

**FACTORS LIMITING EMERGING MAIZE PRODUCERS FROM PROGRESSING
TO COMMERCIAL AGRICULTURAL FARMING IN INTSIKA YETHU
MUNICIPALITY**

By

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DECLARATION

I, Yonela Sisusa, declare that the dissertation hereby submitted by me for the Masters in Sustainable Agriculture (MSA) degree at the University of the Free State is my own independent work and has not previously been submitted by me at another university/faculty.

Yonela Sisusa

04/01/2021

Date

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LIST OF ABBREVIATIONS AND ACRONYMS

DAFF Department of Agriculture, Forestry & Fisheries

MDAN Managing Director of Advanced Nutrients

SABC South African Broadcasting Corporation

LRP Land Reform Programme

CASP Comprehensive Agricultural Support Programme

ABSTRACT

The study was conducted in Intsika Yethu Local Municipality, Chris-Hani District of Eastern Cape in South Africa on a proportionally randomly selected sample of 30 emerging maize farmers. Maize is the staple food for most South Africans. This means that if maize crops are damaged that will affect the food security of many South Africans. Maize is an important staple food and a source of food security in Intsika Yethu local Municipality. Data was collected through a structured questionnaire and captured into the SPSS Version 24 computer program. The same program was used to analyse data through cross tabulations and logistic regression modelling. In particular, the study focussed on the impact challenges that farmers face and views of extension officers on transforming maize farmers towards commercialization. The most critical findings of the study were dominance of women, lower youth participation, poor training and poor educational level, non-membership to agricultural organizations, as factors that could influence on farmers' transformation process. Farmers' challenges that could effect on transformation were identified as lack of good production inputs, water, access to market and supportive infrastructure such as mechanization. However, the views of extension officers regarding transformation centred mostly around insufficient land holdings, climate change and financial support. In contrast to farmers, extension officers viewed market access as a minor challenge. The study recommended for development of strategies that could increase youth to participate in farming such as start-up credit, reduction of dependence on social grants by adopting strategies that could increase productivity and thus income, exposure to funding opportunities through training and increased involvement of institutions of higher learning into emerging farming activities. Majority of the farmers did not own any farming implements. The study suggests that government interventions alone are not enough to fix the challenges facing emerging farmers. Therefore, private sector intervention and collaboration is vital for much needed financial, skill development quality of inputs and infrastructure investment that will relate to production expansion, job creation, food security and profitability.

Keywords: Maize, Emerging Farmers, Land Tenure, Commercialization

CHAPTER 1: INTRODUCTION

1.1. BACKGROUND OF THE STUDY

South Africa involves commercial as well as emerging farming systems (Thamaga, et al., 2014). The commercial farming system is well established and resourceful contributing meaningfully to national food security. According to Chikazunga & Paradza (2012:3-4) The previous South African government prior 1994, established strong subsidies and provision programs that boosted, empowered and elevated commercial farmers while smallholder farmers received little to no support mechanisms. About 95% of agricultural produce in South Africa is being produced by 45 000 commercial farmers (WWF 2015). Emerging farmers produced small amount of agricultural produce in the country; to support that, three million emerging farmers produce only 5% of agricultural output in the country (WWF 2015). A clear question arises, why is it that commercial farmers are always producing better than emerging farmers? Emerging farmers are supposed to be the main source of income, employment and food security in remote areas. In many countries especially in Africa, it is strongly believed that emerging farmers play an essential role in their economic development and growth (Mutero, Munapo and Seaketso 2016). 18 years back, South African Government applied several policies and programmes to increase the budget spent on the agricultural sectors as well as on Agencies that played a vital role in supporting emerging farmers (DAFF, 2010; Frequin, et al., 2012). As emphasized by Wickramasinghe (2009) and Leahy and Goforth (2014), transformation of emerging farming to commercialization is vital in addressing poverty in a supportable way.

1.2. THE RESEARCH PROBLEM

Emerging maize producers are characterized through low production of maize, with poor access to inputs. Emerging maize producers face challenges in gaining access to formal markets due to poor quality of maize therefore, their produce does not meet the requirements of retailers (Bie' nabe & Vermuelen (2011:494). Maize producers are affected by poor infrastructure such roads, lack of access to water, and insufficient property rights (Wynne & Lyne, 2003:566). According to Mazibuko (2018) lack of infrastructure development is a serious challenge facing emerging farmers in rural areas. Transportation price of agricultural produce is affected by the poor road state. Farmers of Intsika yethu are facing a huge problem in maize transportation due to the roads that are bad, Low education level amongst the farmers, lack of facilities in farming such as lack of storage facilities which is the main problem as a result

farmer end up selling their maize with low price due to the shortage of storages facilities. Unavailability of irrigation systems, low level of education amongst farmers, lack of access to technology, lack of creative advanced implements, in order for the farmers to produce more yield and business skills are required as to make the efforts of farmers a success (Bie'nabe & Vermuelen, 2011:494). Fencing materials as livestock continue to damage maize due to unavailability of fence. Financial and lack of resources make it difficult for emerging farmers to change negative market factors individually.

1.3. THE PURPOSE OF THE STUDY (AIM)

The main research objective is to identify the factors that would transform emerging maize producers to commercial farming in Intsika Yethu Municipality.

1.4. RESEARCH OBJECTIVES

Main objective

1. To analyse and identify the main challenges faced by emerging maize producers in progressing to commercial farming.
2. To discern the views of agricultural officers regarding the problems that hamper emerging maize producers from progressing to commercial farming in Intsika Yethu Municipality in the province of Eastern Cape.
3. To develop strategies that can be applied to assist emerging maize producers to progress to commercial farming.

1.4. RESEARCH QUESTIONS

1. What are the main challenges faced by emerging maize producers of Intsika Yethu Municipality in progressing to commercial farming?
2. What are the views of agricultural officers regarding the problems that hamper emerging maize producers from progressing to commercial farming in Intsika Yethu Municipality?
3. What strategies can be applied to assist emerging maize producer's progress to commercial farming in Intsika Yethu Municipality?

CHAPTER 2: LITERATURE REVIEW

2.1. INTRODUCTION

In South Africa, there is one existing agricultural sector that comprises emerging/ small scale and commercial farming. Emerging farmers includes of farms that are small that use traditional production methods, is labor intensive, lacks technical and financial support while commercial farming includes of large commercial farms which have high turnovers use modern production methods. This chapter mainly focuses on the review of the factors that would transform emerging farmers to commercial farmers, both social and economic factors, that is, socio-economic characteristics that could influence the transformation of smallholder to commercial farming, challenges faced by smallholder farmers in the transformation processes and the role of agricultural extension officers in emerging commercialization. The social and economic factors which is socio-economic features that could impact the emerging maize producers from proceeding to commercial farming reviewed in this study include gender, age, education level, training received by farmers and membership of farmers to agricultural organisations, family income, credit access, access to market and inputs with good standard, land tenure and size.

2.1.1 Gender and age of farmers

Liverpool-Tasie *et al* (2011) stated that gender inequality in agricultural practices is a characteristic of many countries. Males have been found to be more successful farmers as compared to females. There was an assumption that male farmers are more focused on growth profit where female farmers focused more on the family wellbeing that lead to in low proportion of female's famers to reach success in the farming market. According to Njukia *et al.* (2011), men were more successful in market participation than women due to their competitiveness. The study conducted by Leykun and Jemma (2014) further explore that farmers features like being male decrease the chance of being emerging farmers and have a positive effect on progressing to commercial farmers. In the study by Moyo, (2013) which was conducted in South Africa claims and supports the fact that the probability of being females drops the chances of being a commercial agriculture.

Another study that was conducted in Mutula Local Municipality stated that farmers that were participating in the study were females ranging between the ages of 36-59 years. The participation of youth in the study was very low as compared to elders. In the study which was conducted by Nokonwaba, (2014) in the province of Eastern Cape it is stated that females were to be most in the farming practices because males in the study were used to work in the mines and they come back home after a long time leaving females behind to look after the children. According to the findings of the study by Nokonwaba (2014), there is a perception among the

youth that farming is something for old people and this poses a major problem because these same old people are illiterate. This makes it difficult for them to seek information on how to adopt new technologies used nowadays to help with the increase of maize production.

According to Ngqangweni and Delgado (2003), mentioned by Mandikiana (2011), the age of the farmers is thought to be very important changeable in the study of this nature because it is believed that age is linked to the experience. Age indicates the farmer's position in the life cycle. Young farmers are possible to improve the standard of farming as compared to elder farmers because elder farmers are challenged by lack of technology, technical skills that are new, as well as development which are the significant fundamentals to change farmers.

In a study conducted by Martey *et al.* (2012) highlighted that the age could also assist or impede farmers to transform from smallholder to commercial farming. Young farmers are likely to commercialize compared to elder farmers since older farmers are challenged by lack of new technical skills and innovation which are the critical elements to transform farmers. Alam *et al.* (2009) highlighted that farmers at the age of 16 to 35 years were likely to commercialize their farming activities compared to the above 35 years age group. However, many farmers from youth group were part-time farmers while farmers from the other group (36 to 55 years) were fulltime. The work performance of this group and income potential are far behind than the group with an age range 16 to 35. The youth age group could acquire more business techniques due to their higher level of education attained.

