

AGRICULTURAL STRUCTURE AND PRODUCTION PROBLEMS FACED IN MIDDLE SHABELLE REGION OF SOMALIA*

Somali'nin Orta Shabele Bölgesinde Tarımsal Yapı ve Üretimde Karşılaşılan Sorunlar

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ABSTRACT

The purpose of the study was to identify agricultural structure and production problems faced in Middle Shabelle region of Somalia with the reference of Jawhar and Bal'ad districts. These problems can be categorized into agronomic and socio-economic problems. The study was employed descriptive survey research design. A sample of 138 farmers selected from Jawhar and Bal'ad districts in Middle Shabelle region of Somalia. The main instrument used for primary data collection was questionnaire. The collected data was analyzed by proper statistical program by using frequencies and percentages. This study discovered that lack of proper and good quality hybrids, pests and disease, shortage of water and lack of irrigation channels was the main agronomic problems faced in farmers of Jawhar and Bal'ad districts in Middle Shabelle of Somalia. The socio-economic problems influencing agricultural structure and production of the farmers are financial problems, lack of government incentives and lack extension and research services. This study thus recommended that government agencies and NGO's should be assist the farmer's ways to deal these problems and should provide farmers incentives to enhance their agricultural production.

Keywords: Agricultural production, agricultural structure, agronomic problems, socio-economic problems.

Öz

Bu çalışmanın amacı Somali'nin Orta Shabelle bölgesinde tarımsal yapı ve üretimde karşılaşılan sorunları Jawhar ve Bal'ad ilçeleri referans alınarak belirlemektir. Bu sorunlar agronomik ve Sosyoekonomik olarak kategorize edebilir. Bu çalışmada tanımlayıcı bir anket araştırma tasarımı kullanılmıştır. Somali'nin Orta Shabelle bölgesindeki Jawhar ve Bal'ad ilçelerinden seçilen 138 çiftçilri ulaşan bir örnektir. Birincil veri toplamak için kullanılan ana araç ankettir. Toplanan veriler uygun bir istatistik programıyla analiz edildi ve verilen yazılımın frekansları ve yüzdeleri kullanılarak analiz edildi. Bu çalışmada Somalının orta Shabelle bölgesindeki Jawhar ve Bal'ad ilçelerindeki çiftçilerin karşılaşılan agronomik sorunların uygun ve kaliteli melezler eksikliği., Zararlılar ve hastalıklar sorunları, Su sıkıntısının ve sulama kanallarının eksikliği olduğunu ortaya çıkardı. Çiftçilerin tarımsal yapının ve üretimini etkileyen sosyoekonomik sorunlar finansal

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sorunlar, devlet teşviklerinin olmaması, yayım ve araştırma hizmetlerinin olmamasıdır. Be nedenle bu çalışmada devlet kurumları ve STKları çiftçilere bu sorunları çözüme yollarında yardımcı olması ve çiftçilere tarımsal üretimlerin artırması için teşvikler sağlamaları gerektiği önerilmektedir.

Anahtar Kelimeler: tarımsal üretim, tarımsal yapı, agronomik sorunlar, sosyoekonomik sorunlar, Somalia

INTRODUCTION

Somalia has potential agricultural resources that can feed its people (15 m) and even produce export surpluses. It consists of agricultural land (44mha), forest land (6.6mha), surface water (179.7km³ / annum) and potential unspecified groundwater, livestock population (> 40 m heads), sea and inland fishery resources (3333 km long coast) and forestry. Gross Agricultural Products, GAP, contributed an average of 62 per cent to national GDP between 1977 and 1987.25% of the GAP is of plant origin, while 75% comes from the livestock market. Agriculture commodities are the only exports to the Somali economy. Almost 70% of people live in rural areas, agriculture being their primary source of livelihood. These statistics clearly demonstrate how important the agricultural sector is to the national economy. According to data from the Ministry of Agriculture in 1989, before the outbreak of the civil war, the tilled area was divided into 564,600 hectares of rain-fed and 113,000 hectares of irrigated land and approximately 360,300 was under fallow. Crop production in Somalia relies primarily on the rainfed system, while the irrigated area has reached a limit of 200,000ha. Thus, the implementation of water harvesting techniques in rain-fed agriculture, the effective use of available water for irrigation, the availability of proper agricultural services and the availability of farm labour are key factors in the success of crop production world (Jeilani, 2016).

