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CATHOLIC UNIVERSITY OF EASTERN AFRICA

**SUSTAINABLE AGRICULTURE AND INTEGRAL RURAL
DEVELOPMENT THROUGH PARTICIPATION**

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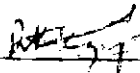


**MARCH, 2001.
NAIROBI-KENYA**

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DECLARATION.

I the undersigned, declare that this long essay is the fruit of my own effort. It has been compiled through my academic endeavour, discipline and devotion. This work has not been submitted to any college or university of academic credit. All information from other sources has been fully acknowledged.

Signed 

Date 2 - 4 - 2001

This is to certify that the long essay has been submitted for examination with my approval as a college tutor.

Signed 

Date 2 - 4 - 2001

DEDICATION.

To all open -minded people who view agriculture in Kenya as impoverished and have the courage to say and act now about it. And to those who dedicate themselves to the teaching and practicing of sustainable development in all aspects that affect the rural folk.

ACKNOWLEDGEMENT.

I gratefully acknowledge my debt to “self” for without my prior conceptualization of the idea nothing could have been realized as written. I owe special thanks to the computer-lab personnel who gave me a calm and conducive environment during the typing, editing and finally printing this essay, and to Tangaza College Librarians, My tutor, classmates and friends who gave me the wisdom and inspired me to come up with a complete essay.

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LIST OF ABBREVIATIONS

ADP- Agricultural Development program.

ACK- Anglican Church of Kenya.

ASAL- Arid and Semi-Arid Agricultural land.

AI- Artificial Insemination.

A.I.C African Inland Church.

BAC- Baraka Agricultural College.

CDN- Catholic Diocese of Nakuru.

DP- Democratic Party.

FGCK- Full Gospel Churches of Kenya.

GOK- Government of Kenya.

KFA- Kenya Farmers' Association.

KARI-Njoro- Kenya Agricultural Research Institute Njoro branch.

NGOs- Non-Governmental Organizations.

NT- New Testament.

MoALDM- Ministry of Agriculture Livestock Development and Marketing.

OT-Old Testament.

PTD- Participatory Technology Development.

SARD- Sustainable Agriculture and Rural development.

SDA- Seventh Day Adventist.

General Introduction

Agricultural farming has been in practice since the discovery of the iron- age period. Prior to this period, people were hunters, gatherers and fishermen. With the discovery of iron, implements were shaped in such a way that to clear, dig and till the land was made possible. This is the scientific explanation of how agriculture started. In the Bible, it is shown that God instituted agriculture when He placed the first couple in the Garden of Eden. After Adam and Eve had sinned, they were summoned to work, toil and sweat in the garden before they would get what to eat. In Africa, the traditions show that in some cultures pure arable farming was practised. Others were pastoralists and nomads. Still others practised both animal rearing and the growing of crops. Traditionally, some agricultural systems that were popular have disappeared over time because they would not be sustained for a variety of reasons. Some have been sustained for a number of years and are still flourishing.

The question we ask here is, are the flourishing systems viable for sustainable agriculture? Is sustainable agriculture a system that may allow rural development that is both economically profitable and environmentally compatible? In the Old Testament (OT), in the book of Genesis, agriculture is not singled out whether it is an occupation of the poor or the rich people. The whole family, the society is involved in it. In the latter part of the OT, that is, during the prophetic time, agriculture is associated with the poor people. In the New Testament (NT), it is not apparent whether farming was an activity of the poor or the rich people. What is shown is that those who were poor served as slaves in the farms of the rich people.

In the context of the OT, we may not deny the aspect of agricultural sustainability since all factors of production were constant and available. The same

case applies to the traditional African agriculture. Sustainability was assured since factors(soil erosion, deforestation, overgrazing) that caused unsustainability had not cropped in.

In agriculture, sustainability is a system in which a farmer is equipped continuously with the capacities for managing the factors of production namely, land, labour and capital. This continuity is there with increasing efficiency to satisfy the ever-changing needs and circumstances while maintaining the natural resource base. Agriculture is currently not sustainable because it generates environmental degradation, threatening crop production, animal rearing as well as human existence while causing imbalance in natural forest resources traditionally regarded as renewable. The problems of agricultural sustainability are linked in a critical framework such that to draw a distinction is not very clear. These problems include poverty, deforestation, fuelwood exhaustion, overgrazing, use of crop residues, soil erosion, flooding and accumulation of chemicals in the soil.

Therefore, the topic of sustainable agriculture and rural development in participation is of high priority in all countries of the world, whether they are developed or developing in their recent economies. Any changes that alter the favourable conditions for agriculture upsets the whole system of its sustainability.

Agricultural systems adjust and evolve in response to many types of forces what may be environmental, economic, technological, institutional, or social/ ideological. Together these parameters establish the context within which farm business and agricultural regions develop and function. Changes in any of these domains can lead to agricultural changes.¹

¹Ilbery B, G, Chioti and T.Richard (Editors), Agricultural Reconstruction and Sustainability. A Geographical Perspective: Sustainable Rural Development Series No.3. (New York: CAB INTERNATIONAL, 1997), 167.

The methodology used in this essay is the integration of secondary data through reading and primary data through interviewing of people already teaching and practising sustainability in agricultural activities and rural development. According to the methodology of see judge and act, this essay is the 'judge' part of the fact finding report as experienced at Lare division- Nakuru Diocese during field attachment.

The choice of this topic is to address the issues of sustainability in agriculture and rural development. It seems that sustainability has been looked at from two sides. There are those who talk of sustainable agriculture and leave a side sustainable development. For us in this essay we deal with both. This is because sustainability to be achieved, the lives of people must be improved for the better and in a continuous process. In essence this is the same time the resources of agricultural development must be carried out without depleting them, but assuring their renewability for the present and future generations. Other reason for choosing this topic is because agricultural activities that are carried out in rural Kenya contribute to unsustainability. The natural resources (water, forests, soils and animals) are diminishing their potentiality at a higher rate with no signs of renewability.

