Imperial Journal of Interdisciplinary Research (IJIR)
Vol-2, Issue-10, 2016
ISSN: 2454-1362, http://www.onlinejournal.in

Maize Farm Growth, Constraints and Profitability: A Case Study from Northern Regions of Tanzania

Dr. Ranjul Rastogi[1] & Cairo Paul Mwaitete[2]
[1]Professor, School of Business
[2]PhD-Scholar, School of Humanities and Social Sciences
Galgotias University, Gr.Noida, UP,India

Abstract: *The study investigates on maize farm growth constraints and profitability a case study from northern Tanzania through using questionnaires, Interviews, group focus discussion and observations. Data reveals that that maize farming is very significant in alleviating poverty since it is the main food staple in Tanzania and a means of livelihood and income among rural people. The study also reveals that current maize farm investment is not technically feasible, viable and not profitable investment and therefore there is a need for government support to farmers. It is also revealed that current level of output for the maize farm is less than 30 bags per acre of production. The study recommends that additional revenue from gold export should be raised to account for agriculture and import modern farming technology of quality seed to increase yield. Provide subsidies to all farmers with timely agricultural inputs. The government must use gold revenue to construct dams and improve rural infrastructure. Special education should be given to farmers on commercialization of agriculture and marketing. Lastly the government must provide soft loans to farmers.*

Key Words: *Farming, Profitability, commercialization, Rural people*

1. INTRODUCTION

Importance of agriculture shouldn't be ignored as it has significance in poverty alleviation and economic growth. Agriculture is the livelihood and source of income among the majority of people mainly the rural population. Improving agriculture means improving the life of majority and rural population benefit the most and help alleviating poverty. But farming has to be sustainable that can ensure farmers with reasonable income and profitability. This paper investigates on maize farm, growth constraints and profitability a case study from northern Tanzania and examines the key constraints that farmers are currently facing when desiring for growth and profitability. The study also assesses the significance of agriculture in poverty alleviation.

According to Vashishitha, et al (2013), reveals that agriculture plays a significant role in stimulating the economy, providing food supply needed to reduce hunger among majority of the population. Cervantes and Dewbre .(2010) and other researchers also confirm that agriculture has significance role in alleviating poverty in most developing countries. They also added that agricultural led growth is more pro poor growth than other approaches. The researchers also defend that innovative approaches is needed to improve the agriculture sector in rural areas since the agriculture sector has a role to play in poverty alleviation.

Tanzania is believed to have good area weather with fertile land and water sources for agricultural farming but again data reveals that the agriculture sector is also falling raising a concern over food hunger and malnutrition. Availability of food will assure the nation with strong people with capability to serve the nation in different ways. Notwithstanding the government effort to deliberate improve the agriculture sector is far from the reality and condition of farmers is deteriorating in the country.

Travelling in the rural area where most of the farmers live you shall see farmer's conditions and their building and give you signal that the fall of agriculture is the fall of the rural farmer's income and their livelihood. This calls for examining the key constraints, growth and profitability among farmers. In this context where 80% of the workforce is engaged in agricultural activities and therefore examining key constraints and profitability in agriculture is more pro poor strategy.

Mwaitete (2015) in his paper analyzes that in the 21st century, agriculture continues to be a fundamental instrument for sustainable development and poverty reduction. This is also evidenced by many researchers who claim that by 2030 the demand for agricultural products and food will be high. Therefore there is a need for the government to set up infrastructure that will

maximize agricultural production activities to meet this increased demand.

1.1 Objectives

The main objective of this study is to investigates maize farm growth constraints and profitability a case study from northern Tanzania

Specific Objectives

- To explore the current level of maize farm output per acre of production
- To examine whether the maize farm investment is technically feasible, viable and profitable investment and therefore there is no need for government support
- To investigate the significance of agriculture in poverty alleviation.
- To examine some current constraints facing maize farmers

1.2 Hypotheses

- The current level of maize farm output is more than 30 bags per acre of production
- Current maize farm investment is technically feasible, viable and profitable investment and therefore there is no need for government support

2. LITERATURE REVIEW

Agriculture in Tanzania plays a significant role in the economy since majority of its citizens are employed in this sector. Statistics shows that more than 80% of the work force in Tanzania is engaged in the agriculture sector and the rural population agricultural activities play a significant role. Any transformation by government and individuals towards improving the agriculture sector is the transformation to the rural poor.