The Middle Shabelle region is a very productive area, with heavy rainfall (492–545 millimetres a year), also in the Shabelle River basin, crops are irrigated mainly by flood recession along the river. Water can flood the low-lying lands close to the river; crops are then planted in the newly exposed soil as the flood water recedes. Before the civil war, this area had large sugarcane and rice plantations. Today, the main crops are sesame, maize, beans, peas, watermelons, vegetables, groundnuts, and sugarcane. The most productive areas in this region are Jawhar and Bal'ad districts, where riverine agriculture based on pumped irrigation produces onions and tobacco for the major urban markets of Mogadishu, Kismayo, and Baidoa. One of the most vital agricultural production areas of Somalia is Middle Shabelle region. Over the past decades, diverse agricultural production systems existed in this region. Over the past two decades, since the collapse of the Central Government in Somalia, irrigation farming has significantly declined in Middle Shabelle and at present primarily subsistence farming is practiced on small land parcels. A significant part of the arable land is not currently cultivated which is due to the combination of several factors. They include insecurity (which increases farming costs), erratic and highly variable rainfall, lack of farming inputs, lack of credit facilities and extension services, poor irrigation and transport infrastructure,

and limited efforts to rehabilitate irrigation infrastructure because of inaccessibility. While these factors are relatively well known, very little is known about their impact on agricultural structure and production in middle Shebelle have been established and the extent to which they affect the development of the production system in the region (SWALIM and FAO,2010).

Middle Shebelle region of Somalia, which is the study area, has high agricultural potential and receives good rainfall for both of rainy seasons; it is one of the regions that are expected to produce its own food to feed its people and even can produce surplus to feed people in other parts of the country. However, agricultural productions in Middle Shebelle region of Somalia like the rest of other region in country faced many agronomical and socio-economic problems that hindering agricultural production in the country. Therefore, this study addresses agricultural structure and production problems faced in middle Shebelle region of Somalia especially Jawhar and Bal'ad districts (SWALIM and FAO, 2010).

The main purpose of the study is to identify agricultural structure and production problems faced in Middle Shebelle region of Somalia and to make relevant recommendation with the specific reference of Jawhar and Bal'ad districts. Objectives of the study

- To identify agronomic problems hindering agricultural structure and production in middle Shebelle region of Somalia.
- To examine socio-economic problems influencing agricultural structure, and production in middle Shebelle region of Somalia.

MATERIALS AND METHODS

Material

The instrument used for the study was a set of questionnaires for agricultural structure and production problems faced in Middle Shebelle region of Somalia with the reference of Jawhar and Bal'ad. Kerlinger (2003), defined questionnaire as a research tool consisting of a series of questions and other facts for the purpose of gathering information from participants and realize that the questionnaire is one of the widely used instrument for collecting data in many research fields because it is very effective for securing information about practices and conditions of which the respondents are presumed to have knowledge.

The questionnaire was divided in to two parts. First part was demographic information of the respondents while the second part was consisting of two sections which each section included several questionnaires. The basic structure of the questionnaire was based on the liker scale format, which was the simplest but equally efficient approach for studies in science research (Willis,2004). Respondents indicated the extent to which each statement best described their response on the occurrence of each of them on a 5 -point liker – types of scale from strongly disagree to strongly agree and neutral. The respective weights for the responses were as follows:

1. Indicated strongly disagree
2. Indicates disagree
3. Neutral
4. Agree
5. Indicates strongly agree

Methods

This study descriptive survey research design was used. Ogula (2005), defined descriptive research design as strategy, plan, and structure of investigation the nature of the situation and usually answers research questions “what and how”. The researcher used this research method because researcher is seeking insights into the general nature of problems facing the farmers and possible solution to overcome these problems.

