmers (8.2%). However, compared to others, the situation is better with regard to AMCOSs leaders and cooperative unions. As a major representative of the farmers in fixing the indicative price of cashew nut and negotiation during auctioning etc, the CBT was expected to play a key role. But according to many farmers, contrary to their expectations, they were dissatisfied with the contribution of CBT in this system. It may be noted that there was no indication of any dissatisfaction from 23 farmers (27.1%) on any stakeholders' performance.

The overall performance of the warehouse receipt system in the cashew nut sector

Prices obtained under warehouse receipt system: It was very important to ascertain the prices of the cashew nut in the last four years to assess the contribution of the warehouse receipt system to the cashew nut farmers. This is because high or low prices always determined the future status of the cashew nut farmers and the cashew nut sector in general. It was reported that in 2010/2011 season, the majority of cashew nut farmers sold their cashew nut between Tshs 500-1000/= which was not bringing adequate profit to these farmers. It could be seen that a majority of the cashew nut farmers (48) in 2011/12 season sold their cashew nuts for prices ranging 1001-1500/= Tshs. This means that, there was an increase in the prices in 2011/12 season compared to the previous season 2010/11. In 2012/2013 season, a vast majority of 82 farmers (96.5%) sold their cashew nut between Tshs 1001-1500/=. That means that the cashew nut prices for these farmers were more uniform and there was limited variation between them.

In 2013/14 season, an overpowering majority of 84 farmers (98.8%) sold their cashew nuts for prices ranging between Tsh 1001 and 1500/= per kilogram.

It could be seen that, compared to 2010/11 season, there was no farmer who was getting the prices in the range of Tshs 500-1000 per kilogram, in the subsequent seasons from 2011/12 to 2013/14. This is an improvement. However, the success of the season 2011/12 wherein a good number (37) of farmers (43.4%) got the better prices in the range of Tshs 1001-1500 per kilogram, could not be repeated subsequently either in 2012/13 or 2013/14. Introspection on these aspects is needed to ensure that there is an upward movement of the prices obtained by the farmers.

The researcher wanted to assess the overall performance of the warehouse receipt system by ascertaining farmers' satisfaction on the prices of their cashew nut during 2010-2014. It was found out that 72.9% farmers (62) were dissatisfied with the prices obtained by their cashew nut through AMCOSs in the last four years under warehouse receipt system. Only 27.1% farmers (23) were satisfied with these prices. The researcher found that many cashew nut farmers in Nanganga, Mpowora, and Luatala were not satisfied with the prices due to different factors.

Reasons for dissatisfaction with the indicative prices: The researcher discovered that many respondents were not satisfied with the indicative prices. Hence, the researcher wanted to know the reasons for their dissatisfaction with the indicative prices fixed by Government of Tanzania. It was found out that 72.9% farmers (62) were not satisfied with the indicative price because the cost of production was higher than the indicative price. About 7.1% farmers (6) were not satisfied because the prices were mostly benefiting the buyers. The remaining 4.7% farmers (4) were dissatisfied because there was no participatory approach in the process of fixing the indicative prices.

Overall performance of the warehouse receipt system

The researcher wanted to assess the overall performance of the system, i.e. whether the system was performing well in the cashew nut sector. The data indicated that only 20 farmers (23.5%) were satisfied with the overall performance of the warehouse receipt system for the cashew nut, while 65 farmers (76.5%) disagreed and stated that they were not satisfied with the overall performance of the warehouse receipt system. There is a need for the key stakeholders especially the Government of Tanzania and Cashew nut Board of Tanzania to find ways for addressing all these problems that led to these views on poor performance of the system. The researcher further sought to know if there was transparency in the bidding processes of cashew nut at the cooperative unions. This question was directed to the eight AMCOS leaders only. All these AMCOS leaders said that there was transparency in the bidding process conducted at the cooperative unions.

Reasons for dissatisfaction with the overall performance of warehouse receipt system

The researcher wanted to know the key reasons for dissatisfaction with the performance of the system. The Table 10 indicated that 24 farmers (28.2%) were not satisfied due to delayed payments and 20 farmers (23.5%) said that warehouse receipt system gave less profit to farmers and that was why they were dissatisfied with the overall performance of the system.

Five farmers (5.9%) said that they were dissatisfied because of the poor management and implementation of the system while 14 (16.5%) were dissatisfied with the overall performance of the system because of the problem of multiple installment in effecting the payments. Lack of understanding and poor management of the system was the other reason. Thus many farmers were not satisfied with the overall performance of the warehouse receipt system. Therefore, the Government through CBT should ensure that under this warehouse receipt system, there is a timely payment and that too in a few installments.