2.1.2 Low level of education achieved by farmers

It is stated by Martey *et al.* (2012) that background in education is very important factor in smallholder commercialization. Low level of education between emerging maize producers make them not capable to know and understand market information properly (Department of Agriculture, 2001). Level of education achieved by farmers is very important for the performance of farmers in several areas in the sectors of agribusiness. The level of education makes it easier for farmers to own different skills and knowledge needed for the success of commercialization. This could be achieved by attending seminars, workshops and conferences where farmers would have right access and gain innovation that could improve their farming progression (Yamusa and Adefila, 2014).

A study done by Khapayi and Celliers (2015) in the province of Eastern Cape in South Africa has revealed that the majority of farmers in rural areas are not educated which could result to incapability to interpret information market essential for production planning and marketing. Another study conducted by Diale (2011) supports other findings concerning education as an important component to emerging farmer's transformation in the province of Limpopo in South

Africa. A study showed farmer who had reached grades in schooling was possible to recover their farming activities likened to those who have not achieved any educational levels.

The research of Hepelwa (2010) suggests that in his study area household members with a higher level of education are found to engage more on wage and self-employment; this offers little opportunity in maize crop production. Technical skills in agricultural activities, especially in developing countries, are more influenced by ‘hands on’ training than school attendance. The expected sign of co-efficient is positive for a lower level of education and negative for higher levels of education.

However, Shultz (1964) trusts that exposure to education boosts the skills of the farmers to obtain process and use information relevant to the acceptance of techniques and improved maize production. He proceeds to conclude that education is very important to the production of farm in a speedily changing technological or economic environment. Unfortunately, what worked for farmers ten years ago may not have the same result now everything is changing and farming styles need to change and farmers need to adjust to better and more effective ways of farming” (SABC Education, 16-08-2012).

In a study done by Nokonwaba (2014) in the province of Eastern Cape stated that some of the farmers are resistant, and do not want to change their old way of farming and are not exposed either to new system of ploughing which includes using planter machines and fertilises to boost maize to grow faster and rich. The low levels of education amongst emerging farmers leave them unable to understand and interpret market information correctly (Department of Agriculture, 2002).

2.1.3 Training received by farmers

Farmers require technological skills which comprise the computer usage, tractor, radio, and televisions. These will according to Olaove (2014), permit them to access information related with their farming activities. In a study by Alam *et al.* (2009) it was exposed that farmers were getting training based on crop production such as pest control, storage facilities, marketing strategies, and management. There are colleges that are responsible for providing education and trainings to many farmers.

Another study conducted by Worku (2016) supported the provision of training to farmers as a critical tool to smallholder commercialization in Ethiopia. However, the lack of orientation to agricultural production practices by farmers was a major constraint to many farmers that limit them to improve their technical knowledge. Many strategies were adopted by extension officers for training provision, i.e. training farmers individually or in group meetings, demonstrations and farmers field days. The level of education of farmers, training and skills of farmers, level of government assistance and provision of extension services influenced the productivity of farmers and their ability to ensure household food security (Mbanza &Thamaga-Chitja 2014). Important developments and improvements that can help increase subsistence productivity is an increased investment into research and development, extension services, financial and credit services and training and skills transfer (Baiphethi & Jacobs, 2009)

2.1.4 Membership to agricultural organizations

In a study conducted by Ojiagu *et al.* (2015) it was found that cooperatives form building units of farmer's organizations that should not be undermined. It was found that organizations that are related to agriculture improve the supply of inputs, processing, and access to credit and extension service. Majority of farmers were capable to transform from home consumption production to market orientated production. It was also found that organizations were improving the stability of farmers, especially income that farmers make in their farming activity. In another study by Tolno *et al.* (2015) it was decided that agricultural organizations have the ability to assist farmers to increase their income and deliver a good platform for the

distribution of farm production input; This can greatly improve farm productivity and upsurge farm income therefore contribute to the reduction of poverty.

2.1.5 Household Size

In the study which was conducted by Nokonwaba (2014) in the province of Eastern Cape stated that during that households with few members do not have the ability to sustain their farms. The farmers who had few members in their families approved that their crops suffer due to the lack of family labor. They demanded to be jobless and could not promote a big farm as in the olden days because they cannot afford to hire paid labor. The larger family, the more resources are needed to feed, clothe, house and educate all members. The size of the household is also thought to have an influence in the decline of maize production (Nokonwaba, 2014). In a study conducted by Adeniyi (2013) farmers' income increased proportional with the land size, such as farmers with high income either generated from farm or off-farm were able to expand their landholding for commercial farming and to maintain the standard of high income.

2.1.6 Market access of emerging farmers

Access to markets plays an important role not only linking farmers with off-takers of their produce but also improves the farmers access to inputs that can help these farmers develop (Baiphethi & Jacobs, 2009). It could therefore, be recommended that government and private sector support should focus also on the development of off-take markets for these farmers so that they will be able to sell their surplus grain. It was found that one of the reasons farmer development programs failed in the past in South Africa, was the lack of focus of market availability and access (Kruger, 2016). Effective markets and distribution networks can not only improve the access of farmers to inputs but can also help developing farmers with an off-take of their producing, linking them with the consumer (Baiphethi & Jacobs, 2009).

Access to market is vital to emerging farmers because it offers alleviation and eradication of hunger by increased production and cash generation of income (Department of Agriculture: Marketing, 2004). Kamara (2003) found out that cash crops play a big role in rural growth and livelihood development. With no good access to commercial markets emerging farmers are likely keep on in poverty circle. Marketing is very crucial to emerging farmers since they act as some mechanisms for the exchange to get benefit such as income and open opportunities for rural employment (Machethe, 2004).

In terms of market access, the transition of emerging farmers towards commercial production is determined by the access to markets. Marketing of produce for emerging farmers is one of

the difficult policy issues to be addressed for improving maintainable smallholder agriculture (Jooter, 2001). Although there are many existing markets in the province, Nkosi and Kirsten (1993) stated that emerging farmers sell their maize through informal markets, which end up getting low prices for their produce. Only 45 % of the farmers had access to market information. Another study by Khapayi (2013) in the province of Eastern Cape state that a lack of marketing for emerging farmers is due to the marketing challenges they face. The findings showed that the sampled farmers are faced with marketing challenges such as insufficient market facilities, low prices, and high transaction costs (Khapayi, 2013). Farmers who managed to produce maize of good quality were not realizing good profits from their produce owing to insufficient markets being available.

Jooster and Van Rooyen (1996), believe that the commercialisation of emerging farmers depends on the demographic and ethnographic changes, new technologies, and infrastructural development.

2.1.7 Land Tenure

Land tenure is a mainly a serious problem to emerging farmers in South Africa where insecure agreement for land tenure are limiting land access and undermining interest and commitment to subsistence farming. They have no title deeds which makes it hard for them to invest in new technology “Land is measured the most important resource to the emerging farmers and is vital to allowing them to boost themselves out of poverty” (Mutangadura, 2003). In the study conducted by the United Nations Economic Commission for Africa Office for Southern Africa in 2003, it is exposed that land tenure insecurity is still extensive in Southern Africa and it establishes itself in many ways. Land tenure is one of the most sensitive political issues in almost every country across the world. It is also clear that the present system of land tenure in South Africa is changing from subsistence agriculture to commercial farming. According to Bembridge (1884) cited by Steyn (1988), implementing any system of land reform programme must be affected with as little disruption as possible and carried out in an evolutionary way. However, Bembridge (1884) also states the fact that the system of land tenure in many of the less developed countries is one of the main obstacles towards agriculture. Nokonwaba (2014) pointed out that land ownership at Ethembeni location is still a problem because women are unable to access land although they seem to be the drivers of the whole idea of farming. The system of land tenure in this location was never revised. However, there are also residents who have *amafusi* (land that is not ploughed) who claim that they have no means of production to practice farming. The counsellors have mentioned that they also have a system they use in the

case of those women who are interested in farming which involve borrowing from those who leave *amafusi* in their fields.

2.1.8 Infrastructure organization

According to Nokonwaba (2014) lack of infrastructure in the study area is one of the barriers to maize farming. The level of infrastructure in agricultural sector is one of the major factors that could explain the regional balances and imbalances in agricultural growth. According to the findings of the study transport in Ethembeni location seems to be a problem to the growing farmers in the present (Nokonwaba., 2014). High transaction cost is one of the major factors constraining the growth of emerging farmers in African countries and this can largely be attributed to poor infrastructure. For agricultural purposes, the farmers do not have their own tractor to plough and carry heavy loads, but rather when in need individual famers hire a tractor which costs R1800 per morgen from other local farmers in the surrounding areas like Mbaxa location. According to Machete (2004) most countries that have successfully developed their agriculture, identify the provision of good infrastructure as a requirement for achieving higher levels of agricultural productivity and profitability. This is true when one looks at the development of American agriculture or the green revolution experience of the Asian countries. According to Cochrane (1993) there can be no agricultural development without the services that flow from the required infrastructural elements, physical infrastructure such as irrigation, roads and storage, in the Asian green revolution was a key element. Emerging farmers planting their maize under dryland which is the big challenge when there is a drought as it decreases and affect the yield. Emerging farmers moistly rely on rainfall and that exposes them to risks of droughts as well as floods that are common in the (Southern African Development Community) region. This makes emerging farmers susceptible to climate change. Protection of natural resources is necessary to decrease the effects of climate change on rural communities.

