

# **The role of rural youth in promoting conservation agriculture in Kenya**

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## **A. Introduction and background of kenyan agriculture**

Kenya has been known as agro-based country since time immemorial and this became popular during the colonial times when the most productive areas were occupied by the white settlers hence named the “White Highlands”. After independence in 1963 Kenya realized a considerable success in expansion in agricultural production. This was evidenced both in Food crops as well as Cash crops. This expansion managed to remain stable despite the population increase from 8.9 million in 1963 to 24.4 million in 1993.

The major export earning crops contributed a lot to the Gross Domestic Product in terms of Foreign Exchange Earnings. This was achieved as result of good commodity prices in the World Market. The leading crops: Coffee and Tea fetched good prices. At domestic level the production was expanded to include the small holders of land size ranging from 0.5- 1.0 acre. What was evidenced was that the majority of Kenyan farmers were able to produce their own basic food both for their own consumption as well as marketing the surplus.

Despite the good picture of Kenyan Agriculture between 1963 to 1990, a lot of changes took place that has made the sector to be worse than what it used to be.

Some of the reasons are the following:

- The ever changing Weather pattern with drought occurring frequently
- The introduction of Structural Adjustment Programs as prescribed by the World Bank and International Monetary Fund
- Population increase taking up the arable land for settlement purposes
- Degradation of Arable land
- Existing Agricultural policies that are farmer un friendly
- High cost of production as result of SAPs, Liberalization and Globalization
- Poverty
- Poor Research – Extension- Farmer linkages among others.

With the above-mentioned problems, the once vibrant sector in Kenya is facing a major threat. Drawing from analysis between 1980 to 1990 the average growth rate in the agricultural sector was **3.5 %**; 1986 to 1990 the growth rate was **4%** and what is more shocking is that at the moment it is less than **1%**. Tea Production grew in 1980 from 73000 tones to 197000 tones in 1990, Coffee Production over the same period of time grew from 51900 tones to 112000 tones while Horticulture grew from 110000 tones in 1986 to 112000 tones in 1990

These improvements in production were registered as result of expansion of the small holder production and good service delivery by extension staff, subsidies to farmers coupled with good marketing infrastructure both at local and international levels. The sector now is worse off hence

reduced real benefit to the nation. Production has particularly gone down with majority of farmers are quitting the occupation. Population increase coupled with influx of refugees from Great Lake Region has overtaken the food supply as well as production hence reduction in per kaput nutritional intake. The statistic has it that about 2.8 million Kenyans are malnourished as result of their inability to access food.

Population has a big bearing on the existing cultivable land in Kenya. The most productive areas in Kenya have the highest population thus Agriculture is competing with Settlement. The cultivable land is continually becoming smaller and smaller year in year out.

Kenya has also suffered from erratic Weather Phenomenon for example El Nino. This has resulted in fluctuation in agricultural production .For example the National demand for Maize and Milk still remains unmet and the situation is always worse in years of poor weather for example 1980/1981, 1984/1985, 1992/1993 and 1999/2000

Structural Adjustment Programs have had a negative impact on Kenya Agriculture. The most hard hit by SAPs are farmers due to sharp increase in the cost of production especially imported inputs like fertilizers, pesticides, herbicides among others. The gloomy picture is that after incurring heavy cost of production they are subjected to forces of demand and supply in the market. Many farmers have lost heavily due to opening up of local markets for cheaper agricultural produce from other countries and the inability of local farmers to access international markets due to lack of support from the government especially on policy issues and incentives to farmers.

In Kenya the existing agricultural policies are outdated and therefore do not support farmers. The government gave in to Trade Liberalization without consulting the farmers. The existing picture in Kenya is that some agricultural based Industries have collapsed and some are on their way to collapsing. The notable ones are Sugar Industries, rice industry, Cashew nut industry, Coffee industries, and Cotton industries among others.

Degradation of Arable land is seen in Kenya. This is attributed to Over intensive Production, use of Chemical fertilizers, herbicides. Farmers no longer conserve their land against agents of soil erosion hence agricultural production has gone down.

Poor Research- Extension- Farmer linkage is a common feature in Kenyan Agriculture. There is a serious gap that exists between Researchers and farmers because the government extension system is collapsed and therefore no longer reaches farmers. The result of this scenario is that the latest research developments in farming are not accessible to Kenyan farmers. Thus the farmers continue to use conventional approach to farming hence the production continue to go down.