The target population of this study was made up of small scale and large-scale farmers in Jawhar and Bal’ad districts in Middle Shebelle region of Somalia.

The accessible population was consisted total of 215 small scale and large farmers from Jawhar, and Bal’ad districts in Middle Shebelle region of Somalia.

The sample size was consisted of 138 small scale and large-scale farmers selected from farmers in Jawhar and Bal’ad districts in Middle Shebelle region of Somalia. 78 farmers from Jawhar district and 60 farmers from Bal’ad district. The sample size was determined by using statistical formula called Slovene’s formula. Here is the calculation of sample size by using Slovene’s formula with the maximum acceptable error of (0.05).

The sampling technique is a procedure for selecting sample members from a population. In this study was used probability sampling to select a reasonable number of participants, or cases that represent the target population. And technique was used is simple random sampling to select the sample size. The simple random sampling involves giving a number to every subject or member of the accessible population, placing the numbers in a container, and then picking any number at random. The researcher wrote ‘Yes’ and ‘No’ on papers for participant. The number required was written ‘Yes’ the rest ‘No’. The papers were shaken to mix well and then passed around. Those picked papers with ‘Yes’ were are one’s included in the sample. The researcher consciously decided who will include the sample, the main objective of simple random sampling it is designed to collect target information. It is preferred for this study because to get accurate information and fairly about target population.

Afterthe collection of data, normally it was organized and analyzed. For the analysis of closed-ended questions a proper statistical program was used. Descriptive statistics were used for questionnaire analysis by using frequency, mean, percentage, and cumulative percentage. Numerous tables and charts were used in this study to identify agricultural structure and production problems faced in farmers of Middle Shebelle region in Somalia.

RESULTS

Demographic information of the respondents

Table 1. Age of the Respondents

Age	Frequency	Percent	Cumulative Percent
less than 20	25	18.1	18.1
21-30	56	40.6	58.7
31-40	31	22.5	81.2
41-50	15	10.9	92.0
above 50	11	8.0	100.0
Total	138	100.0	

Table 1. Reveals the age of the respondents. This table indicates that 18.1% of respondents are aged less than 20, it also shows Most of the respondents aged between 21-30 years 40.6% which had greater than the percentage of respondents, aged 31-40 years 22.5%, 41-50 years 10.9%, while 50 and above years 8%. This shows that most of the farmers are young.

Table 1. Gender of the Respondents

gender	Frequency	Percent	Cumulative Percent
Male	78	56.5	56.5
Female	60	43.5	100.0
Total	138	100.0	

Table 2. Reveals the gender of the respondents. This table shows that 56.5% of the respondents were male, while 43.5% of the respondents were female. This indicates male and female farmers participating in this study were almost same.

Table 2. Marital Status of the Respondents

Marital Status	Frequency	Percent	Cumulative Percent
Single	35	25.4	25.4
Married	77	55.8	81.2
Divorced	26	18.8	100.0
Total	138	100.0	

Table 3. Presents the marital status of the respondents. This table 3 indicates that 25.4% of the respondents were single, while 55.8% of the respondents were married and 18.8% were divorced. This shown most of the respondents were married.

Table 3. Educational Level of the Respondents

Educational qualifications	Frequency	Percent	Cumulative Percent
Donot attend school	18	13.0	13.0
primary school	36	26.1	39.1
secondary school	72	52.2	91.3
Diploma	12	8.7	100.0
Total	138	100.0	

Table 4. Represents the educational level of the respondents. This table 4 indicates that 13% of the respondents do not attend school, 26.1 of respondents were primary school, 52.2% were secondary school, while 8.7% of the participants were diploma, they have two years of post secondray school certicate. This indicates that most of the farmers participated in this study were secondary school.

Agronomic problems hindering agricultural structure and production of the farmers of Middle Shabelle region of Somalia.