2.1.9 Transport cost

Farmers and ranchers are increasingly contending with traffic from urban areas as drivers use rural roads to avoid congestion. While road improvements can help farmers and ranchers, the net impacts may be negative if better roads also lead to speeding and incompatible development in rural areas. Amongst the marketing challenges emerging farmers are facing are high transportation costs. Another study by Nokonwaba (2014) stated that the road is made up of gravel, there are a number of streets and there is in no railway line, pedestrian facilities, traffic lights or road signs. In a study conducted by Khapayi (2015) it is exposed that the availability of one's own market transport influences the delivery time of produce to the markets, unlike

the case of farmers who depend on hired transport or public transport to transport their produce. Transport availability determines the quality of the delivered produce. Unreliable transport can lead to the late delivery of produce. In the case of emerging farmers who lack storage facilities late delivery of produce can result to loss of produce quality (Khapayi., 2015).

2.1.10 Support services

In a study which was conducted by Khapayi (2015) it was found that the provision of support services remains one of the major important interventions in the agricultural sector for rural development, commercialization, food security, poverty alleviation and income generation of emerging farmers. The commercialization of emerging farmers cannot be achieved without appropriate farmer support services. With adequate access to farmer support services, emerging agriculture can contribute to an increased agricultural growth, rural development and have a positive impact on the farm income.

2.1.11 Provision of soil analysis subsidies

According to Khapayi (2013) the government should provide soil analysis subsidies to emerging farmers to enable them to determine which products can be produced successfully in an area where they farm. Fertilizer companies and government research institutes should assist the farmers by making laboratories available to send their soil samples.

2.1.12 Labor migration

In a study which was done by Nokonwaba (2014) it is stated that the majority of youth in the the province of Eastern Cape have migrated to the cities in search of employment therefore famers do not have enough labour for maize production. It can be concluded from the study that the majority of informants did not have sufficient labour for maize production. The availability of labour proved to be one of the most important determinants of maize production. However, in South Africa, women had to stay in the garden while their male counterparts were in the mines working for wages. The reason was that the black farmers in South Africa were severely undermined by apartheid practices as the apartheid-government sought to ensure cheap migrant labour while reducing the competition for white farmers.

2.1.13 Access to advanced agricultural inputs, technology non-government support

Most of the subsistence household food production is done under relatively harsh conditions with limited access to water, unpredictable rainfall and poor soil fertility. Because of the poor

agro-ecological conditions and the poor social conditions of the farmers the natural resources tend to deteriorate under these subsistence farming practices (Aliber & Hart, 2009). Mismanagement, overgrazing and unmanaged harvesting of firewood is further leading to deterioration of the natural resources. During their survey, Aliber and Hart (2009) noted that subsistence farmers did not have the resources to use advance technologies and inputs in their farming practises. Because of the low levels of income and the low spending on agricultural inputs, farmers chose to make use of low input “traditional” farming practises that formed part of their culture.

This enabled them to produce food even under harsh conditions with poor rainfall, but at low productivity. Although subsistence farming is very important for household food security the productivity is low, this leads to abandonment of agricultural activities and increased reliance on non-agricultural sources of income (Baiphethi & Jacobs, 2009). The low productivity can mainly be attributed to the absence of high yielding crop varieties that are widely used in high agricultural productive areas of the world. If subsistence farmers have access to better seed and technology, it will improve the productive efficiency and reduce the risk of food shortage. Access to improved seed, fertiliser and technology for subsistence farmers is complex, with a wide range of crops, climatic and soil conditions as well as poor developed distribution channels (Baiphethi & Jacobs, 2009). In a study which was conducted by PR (2016) showed that the first idea relates to the access the farmers have to advanced inputs such as hybrids seed, fertilizer, biotechnology and crop protection products such as herbicides and pesticides. The construct also includes items related to the support and mentorship the farmers receive from non-government industry organisations such as Grain SA, Agri SA, GFADA and others (PR., 2016). The reason why the farmers may have responded similarly towards these items placing them in the same construct can be explained by the fact that the respondents are all supported by Grain SA farmer’s development program. Through this program farmers receive support from Grain SA in the form of mentorship, agronomic advice and training (PR. 2016). The farmers in the Grain SA development program also take part in a project that allows them to gain access to advance; therefore, the farmers associate the access to support from Grain SA with access to mentorship and access to advance inputs.

2.1.14 Low quantity and poor quality

According to Baloyi (2010) most of smallholder farmers produce low quantity of produce with poor quality and results to products being ignored by markets. Partnering of emerging farmers with business is limited through these low quantities and poor-quality products, because

businesses prefer good quality of maize supplied continuously for the satisfaction of their customers.

2.2 Challenges faced by emerging farmers

The study which was conducted by Zhou *et al.* (2013) in Southern Africa recognized many challenges to emerging farmers. These challenges included climate change, lack of supportive structures, poor access to market and information, public services such as extension services and technology. These were some of the limiting factors of maize producers from proceeding to commercial farming. Another study conducted by Hailua *et al.* (2015) exposed unreliable rainfall, lack of farm inputs such as fertilizers, pesticides, fungicides, Urea, distance to market and lack of irrigation infrastructures as a major challenge that limit participation of smallholder farmers in crop commercialization. In a study conducted by Kadapatti and Bagalkoti (2014) many challenges that were faced by emerging farmers; included management of water, lack of access to inputs, insufficient availability, lack of inputs with good quality, non-availability in affordable packages and lack of knowledge. Challenges faced by emerging farmers includes low mechanization, shortage of water, poor infrastructures, poor safety and security on farm properties, pest and diseases, lack of access to inputs and access and distance to markets (Elekanyani ,2017) Many respondents (80.4%) ranked shortage of water as the second main constraint in their daily farming activities. Low mechanization (technology) was regarded as the main problem facing many respondents (92.8%). More than half of the emerging farmers also pointed out that infrastructure and access to market and long distance from the point of farming is still a challenge in the Mutale Local Municipality (69.3% and 60.7% respectively). The latter includes irrigation infrastructures such as dams. Kadapatti and Bagalkoti (2014) further noted poor access to suitable extension services as restricting factors to suitable decisions regarding cultivation practices and technological application. A study conducted by Njukwe *et al.* (2014) revealed the lack of market services support as one of the major challenges to farmers in Cameroon. Most roads linking farmers to the point of selling were not accessible and constitute a blockage for out-flow of perishable agricultural produce by most farmers in Cameroon; hence there was a lack of storage by many farmers. Another study in Guinea (Tolno *et al.*, 2016) also reflected that agricultural infrastructures are still a major constraint to smallholder commercialization. The latter challenges were poor roads conditions and the provision of transportation services was insufficient: and the other types of infrastructure supporting agricultural markets (e.g., for storage and processing) were also underdeveloped.

Problems related to storage facilities were also noteworthy in that 41.4% of farmers lack adequate storage facilities. A study conducted by Adekunle (2013) in the Eastern Cape province of South Africa supports many other findings that many farmers are challenged by factors such as the use of technology and limited technology in their farming activities, lack of fertilizers, poor storage facilities and lack of market to information. Another study in South Africa by Matsane and Oyekale (2014) revealed the prominent constraints to smallholder commercialization which were: lack of access to credit, lack of access to storage facilities, lack of market information, inadequate access roads, small size of transport and high transportation costs. The uncovered limiting factors included the poor physical infrastructures such as roads, lack of transportation to the markets from the farms, lack of information and market infrastructures as well as the low education levels which results in an inability to interpret market information to be used in the production planning and marketing.

2.3 Role of Extension officers in assisting emerging farmers to progress to commercial farming

Extension officer's services are the most needed tools for the development of agricultural support to farmers (Peshin *et al.*, 2014) and a serious component of agricultural sector (Mahaliyanaarachchi *et al.*, 2006) A real extension officers need to have more skills and quality for the achievement of commercial process. These include exceptional listening skills, and timeliness. Extension officers are important for supporting and assisting farmers in technical and logical support and access the relevant technologies (Van Niekerk, 2009). In the study that was conducted in Kwazulu Natal Province South Africa, discovering the role of agricultural officers, it was found that agricultural extension officers involved with farmers in transferring technology and the production inputs distribution, which poses challenges to biodiversity conservation. Extension offices were observed as the key role that hold capacity to promote ecological agriculture and sustainable farming. (Abdu-Raheem, 2014).

In a study conducted by Van Bo (2012) it is asserted that the role of agricultural extension services is the most critical element as they are agents for dissemination of advanced technology for enhanced cultivation, animal husbandry, forestry, fisheries, processing industries, storage and post-harvesting of crops. Their role also included development of economic management skills and assistance with market information (Van Bo, 2012). In another study by Magoro and Hlungwani (2014) it was highlighted that the role of agricultural extension on smallholder commercialization in South Africa is to empower rural livelihoods, empower farmers by building social capital or improving resource management.

CHAPTER 3: METHODOLOGY

3.1. RESEARCH DESIGN AND INSTRUMENT

The study will adopt a mixed research method, and data will be collected by means of a questionnaire. The questionnaire will be divided into three sections as follows: demographic information production profile, and factors that could transform farmers and views of extension officers. This will be done to face to face interviews with individual farmer's in order to get clarity of questions. The interview will approximate take 30 minutes.

3.2. UNIT OF ANALYSIS AND SAMPLING PROCEDURE

According to Trochim and Donnelly (2006), the unit of analysis is the main thing that is to be analysed in this study. The proposed research will make use of individuals, cooperatives as well as study groups of emerging maize producers as sampling procedure. Instika Yethu Municipality is divided into two towns which is Tsomo and Cofimvaba therefore two study groups with five farmers in Tsomo and two study groups with five farmers will be selected to answer the questionnaire which make the total of 30 farmers. The study also includes extension officers in Instika Yethu Municipality as key informants working closely with the farmers. four extension officers will be selected in the study to give their views concerning the hampering factors to commercialization.