Poverty is a major issue in Kenya at the moment. According to the available statistics the rate of poverty in the rural Kenya is over 70% hence many small-scale farmers have been driven out of farming because they are unable to acquire the basic inputs for farming. This has resulted in the declaration of 23 districts to be food poor and therefore have to be fed on the basis of Emergency Intervention of Relief Food Provision.

With this kind of scenario in Kenyan Agriculture, there is need for an all inclusive approach that will involve the review of the existing agricultural framework, introduction of new farming

techniques within the Framework of Sustainable Development of conserving the natural resources for future use. This where Conservation Agriculture comes into play.

## **B. National Food Policy on Agricultural Production in Kenya**

The first National Food Policy came to being in 1986 as result of the worst drought the country experienced in 1980/1981. The government emphasized the need for intervention measures for example relief food as the last resort but the policy to focus more on supporting farmers to produce their own food. With the new developments being witnessed in the Agricultural Sector the World over, The Kenya National Food Policy has been reviewed in 1991 when Structural Adjustment Program was introduced. This was to gear the Agricultural Sector in line with demands of World Bank and IMF that the government to withdraw monetary support/subsidies substantially in the provision of goods and services. This review dealt a blow to farmers who were ill prepared to bear the after math of SAPs.

With the coming in of World Trade Organization rules of Liberalization and Globalization and demolition of Trade barriers, The Kenyan Farmers became worse off and therefore this prompted the need for review of the national food policy. This is due to increasing cases of Food related poverty, decline in Agricultural Sector growth and the overall economic growth of the country. The National Food Policy is being revised under the Sessional paper 1of 1994 created by the National Assembly which developed the framework for it's review.

The current review is focussed on introducing the following programs to support Kenyan Agriculture:

- Program to establish The National Food and Nutrition Secretariat
- Program to improve Food and Agricultural Policy Analysis
- Program to improve supply of seeds
- Program to improve land preparation services
- Program to improve the supply and utilization of crop and livestock inputs
- Program to improve the supply and utilization of other inputs
- Program to improve credit facilities for food production
- Program to improve Extension services
- Program to intensify Research on food production
- Program on food crop research
- Program on Horticultural Research
- Program on Soil and water management
- Program on Environmental Protection
- Program on Research on Agroforestry
- Program on Livestock breeding
- Program on Animal diseases Research
- Program on Research on Animal diseases
- Program to improve the Marketing and distribution of food
- Program to establish information system
- Program to improve Weather Monitoring and dissemination of weather information
- Program to improve National Food security
- Program to improve nutrition

The process of reviewing the National Food Policy has so far taken place in three regions and it targets six more regions. Unlike in the past, the current National Food Policy

review involves consultation through provincial workshops with participants drawn from the stakeholders in the Agricultural sector in Kenya

### **C. The Role of Rural Youth in Kenyan Agriculture**

In Kenya the working definition of youth is persons falling within the age group of 14-30. According to population census of 1999, youth constitute over 62% of the total Kenyan population. Of this 62% more than 50% are found in the rural settings in Kenya. In Kenya youth are significant force that can contribute enormously to the development process of the country. Rural youth in Kenya are playing an important role in agricultural production and especially at the farm household level where they are involved in crop production i.e. tending to crops in the fields, looking after the animals, grow vegetables, keeping rabbits, poultry among others. Although their participation is concentrated at farm family household levels, it very difficult to obtained statistical data to support the same. Currently many organizations, government ministries and departments are now focussing on youth because of their numerical strength, idealism, creativity and knowledge that can make them play a proactive role in the development process.

In Agricultural Sector the main Ministry in charge is the Ministry of Agriculture and Rural Development which has a Branch specifically handling Rural Youth Agricultural Programs. Their programs are focussed on school based youth groups, out of school youth groups and individual youth involved in agriculture and related activities in the rural areas in Kenya. The notable ones are 4K clubs, Young farmers' clubs, and agricultural clubs, out of school youth groups and individual youth. At the moment youth out of school are becoming a major concern because in many cases they are left out in terms of training and therefore their talents in most cases are underutilized and not recognized. Food and Agriculture Organization of United Nations is particularly concerned and is involved in the development of resource materials that can be used to train them on being involved in the fight against hunger and development generally.