Suggestions to improve the warehouse receipt system

The suggestions of all these respondents to improve the performance of the system in the cashew nut sector were sought. It was suggested by 16 farmers each (18.8%) that there should be early payments to farmers and indicative prices should reflect the production cost while 22 farmers were (25.9%) suggesting that there was a need to remove the system of multiple installment of payments. In addition to that nine farmers (10.6%) were suggesting that there should be an accountability of CBT, Cooperative Unions and AMCOS leaders in the implementation of the system. Many farmers i.e. eight farmers (9.4%) were suggesting that there should be timely availability of inputs.

V. RECOMMENDATIONS

The results indicated that warehouse receipt system has many challenges in contributing to cashew nut farmers in Masasi District. Establishment of warehouse receipt system was seen as a bridge for the cashew nut farmers to overcome their poverty. Generally, the performance of the warehouse receipt system in cashew nut was not considered bad. But the problem was in the implementation of the system. In order for the warehouse receipt system to offer a better contribution to the majority farmers' livelihoods, the following might be taken into consideration.

Timely availability of inputs: Timely availability of inputs for cashew nut production was a problem. It existed even before the introduction of warehouse receipt system. There is a need for the input fund under this system to put more efforts for timely provision of inputs in order to increase cashew nut production leading to more income to the farmers.

The indicative price should reflect the cost of production:

The cost of production in cashew nut normally is high. That is why majority of the farmers failed to meet the cost of production due to the low prices obtained by their cashew nuts. The Government of Tanzania and Cashew nut Board should make sure that, before the fixing the indicative price there is a study in all areas where the cashew nut is produced, to get information from the cashew nut farmers on the cost of production. This will help in knowing the situation about the cashew nut production and probably will result in fixing of an appropriate price for cashew nuts.

Timely payments: The payments made under this system were normally a problem especially due to delayed second installment. Thus, there is a need for financial institutions and traders to make sure that the payments were done on time to help cashew nut farmers to sustain their life.

Effective supervision during auctioning process:

Auctioning is a very important step in the warehouse receipt system. During this process, the prices of cashew nuts are agreed. If the auctioning is effectively supervised, it increases the probability of getting higher prices. Effective participation of the AMCOS leaders in the auctioning process is very important because it will increase the level of satisfaction of the cashew nut farmers on the price agreed during auctioning process. The AMCOS leaders can be trained to become more effective in this process.

REFERENCES

- Agricultural Non-State Actors Forum (2012), *Advocating for the Effective Regulation of the Cashew Nut Industry in Tanzania*, ANSAF, ACT and Best AC, Unpublished report, Dar es salaam
- Cashew nut Board of Tanzania (2001), *Annual Reports: Mtwara, Tanzania*
- Cashew nut Board of Tanzania (2012), *Annual Reports: Mtwara, Tanzania*
- Cottan, P (2009), *Warehouse Receipt System: The Zambian Experience*, National Milling Cooperation Limited, Lusaka
- Coulter, J and Onumah, G (2002), *The Role of Warehouse Receipt Systems in Enhanced Commodity Marketing and Rural Livelihoods in Africa*, *Food Policy*, 27(4): 319-337
- Coulter J (2009), *Review of Warehouse Receipt System and Inventory Credit Initiatives in Eastern and Southern Africa*. Final draft report, commissioned by UNCTAD under All ACP Agriculture Commodities Program (AAACP), UNCTAD, New York
- Giovannucci, D., Varangis P. and Larson D. (2001), *Warehouse Receipt System: Facilitating Credit and Commodity Markets. A Guide to Developing Agricultural Markets and Agro Enterprises*, World Bank, Washington

Katinila, N. A., Shomari S. H. and Mdadila J. M (2001), Status of cashew nut Industry in Tanzania, Paper presented to the sub regional Technical Workshop on Development of the Cashew subsector in Eastern and Southern Africa, 29th to 31st October, Maputo, Mozambique

Kidando, Noel (2014), ‘Warehouse receipt system and its contribution to the small scale cashew nut farmers in Masasi district, Tanzania’ Unpublished Masters’ dissertation, University of Dodoma

Kilama, B (2010), Crisis Responses in the Cashew Industry: A Comparative Study of Tanzania and Vietnam, Paper presented at DIIS conference ‘Impacts, Responses, and Initial Lessons of the Financial Crises for Low Income Countries’, 14-15 October, 2010 Copenhagen, Denmark

Kilama, B. (2013), The Diverging South: Comparing the cashew nut sector of Tanzania and Vietnam, African Studies Centre, Leiden

La Grange M. D. (2002), Feasibility Study for a Regional Warehouse Receipt Program for Mali, Senegal, and Guinea. Abt Associates, Bethesda