3.3. DATA COLLECTION TECHNIQUES

Data will be collected from Instika Yethu farmers in Mgxobhozweni location and Forty location in Tsomo and in Mtanyana study group as well as in Ngojini Maize project in Cofimvaba by means of structured questionnaire. This will be done to face to face with individual farmers to get clarity of questions and make observations of the farming area. Questions will also be translated into the participants language of choice should they not understand English.

3.4. DATA ANALYSIS AND INTERPRETATION

The data will be summarized in Microsoft excel and analyzed through Statistical Package for

Social Science (SPSS). Descriptive statistics provide the essence of the study by summarizing the data sample and measuring it into tabular or graphic forms.

3.5. ETHICAL CONSIDERATIONS

Ethical clearance will be applied to the University of the Free State. The study will be strictly confidential, and respondents will remain anonymous. All participants (farmers as well as extension officers) will be given a written consent form which explaining what the study would focus on and their obligations and rights. In order to ensure that participation is voluntary, all the data collection tools will be accompanied by a written consent form which summarized the study and its objectives.

CHAPTER 4: RESULTS AND DISCUSSION

4.1. INTRODUCTION

This chapter discusses the results of the study. The data used in this chapter was obtained from sampled farmers and extension officers in the Intsika Yethu Local Municipality through structured questionnaires. In this chapter, identified challenges are presented. The research study revealed key factors limiting emerging maize producers from progressing to commercial farming in Intsika Yethu Local Municipality. This is followed by presentation of challenges faced by farmers, inferential statistical analyses and discussion of results.

4.2 Demographics of the Study area

As Table 1 shows the demographic information indicates that majority 64,3% of farmers were females while males were only 35,7%. The reason is that most males in the study travelled to work in mines leaving females behind to take care of children and come back after a long time. Females start farming as an entry to be able to put food on the table while their husband is not around. According to Nokonwaba (2014) noted that it is a tradition in the study area that after getting married a woman shall work in the fields with her husband or while the husband is working in the urban areas. Most of respondents (30%) were aged between 36 to 40 years and about (26.7%) were aged between 51 to 60 years, then from age 26-30 years is only 3.3% and from age 31-35 is 13,3%.

According to the finding of the study, youth is not fully participating in agriculture and is a major problem because young farmers are easy to commercialize as compared to older farmers because older farmers are challenged by lack of new technologies. The results indicated that all the farmers participated in this study were blacks. The study conducted by Khapayi and Celliers (2015) in the province of Eastern Cape in South Africa has revealed that most farmers in rural areas are not educated which could result to incapability to interpret information market essential for production planning and marketing. The results of the study show that the majority of farmers participated in the study have low level of education. Table 1 below shows the distribution of the farmers by their education level. Table 1 shows that 36.7% of farmers have never been at school; 23.3% had Grade R to Grade 8; 10% had Grade 9 to Grade 12; and 20% had completed matric; only 10% of farmers went for tertiary qualification.

According to the findings of the study the correspondents have less than 5 years with 20 farmers (66.7%) been farming in Intsika yethu municipality, about nine farmers which makes 30% of the total of farmers interviewed have more than 5 years, but less than 10 years farming in the

area and only 3.3% of farmers have more than 20 years of farming in the area. The results indicated that the farmers of Intsika Yethu Municipality are still new in farming as majority have a short-term period.

Table 1: Demographics information of the respondents

		Frequency	Percentage
Gender	Male	10	35.7
	Female	18	64.3
Age	26-30	1	3.3
	31-35	4	13.3
	36-40	9	30.0
	41-50	5	16.7
	51-60	8	26.7
	61or older	3	10.0
Racial Group	African	30	100.0
Dependents	Yes	30	100.0
Number of years in farming	Less than 5 years	20	66.7
	More than 5 years, but less than 10 years	9	30.0
	More than 20 years	1	3.3
Level of education	Never been to school	11	36.7

	Grade R to Grade 8	7	23.3
	Grade 9 to Grade 12	3	10.0
	Matriculated	6	20.0
	Tertiary Qualification	3	10.0

Source: Survey Results (2021)

4.3 Training received by farmers from Extension officers

Farmers were asked about the training they received from extension officers and the results are indicated in the Table 2 and 3.

Table 2: Extension services

		Frequency	Percent	Valid Percent
Valid	Yes	19	63.3	63.3
	No	11	36.7	36.7
	Total	30	100.0	100.0

Table 3: Where to receive extension services

		Frequency	Valid Percent
Valid	Government	18	94.7
	Non-Government	1	5.3
	Total	19	100.0

Source: Survey Results (2021)

Extension offices services are the most needed tools for the development of agricultural support to farmers (Peshin *et al.*,2014) and stay a serious component of the agricultural sector (Mahaliyanaarachchi *et al.*, 2006). A real extension officers need to have more skills and quality for the achievement of commercial process. The findings reveal that the majority (63.3%) of farmers had access to extension services. Farmers mentioned that government and non-government played significant roles in availing these essentials, especially with regard to accessing government subsidies for acquisition of seeds and training.

4.4 Land Information

4.4.1 Land ownership

Land is regarded as the one of the serious factors for the production to be successful. Eastern Cape is faced with the major problem of poverty and over population, because land is not efficiently used. Therefore, any piece of land available must be used efficiently with the aim of producing food for the people. Participants were asked to indicate the information about their land and the results are illustrated below

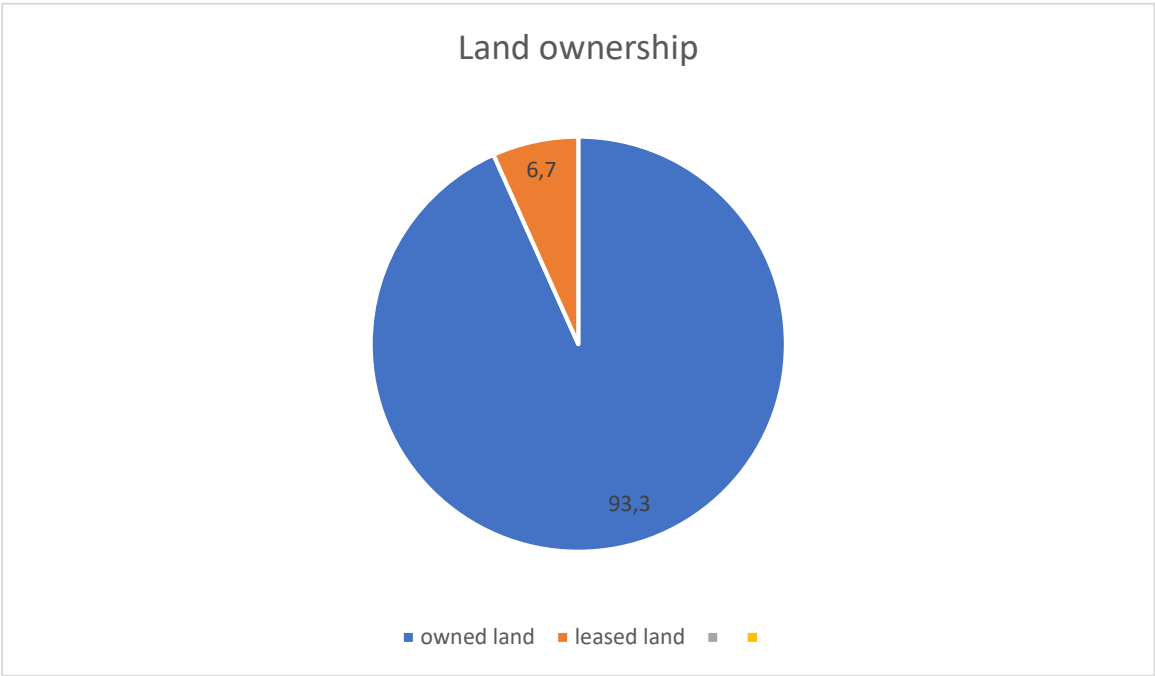


Figure 1: Land ownership

According to Figure 1, it shows that (93%) emerging maize producers of the study are farming on their own land and (6,7%) are leased land. The farmer’s situation regarding tittle deeds was also assessed

4.4.2 Land Size Distribution

Land is measured the most important resource to the emerging farmers and is vital to allowing them to boost themselves out of poverty” (Mutangadura, 2003).

Table: 4 illustrates land size distribution used by farmers.

Table 4: Land size distribution

Farm size (ha)	Percentage of correspondents %
----------------	--------------------------------

Less than ha	40
2-5	56.7
6-10	3.3

Source: Survey Results (2021)

From the Table above, it is shown that most farmers in the study (56.7%) have cultivated land portions that are between 2-5 ha. About 3.3% of the farmers had between 6 and 10 ha under production, and 40% of farmers planted less than ha. The study exposed farming in small portions of land limits farmers from producing for formal markets.

4.5 Other factors that could transform farmers

Information below reflects factors that could impact on transformation of farmers from subsistence to commercial farming in Intsika Yethu Local Municipality. In interpreting the figures, it is important to note that each of the factors could have had an impact on all farmers.