Chapter One is a brief background of Lare Integrated Extension Project and causes of agricultural impoverishment in Kenya. Chapter Two highlights the concept of sustainability in agriculture and in development. Discussed are the issues of rural agricultural development through participation and the contribution of agriculture to the economy of Kenya. Therein mentioned is the concept of gender and agricultural development. In the third chapter, theological reflections on agriculture in the OT, in the NT, on the social teaching of the church and pastoral approaches to agriculture are

discussed. Chapter Four has recommendations, challenges and conclusion remarks.

Lastly, is the bibliography and the appendixes.

CHAPTER ONE

1.0 Introduction

This chapter starts with the brief description of Lare Integrated Extension Project, found in the Catholic Diocese of Nakuru. Lare is a place where I did my attachment and it serves a practical example of the agricultural activities as practised in most parts of rural Kenya. In this chapter, also discussed are the root causes that lead to agricultural impoverishment in rural Kenya.

1.1 Brief Description of Lare Integrated Extension project.

Lare Division is situated to the West of Nakuru town. It borders Nakuru National Park on the floor of the Rift Valley in Kenya. It was created in 1970 when the Government of Kenya (GOK) sought to settle the landless people within the Rift Valley Province. The division covers 134 square kilometres and comprises four locations namely, Bagaria, Naishi, Gichobo and Lare.

Lare division is at 1500 m above sea level, in a rain shadow area. This causes the rains to be very unreliable and unevenly distributed while the soils are imperfectly drained. Generally, the area is characterised by hilltops and sloppy contours, making it vulnerable and susceptible to severe soil erosion. The area originally had indigenous forest cover, which was deforested to pave way for agricultural activities and human settlement. On average, minimum temperatures are 8-10 and maximum 22-26 degrees centigrade.

Politically, it is currently an opposition zone, whose party is Democratic Party (DP). This could be a contributing factor to the area's poor infrastructure and

communication facilities. Religiously, the area is well served with a variety of denominations such as Catholics, Protestants for example Full Gospel Churches of Kenya (FGCK), African Inland Church (AIC), Seventh Day Adventists (SDA), Anglican Church of Kenya (ACK) and the Akorinos). Economically, people in the area practice mixed farming with limited use of new agricultural technologies. They grow maize and beans, both as cash crops and food crops. They supplement these crops by Irish potatoes, kale (*sukumawiki*), cabbages and carrots. Animals kept are cows, both indigenous and exotic, sheep and goats. Women do much of the farming activities from where they get their living after selling the crop harvests and animal products. Socially, women head most of the households, for men might be in towns employed or some might have died in the 1992-1997 tribal clashes.

On rural development, the government extension agents, NGOs and other voluntary agencies are working as a group in the area. People are gradually induced to the involvement and participation of development activities. Prior to this period, interested parties in development worked in isolation, leading to duplication of the technological information and services offered.

1.2 Causes of poor agricultural impoverishment in rural areas of

Kenya

1.2.1 Use of old, unskilled methods and lack of motivation.

Most small-scale farmers in rural areas use old methods of ploughing, sowing and harvesting. They use manual labour, digging a very small area. As a result the returns are very limited. There is inadequate motivation for the adoption of

new skills. The really poor farmers never perceive the benefit of new technologies. Instead the farmers believe that the new methods are more involving, expensive and risky than the traditional ones. And as the adage goes, *it is hard to teach an old dog new tricks*. There is a cost attached to new technology and peasant farmers may not afford it. Financing agents may not give loans either to the peasant farmers because they cannot repay it. Other barriers to the adoption of new skills are bottlenecks in the supply of required inputs such as fertilizers and insecticides. Thus farmers end up shunning any new form of technology, leading to a vicious cycle of low production, low incomes and poverty.

1.2.2 Use of outdated tools and poor methods of farming.

Agriculture is further hampered and handicapped by the use of old and outdated tools namely hoes and *pangas* (machets). Very few rich farmers have big land. Worse, they only use modern tools like tractors, sowers, mowers and harvesters. The rest of the farmers have their farms sub-divided into small pieces and have little knowledge of these tools and even if they were available they have no resources to purchase them or hire their services.

Because of the ignorance of which methods to follow when preparing their land, farmers often plough up-hill, do not make contours or ridges on their farms. This leads to severe soil erosion (**see appendix I**), loss of rich soil nutrients and a low return of crop harvests.

1.2.3 Usage of unapproved varieties of seeds.

Most poor farmers in rural areas of Kenya grow maize and beans only. These farmers have little knowledge on other types of seeds that may do well in their soils. An example of Lare Division a semi-arid area, Nakuru District illustrates this. Research organisations such as KARI-Njoro and scientists from Egerton University are now trying to introduce new varieties of seeds they deem may do well in Lare. For example they have introduced a number of drought-resistant crops such as cassava, rape-seeds, sunflower, finger-millet, cow-peas and sweet-potatoes.

1.2.4 Shortage of the means of irrigation and unreliable rains.

Sixty five percent of the landmass of Kenya is semi-arid. These places experience long spells of sunshine with no rains, which affects crop production and animal husbandry. There is a serious shortage of the means of irrigation throughout most parts of Kenya. Only in a few places, which are, served by permanent rivers like Mwea Tabere in Eastern Province and Kano plains in Nyanza province where irrigation is possible. Crops in these semi-arid areas do not do well because of lack of enough water and unreliable rain that comes at the untimely period. Kenyan small-scale agriculture heavily depends on rainwater, which makes it vulnerable since seasons are uncertain., hence crops and animal production stand at a chance of failure. For example during the *El Nino* period, most farmland was waterlogged leading to crop failure since rotting of crops took place.

1.2.5 Effect of insects and parasites on crops and animals.

In rural Kenya where farming is widely practised, the majority of small-scale farmers are not acquainted with modern methods of preventing and curing diseases to which the crops are susceptible. Thus, farmers suffer a great loss due to damage of crops and dying of animals.

1.2.6 Poor infrastructure.

In the remote parts of Kenya, most roads are in bad shape and there is no proper facility in the means of transport and communication. Agricultural products, most of which are perishable, never reach the local markets on time. For example, hilltops and steep slopes characterise Gusii-land. This makes the roads totally impassable during the rainy season. Narrow feeder roads characterise the area, hence vehicles cannot be used.