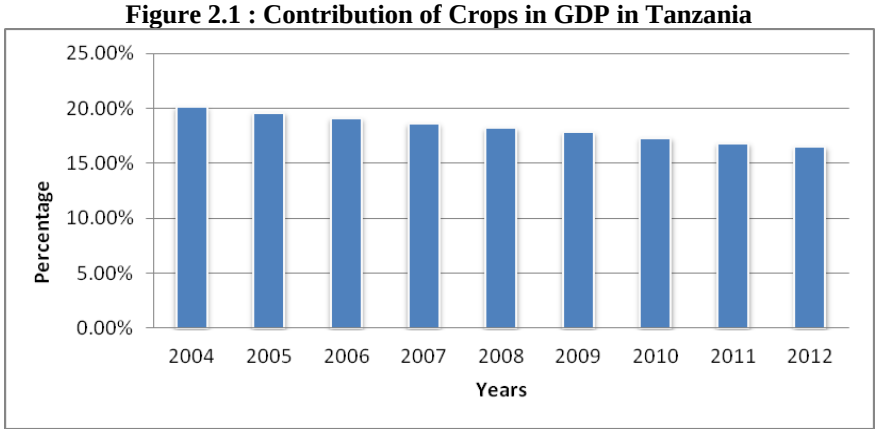
Agriculture is still the important sector in the economy for food security, employment, fight against malnutrition and growth of the economy AGRA (2013) and Necmiye (2012). It is also reveled that agriculture led growth has great impact in reducing poverty to the country and Tanzania follow the same. There is no way a poor nation like Tanzania can attain its development without adding investment in agriculture; it is where majority of the poor lays.

It is also observed from Tanzania statistics that in the past ten years agriculture investment has been continuously falling despite its potential. UNESCO National commission of Tanzania (2013) and MKUKUTA Secretariat (2010) evidences the statement.

This calls for the researcher to investigate the falling trend in agriculture and in this context the researcher's use one of the agricultural products such as maize assessment since it is one of the main food staple in Tanzania. This is also pointed by the Ministry of Agriculture Food Security and Cooperatives (2008) that maize is the most important food crop accounting for over 20 percent of total agricultural GDP. Food and cash crops account to over 70% rural income in Tanzania.

Below is the agricultural crops share of GDP demonstrating the trend in agriculture crop share that has been falling throughout the period from 20.10% in 2004 to the lowest level of 16.5% in 2012.Therefore it calls for investigation about agricultural investment that something is going on the field farms that needs reversing

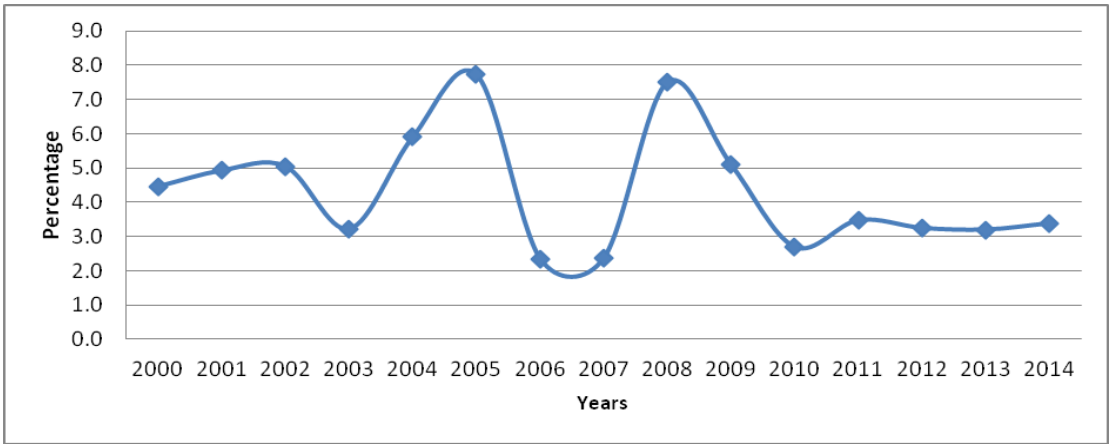
Figure 2.1 : Contribution of Crops in GDP in Tanzania



Source: Ministry of Finance(2013)

Several issues for underperforming of the sector is also revealed by Endrew (2008), that the agriculture sector remains dominated by self-sustaining smallholders and the sector has grown poorly performed and transformation on the agriculture sector has been difficult to attract more productivity and commercialization.

Figure 2.2 Annual growth of Agriculture in GDP (in percentage)