4.5.1 Access to other factors by farmers in Intsika Yethu Local Municipality conducting soil samples

For smallholder farmers to function effectively and efficiently they are supposed to conduct soil samples as to know the required fertilizer and quantity per ha. Respondents were asked to indicate whether the extent in which they have conducted soil samples or not

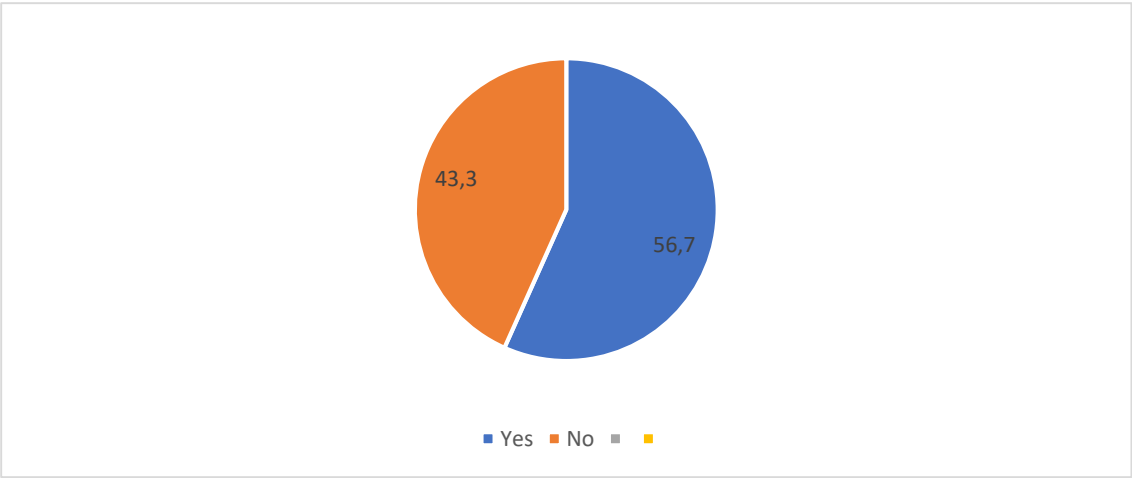


Figure 2 farmers who are able to conduct soil samples

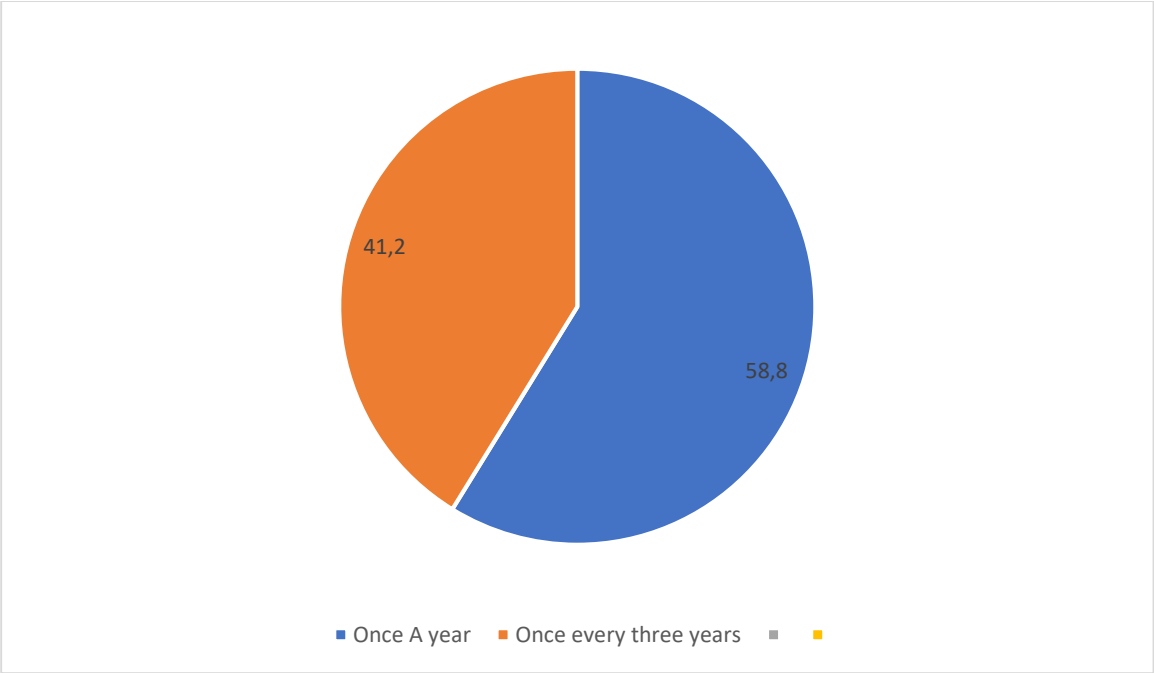


Figure 3: respondents of farmers on when the soil samples were conducted

In the above figures the results stated that emerging maize producers that conducted soil samples are 56.7% and 43.3%. the majority of farmers conducted soil samples once a year 58,8% and 41,2% are the farmers that conducted soil samples once every three years. The finding of the study shows that farmers are supported by Agriculture to conduct soil samples as to improve the standard of their maize.

4.5.2 Method of Transport

Transport is crucial in the farming business. It is used to transport both farming inputs to farmers and farming outputs to markets. Transportation is a key link for food security and agribusiness-based economic growth. Respondents were asked to indicate the method of transport and the results are indicated in Figure 4.

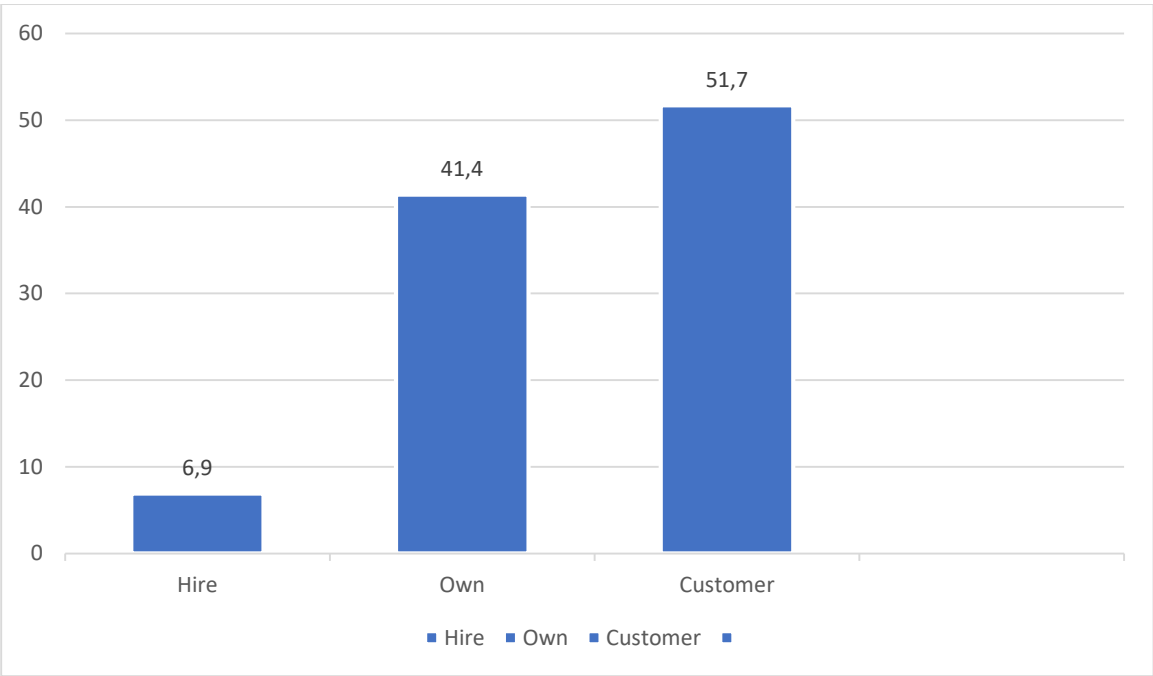


Figure 4: Method of Transport

According to Figure 4, it indicates that transportation mode amongst emerging farmers. For many emerging farmers it is very difficult to transport produce to the markets in time. When there is no reliable private form of transport produce spoilage and loss can occur (Bachmann and Earles, 2000). The results indicate that 51.7% are customers transport meaning that most of the farmers relies on the customers of transport mode and 41.4% farmers own the transport to assist those who don't have transport. and therefore, there is no need of hiring transport to access both production inputs and produce transportation to markets. Warner and Kahan (2007) point out that rural roads are the only means of access between farm and market in most parts of the region.

4.5.3 Tons produced from 2017 to 2019

Tonnage is 1000 kg and it is very crucial in maize production. Farmers must get not less than 4tons of maize per/ha if the quality of inputs is good application of fertilizer is recommended and herbicides, fungicides and pesticides are applied.