Agronomic Problems	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Total
Lack of proper and good quality hybrids Frequency Percentage	9 6.5	11 8.0	15 10.9	40 29.0	63 45.7	138 100
Pests and disease problem Frequency Percentage	18 13.0	10 7.2	20 14.5	51 37.0	39 28.3	138 100
Shortage of water Frequency Percentage	8 5.8	12 8.7	8 5.8	63 45.7	47 34.1	138 100.0
Soil fertility problems Frequency Percentage	13 9.4	20 14.5	27 19.6	44 31.9	34 24.6	138 100.0
Poor of farm mechanization Frequency Percentage	10 7.2	16 11.6	12 8.7	53 38.3	47 34.2	138 100.0
Lack of irrigation channels Frequency Percentage	9 6.5	11 8.0	11 8.0	40 29.0	67 48.6	138 100.0

Agreed that Lack of proper and good quality hybrids as an agronomic problem constraining their agricultural structure and production, while 29% agreed and 10.9% were neutral. The respondents strongly disagreed that lack of proper and good quality hybrids not agronomic problem hindering their agricultural production were 6.5% and 8% were disagreed. Absence of suitable varieties has been existing as one of the major problems facing farmers.

It also shows that 28.3% of the farmers participated in the study strongly agreed that Pests and disease problem as an agronomic problem constraining their agricultural structure and production, while 37% agreed and 14.5% were neutral. The respondents strongly disagreed that Pests and disease problem not agronomic problem hindering their agricultural production were 13% and 7.2% were disagreed.

Moreover, the table states that 34.1% of the farmers participated in the study strongly agreed that Shortage of water as an agronomic problem constraining their agricultural structure and production, while 45.7% agreed and 5.8% were neutral. The respondents strongly disagreed that Shortage of water are not agronomic problem hindering their agricultural production were 8.7% and 5.8% were disagreed. Most of the farmers reported that lack of dams, variable rain falls, and poor irrigation channels are the main problems responsible for the shortage of water.

It also reveals that 24.6% of the farmers participated in the study strongly agreed that Soil fertility problems as an agronomic problem constraining their agricultural structure and production, while 31.9% agreed and 19.6% were neutral. The respondents disagreed or strongly disagreed that Soil fertility problems are not agronomic problem hindering their agricultural production were 14.5-9.4% respectively.

Additionally, the table shows that 34.1% of the farmers participated in the study strongly agreed that Poor of farm mechanization as an agronomic problem constraining their agricultural structure and production, while 38.4% agreed and 8.7% were neutral. The respondents disagreed or strongly disagreed that Poor of farm mechanization are not agronomic problem hindering their agricultural production were 11.6-7.2% respectively.

Finally, 48.6% of the farmers participated in the study strongly agreed that Lack of irrigation channels as an agronomic problem constraining their agricultural structure and production, while 29% agreed and 8% were neutral. The respondents disagreed or strongly disagreed that Lack of irrigation channels are not agronomic problem hindering their agricultural production were 8-6.5% respectively. This indicates that Lack of irrigation channels as one of the agronomic problems hindering agricultural structure and production problems faced by Middle Shabelle region of Somali.

Socio-economic problems influencing agricultural structure and production problems of the farmers.

Table 6. Socio-economic problems

Socio-economic Problems	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Total
Financial problems Frequency Percentage	9 6.5	12 8.7	14 10.1	42 30.4	61 44.2	138 100.0
Poor access of agricultural inputs Frequency Percentage	9 6.5	14 10.1	13 9.4	32 23.2	70 50.7	138 100.0
Lack of extension and research services Frequency Percentage	10 7.2	13 9.4	17 12.3	51 37.0	47 34.1	138 100.0
Lack of infrastructure such as roads Frequency Percentage	6 4.3	7 5.1	19 13.8	50 36.2	56 40.6	138 100.0
Lack of government incentives Frequency Percentage	10 7.2	7 5.1	12 8.7	47 34.1	62 44.9	138 100.0
Illiteracy of the farmers Frequency Percentage	27 19.6	30 21.7	12 8.7	41 29.7	28 20.3	138 100.0

Table 5. it reveals that 44.2% of the farmers participated in the study strongly agreed that Financial problems as a socio-economic problem influencing their agricultural structure and production, while 30.4% agreed and 10.1% were neutral. The respondents disagreed or strongly disagreed that Financial problems are not socio-economic problems influencing their agricultural production were 8.7-6.5% respectively. One of the socio-economics problems common to all farmers of Middle Shabelle region of Somalia is financial problem where they lack capital and adequate cash to improve and enhance their production.