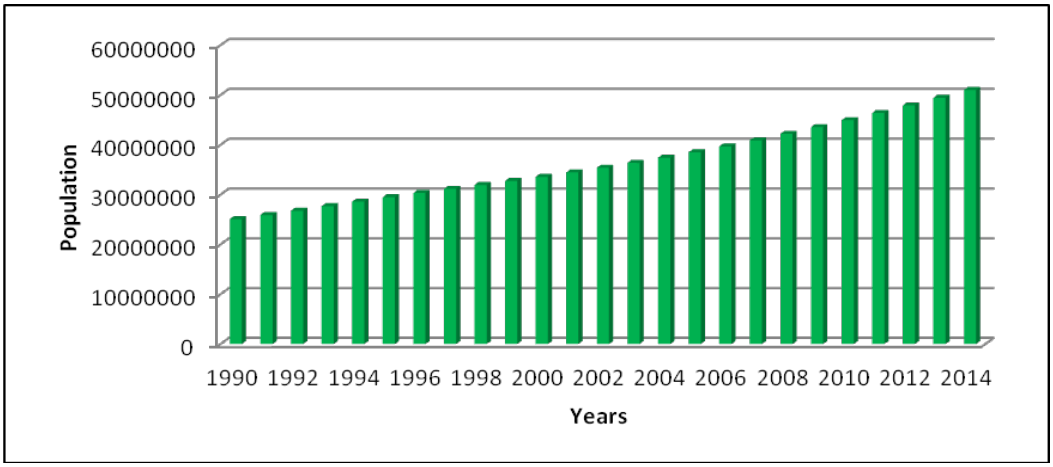


Source: World Bank (2015)

The above figure demonstrate that the real agricultural value added (% of annual growth) has been growing from the initial level of 4.5% in the year 2000 and reaches growth rate of 5% per annum in 2002 and fell to the lowest level of 3.2% in 2003 and reaches peak in 2005 at the rate of 7.7% then that was the highest growth in those years.Then It continued falling throughout the period until it reaches 3.4% in 2014.This fluctuation is mainly attributed with lower output and profitability with the agricultural investments,Poor farming tools and other agricultural inputs that could help increase production of more crops.

The continue falling of agricultural production and growth will lead to mass starvation, hunger, poverty and inflation.Efforts must be done to uncover the falling trend and strategy to growth must be used to support the growth of the sector with profitability since the population is growing and demand for food is also expected to increase and therefore more production is needed.

Figure: 2.3 Trend of Population Growth in Tanzania



Source: Country Meters (2016),

The above figure demonstrate that population in Tanzania has been positively increasing from its first population statistics where in 1990 the population was 25,060,746 then grew to 33,563,436 in the year 2000 and continue increasing positively to 51,018,039 in the year 2014 .The trend is significant that suggest to increasing agriculture investment in Tanzania mainly the maize farming to meet the increased demand.

Ngugi, Karau and Nguyo (2012) and Derek, Alain, and Elizabeth (2009) also suggest that agriculture not only supply the needs of total population for food and raw material but it provides a market for industrial products also. It contributes in export income of the country, helps in providing surplus fund for investment and employment opportunities. In short, contribution of agriculture to the gross domestic product for merchandises and services made by residents is very crucial.

According to Nyanjom and Konyango (2013), reveals that agriculture may contribute very much on to the national development because it emphasizes on the soil and its products which humanity depend for lively hood. It is the most valuable resource of the world. As economics agriculture remains the dominant segment of the economy in providing job to the greater population. Agriculture facilitates rural access of road and other infrastructure which encourage the flow of goods and services. Provision of extension services like credit facilities, medical, electricity is an indication of national development.

Mwaitete (2015) reveals that the share of agriculture including hunting and forest has been decreasing with the highest record of 26.9% in 2004. The sector has been continuously falling reaching its lowest level of 22.1% in 2011 and slightly improved but not significant in 2012 where it was recorded at 21.6%.This slightly improvement is linked to the growth share in the forest activity. But generally the sectors are not performing to the expected level given the abundance of land and water resources.

It is also pointed out by Kandeh, et al (2011) that many agricultural activities in Africa are neither productive nor profitable through revealing that the farmers yields are low to generate surplus and also lack of the market due to poor roads. This demonstrates that agriculture has to be transformed to meet the current demand. These researchers were too general never focus on profitability with quantitative approach. Also they did do not provide much analysis regarding maize profitability.

Therefore the researchers of this study will investigate maize farm growth constraints and profitability a case study from northern Tanzania.

3. METHODOLOGY

Methodology used in conducting this survey was questionnaires, interview and discussions in order to get data on primary sources for the period of September 2015 to March 2016. Self-administered questionnaires were designed to seek views, opinions, and relevant data from the respondents in respect to the objectives of the study. The questionnaires were simple with the kind of questions in which, respondents had wide freedom of choice to express view on maize farming activities. Formal and informal Interviews were carried out in order to get a general picture and views on maize farming activities. Interviews were conducted as a way of supplementing the data which were generated through questionnaires. Observation method was used by the researchers to physically observe the farmers situation about their farms, families constraints and living condition for maize farm activities. The researchers visited field farms to observe the current status of maize farms and its viability given the level of production. Maize farmers cost and benefits analysis was used during the group discussion (Final meeting) at Bargish to examine the maize farm investment in some cases simulated by the researchers and NPV formulae applied to individual farmers to examine this trend whether maize farm is viable or not and help probing the financial gap, constraints and requirements that farmers are facing to attain viable investment in the areas. Nine individual farmers cost and benefits were simulated at the rate of 19% interest rate (r).

The study population is Northern Tanzania with a focus of two regions of Arusha and Manyara. For Arusha region it comprise one ward in Karatu namely Mbulumbulu ward and in Manyara it comprise two wards of Mbulu district that is (Moringa and Bargish) . The area visited aimed at getting an overview regarding the situation of farm investment and constraint that farmers are facing.