Likwata, Musa Yusuph and Venkatakrishnan V (2014), Performance of agricultural marketing cooperative societies in cashew nut production and marketing in Masasi district, Mtwara Region, Tanzania, *IRACST- International Journal of Research in Management & Technology*, 4 (5): 282-293

Mashindano, O., Kayonze, K., Da corta L. and Maro, F. (2011), Agricultural Growth and Poverty Reduction in Tanzania 2000-2010: Where Has Agriculture Worked for the Poor and What Can We Learn From This, Working paper No. 208, Chronic Poverty Research Centre, Manchester

Mitchell, D (2004), Tanzania’s Cashew Sector: Constraints and Challenges in a Global Environment, Africa Region Working Paper Series No. 70 June 2004, World Bank, Washington DC, www.worldbank.org/afr/wps/wp70.pdf

Mitchell, D and Baregu, M (2012), The Tanzania Cashew Sector: Why Market Reforms Were Not Sustained, In M.A. Aksoy, ed. African agricultural reforms: The role of consensus and institutions, World Bank, Washington DC

Nkonya, N and Barreiro-Hurle, J (2013), Analysis of incentives and disincentives for cashew nuts in the United Republic of Tanzania, Technical notes series, MAFAP, FAO, Rome

Mtweve, S (2013), Warehouse Receipt System Inefficient, *The citizen*, September 15: 19

Sijaona, M E R (2002), United Republic of Tanzania: Assessment of the Situation and Development Prospects for the Cashew nut Sector, Agricultural Research Institute (ARI) Naliendeke, Mtwara

United National Industrial Development Organization (UNIDO) (2011), Tanzania Cashew Value Chain: A Diagnostic, United Nations Industrial Development Organization, Vienna

United Republic of Tanzania (URT) (2009), Warehouse Receipt in Tanzania, Tanzania Warehouse Licensing Board Unpublished Report, Dar es Salaam

Van der Vyver and Nordier, A (2013), The Role of Warehouse Receipt System in an Agricultural Commodity Exchange, A Case Study of Malawian Agricultural Commodity Exchange. Paper Presented in the 4th International Conference of the African Association of Agricultural Economists, Hammamet

AUTHORS’ PROFILE

Kidando, Noel has obtained MA (Development Studies) from the University of Dodoma, Tanzania in 2014. The data used in this paper were based on his unpublished Masters’ dissertation entitled ‘Warehouse receipt system and its contribution to the small scale cashew nut farmers in Masasi district, Tanzania’ supervised by Dr V Venkatakrishnan.

V Venkatakrishnan is a Senior Lecturer (Development Studies), at the University of Dodoma (UDOM), Tanzania since Nov 2009. He has obtained PhD (Development Studies) from the University of Mysore. He has experience in research, teaching, supervision and consultancy since 1998. Prior to joining the UDOM, he has served at the Institute of Rural Management, Anand (IRMA), Administrative Staff College of India (ASCI), Hyderabad, Addis Ababa University (AAU), Ethiopia and KIIT University School of Rural Management (KSRM), Bhubaneswar. He is a life member of the Indian Institute of Public Administration (IIPA), New Delhi and Indian Society for Technical Education (ISTE).

Table 1: Amount of cashew nut sold by selected AMCOSs during 2010-11 to 2013/14 (Kgs)

S/N	AMCOSs	2010/2011	2011/2012	2012/2013	2013/2014
1	NANGANGA	692,014	814,340	767,717	830,000
2	MPOWORA	472,040	670,418	451,428	744,757
3	LUATALA	242,238	270,416	292,320	320,502

Source: Field survey, 2014

Table 2: Sampling and data collection methods

Sample members	Number of respondents	Sampling method	Data collection methods	Data collection tools
District Cooperative Officers	2	Purposive sampling	Interview	Interview guide
District Agriculture Officer	1			
Financial Institution Officer	1			
Ward Councilors	3			
Cashew nut buyer	1			
Ward Agriculture Officers	3			
Cooperative Union leaders	3	Purposive sampling	Field survey	Questionnaire
Cashew nut farmers	74	Stratified random sampling	Field survey	Questionnaire
AMCOS leaders	8			
Total		96		

Table 3: Sex, age and the level of education of respondents (n=85)

Sex	Age (Years)	Educational level
Male (54) – 63.5%	18–35 years (8) – 9.4%	Primary (77) – 90.6%
Female (31) – 36.5%	36–55 years (56) – 65.9%	Secondary (7) – 8.2%
	Above 55 years (21) – 24.7%	College (1) – 1.2%