It also shows that 50.7% of the farmers participated in the study strongly agreed that Poor access of agricultural inputs as a socio-economic problem influencing their agricultural structure and production, while 23.2% agreed and 9.4% were neutral. The respondents disagreed or strongly disagreed that Poor access of agricultural inputs are not socio-economic problems influencing their agricultural production were 10.1-6.5% respectively.

Moreover, the table states 34.1% of the farmers participated in the study strongly agreed that Lack of extension and research services as a socio-economic problem influencing their agricultural structure and production, while 37% agreed and 12.3% were neutral. The respondents disagreed or strongly disagreed that Lack of extension and research services are not socio-economic problems influencing their agricultural production were 9.4-7.2% respectively. This indicates that Lack of extension and research services as one of the socio-economic problems influencing agricultural structure and production problems faced by Middle Shabelle region of Somalia.

It also reveals that 40.6% of the farmers participated in the study strongly agreed that Lack of infrastructure such as roads as a socio-economic problem influencing their agricultural structure and production, while 36.2% agreed and 13.8% were neutral. The respondents disagreed or strongly disagreed that Lack of infrastructure such as roads are not socio-economic problems influencing their agricultural production were 5.1% and 4.3% respectively.

Additionally, the table shows 44.9% of the farmers participated in the study strongly agreed that Lack of government incentives as a socio-economic problem influencing their agricultural structure and production, while 34.1% agreed and 8.7% were neutral. The respondents disagreed or strongly disagreed that Lack of government incentives are not socio-economic problems influencing their agricultural production were 5.1% and 7.2 % respectively. This indicates that Lack of government incentives as one of the socio-economic problems influencing agricultural structure and production problems faced by Middle Shabelle region of Somalia.

Finally, 20.3% of the farmers participated in the study strongly agreed that Illiteracy of the farmers as a socio-economic problem influencing their agricultural structure and production, while 29.7% agreed and 8.7% were neutral. The respondents disagreed or strongly disagreed that Illiteracy of the farmers are not socio-economic problems influencing their agricultural production were 21.7-19.6% respectively. This indicates that Illiteracy of the farmers as one of the socio-economic problems influencing agricultural structure and production problems faced by Middle Shabelle region of Somalia.

Conclusions and Recommendations

This study focuses on agricultural structure and production problems faced in Middle Shabelle region of Somalia with reference to Jawhar and Bal'ad districts. From the findings of this study agronomic problems such as lack of proper and good quality hybrids, pests and disease problems, shortage of water, bad irrigation channels and poor farm mechanization was the major agronomic problems, while financial problems, poor access of agricultural inputs, lack of extension and research services and lack of infrastructure was main socio-economic problems influencing agricultural production of the farmer. Omar (2018) , agronomic problems like diseases, adverse climate, weed, and bad cultivars were identified to be the major problems faced in farmers of Somalia. Omar (2018) also identified

many socio-economic problems such as insecurity, bad agricultural policy, and inflation. The findings of this study are little difference from that of Omar (2018). However, the result of this study was like that of Abdi Soojeede (2011).

Based on the findings of this study, the researcher recommended that:

1. The Ministry of Agriculture of Somalia specially crop production department should provide training to the farmers of Middle Shabelle to improve their knowledge and skills.
2. Farmers of Middle Shabelle region face lack of good infrastructure so government of Somalia should improve and build irrigation channels and infrastructure such as roads to help farmers to get access of market and increase their production.
3. Ministry of Agriculture should give the farmers of Jawhar and Bal'ad districts research and extension services.
4. Non-governmental organization should take part the developmental efforts for enhancement of the farmers production and help farmers accessibility of good quality hybrids.
5. Government should provide farmers seminars about pests and disease control to help farmers to fight pests and disease.
6. Ministry of Agriculture should provide farmers of Middle Shabelle especially farmers of Jawhar and Bal'ad districts incentives to promote their production.

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