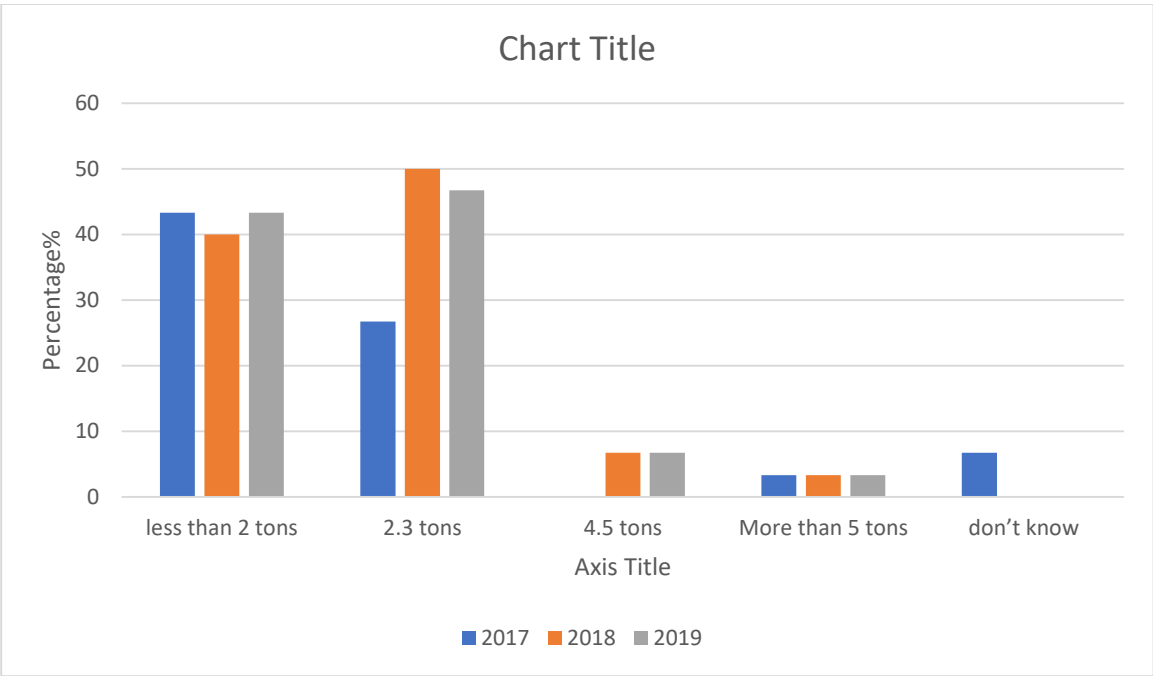


Figure 5: Tonnage produced by farmers from 2017 to 2019 seasons

According to the findings of the study from the above (figures 5) and it shows that most farmers in 2017 harvested less than 2 tons of maize 43,3% and the tonnage managed to increase in 2018 as majority of farmers 50% were harvested 2-3 tons and still in 2019 majority of farmers 46% harvested 2-3 tons. Farmers need to be provided with high standard of inputs to improve their production.

4.5.4: Access to Roads

Access to roads is very important if the condition of roads is not good it affects the marketing of the products as customers loose interest to travel long distance in gravel road that is full of potholes.

Table 5: Access road to the farm

		Frequency	Percent
Valid	Yes	29	96.7

Table 6:Type of the road

		Frequency	Percent
Valid	Gravel	29	100.0
	Total	29	100.0

Table 7: Condition of Road

		Frequency	Percent
Valid	Fair	11	36.7
	Poor	19	63.3
	Total	30	100.0

Source: Survey Results (2021)

In tables 5, 6 and 7 it shown that the majority of farmers 96.7% have access to road but 100% of farmers have only access to gravel road. The poor conditions of roads which are often impassable during rainy season, have an adverse effect on the transportation of the maize. Farmers indicated that the gravel access roads become slippery when it rained making it difficult to transport produce to markets and experiencing high transaction costs.

4.5.5 Storage Facilities and Condition of storage

Storage facilities have been the priority amongst farmer. Checking out the ventilation, cleanliness and conditions of the storage. Some farmers will use tanks to keep their crop while other farmers will be using their houses. Mostly people are not aware that moisture can lead to rotten the crop. Farmers need to make sure all the necessary precautions have been taken to avoid the unforeseen circumstances.

Table 8: Storage Facilities conditions

		Frequency	Percent
Valid	No	3	100.0
	Total	3	100.0

Source: Survey Results (2021)

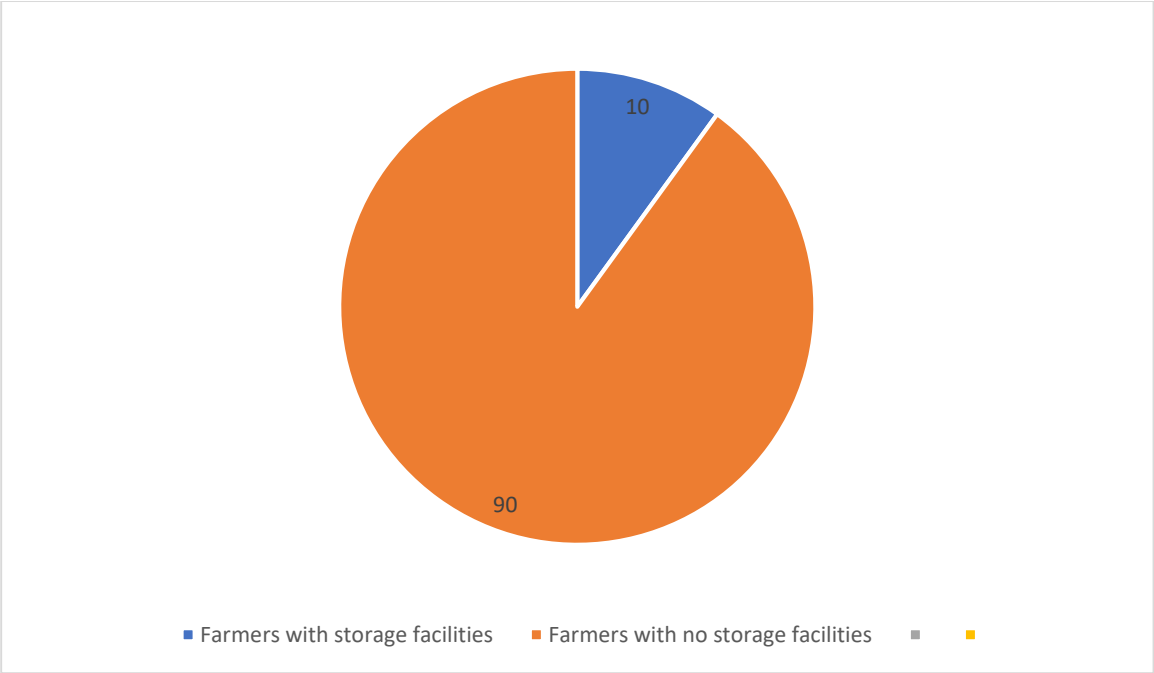


Figure 6: Storage Facilities

In table 8 and figure 6 it shown that the majority of interviewed maize farmers (90%) do not have storage facilities and (100%) of these farmers with storage have no cooling system.

4.6 Financial Support

The provision of financial support services remains one of the major important interventions in the agricultural sector for rural development, commercialisation, food security, poverty alleviation and income generation of emerging farmers. The commercialisation of emerging farmers cannot be achieved without suitable support services.

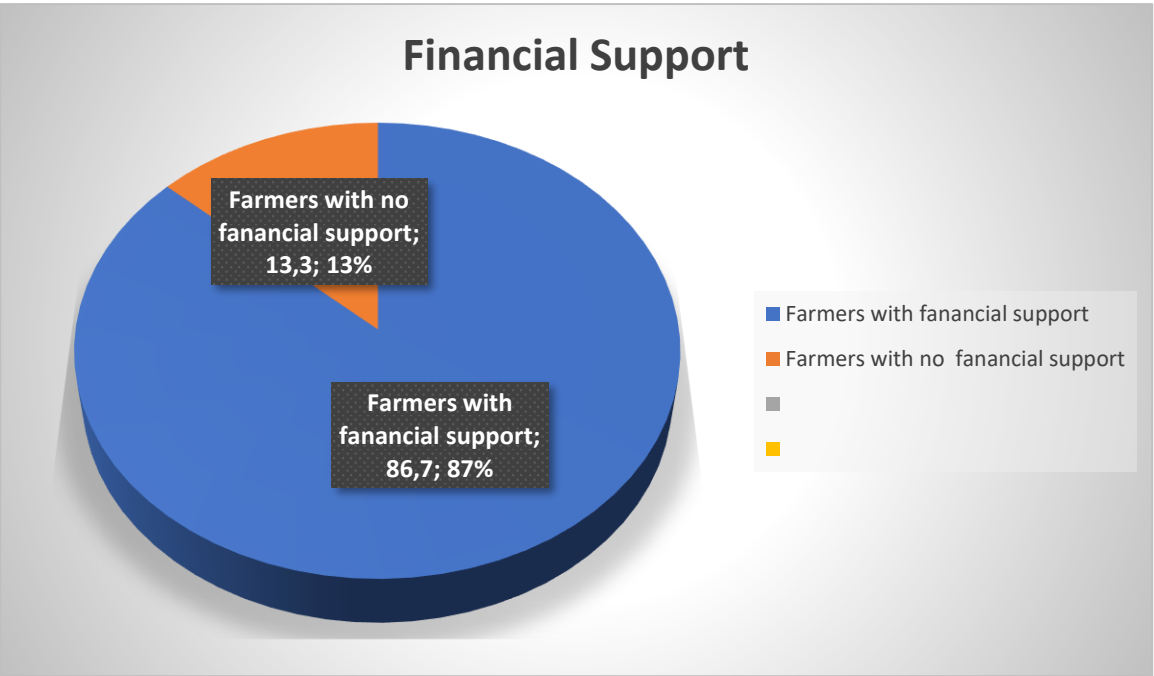


Figure 7: Financial Support Services

Table 9: Financial support provider

		Frequency	Percent
Valid	Government	25	96.2
Missing	System	1	3.8

The results stated well that the farmers of Intsika Yethu are fully supported by Government with financial support as 86,7% of farmers responded yes.