1.2.7 Lack of access to information and technology.

Farmers lack motivation on adopting new technology due to risks and costs of adoption. There are barriers of adoption due to market features such as price variation and changes in demand and supply. Farmers are ignorant and have limited understanding of better methods in relation to the particular climate and environmental conditions. Some technology needs basic literacy for interpretation. Lack of knowledge is partially true for many a times, farmers needing better methods are located in remote and inaccessible areas with poor means of communication.

Relative poverty of farmers is also a big barrier to the spreading of information. Farmers cannot travel in search of knowledge. Instead extension personnel have to

look for the farmers. Some farmers cannot afford electronic devices such as the radio, television, magazines or newspapers. Generally, the print media and the press may not be the most effective channels of transmitting information to farmers. To come down to the level of illiterate farmers, the administration of Baraka agricultural college often sends her students for attachment to stay and work with the farmers. On interviewing a young man on attachment at Mtakatifu Clara Mwangaza commented,

You see what we learn and study at college is theoretical. For us to realise it practically, we need to stay and work with the farmers. By this time (six month attachment period), we explain to farmers what they may read in books, newspapers, pamphlets, and newsletters or listen on the radio and don't understand. And for any difficult issue we refer them to scientists from Egerton University or researchers from KARI- Njoro. This is the requirement and criteria of the college so that farmers are reached at the grassroots level.²

1.2.8 Inadequate extension services.

The extension agents usually provide extension services. These people are of key importance in awakening a desire for change and in persuading the community that, by their own efforts, they can achieve much in the productivity of their lands.

The work of extension services is to link farmers with research workers and policy makers. Often extension services have been structured and operated on the assumption that farmers are largely passive and recipients, that they are illiterate and therefore ignorant, and that they are unable to motivate or integrate new cropping and livestock practices into their established systems. To assist, motivate and encourage farmers is indeed the work of extension workers. But this is not done by the government extension staff who are supposed to stay with the farmers. The

² Jirro Watie, Interviewed at Mtakatifu Clara Mwangaza (Lare), on Thursday 13th July, 2000.

government especially through the Ministry of Agriculture) is not in a way effectively supportive, partly due to corruption. That is misappropriation of funds intended for agricultural projects to other unplanned for projects.

Many at a time, the agricultural extension staff concentrates on large-scale farmers rather than the small-scale farmers who really need their help. Due to lack of support by government on small-scale farmers, farmers also fail to adopt technologies taught by the private sector since they are expensive for them. Agricultural extension services end up not really promoting farmers' needs as should be the case. There is top-down approach where delegated extension workers believe they know what is best and farmers are expected to accept and implement received knowledge and technologies, whether or not they see the need for it. In many instances, the extension workers' view has reflected government, NGOs, or donor priorities. Extension services have attempted to promote policies of whose projects are designed and developed without prior consultation of the farmers concerned. This approach makes farmers dependent on what comes from outsiders, leaving them with little knowledge of their crops, animals and about market conditions of demand and supply.

Extension services are being criticised for being understaffed and in many instances coupled with improper co-ordination of the extension agents. This results into overlapping of services offered.

Each extension service provider has its target group, all competing for the most able and well informed farmers. There is seldom meaningful co-ordination or collaboration between them.

The Co-ordinator of Lare Integrated Extension project commented when interviewed: *"It was realised that though extension agencies did some good work*

*there was lack of proper co-ordination among them. Each extension agency acted and rendered her services independently which led to the duplication of work."*³

Some extension agents are successful but when the project's term ends, extension usually ceases and the benefits are seldom sustained. As the result extension remains a challenge and one that cannot be met without a re-assessment of national agricultural needs and farmers' priorities.

1.2.9 Lack of agricultural management skills.

Farming is a complex business. To be successful, the farmers must have a wide range of knowledge and skills. The majority of small-scale farmers have little management skills hence their agricultural production is limited. Many agricultural projects fail to achieve the desired results because of managerial deficiencies. But often, the failure is traced to inappropriate technology mentioned above. Technologies and new methods only make agricultural production possible. It is people who actually achieve production and productivity. The effective and efficient management of people is, therefore, the key to success in agricultural production. Management is, therefore, prior to technological knowledge. This is because the farm manager has to decide and plan to establish the goals, policies and strategies of his/her farm. After deciding what to do, then the technologists provides the materials and tools to do it. In this respect, farmers as managers require skills of planning, organising and implementing. Farmers also need specific skills such as financial skills, personal skills and entrepreneurship skills.

³ Josephat Mbui, Interviewed, in Miakatifu Clara Mwangaza (Lare), on Tuesday 6th June, 2000.

1.2.10 Professional biases.

Those who receive agricultural education do not prefer to work in the garden. Instead they would need to be in offices and command their services from there. They claim that wearing overalls and gumboots and going to the garden is all an idea that lowers their dignity as graduates. In this case, the money spent on agricultural education becomes a great waste, since what is studied and learned in colleges and universities is not put into practice.

--- one can no longer be sure that investment in agricultural education will yield returns. Today agricultural education is a necessary but not sufficient condition--- for increasing agricultural productivity, but a new direction of adapting to practical solutions to problems in real lives need to be devised without professional biases.⁴

Agricultural education especially on the practical should be the prerequisite of any graduate so that what is learned is put into proper use.

1.2.11 Shortages of finances, lack of micro-credit facilities and heavy taxation.

Commercial banks and supplies of various agricultural inputs, i.e., fertilisers, are the major sources of credit finance for smallholders. Compared to these private credit institutions, government loan schemes are of less significance. Only a small group of wealthy farmers is considered credit-worthy and in a position to obtain loans from these institutions. It has been estimated that less than ten per cent of the peasants have been able to obtain credit from these sources⁵

Besides lack of credit facilities, the small-scale farmers have no say in fixing the prices of their farm produce.

⁴ John Carsen, Economic and Social Transformation in Rural Kenya, (Copenhagen: Scandinavian Institute of African Studies, Uppsala, 1980), 82.

⁵ Ibid., 83.

*--- the marketing system for agricultural produce has probably been a much more important mechanism for government extraction of surplus from the smallholder economy than taxation--- Since the government fixes the bulk of agricultural prices for the products bought by government marketing boards, they are in a position to extract surplus from the peasant economy by paying low prices.*⁶

The small-scale farmer has no bargaining power over the pricing mechanisms though he/she does a lot of farm work and knows all what it costs in terms of labour, time and money.