The researchers used a judgmental sampling technique (a non probability sampling) based on the researchers judgment for the individuals to be selected for the sample given the limited amount of money and limited time. In this analysis, total 450 respondents were contacted, but only 300 provided their feedback through questionnaire, interview and discussion. This shows a response rate of 67% which is significant to validate the study. Findings

from interview and questionnaire were also supplemented by observations.

3.1 DATA PROCESSING

The data were processed by using excel. Statistical presentation such as NPV computations, tables, charts, percentages and ratios have been used in the analysis and presentation of the data by using excel spread sheet.

4. FINDINGS

4.1 Current Level of Output of Maize Farm Investment

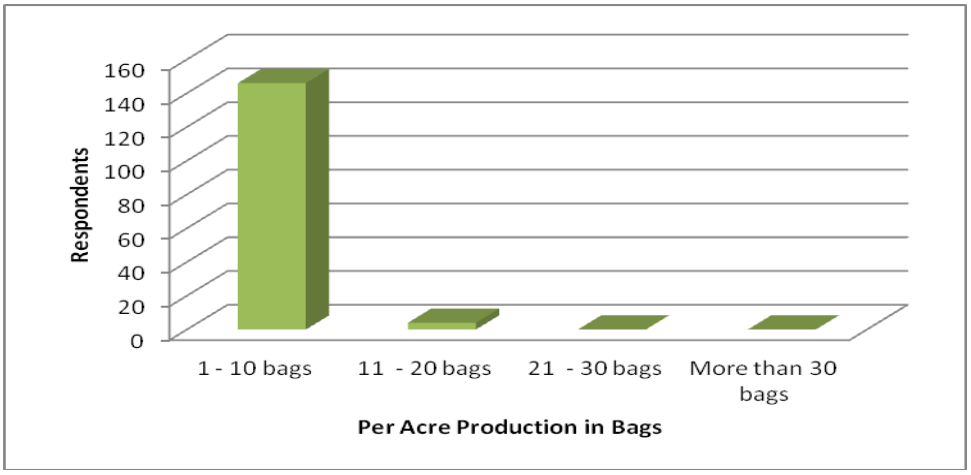
The researchers also investigated the current level of maize farm output per acre of production.

This enabled the researchers to assess the current capacity of one acre in producing maize

in Tanzania especially from the northern part of the country where maize is the major product.

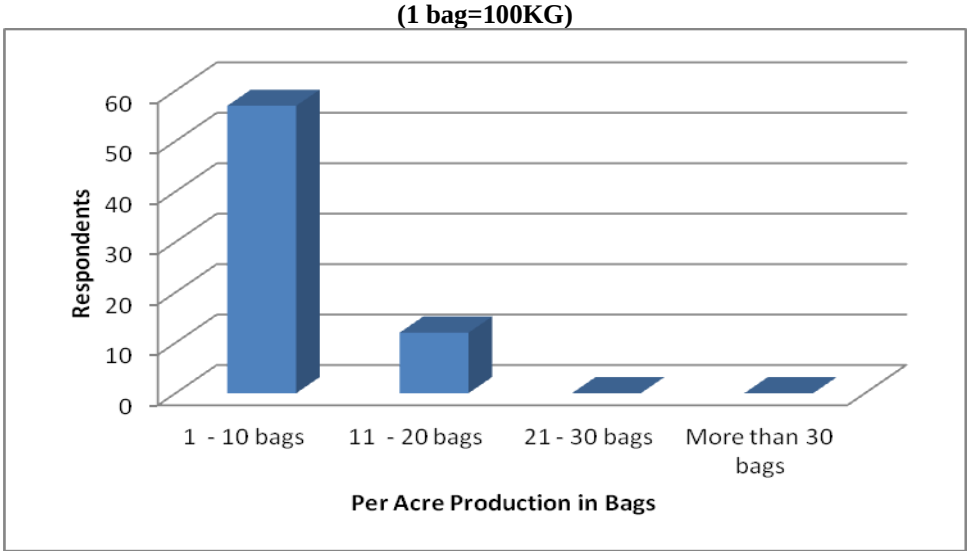
The analysis below provides the picture of the current level of output per acre;

Figure 4 .1.1 Current Level of Output of Maize in MbuluMbulu - Karatu District(1 bag=100KG)



The above figure reveals that the current level of maize farm harvest and output per acre of maize farm production ranges between 1 - 10 bags as commented by 146 respondent representing 97% and 4 respondents said that they only get harvest of between 11- 20 bags per acre. None respondents produced more than 20 bags.