Table 10: Quality of maize

According to Baloyi (2010) most of smallholder farmers produce low quantity of produce with poor quality and leads being rejected. Partnering of emerging farmers with formal market is limited through these low quantities and poor-quality products, because businesses prefer good quality of maize supplied continuously for the satisfaction of their customers. The results are presented in the following table

		Frequency	Percent
Valid	Yes	4	13.3
	No	26	86.7

Table 11: intervention to be taken to improve quality

		Count	Column N %
Attend workshops/training	No	14	53.8%
	Yes	12	46.2%
	Total	26	100.0%
Consult government specialists	No	26	100.0%
	Yes	0	0.0%
	Total	26	100.0%
Engage with other farmers	No	10	38.5%
	Yes	16	61.5%
	Total	26	100.0%
Other	No	24	92.3%
	Yes	2	7.7%
	Total	26	100.0%

Source: Survey Results (2021)

According to the findings of the study from the above (tables 10,11) it shows that the majority of farmers 86,7% are not certified with the quality of maize and only 13.3% of farmers that were happy with the quality of the maize. This simple means that there are lot of things needed to be done in this study to improve the standard of maize crop in Intsika Yethu Municipality. The majority of famers 61,5% suggested to engage with other farmers as to improve the quality of maize and 46,2% suggested to attend trainings as well as workshops

Most of farmers 61,5% in the table below suggested to engage with other farmers as to improve the quality of maize, 46,2% suggested to attend trainings and workshops.

4.7 Market Channels

Access to markets plays an important role not only linking farmers with off-takers of their produce but also improves the farmers access to inputs that can help these farmers develop their production (Baiphethi & Jacobs, 2009). According to Khapayi (2013) in the province of Eastern Cape state that a lack of marketing for emerging farmers is due to the marketing challenges they face. The findings showed that the sampled farmers are faced with marketing challenges such as insufficient market facilities, low prices. Farmers who managed to produce maize of good quality were not realizing good profits from their produce owing to insufficient markets being available. Markets provide an opportunity for farm production to contribute to poverty reduction through the cash income released from sales of farm produce (Ajuruchukwu, Van Schalkwk & Van Tilburg, 2011).

This section explored on how farmers mostly sold their maize. Results are summarised and presented in Table 12.

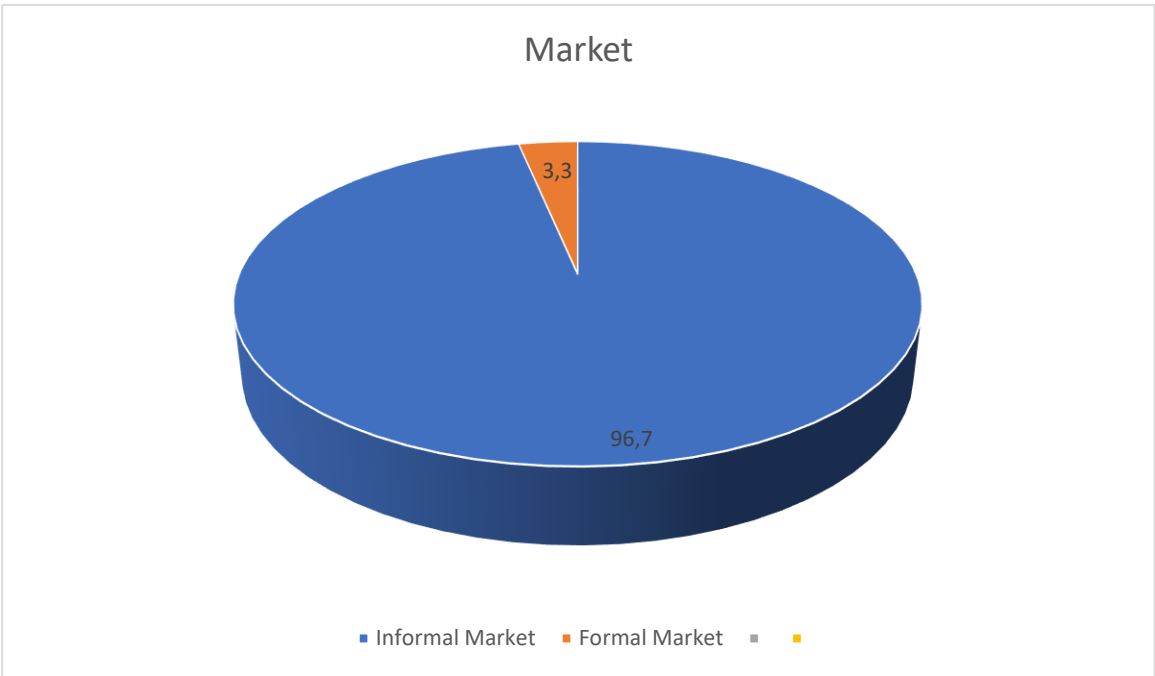


Figure 8: Market channels used to sell farm produce

Table 12: Intervention to be taken to improve quality

		Count	Column N %
Market prices set by retailers	No	29	96.7%
	Yes	1	3.3%
	Total	30	100.0%

Not meeting product demands	No	14	46.7%
	Yes	16	53.3%
	Total	30	100.0%
Small production area	No	15	50.0%
	Yes	15	50.0%
	Total	30	100.0%
No production during some seasons	No	25	83.3%
	Yes	5	16.7%
	Total	30	100.0%
Do not know	No	29	96.7%
	Yes	1	3.3%
	Total	30	100.0%
Other	No	30	100.0%
	Yes	0	0.0%
	Total	30	100.0%

Source: Survey Results (2021)

From figure 8 and table 12, it is noted that 96,7% of the farmers sell their maize to informal markets and do not have offtake agreements and only 3.3% of farmers sell their maize to formal markets. This may be due to small production areas as majority of farmers do not plant a huge number of hectors and due to poor quality of maize.

4.8 Challenges faced by farmers in Intsika Yethu Local Municipality

Through the results of analysis, the following themes regarding the challenges faced by farmers emerged; low mechanization, no water, poor infrastructures, poor commitment to youth. respondents ranked shortage of infrastructure like fencing as the second main constraint in their daily farming activities. Low mechanization/ implements (technology) was regarded as the

main problem facing respondents. More than half of the farmers also pointed out that infrastructure and access to market and long distance from the point of farming is still a challenge in Intsika Yethu Local Municipality. Farmers with access to the market pointed out that selling their produce to local people was the most accessible option to dispose of their produce. Some farmers indicated that irrigation structures were the main constraint affecting their production.

Table 13: Major challenges faced by farmers in Intsika Yethu Local Municipality from Extension officers

Respondent Number	How best can farmers improve their farming activities?	What are other challenges that farmers are facing?
1	Acquire more land that will be theirs. Soil tests must be done and fertilization must be done according to the soil results.	There's no enough land. Most farmers only own 1ha and are farming under dryland. Drought or insufficient rainfall is a challenge for farmers.
2	Farmers should have their own implements for cultivation Fencing of arable land should be considered to improve farming activities Training of farmers on agricultural activities is needed	Lack of implements Poor fencing of arable lands Lack of passion on farming Poor commitment of youth on farming Shortage of water
3	Fencing of arable can help to improve farming in communal areas	Theft on maize when is ready for market more especial the green mealies
4	Farmers need to learn to plant high value crops other than maize so that they can improve their financial stability	Poor infrastructure, e.g. fencing, loss due to livestock damage. Farmers need to be provided with silos so that they can sell when saffex price is higher

Source: Survey Results (2021)

Table 14: Views of extension officers regarding challenges that hamper maize farmers from commercialization in Insika Yethu Local Municipality

Likert Scale Item	Likert Scale Responses (%)				
	SA	A	D	N	Total

Ownership of land	25	50	25		100
Diversification of farming produce	25	25	25	25	100
Availability of market for farm produce	25	50	25		100
Financial support	50	50			100
Climate change	25	50		25	100
Use of Genetic Modified Inputs	25	50	25		100
Aging Farmers	25	50	25		100
Limited Knowledge	50		25	25	100
Low Mechanization	50	25	25		100
Poor Infrastructure	25	75			100

Source: Survey Results (2020): SA= Strongly agree, A = Agree, D= Disagree, SD=Strongly

Extension officers also viewed infrastructure as a major stumbling block to farming activities. The negative impact of climate change and aging of farmers that was accompanied by lack of financial support for production input gaining could have been seen by extension officers as one of the critical challenges facing emerging agriculture. The almost neutral views by extension officers concerning crop diversification may be indicative in the above challenge. Extension officers also agreed that the majority of farmers own the land. This view could however be coming from locational advantages of emerging farming operations within the area, especially in that the nearest formal markets (border seed – about 80km and Epol about 100km away) leave the informal local market as the easiest and largely underserviced location for produce disposal. However, this study reflected the clear link between the results from farmers and extension officers. Limited knowledge as well as aging of famers are also the main challenges which also supported the despondences of farmers. Successful transformation towards commercialisation requires effective financial support, moderate climate change risk, relatively younger farmers, mechanisation and good infrastructure. Extension officers' views that all of the above are challenges facing the Intsika Yethu Municipality

CHAPTER 5: CONCLUSION AND RECOMMENDATIONS

5.1. INTRODUCTION

The aim of the study was to assess the factors that would assist smallholder farmers to a commercial mode of production in Intsika Yethu Local Municipality. were to analyse and identify the main challenges faced by emerging maize producers in progressing to commercial farming, to discern the views of agricultural officers regarding the problems that hamper emerging maize producers from progressing to commercial farming in Intsika Yethu Municipality in the province of Eastern Cape. To develop strategies that can be applied to assist emerging maize producers to progress to commercial farming. Therefore, this chapter provides the study summary, conclusions and recommendations on the main findings of the study. It further gives suggestions on future research opportunities.