Conclusively, after having seen some causes why we have poor agricultural production, in the next chapter we will discuss on the issue of sustainability both in agriculture and development. We will also mention the participation of farmers as the first protagonists of their own liberation in agricultural practices.

⁶ Ibid., 85.

CHAPTER TWO

Sustainability

2.0 Introduction

This chapter will deal with issues of sustainability in general as far as SARD is concerned. Sustainability is in both agriculture and in development. It cannot be dealt in isolation. Also covered are the ideas of agricultural rural development, the contribution of agriculture to the Kenyan economy and the issue of gender and agricultural development. The reason for gender is that women have been seen doing more agricultural work than men. Lastly, the idea of involving farmers in rural transformation through agriculture is looked at. This is because involvement (participation) is the only way forward that could change people's attitude towards their own development. Noted is that the idea of sustainability does not exist in the mentality of the farmers. For them it is to clear the land and burn the bush to pave way for agricultural activities. They are more concerned with the immediate problem of having food and cash crops than what may happen in the future on the environment.

2.1 Sustainable agriculture

Agriculture is the growing of crops and the rearing of animals. To sustain agriculture means to have the continuous supply of the resources necessary for growing crops and rearing animals. For agriculture to be sustainable, it should take into account not only soils, climate and ecosystem, but also local social, religious, cultural and economic conditions. Therefore farming can only be understood as

sustainable when it is based on the proper use and maintenance of locally available resources such as soil, water, wind, domestic animals, vegetables and crops, trees and forests, local knowledge and human power. Thus;

*Sustainable agriculture is a model of social and economic organization based on an equitable and participatory vision of development which recognizes the environment and natural resources as the foundation of economic activities. Agriculture is sustainable when it is ecologically sound, economically viable, socially just, culturally appropriate, adaptable and based on a holistic scientific approach.*⁷

Ecologically sound, which means that the quality of natural resources is maintained and the vitality of the entire agroecosystem from humans, crop and animals to soil organisms is enhanced. This is best ensured when the soil is managed and the health of crops, animals and people is maintained through biological processes (self-regulation). Local resources are used in a way that minimises losses of nutrients, biomass and energy, and avoid pollution. Emphasis is on the use of renewable resources.

Economically viable, which means that farmers can produce enough for self-sufficiency and or/ income, and gain sufficient returns to warrant the labour and costs involved.

Socially just, which means that resources and power are distributed in such a way that the basic needs of all members of society are met and their rights to land use, adequate capital, technical assistance and market opportunities are assured. All people

⁷ Brother Tony, Interviewed, in The residence of the Little Sisters of St. Joseph-KAREN, on Saturday 6th November, 1999.

have the opportunity to participate in decision-making, in the agricultural field and in the offices.

Adaptable, which means that rural communities are capable of adjusting to the constantly changing conditions for farming, population growth, policies and market demand . This involves not only the development of new, appropriate technologies but also innovations in social and cultural terms.

Soil and water are the indispensable components of sustainable agriculture. For soil and water all exist and are found on land.

*Approximately 71% of the earth is covered with water. Statistically, the global availability of arable land per capital was .35 hectares in 1874. Twenty years later this has diminished to only 0.26 and in some region only .11 to 0.12 hectares. Forest area in 1990 covered about 3.15 billion hectares. The forest area has decreased by the year 1995 to 3.45 billion hectares. Each year around 11.2 million hectares of forest disappear.*⁸

The idea of land and its resource is very crucial for sustainable agriculture. When forests disappear (see **appendix II**) it means the whole system of farming is disturbed. Trees attract rain and their roots hold the soils firm such that erosion does not take places. The water catchment remains improved throughout the year thus allowing farmers to plan for their farming activities for they know when the next rain season is due.

⁸ El, Bassam. R.K Bell and B. Prochnow (editors) Sustainable Agriculture for Food, Energy and Industry: Strategies Towards achievement Vol. I. (London: Published by James & James (Science Publishers) Ltd, 1998), 8.

Other practices that disturb and degrade land are shifting cultivation, overgrazing and the use of fire to clear forests for short-term gains.

2.2 Sustainable development

From an economic point of view, development is the movement of the desires and aspirations of an individual or a group of people a way from a condition of life widely perceived as unsatisfactory towards a situation or condition of life regarded as materially and spiritually better. Michael Todaro asserts;

Development, in its essence, must represent the whole gamut of change by which an entire social system, tuned to the diverse basic needs and desires of an individual and social groups within that system, moves a way from a condition of life widely perceived as unsatisfactory toward a situation or a condition of life regarded as materially and spiritually better.⁹

The concept of sustainable development is gaining more and more world-wide acceptance as a recognised model also in agriculture. The model of sustainable development is to reconcile the improvement of the economic and social living conditions with the long-term conservation of the natural resources of life. In this way it is possible to speed up and also succeed in offering future generations sustainable opportunities for development. Agricultural sustainability has to be defined according to each locality. This is because agricultural conditions are different and differ from one place to another, from a temperate place to a tropical place. However, there are universally acceptable rules of managing sustainability. These include; the use of renewable natural resources such as forests which may not exceed their rate of

⁹ Michael Todaro; Economic Development; Sixth Edition, (New York: Addison Wesley Longman Limited, 1997), 13.

generation in the longrun – otherwise succeeding generations would be deprived of these resources.

Thus;

Sustainable development has been defined by the World Commission on Environment and Development in " Our Common Future" (Brundtland, 1987) as a strategy that meets the needs of the present generation without compromising the ability of the future generations to achieve their requirements. The key concept is to promote the conservation and the sustainable use of natural resources, which allows long term economic growth, a long with being equitable and environmentally acceptable.¹⁰

2.3 Integral development

Integral development implies the development of the whole person. In this respect the person is not looked at from the view of needing only food to sustain his/her survival but also spiritual, emotional, ethical relationship with God, psychological dependence, intellectual autonomy and to be open to new ideas. Integral development basically means empowerment for positive contribution to the society. Tony Byrne quotes what Pope Paul VI says on development and states; "*He described it as the promotion of the good of people, every person and the whole person*"¹¹ The person is put on the focus of development but not things such as buildings, projects, religious affiliation (Protestant, Catholic Muslim or traditionalist) or ethnic group.