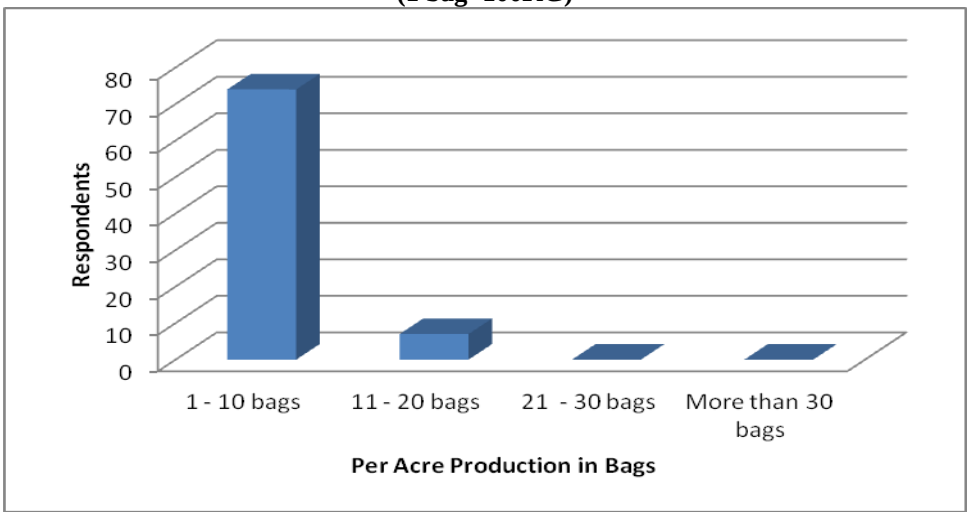
Figure 4:1.2 Current Level of Output of Maize in Bargish Antsi –Mbulu district (1 bag=100KG)



The above figure reveals current level of maize farm output per acre of maize farm production in Bargish Antsi –Mbulu district. 57 respondents representing 83% commented 1 - 10 bags yield and 12 respondents representing 17% said that they only get harvest of between 11 - 20 bags per acre.

Researchers probed further on why there is a low yield given their farm size, among the reasons identified was poor quality of seeds and soil infertility as the main contributing factors towards increasing output,

Figure 4.1.3 Current Level of Output of Maize in Moringa –Mbulu district (1 bag=100KG)



The above figure reveals Moringa –Mbulu district on the current level of maize farm harvest and output per acre of maize farm production. The range of yield between 1-10 bags as commented by 74 respondents representing 91% and 7 respondents representing 9% said that they only get harvest of between 11- 20 bags per acre as their maximum yield for one acre of maize.

Therefore the general indication is that we reject the null hypothesis and accept that the alternative hypothesis that current level of output for the maize farm is less than 30 bags per acre of production. None of the respondents had the capacity to produce more than 30 bags of maize per acre and therefore more farmers support is needed.

4.2 Maize Farm Viability and Need for Government Support

The researchers investigated in detail on the current situation of maize farmers on their cost and benefits of their investment and examines viability to establish financial gap requirement and other constraints for the investment given the status of gold export in the country. Maize farmers cost and benefits analysis used to examine the maize farm investment in some cases simulated and NPV formulae applied to individual farmers to examine this trend whether the venture on maize farm is viable or not and help probing the financial gap and requirements that farmers are facing to attain viable investment.

The researchers requested farmers to estimate their cost and benefits of maize farm per acre production of output as stipulated in the questionnaire form attached. Farmers discussed in details about the cost and filled those cost in the specified form of the questionnaires under the guidance of the researchers. The cost includes labor cost, fertilizer cost, seeds, planting cost, land clearing, guarding, pesticides, cultivation, weeding, storage cost, oxen cost marketing cost, transport, interest rate, rent, taxes, communication, electricity and any other expenses.

Farmers Behavior towards Cost

Initially most farmers included costs like cultivation, planting, storage cost but they did not include the implied cost of oxen and labour cost (use of their own oxen and labour provided by Family members) as part of the total cost. After discussion they realized that there is need to account for these costs also. Implied cost must be accounted for in monetary terms. It is where they realized that their total cost is more than what they currently calculating. The cost estimated was assumed to be fixed for the years estimated but benefits were allowed to change depending on the annual harvest.

Revenue Estimation and Profit

Farmers recalled back their total amount of bags of maize harvested and sold in previous years and the maximum price sold in that year was also identified by individual farmers and filled in the form under the guidance of researchers. Based on the estimated revenue and cost farmers were also requested to examine their calculations whether they are making profit or loss.

Observations on Profitability

When all cost and revenue is taken into account it was found that most farmers are operating at a loss given the output level per acre of production of maize. It is concluded that farmers are producing without knowing that they are making a loss.

Given the lower level of output per acre of production the study reveals that the maize farm investment in the visited villages is not viable since cost is greater than revenue. Even if we take consideration of 19% lending interest rate (which is very low rate of interest in Tanzania as compared to other countries) still the investment becomes worse, not viable as demonstrated on the NPV.