Table 4: The output of cashew nut farms during 2010/11 to 2013/14

Output of cashew nut (in Kgs)	Number of farmers having the output in various years			
	2010/11	2011/12	2012/13	2013/14
0-2000	74 (87.1%)	69 (81.2%)	73 (85.9%)	74 (87.1%)
2001-4000	7 (8.2%)	13 (15.3%)	9 (10.6%)	8 (9.4%)
4001-6000	2 (2.4%)	1 (1.2%)	0 (0)	1 (1.2%)
Above 6000	2 (2.4%)	2 (2.4%)	3 (3.5%)	2 (2.4%)
Total	85 (100%)	85 (100%)	85 (100%)	85 (100%)

Source: Field Survey, 2014

Table 5: The farmers’ views on the services provided by AMCOSs

Services provided by the AMCOSs	Number of farmers who were		
	Availing the service	Receiving the service on time	Not receiving the service on time
Pesticides supply	61 (71.8%)	34 (40.0%)	51 (60.0%)
Fungicides supply	51 (60.0%)	35 (41.2%)	50 (58.8%)
Extension services	48 (56.5%)	17 (20.0%)	68 (80.0%)

Source: Field Survey 2014

Table 6: Levels of satisfaction on the charges levied for various services

Levels of satisfaction	Number of farmers indicating the level of satisfaction for the charges levied for		
	Pesticide supply	Fungicide supply	Extension services
Highly satisfied	10 (11.8%)	8 (9.4%)	1 (1.2%)
Satisfied	15 (17.6%)	19 (22.4%)	26 (30.6%)
Neutral	23 (27.1%)	14 (16.5%)	43 (50.6%)
Dissatisfied	33 (38.8%)	38 (44.7%)	14 (16.5%)
Highly dissatisfied	4 (4.7%)	6 (7.1%)	1 (1.2%)

Source: Field Survey, 2014

Table 7: Ratings on the performance of key stakeholders in the warehouse receipt system

Key stakeholders	Levels of satisfaction of the farmers				
	Highly satisfied	Satisfied	Neutral	Dissatisfied	Highly dissatisfied
AMCOSs	33 (38.8%)	30 (35.3%)	21 (24.7%)	1 (1.2%)	0 (0%)
Cooperative unions	14 (16.5%)	32 (37.6%)	23 (27.1%)	8 (9.4%)	8 (9.4%)
Warehouse operators	13 (15.3%)	25 (29.4%)	22 (25.9%)	18 (21.2%)	7 (8.2%)
Cashew nut Board of Tanzania	4 (4.7%)	8 (9.4%)	20 (23.5%)	28 (32.9%)	25 (29.4%)
Bidders	7 (8.2%)	9 (10.6%)	22 (25.9%)	18 (21.2%)	29 (34.1%)
Financial institutions	14 (16.5%)	23 (27.1%)	26 (30.6%)	12 (14.1%)	10 (11.8%)

Source: Field Survey, 2014

Table 8: The reasons for dissatisfaction with any stakeholder

Reasons for dissatisfaction	Frequency	Percentage
CBT is not accountable to farmers	31	36.5
Exploitation by the buyers	16	18.8
Delaying of credit from banks	7	8.2
High interest rate charged by the banks	5	5.9
Poor performance of cooperative union and AMCOS leaders	3	3.5
Not applicable	23	27.1
Total	85	100

Source: Field survey, 2014

Table 9: The cashew nut prices during 2010/11-2013/14 seasons

Season	Number of farmers in the price range (Tshs) per kilogram			
	500-1000/=	1001-1500/=	1501-2000/=	Total
2010/11	64 (75.3%)	21 (24.7%)	0 (0%)	85 (100%)
2011/12	0 (0%)	48 (56.6%)	37 (43.4%)	85 (100%)
2012/13	0 (0%)	82 (96.5%)	3 (3.5%)	85 (100%)
2013/14	0 (0%)	84 (98.8%)	1 (1.2%)	85 (100%)

Source: Field survey, 2014

Table 10: The reasons for dissatisfaction with the warehouse receipt system

Reasons for dissatisfaction with the warehouse receipt system	Frequency	Percentage
Delayed payments	24	28.2
Less profit to farmers	20	23.5
Problem of many installment of payments	14	16.5
Poor management and implementation of the system	5	5.9
Poor understanding of the system	2	2.4
Not applicable	20	23.5
Total	85	100

Source: Field Survey, 2014

Table 11: Suggestions to improve the overall performance of the warehouse receipt system

Suggestions to improve the warehouse receipt system	Frequency	Percentage
Removing many installments system of payments	22	25.9
Indicative prices should reflect production cost	16	18.8
Early payments	16	18.8
Education to farmers about the system	9	10.6
Accountability of CBT, AMCOSs, cooperative union leaders	8	9.4
Timely availability of inputs	8	9.4
Active participation of AMCOSs leaders in the auctioning process	6	7.1
Total	85	100

Source: Field Survey, 2014