¹⁰ Bassam, Op cit 3.

¹¹ Byrne, Op.Cit., 6.

In an agricultural project, the condition of improving crops and animal production is necessary but not sufficient. For if the productivity is emphasised and people are left out then it means little will be achieved as far as integral development is concerned.

2.4 Rural agricultural development

The word rural from the Oxford advanced learner's Dictionary means the Countryside-opposite of urban. That which is suitable or attributed to the countryside (Remote areas). Therefore, agricultural rural development means any development that is suitable to the rural areas in consideration of the resources available, climatic conditions, Political and socio-economic influence. We cannot talk of agricultural rural development without looking at agricultural rural poverty problems. Scholars such as Chambers say that rural poverty is unperceived. This is because many a time rural agricultural poverty is defined by outsiders (professionals) who have little knowledge on the practical situation but have theoretical knowledge often documented to serve the interests of the rural elite, urban business people, bureaucrats and the government's selfish ends. As the result rural agriculture continue to suffer due to distance and isolation. Rural areas are designed as remote and poor, therefore professionals choose what to see, who to meet, and in such circumstances rural poor farmers are unflavoured. Hence extensionists have never served some places. The co-ordinator of Lare Integrated extension Project remarked;

You see, these government extensionists and other community development workers choose deliberately to avoid going up hills. They remain in the lower areas and often offer services forcefully even where they are not needed. For example, soil erosion and conservation

*needs to consider how steep the land is, but this is not taken into Consideration.*¹²

Outsiders are ignorant about rural agricultural poverty and they do not want to know what they do not know. They believe that what they hold of rural agricultural poverty is true as they have perceived it. They also believe that rural people like their poverty situation, or are lazy and have brought poverty to themselves.

2.5 Agricultural contribution to the economy

Contribution to employment and growth: Agricultural sector is the key factor in stimulating rapid growth and the attainment of higher incomes and employment to the rural population especially small scale producers who contribute over 75 per cent of Kenya's population. In the Development plan 1994-1996 it is said that;

*In addition to the sector's contribution to overall economic growth, it is also expected to make major contributions to employment generation. It is expected that by the end of the plan period in 1996, the total national labour force will have reached 12.0 million compared to 10.3 million in 1992, ...*¹³

But because of continued drought the increase in agricultural labour has stagnated or at most declined as projected in the Development plan of 1994-1996.

Contribution to foreign exchange earnings and savings:

*Historically, Kenya has depended largely on agricultural export earnings to meet the foreign exchange requirements for development programming and other activities. A part from tourism, coffee, tea, and horticultural crops are the major earners of foreign exchange for the country. Smaller contributions come from pyrethrum, cashew nuts, sisal and meat products*¹⁴.

¹² Joseph Mbui, *Interviewed at Mtakatifu Clara Mwangaza (Clara), on Tuesday 27th June, 2000.*

¹³ Republic of Kenya, *Development Plan, 1994-19996*, (Nairobi: Government Printer, 19994), 118.

¹⁴ *Ibid.*, 118.

Contribution to food security: Food security, defined as the access by each citizen at all times to an adequate level of food for normal life is an important component of food policy in Kenya. Altogether food security has not been achieved. The population is increasing rapidly while the potential arable land is becoming scarce. Also drought has been recurrent, it happened in 1984, 1992 and in 1999.

In the development plan of 1994-1996, it was said;

Weather problems and especially drought have in the past caused temporary food insecurity in some parts of the country. This problem was widely experienced in 1984 and again in 1992 when there was serious food shortage in many parts of the country. Because the country depends critically on rainfed agriculture, during years of drought, the production of major staples is adversely affected and the consumption of maize increases above normal levels.¹⁵

To ensure food security the following strategies were put forward for realization.

- *procured through cost reduction mechanisms;*
- *Ensuring increased and timely availability of key agricultural and livestock inputs Putting in place a short-term input subsidization programme covering fertilizers and veterinary drug;*
- *Offering target small-scale farmers subsidized credit supervised by the extension service of the Ministry of Agriculture, Livestock development and Marketing;*
- *Offering farmers minimum (Floor) producer prices in case of maize, wheat, rice and sugar;*
- *Increased emphasis on development of drought escaping crops for ASAL areas including sorghum, millet, sweet potatoes, beans, legumes and oilseeds;*
- *Improvement and further strengthening of monitoring and early warning system for weather conditions in all agricultural zones and wide dissemination of information on expected weather trends and their possible effect of food production and livestock management; And*
- *Improvement of research and extension services.¹⁶*

¹⁵ Ibid., 119.

¹⁶ Ibid., 120.

Though these strategies were put forward in 1994, it seems less has been done to realise them. This is because, either there is lack of political will, economic hardships or unfavourable climatic conditions. There is also lack of preparedness even though there has been early warnings by the meteorological department.

2.6 Gender and Agricultural development.

Gender and development is a concept that refers to the socially constructed roles ascribed to males and females in the social and development process. In the traditional African society, functional roles were strictly defined on sexual lines. A male had particular tasks to do as well as a female. The point to note is that, no two cultures will agree what distinguishes one gender role from one culture to another. In Traditional African society, men had the access and control to land. Men owned land as the supreme property and no woman was entitled to own one. Even married women had no right to do any transactions on land issues. In most societies, the customary law did not allow a woman to inherit land. This law even today has great impact and it bars women from owning land. *"In much of Kenya, Customary laws bars women inheriting land, which is traditionally passed down through male descendants."*¹⁷

Today, though we have land-tenure laws that allow everyone to own land, very few women actually do so or know that such laws do exist. In the 1989 National Development Plan, it is recognised that women have played a significant role in African economies, being the agricultural producers and suppliers of welfare services at household and community levels. In an agricultural economy such as Kenya's,

¹⁷ Akinyi Nzioki, "will our interests be taken care of?" International Women's Day Special, in The Daily Nation, No 12235. (Nairobi), 8th March, 2000, 12.

arable land in the most valuable form of property due to its economic, cultural, political and economic importance. Land is the permanent asset and it provides a sense of identity in the community.