5.2. CONCLUSIONS

The conclusion of the study is based on the proposal that was set by the research based on the results of some factors were tested for their significance to influence the ability of farmers to access the market. The following were the tested significant variables water shortage, farming inputs, lack of information, infrastructures, access to markets, and distance to market and low level of education by farmers are the obstacles to the commercialisation of smallholder agriculture Therefore, if this variable were taken into consideration in Intsika Yethu, emerging commercialisation process would have been improved, i.e. the shift from full subsistence to emerging farming to fully commercialised agriculture. Emerging commercialisation will add value on the decrease of poverty by improving farmers' income and contribute to food security.

stowards commercialisation using different policy instruments such as land reform programme (LRP), Black Economic Empowerment in Agriculture (AgriBEE), Comprehensive Agricultural Support Programme (CASP), and other organisations. If farmers of Intsika Yethu Local Municipality become aware of all these programmes, they could develop their emerging sector which will play an important role in economic development by enhancing food security, poverty reduction and job creation through commercialising their farming produce. All the above programmes need to be strengthened to support emerging farmers in Intsika Yethu area to ensure effective progression of emerging sector to commercial agricultural sector. The following challenges still need special attention; shortage of water, low mechanization, low input access, lack of infrastructures, and distance to and from markets. In the literature such challenges were found in many studies in South Africa and in other African countries as well.

5.3. RECOMMENDATIONS

From the results of this study, the following recommendations are proposed: Most of the farmers have 2-5 hectares under production, scale of production is not enough, and hence farmers are unable to secure off-take agreements from formal markets. Strategies to increase youth participation need to be devised both by the private sector and public institutions if commercialization of farming units is to be achieved. Such strategies could include providing motivations such as start-up credit to potential youth farmers and production skills. The support of youth in farming will also be the best strategy in reducing unemployment in the whole country. Poor educational and lack of training are critical findings that need to be addressed. There is a need for external agencies such as the government and the private sector to aim resources towards basic education and training provision.

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APPENDIX

QUESTIONNAIRE

SECTION A: DEMOGRAPHIC INFORMATION AND PRODUCTION PROFILE
--

Respondent name: _____

Contact number: _____

Date: _____

Name of farm/project: _____

Area/location of farm/project: _____

1. SOME CRITICAL SOCIO-ECONOMIC CHARACTERISTICS OF THE RESPONDENTS

Instructions: Mark the appropriate block with an X or write your answer in the provided space where applicable.

1.1. Gender

(a) Male	1
(b) Female	2

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1.2. Age

(a) 26-30	1
(b) 31-35	2
(c) 36-40	3
(d) 41-50	4
(e) 51-60	5
(f) 61 or older	6

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1.3. Racial group

(a) White	1
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(b) Black	2
(c) Indian	3
(d) Coloured	4

1.4.What is your highest level of education?

(a) Never been to school	1
(b) Grade R to grade 8	2
(c) Grade 9 to grade 12	3
(d) Matriculated	4
(e) National certificate	5
(f) Tertiary qualification	6

1.5.How long have you been farming in this area?

(a) Less than 5 years	1
(b) More than 5 years, but less than 10 years	2
(c) More than 10 years, but less than 20 years	3
(d) More than 20 years	4

1.6.Do you have any dependents?

(a) Yes	1
(b) No	2

1.7.If yes to question 1.6, how many?

(a) 1-3	1
(b) 4-6	2

(c) 7-10	3
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☐

1.8. Do you receive Agricultural extension services?

(a) Yes	1
(b) No	2

☐

1.9. If yes to question 1.8, where are the extension services from?

(a) Government	1
(b) Non-Government	2
(c) Other	3

☐
☐

2. FARMING SYSTEM AND PRODUCTION TYPE

2.1. Is your farm equipped with irrigation system?

(a) Yes	1
(b) No	2

☐

2.2. If yes, what system type?

Pivot	Sprinkler	Flood	Other
1	2	3	4

☐

2.3 What type of maize do you produce?

(a) Yellow maize	1
(b) White maize	2

(c) both	3
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☐

2.4 What is the size of your land?

(a) Less than 1 ha	1
(b) 2-5 ha	2
(c) 6-10 ha	3
(d) 11-20 ha	4
(e) More than 21 ha	5

☐

2.5 What is the land ownership status?

(a) Own land	1
(b) Leased land	2
(c) Other	3

☐

SECTION B: FACTORS THAT COULD TRANSFORM FARMERS

2. Key factors for commercialization

3.1 Have you ever conduct any soil samples for laboratory analysis?

(a) Yes	1
(b) No	2

☐

3.2 If yes, how often do you take your soil samples?

(a) Once a year	1
(b) Once every three years	2
(c) Once every five years	3

3.3 How many tons per hectare have you produced over the past 3 years?

Year	Less than 2 tons	2-3 tons	4-5 tons	More than 5 tons	Don't know
(a) 2017	1	2	3	4	5
(b) 2018	1	2	3	4	5
(c) 2019	1	2	3	4	5

3.4 Do you have access to farmer's organization?

(a) Yes	1
(b) No	2

3.5 Do you receive any maize production training and education?

(a) Yes	1
(b) No	2

3.6 If yes to question 3.5, specify your training providers?

(a) Government (Extension Officers)	1
(b) Non-Government Organization	2

(c) Private College or University	3
(d) Learning from Co-operatives	4
(h) Other, specify: _____	9

3.7 Do you own the implements used in your farming business?

(a) Yes	1
(b) No	2

3.8 If yes to question 3.7, what type of implements do you own?

(a) Tractor	1
(b) Ripper	2
(c) Plough	3
(d) Disc	4
(e) Planter	5
(f) Boom-sprayer	6
(g) Spreader	7
(h) Combine Harvester	8
(h) Other, specify: _____	9

3.9. Are there any access roads to the farm?

(a) Yes	1
(b) No	2

3.10 If yes, type of road?

Tar	Gravel	Paved
1	2	3

3.11 Condition of road

Good	Fair	Poor
1	2	3

3.12 Are there any storage facilities for your maize?

(a) Yes	1
(b) No	2

3.13 If yes to question 3.12, is your storage facilities equipped with cooling system?

(a) Yes	1
(b) No	2

3.14 Who provide you with financial support?

(a) Personal savings	1
(b) Banks	2
(c) Loan Support	3
(d) Government	4
(h) Other, specify: _____	9

3.15. Are you satisfied with the quality of your maize?

(a) Yes	1
(b) No	2

☐

3.16.If no to question 3.15, what intervention is needed to improve your product quality?

(a) Attend workshops/trainings	1
(b) Consult government specialists	2
(c) Engage with other farmers	3
(d) Other	4

☐

If other, Please specify:_____

3.17. Are your clients satisfied with the quality of your product?

(a) Yes	1
(b) No	2

☐

3.18.What is your preferred market?

Informal market	Formal market	International market	Other
1	2	3	4

☐

If other, please specify:_____

3.19.Who sets the price for the maize?

Farmer	Middlemen	Retailer	Farmer association
1	2	3	4

☐

3.20.Do you have market off-take agreements?

(a) Yes	1
(b) No	2

☐

3.21. If No to question 3.20, why not?

(a)	Market prices set by retailers.
(b)	Not meeting product demands.
(c)	Small production area.
(d)	No production during some seasons.
(e)	Don't know
(f)	Other

☐
☐

If other, please specify: _____

3.22.How to transport your maize to market?

Hire transport	Own transport	Customer transport	Other
1	2	3	4

☐

If other, please specify: _____

3.23How far is the market from your farm?

(a) 1- 10 km	1
(b) 11-20 km	2
(c) 21-30 km	3
(d) 31-40 km	4
(e) More than 40 km	5

☐

SECTION C: VIEWS OF EXTENSION OFFICERS

INSTRUCTIONS:

Please answer the following questions by crossing(X) on the relevant Block or writing down your answer in the space provided.

This questionnaire explores the factors that hamper the transformation of smallholder farming to commercial farming in Instika Yethu Local Municipality.

To what extent do you agree with each of the statements in the table below? Please indicate your responses using the following 4-point scale where:

1= Strongly Agree (SA)

2= Agree (A)

3= Disagree (D)

4= Strongly Disagree (SD)

What are the factors that hamper the transformation of smallholder farmers to commercial farmers in Instika Yethu Municipality?

Category	The following are the factors that hamper commercialization	SA	A	D	SD
1	Ownership to land	1	2	3	4
2	Diversification of farm produce	1	2	3	4
3	Availability of market for maize produce is limited	1	2	3	4
4	Financial support	1	2	3	4
5	Farmers are affected by climatic conditions	1	2	3	4
6	Aging farmers	1	2	3	4
7	Use of low inputs	1	2	3	4

8	Low mechanization	1	2	3	4
9	Limited knowledge	1	2	3	4
10	Poor infrastructure	1	2	3	4

How best can farmers improve their farming activities?

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What are other challenges that famers are facing?

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