The following will be the formulae being applied to examine the situation;

Where:

C_0= Initial Capital

C_1= Cash flow in year one

C_n= Cash flow at time n

Decision Criteria

NPV < 0 Reject the maize farm investment proposal i.e not profitable and viable

NPV ≥ 0 Accept the farm Investment proposal i.e it is viable

The researchers decided to simulate the same cost and revenue projected by farmers on the basis that if farmer borrow money from the commercial bank at 19% lending rate(r). Simulation of result of few farmers representing the farmers of that region is shown in the Table 4.2.

The following were the results of NPV computation by using excel spread sheet reveals:

$$NPV = -C_0 + C_1\frac{1}{(1+r)} + ... + C_n\frac{1}{(1+r)^n}$$

Table 4.2 Criteria for Rejecting or Accepting the Farm Investment

Village/Ward	Farmer	NPV	Criteria
MbuluMbulu-Karatu	Individual farmer1	-222831.0	**Reject**
	Individual farmer2	-322143.3	Reject
	Individual farmer3	-416609.1	Reject
	Individual farmer4	-169376.9	Reject
	Individual farmer5	-297591.1	Reject
	Individual farmer6	-224237.6	Reject
	Individual farmer7	-13464.3	Reject
	Individual farmer8	-824153.0	Reject
	Farmer	**NPV**	**Criteria**
Bargish Antsi-Mbulu	Individual farmer1	-545807.2	Reject
	Individual farmer2	10206.6	Accept
	Individual farmer3	-557226.4	Reject
	Individual farmer4	-595940.2	Reject
	Individual farmer5	-395075.4	Reject
	Individual farmer6	109018.5	Accept

	Individual farmer7	-388261.0	Reject
	Individual farmer8	-505274.8	Reject
	Individual farmer9	-97053.6	Reject
	Farmer	**NPV**	**Criteria**
Moringa-Mbulu	Individual farmer1	-550561.7	Reject
	Individual farmer2	-912290.6	Reject
	Individual farmer3	-530623.9	Reject
	Individual farmer4	-735891.5	Reject
	Individual farmer5	-612058.2	Reject
	Individual farmer6	-704713.8	Reject
	Individual farmer7	-570950.2	Reject
	Individual farmer8	22658.4	Accept
	Individual farmer9	-855330.0	Reject

Therefore based on the above table demonstrate that the current maize farm investment is not technically feasible and viable in most villages. Therefore the researchers reject the null hypothesis and accept the alternative hypothesis

that Current maize farm investment is not technically feasible, viable and not profitable investment and therefore there is a need for government support to farmers. Based on the NPV criteria most individual maize farm investment are rejected once simulated. With the exceptional cases from Bargish Antsi,farmer two(2) and Six(6) their maize investment were viable investment when simulated. Likewise in Moringa Mbulu individual farmer eight(8), his maize farm investment is also viable.

Researcher observed that that most farmers are engaged in subsistence farming and whether maize farm viable or not is none of their consideration they do it because they found their parents doing the same and therefore a matter of traditional farming.

It is advisable that the only way to accept maize farm investment is to increase output to at least 40 bags per acre or increase price of maize per KG farmer can then realize positive NPV. The government should also see the way to reduce interest rate from financial institutions so that maize farm can grow.

4.3 Key Constraints Identified by all Maize Farmers

The following are the key challenges identified by farmers in all three villages visited of Mbulumbulu Village of Arusha region,Moringa and Bargish ants in Mbulu district of Manyara region.the constraint identified by farmers were then discussed in the final meeting at Bargish ants in order to get our common understanding regarding maize farm constraint todate.

Table 4:3 Current Maize Farm Constraints

	Moringa-Daudi(Respondents)	Bargish ants (Respondents)	Mbulumbulu (Respondents)
Poor quality of Seed	22	6	33
Soil Fertility	13	7	9
Climate Change	6	9	6
Technology	5	4	13
Fertilizer and Farm inputs	8	14	28
Government Restrictions	9	2	11
Business education and Marketing	11	8	23
Subsidies	4	13	11
Infrastructure and transport	3	6	16
Total	81	69	150

Quality of Maize Seed

Almost 20% (61) Respondents identified poor quality of seeds as the major problem hindering the maize production and yield.Some farmers have been planting seeds that has been distributed by the government agents and the seeds found to be fake in terms of quality.It accompanied with less maize harvest.Farmers insisted that the government must guarantee them with the quality of seed being distributed the agents and the variety of seeds must be communicated to farmer for the best output.

Soil Infertility

Respondents complained that the soil has been cultivated for years with the maize farms so it is infertile therefore the government must advice farmers with soil fertility technique or identify new product in the area. 10 % (29) respondent had this opinion.

Climate Change

Almost 7% (21) respondents explained that bad weather accompanied by drought has also been the major problem facing maize farmers in the area.But during the interview farmers recommended the use of underground water can be the best strategy to overcome climate change in the area.The government must support farmers with boreholes and reserve tanks to support maize farm irrigation with the use of underground water.