Women do most of shamba (garden) work. Considering the case of the rural Kenya, women largely dominate agricultural subsistence system. This subsistence system depends on natural resources (water, land, soil, forests and animals). The question we may ask here is how well are these resources managed to improve the quality of life of people and guarantee a sustainable agricultural production. In the present situation it is noted that small-scale farmers (especially women) head most of agricultural activities in the rural areas. Thus;

In most countries in Sub-Sahara Africa, agriculture is the lifeline of the economy. Women are key farmers, food producers and natural resource managers. In the region, women produce 60-80 % of domestically produced food, provide nearly half the farm labour, and shoulder over 90 % of domestic responsibilities. Women work almost twice as many hours as men. In Kenya, women form the core of the smallholder farm labour force. Nearly all rural women (96%) work on family farms, providing 75% of the farm labour and 60% of farm derived income.¹⁸

Though women do a lot of agricultural work, they lack necessary inputs, farm tools and implements. They are seldom reached by agricultural extension agents, are ignorant of new agricultural technologies (see **appendix III**), are hindered by customary law and are rarely involved in decision-making concerning agricultural production. It also means that though women have access to land (the main factor of agricultural production) they have no control of the resources and benefits got from it. They have no control over the finances and harvests of agricultural products.

¹⁸ John Adede, et al. sustainable agricultural extension manual for Eastern and Southern Africa, (Nairobi: International Institute of rural Reconstruction, 1998), 70.

Men do much of decision-making and control the benefits though they do very little to acquire these benefits. In the Development plan 1994-1996 of the Kenya government, a summary is given on how women would be promoted to the access and control of agricultural production. The summary states;

Women participation in agricultural production will be promoted through:

- *Encouraging and ensuring access to agricultural information and awareness of women farmers, particularly in female-headed households;*
- *Improving women's access to and control of resources, especially land, which is the main factor of production in agriculture. Customarily, inheritance of property including real estate is biased against women, husbands being the legally acknowledged title-holders. However, with the recent changes in succession laws, women even when married should be able to buy and sell land under their own names;*
- *Targeting women through women groups, co-operatives, schools etc. in terms of agricultural education, extension and dissemination of information on improved technologies (appropriate inputs, production, storage);*
- *Training and employing large numbers of women as extension workers;*
- *Establishing special credit schemes for women groups; and Training extension messages into vernacular languages since many rural women may not know Kiswahili or English..¹⁹*

Since 1994-1996 development Plan, little has been achieved. The difference between access and control responsibilities frustrates women's efforts and often slows down agricultural production.

2.7 Participation for rural transformation through agriculture.

Agricultural activities are common among the rural folk. When proper participation is done then the transformation of people's life is made possible. For any

¹⁹ Republic of Kenya..Op.Cit., 19.

community development worker to achieve his/her dreams he/she needs to involve the people in all agricultural activities that are done. The development worker, the extension agent, an NGO agent or any volunteer ought to understand the cultural behaviour of people. This is because previously, the rural people (farmers) had been considered ignorant, primitive and underdeveloped. Hence anything designed for the local community had to be planned outside it and later implemented in the community without any consultation.

Francis Wambua Mulwa gives a story to illustrate what participation ought to be.

A story is told of a development worker who went to a remote village. He was highly motivated and fully prepared to solve all the villagers' problems and transform the primitive community. Soon he realized that people lived under great fear and apathy. They were not even prepared to do anything to change their situation. He came to learn that this fear emanated from a strange phenomenon in that village. The villagers reported that they had of late noticed a monster across the valley which they believed was sent by the evil spirits to kill them. They went to show the development worker where the monster was. At one stage the villagers were so scared that they left him to face the beast alone. After crossing the valley he discovered that it was nothing else but an overgrown watermelon. To satisfy the villagers, he acted brave by drawing out his sword and dramatically cutting it into pieces as the villagers watched from the distance.

To his great dismay, the villagers did not welcome him back despite what he had done for them. Instead they requested him to leave their village in peace for fear that he was another monster. They did not understand how he would overcome the monster all by himself if he was not a monster. A few years later there was another overgrown watermelon in the same village. Another development worker came to the village and learning of people's fear, asked them to join him with their traditional weapons to fight the monster. They all tiptoed a breast towards the unknown. The development worker identified the object but did not disclose what it was. On reaching it, they all set on the monster with their traditional weapons until they shattered it. They proudly walked back to the village, singing and dancing; celebrating their great victory. The development worker lived and worked in the community for a long time, learning many things from the villagers. At

*the same time he taught them new things including how to grow watermelons.*²⁰

In the story highlighted above, the second development worker knew the importance of involving people in what was their problem. People's participation is both a means and an end in every development effort. As a means, it reduces project development and implementation costs, promotes sustainability, facilitates training, delivery of inputs; credit and extension services. Over and above the ultimate goal of participation should be to create people's awareness of their social and economic rights and thus to enable them change from a state of dependency to greater self-reliance and articulateness in decision-making concerning their lives. People's participation provides the internal dynamic forces essential to the success of SARD.

Conclusion

We have discussed what sustainability is in agriculture and development. Also we have seen the contribution of agriculture to the Kenyan economy and the issue of gender and agricultural development. In the following chapter we will discuss about the theological reflection on agriculture. That is how agricultural activities can be traced in the Old and the New Testament. Also mentioned is the Church's social and pastoral teaching on agriculture.

²⁰ Francis Wambua Mulwa, Enabling the Rural Poor Through Participation, (Eldoret: AMECEA Gaba Publications Spearhead Nos. 132-133, 1994), 16.

CHAPTER THREE.

THEOLOGICAL REFLECTIONS ON FARMING.

3.0 Introduction.

This chapter deals with agriculture from the Biblical perspective. It give relevant verses from the Bible (Old and New Testaments) that shows elements of agriculture. In it we also talk of the social teaching of the Church on agriculture and the Church's pastoral approach to agriculture. On pastoral approach a concrete example of the Catholic Diocese of Nakuru is given.