### **D. Rural Youth and Conservation Agriculture in Kenya**

Conservation Agriculture is becoming very important especially in the Tropics where the environment and natural resources are under threat due to the practice of conventional agriculture among other things. The conventional plough tillage has had tremendous impact on the soil productivity for example:

- Compaction of the soil
- Increased combustion of organic matter
- Increased soil erosion

Conservation Agriculture is coming in as remedy where alternative tillage practices/strategies like subsoiling, ripping and zero tillage are introduced together with more elaborate management of crop residues and cover crops. It offers a very exciting alternative to the conventional agriculture, which in many cases degrades the soil. The main objective of conservation agriculture is minimum disturbance of the soil and maximum build up of soil structure and soil chemical properties, which in turn can help to improve crop production.

The rate of pollution and destruction of natural environment and resources has led to reduction in crop production where most of the topsoil is carried away by erosion, leaching, and destruction of forest cover among others. With the population of the world projected to reach 9 billion by 2050 majority to be found in the developing countries and with this trend of population

growth and continued practice of conventional agriculture that is not environmentally friendly then agriculture is heading for a major disaster.

Water has particularly become one of the primary constraints. The amount of rain has dramatically reduced in the tropics. It is estimated that 55% of the world population will be facing water scarcity problems by 2025. This is attributed to large volume of water required to sustain human diet. The human requirement of water annually is approximated to be 1700m cc to cover drinking, municipal, household and industrial needs. Water is very important in food production as the study shows that out of 1700m cc, 90% which is 1550m cc is used in food production. Research has shown also that there is a linear relationship between water use and food production hence for every increase in food production per unit of crop land will be followed by an increase in the return flow of water into the atmosphere. Conservation Agriculture will offer some remedy in how best the recycling and conservation process of water can be attained to ensure continued crop production.

For the adoption of Conservation Agriculture in Kenya, I wish to suggest the use of rural youth in this process. Rural youth based on their potentialities and what they are currently doing in agricultural sector. The government extension system is collapsing due to lack of support, lack of resources and system approach in service delivery to farmers. Conservation Agriculture can be domesticated by practice rather than instruction.

### **E. Strategies of using the Rural Youth in the Promoting Conservation Agriculture in Kenya**

Kenya Youth Foundation as one of the organization focussing on youth involvement in the development process is in a process of implementing a pilot Extension Project that promotes partnership by all Extension Service Providers. This is where in a given area, all extension officers need to consult and come up with a joint program on the best way to reach the farmers. This extension system gives priority to youth farmers as well as women farmers who are the major food producers.

Based on this Extension System, I wish to pick on rural youth as the vehicle of promoting Conservation Agriculture. According to KYF the strategies that can help in promoting Conservation Agriculture are based on the following attributes of Rural Youth

- In Kenya the level of youth literacy is very encouraging thus they are able to read, write and understand school based training hence they are capable of understanding and conceptualizing the new findings with regard to Conservation Agriculture which would be very difficult if it focuses on old farmers.
- Most of the Rural Youth practice agriculture both directly and indirectly, both in school and out of school as well as both practically and theoretically. Most of their practices are involving their parents; guardians and teachers at interactive levels making them understand agriculture fully. In Kenya Agriculture is an examinable Subject at Basic, High School, Post High School Institutions and Universities hence youth are at home with farming therefore they can promote Conservation Agriculture in Kenya.
- Parentage and Guardian Trust is very important because parents and guardians trust to learn from their sons and daughters. They are happy to adopt ideas brought home by their sons and daughter more than ideas brought by strangers and in many cases farmers see extension officers as strangers. Conservation Agriculture can be promoted by rural youth. Parents and Guardians

see their sons and daughters as role models and especially when they are school going and they are much willing to share with them what they have learnt in school. Hence rural youth can be the best vehicle to promote Conservation Agriculture

Rural Youth are therefore better placed to promote Conservation Agriculture among themselves as well as to other farmers in Kenya. This can be made possible through:

1. **Short courses/Seminars** for rural youth involved in agriculture and related activities on Conservation Agriculture. This will enable them to acquire the knowledge in Conservation Agriculture and how to practice it.
2. **On Farm Demonstrations**: Demonstrations need to be carried in the youth owned farms either in schools and out of schools. This will enable them to learn by practicing Conservation Agriculture and will allow other farmers to learn Conservation Agriculture in these demonstrations.
3. **Extension Field Visits**: This is particularly important for timely advise and follow up on the implementation of Conservation Agriculture Techniques by youth both in schools and out of schools. This will help in the identification of the shortfall and offer remedy based on the findings on the ground.
4. **Provision of Technical Resource Materials** to youth involved in the promotion of Conservation Agriculture
5. **Organization of Youth Agricultural Shows** with special focus on Conservation Agriculture where other farmers can come and learn more about conservation agriculture.
6. **Organization of Field Days** with special focus on conservation agriculture
7. **Use of Mass Media** to promote Conservation Agriculture in Kenya
8. **Agricultural Sport Competition** involving Rural Youth: This will attract many people and in the process the Conservation Agriculture Experts can pass the technical information to participants and fans.

## **F. Conclusion and recommendations**

Rural Youth are very important human resources in food production in Kenyan rural economy and therefore their potentialities need to be exploited in promoting Environmentally friendly agricultural practices like Conservation Agriculture.

I therefore **recommend** the following:

- Setting up of Rural Youth Resource Centers where youth can learn agriculture and related activities
- Improve freedom, access and ownership of resources by rural youth to enable them become full time farmers
- Introduction and recognition of Informal Education and Training for rural youth out of schools
- Development Partners to focus more on rural youth and consider channeling resources to youth initiated projects to increase youth participation in the development process

It is my wish to see young people being given the chance in Research and Development now because they are the successor generation.

## Appendix I

### Kenya

	<u>Region</u>		<u>Income Group</u>
Population (millions) 1999	29.4	643	2417
Urban Population (% of total ) 1999	32.2	33.8	31.4
GDP (\$ billions) 1999	10.6	324	1033
GNI per capita, Atlas method (\$) 1999	360	490	420
<b>Agriculture</b>			
Land area (1000sq km)	569	23605	33008
Agricultural land (% of land area)	45.5	7.3	14.4
Irrigated land (% of crop land)	1.5	4.2	26.6
Fertilizer consumption ( 100 grams/ha arable land)	319	134	670
Food Production Index (189-91= 100)	103.8	131.6	130.9
Population density, rural (people/sq km arable land)	494	369	507
<b>Forests</b>			
Forest area (1000 sq km)	171	6436	8840
Forest area (%of total land areas)	30.0	27.3	26.8
Annual deforestation (% change, 1990 - 2000)	0.5	0.8	0.8
<b>Energy</b>			
GDP per unit energy use (ppp\$/kg oil equivalent)	2.0	2.4	3.4
Commercial energy use per capita (kg of oil equivalent)	505	700	550
Traditional fuel use (% of total energy use)	80	63	30
Energy imports net (% commercial energy use)	20	..	-9
Electric power consumption per capita (kwh)	129.2	453.6	362.3
Share of electricity generated by coal (%)	..	71.2	43.5
<b>Water and Sanitation</b>			
Access improved water sources (%of total population)	49	55	76
Access improved water source rural (% rural population)	31	41	70
Access improved water source urban (urban population)	87	82	88
Fresh water resources per capita (m cc)	1027	8248	6203
Total freshwater withdrawal ( % Of total water resources)	6.8	..	..
Agricultural withdrawal (% of total freshwater withdrawals)	76	87	87
Access to sanitation urban (% urban population)	96	81	79
Access to sanitation rural (% rural population)	81	41	31
Under – 5 mortality rate (per 1000 live births)	118	161	116
<b>National Accounting Aggregates- 1999</b>			
Gross Domestic Savings (% of GDP)	6.8	15.3	20.3
Consumption of fixed capital ( %of GDP)	7.1	9.3	8.3
Net Domestic Savings (% of GDP)	-0.2	6.0	12.0
Education Expenditure (% of GDP)	6.0	4.7	2.9
Energy depletion ( % Of GDP)	0.0	4.3	4.0
Mineral depletion (% of GDP)	0.0	0.6	0.4
Net forest depletion (% of GDP)	4.8	1.1	1.5
CO2 damage (% of GDP)	0.4	0.9	1.4
Genuine domestic savings (% of GDP)	0.6	3.8	7.6

## **G. References**

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