Farm Technology

From independence to date farmers has been using hand hoe as the major technology that dominate maize farming.The use of hand hoe has been the major contributing factor towards maize output this was noted to 7%(22) repondents. At this century the government must intervene in support of farmers with modern farming tools including tractors and other modern agricultural input to make it attractive to individual farmers in the areas.

Fertlizer and Agricultural inputs

Respondents complained about late distribution of fertilizer and other agricultural inputs. 17 % Respondents observed it to be another challenge for maize growth in the area.

Government restrictions and Pricing

Price of maize per KG is the one that will maximize farmers revenue or income.The higher the price the better income to farmers.With places where there is high prices will benefit maize farmers and impove their income. But goverment inputs including bore holes, water reserve tank for irrigation,fertilizer,pesticides etc.

Infrastructure and Transport

Transport and road infrastructure is another challenge that maize farmers are facing in rural

has been setting restriction to farmers not to export maize to nearby countries where price of maize per KG is promising unless with specific permission and compel farmers to sell domestically where price is very low hence worsening farmers income this was another issue that was raised by farmers representing 7%(22) respondents.Therefore government restriction hinder growth of maize production and profitability.

Again it was revealed as a challenge that many farmers do not sell in KG of maize but they sell per bag of maize where one bag can be more than 100 KG and this is benefiting the buyer the maize producer is losing.Improving maize price in the areas will improve farmers income.

Lack of agriculture business education entrepreneurship and Marketing

Respondents said that Lack of agriculture business and entrepreneurship is another area that farmers were facing.Their participation in maize farm production has generally been traditional and practice has been inherited from their parents and history without analyzing whether maize is profitable investment or not.42 Respondents, i.e., 14 % felt that lack of proper education on agriculture business education hinder growth of maize output.

Again when they produce they are being cheated with brokers who come from big cities and cheat farmers with lower prices,therefore lack of marketing information hinder the growth of maize.

Subsidies

A section of respondents (14%) revealed that subsidies given to maize farmers by the government is very low and cannot justify growth in the maize production.It is suggested that the government must prepare for the big push with subsidies to support growth of maize in the area.Goverment has the capability to subsidize farmers on strategic areas of their agriculture

areas and the point of their farms.8%(25) respondents said that road is poor and farmers use their own means with the help of two wheel carts driven by cattle is the common transport that farmers are using.The two wheel cart pulled by

cattle is used to for carrying harvest and other activities from their field farms to the market.

5. Conclusion and Policy Recommendations

5:1 Conclusion

Despite the difficult living condition of individual farmers in the areas of Arusha- Karatu District (Mbulumbulu ward the village of Kambi ya Simba), Manyara -Mbulu District in the village of Bargish antsi and Moringa –Daudi ward farmers still believe that agriculture is the main activities that if supported by the government it can assist in reducing poverty among majority. It is observed that the contribution from the government has been very low as compared to the agricultural potential in the area. Poor quality of seeds, lower level of technology and education has been among the contributing factor for poor maize harvest in the areas and sustainability of maize farm. The study also reveals that the engagement of farmers in maize farm has been inherited from parents and very traditional from long time no commercialization of agriculture has been taken into account that is why there is poor returns on the investment. Lower output per acre of production was observed to be the major problem among respondents.

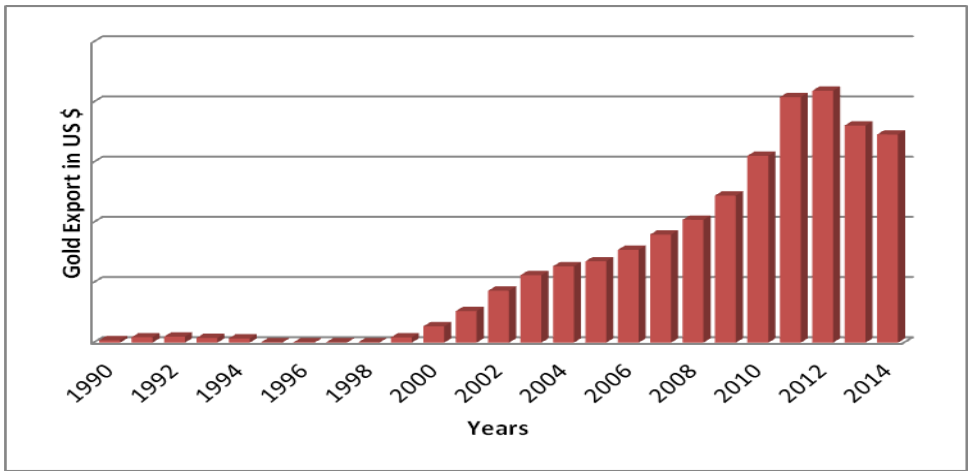
It is observed from finding that the contribution by the government in supporting farmers has been always been very low despite good policies that support farmers, very little is done to deliberate improve maize farming with reasonable subsidies that will ensure maize farm growth in rural areas. Farmers recommended that if the government can provide fertilizer, tractors and soft loan to farmers agriculture will improve. It is also concluded that the government must improve road infrastructure including bridges in rural areas to allow farmers transport their produce easily.