3.1 The Perspective of Agriculture in the Old Testament.

3.1.1 Adam and Eve.

In the Old Testament perspective, different episodes are shown that qualify that agriculture has been as old as the human race. Adam and Eve were given the garden (land) of Eden to tend. They were to till this land and take care of the created things as commended by God. Placed in the Garden of Eden (Gen. 2:15), the couple had to work to earn their bread by the sweat of their labour. Tilling the land here presupposes agricultural work. It implies that God instituted agriculture from the very beginning. In the book of Genesis land and garden are mentioned.

Then the Lord God planted a garden in Eden, in the east, and he placed there the man whom he had made. Out of the ground the Lord God made various trees grow that were delightful to look at and good for food, with the tree of life in the middle of

the garden. The Lord God then took the man and settled him in the Garden of Eden, to cultivate and care for it. (Gen. 2: 8-9,15).

The care here means to be responsible and ensuring that there is good use without deteriorating the present land situation at the expense of the future generation. This passage shows that from the beginning sustainability was founded by God and entrusted to man to perpetuate it. In the garden man had to grow all kind of trees (crops) good for food, get settled in the land and care for it.

The sons of Adam and Eve are clearly shown to be practising farming. Abel tended flocks while Cain grew crops. The agricultural products (of both crops and animals) were used for offerings (Gen. 4: 1-4).

3.1.2 Abraham's period.

Abraham the Father of Faith was called from the city of Ur (Gen: 12:1-9). Ur was built along the two great rivers of Euphrates and Tigris. These rivers provided enough water for agricultural activities, especially on irrigation. Also animals were reared and crops were grown along these river banks. “ *Outside the cities, there was farming along the banks of the rivers. Cattle , sheep and goats were kept; oxen were used for ploughing, and donkeys and camels for transport.*”²¹ Abraham belonged to the Semites people who were originally semi-nomadic herdsmen. The Semites lived in the dry desert areas where they kept their flocks and herds, often moving from one place to another in search of grazing land and water. During Abraham’s call, he was told to leave Ur and go to Canaan. In his promises, the first one was that he will be

²¹ Eileen, Welch et al. (Editors), God's people: A Secondary Christian religious education Course Book 1, (Nairobi: Oxford University Press, 19993), 11.

given land. Land was the sole property probably during this time that an individual claimed monopoly had the right over it and was an inheritance not only recognised by people but also by God because he guaranteed it. Canaan was a land flowing with milk and honey. Thus; *"A land flowing with milk and honey in abundance were blessings of paradise. To wanderers who were used to life in barren wilderness,*

*Canaan was a veritable paradise."*²²

Therefore for Abraham who had been a wanderer it was indeed a blessing to have moved from un-productive land to the fertile crescent (Canaan).

3.1.3 In the story of Joseph

In the story of Joseph, we see that there is slave trade. Joseph was sold to the Egyptian merchants by his brothers who envied him of his talents, interpretation of dreams and being liked by the father. In Egypt, Joseph was able to continue with his work of dream interpretation. Joseph interpreted vividly pharaoh's dream that had not been given an answer even by the magicians and experts. The dream was;

Two years later it happened that Pharaoh had a dream: There he saw, standing by the Nile, and there, coming up from the Nile, were seven cows, sleek and fat, and they began to feed among the rushes. And then seven other cows, wretched and lean, came up from the Nile, behind them; and these went over and stood beside the other cows on the bank of the Nile. The wretched and lean cows ate the seven sleek and fat cows--- a second time: --- were seven ears of grain, full and ripe. And then sprouting up, behind them, came seven ears of grain, meagre and scorched by the east wind. The scanty ears of grain swallowed the seven full and ripe ears again (Gen. 41: 1-7).

²² W. Bernard Anderson, The Living Word of the Old Testament, Third Edition. (New Jersey: Longman, 1978), 99-100.

Joseph told Pharaoh that for seven years there was to be plenty of rain and they will have an abundant harvest. Then the following seven years, there will be drought and famine. Joseph further said that for the first seven years enough food crops had to be planted, harvested and stored. The stored grains will be used during the time when famine would ravage the land. Joseph's intelligent interpretation of Pharaoh's dream prompted him to be made in-charge of the whole land of Egypt. What today we may call "Minister of agriculture, Crops and Livestock production."

"So Pharaoh said to Joseph, since God has given you knowledge of all this, there can be no one as intelligent and wise as you. – I hereby make you governor of the whole of Egypt." (Gen. 41: 39-41). And during the time of famine his brothers came to get food ration from Egypt. "Thus the sons of Israel were among the other people who came to get supplies, there being famine in Canaan. It was Joseph, as the man in authority over the country, who allocated the rations to the entire population" (Gen. 42: 5-6).

3.1.4 The period of Israelite's' festivals.

In the Israelite socio-economic and religious life, there were major feasts that were carried out to mark the beginning or the end of the agricultural season. These feasts included Passover, Pentecost and Tabernacles, all of which had agricultural connotations and religious meaning. These feasts were obligatory for every adult male Jew. The pastoral community had kept sheep and goats. During the Passover, the best lamb was offered during the spring period as thanks giving.

After the celebration of Passover, people occupied themselves in harvesting barley and wheat. The harvest (Pentecost) period came after fifty days from the Passover. Pentecost was also called the "feast of the first fruits" because it marked the completion of barley and wheat. For this reason, Pentecost was a Thanksgiving Day

for the harvest earned during the season. On this day farmers came to the temple in Jerusalem carrying their harvest while singing and rejoicing. Thus;

You shall count off seven weeks, computing them from the day when the sickle is first put to the standing grain. You shall then keep the feast of weeks in honour of the lord, your God, and the measure of your own freewill offering shall be in proportion to the blessing the Lord, your God, has bestowed in you. (Deuteronomy 16: 9-11).

During the Pentecost, not only the first fruits were offered but also animal sacrifices.

After the Pentecost, came the feast of Tabernacles. During the celebration of this feast, people lived in these booths or simply huts, as a remainder of the days when their forefathers sojourned in the desert as they left Egypt and went to the promised land (Leviticus (23: 34-43). The other name of the feast is the 'Feast of in-gathering' because it marked the end of gathering all the agricultural fruit crops. This provided the people with the occasion to thank God for the harvest of the whole year.

Thus;

You must celebrate the feast of shelter for seven days, at the time when you gather in the produce of your threshing-floor and winepress. --- for Yahweh your god will bless you in all your produce and in all your undertakings, so that you will have good reason to rejoice. (Deuteronomy 16: 13-15).)