5:2 Policy Recommendations and Strategies

Tanzania is still a poor nation and capacity to feed its citizens through maize agricultural improvement is basic activity for poverty alleviation, employment and income among people where 80% of the workforce is engaged in agriculture. A lot of gold is exported and revenue is generated, the researchers suggest to utilize part of these earnings to improve agricultural production.

The figure 5.2 demonstrates that in 1990 gold export brought about US $ 20,257,938 and has been positively growing with its highest level of US $ 2,093,294,465 in the year 2012 then slightly fell in the years 2013 to 2014 but not significant fall reaching the level of US $ 1,729,807,293 and US $ 1,804,633,295 respectively. But Gold export is exempted from value added tax(VAT) and export taxes while is a good source of export earnings.

Figure: 5.2 Tanzania Gold Export 1990-2014



The study recommends the following;

- The government must use imported technology in agricultural innovation and technology for maize farm in Tanzania. 10% or more of gold export revenue can be used to import modern technology and innovation in agriculture.
- Underground water has not been utilized in the areas visited where most of the agriculture is rain fed therefore government can use part of gold export revenue to assist farmers with boreholes to

utilize underground water for maize farming rather than rain fed agriculture which victim to climate change and its availability. This will make agriculture production throughout the year.

- Government must supply farmers with quality seeds and fertilizer that assure farmers with high level of output.
- Innovation must be done to improve yield per acre of maize production given the soil production infertility and advise farmers appropriety.
- It is suggested that the government must prepare for the big push with subsidies to support growth of maize in the area.Goverment has the capability to subsidize farmers on strategic areas of their agriculture inputs including bore holes, water reserve tank for irrigation,fertilizer,pesticides ,irrigation equipments etc. The government must abolish taxes on all agricultural inputs imported from abroad but increase taxes on gold export or revenue.
- Some Revenue from gold export can be used for Dam Construction and Rain water harvesting. This can be a good strategy for the government to construct dams and harvest rain water in the village for irrigation.
- Given the gold deposit and export value the government can plaugh back gold revenue to improve infrastructure in rural areas thereby making it passable throughout the season.This must be done before gold is depleted.
- Provision of Tractors and other machines necessary to carry out maize production must be provided by the government to enhance productivity of maize in the area. The government must use gold export to buy tractors and other machines for rural farmers in each village before the gold is depleted.
- Special seminars and training to farmers on commercial agriculture must be promote and facilited by the government officers.Timely market information to farmers must be provided through appropriety channels in the country.
- The government must guarantee farmers with soft loan from commercial banks to allow farmers buy necessary inputs for agricultural development in the area.
- Farmers must be taught on farm log book indicating cost and revenue of the maize farm to allow them assess profitability.

REFERENCES

AGRA (2013), Africa Agriculture status Report, Nairobi ,Kenya, also available online at http://archive.agra.org/our-results/annual-reports/

Cervantes G. and Dewbre J.(2010),Economic Importance Of Agriculture for Poverty Reduction, OECD Food ,Agriculture and Fisheries Working Papers,No.23 ,OECD Publishing,France.

Country Meters(2016), Tanzania Population, Available online at http://countrymeters.info/en/Tanzania.

Derek B, Alain J, and Elisabeth S.(2009), Agriculture for Development: Toward a New Paradigm, University of califonia, USA also available online at http://are.berkeley.edu/~esadoulet/papers/Annual_Review_of_ResEcon7.pdf.

Endrew T.(2008),Tanzania Business for agricultural support, OECD.

MKUKUTA Secretariat (2010), National Strategy for Growth and Reduction of Poverty, Poverty and Poverty Eradication and Economic Empowerment Department, Ministry of Finance and Economic Affairs, Dar es Salaam, Tanzania.

Mwaitete C(2015), Agricultural Investment Decision , ZENITH International of business and management research , ISSN 2249-8826 ZIJBEMR Vol 5 (6), JUNE (2015), pp. 195-214.

Ngugi D, Karau K and Nguyo W. (2012),East African Agriculture, Macmillan Education, Third Edition, UK.

Nyanjom A.and Konyango J.(2013), Certificate Agriculture, East African Education Publishers Ltd ,Kenya, East Africa.

Tanzania Bureau of Statistics(2013), Population census and survey, Dar es Salaam, Tanzania Available online at http://www.nbs.go.tz/

UNESCO NATIONAL COMMISSINAL OF TANZANIA (2013), Agriculture: Green Revolution to improve productivity, Dar es salaam Tanzania

Vashishitha P, et al (2013) agriculture pathways to prosperity in Asia and Pacific, May 2013, Asia and Pacific Division, IFAD.