3.1.5 During the prophetic period.

The post-exilic prophets, especially Amos and Micah addressed the situation of farmers. During the 8th century B.C, business people exploited farmers by use of fake balances and scale. Farmers were victimised for their poverty leading them to be sold for a pair of sandals. Prophet Amos was a layman who carried his prophetic ministry in the Northern Kingdom under Jeroboam II, 783-742 BC. (Cf. II Kings: 14: 23-29). Amos was a shepherd and a dresser of the sycamore trees. Shepherding presupposes

that he might have kept sheep like other people. And dressing the sycamore tree shows that he had a garden. During Amos' time those people who owned land were wealthy and lived a better life. The Northern Kingdom had reached the peak of economic prosperity. This brought a lot of wealth because of the favourable situation set by Jeroboam II, who extended his dominion east of Jordan fostering commerce (agricultural trade) and stimulating wealth. Prophet Amos chiefly condemned the exploitation of the poor (among them the farmers). Amos calls the exploited "the righteous" meaning that they are innocent and honest subjects whose rights have been taken away either in law-suits or in economic deeds. The poor farmers were sold into slavery and owned no more than a pair of cheap sandals.

Thus says the Lord: for three crimes of Israel, and for four, I will not revoke my word; because they sale the poor man for a pair of sandals. They trample the heads of the weak into the dust of the earth, and force the lowly out of the way- (Amos: 2: 6-7). They shall summon the farmers to wail (Amos: 5:16).

Apart from condemning the exploitation of the farmers, Amos was also able to master the market situation of his sheep products at his time. It is said that,

--- the fact that he travelled to Bethel, possibly to market the shearing of his sheep, suggests that he may have been a master-shepherd with others in his employ; he was a man of affairs, who was in touch with recent events among the surrounding nation.²³

Prophet Micah was the contemporary of Isaiah. Micah prophesied in the 8th century BC before the Israelites' captivity. He was concerned with the farmers whom he defended because they were victimised by the rich in the market. His main objective was to see that justice was done to the farmers. This is because he came

²³ John, B. Taylor, Understanding the Old Testament, London: Published in Great Britain By Union Scripture, 1970), 27.

from the rural village of Tekoa and had experienced the life of the poor farmers, himself having been a shepherd.

*His life among the villagers as a shepherd and agricultural worker had given him firsthand experience of destructive pressures and deep suffering his people were undergoing as a result of injustices fostered and carried out by elite ruling classes.--- the 'prosperity' they enjoyed came at the expense of the destruction and suffering of many.*²⁴

The land was the first promise given to Abraham, which was to be enjoyed by all his descendants. Vawter says, "*The inheritance of an Israelite was --- not simply what he had inherited from his fathers but from God himself, his share in the land that had been apportioned to Israel at Yahweh's direction.*"²⁵ The question of religious interpretation on the possession of land at national level was seen as dangerous and that which may be abused by the people in authority. Authority over land might be claimed in the name of God when only superior force and conquest had actually acquired it. In such circumstances, the poor farmers have no authority over it. Micah emphasised on individual (family) inheritance and ownership of land. When

individuals own land, then land becomes fruitful and

*"in religious terms the nuclear element of society, the family holding which in an agricultural and pastoral way of life was the guarantee of financial independence and therefore equal rights and dignity in the society."*²⁶

²⁴ Anthony R. Ceresko, Introduction to the Old Testament, A Liberation Perspective, (New York: ORBIS BOOKS, 1995), 184

²⁵ Ibid., 137.

²⁶ Ibid., 137.

3.2 Agriculture in the New Testament.

In the New Testament we will try to find out activities mentioned in which agriculture is can be traced and if it was sustainable or not. The teaching, sayings and parables of Jesus Christ have some elements of agriculture.

The word "sower" in the parable of the sower may be interpreted literally to mean the farmer but theologically it means the word of God. The farmer as we know has to sow seeds when he/she is planting. The idea of bad or good farming system can be found out in the parable of the sower. Planting on the "rock"" shows that there was wanton deforestation (falling of trees) and soil erosion had taken place. This is the reason we have a rock. Growing crops among the thorns implies that there were lazy farmers who did not clear the bush, or prepare the land well before planting. Planting among the "thorns" implies crops will be choked by weeds or stunted in growth due to competition for the limited resources; that is sunlight, water and mineral salts. Growing crops along the "path" may have an indication that the farmer is not a serious person. He/she does not like what he/she is doing or does not like agriculture at all. Growing crops on the "rich soil results to an abundant harvest. The rich soil can only be productive when good farming system is practised. That is the farmer (sower) tries as much as possible to maintain the fertility of the soil. The farmer does not cut down trees wantonly that attracts rain and whose roots hold firm the soil on the ground, hence avoiding soil erosion.

The farmer practices agro-forestry, we presume, and he/she plants trees whose leaves when they fall on the ground they decompose and enrich the soil with nutrients.

This farmer probably might have been using compost manure, which is rich in nutrients for crops and improves the aeration and water retention capacity of the soil. The fourth sower (who planted on the rich soil) might be said to have maintained the productivity of the underlying natural resource base; soil, water, trees, animals and land for his or her use and for future generations. This farmer's activities are in harmony with the ecological system, ecologically viable, socially just and are culturally appropriate. This is the reason why he/she is able to harvest a hundred-fold. Thus in the parable of the sower Jesus said;

--- listen, a sower went out to sow. As he sowed, some seeds fell on the path, and the birds came and eat them up. Others fell on the patches of the rock where they found little soil and sprang up at once, because there was no depth of earth, but as soon as the sun came up they were scorched and, not having any roots, they withered away. Others fell among thorns, thorns grew up and choked them. Others fell on the rich soil and produced their crop, some a hundredfold, some sixty, some thirty (Matthew 13: 1-9). (Cf. Luke 8: 4-8 and Mark 4: 1-20).

In the parable of the mustard seed, though it emphasises very much on the kingdom of God, it shows that with commitment and favourable climatic conditions, the farmer may have a bumper harvest. This is shown when it is said that even the birds of the air will take rest on this tree whose seed is very small (Matthew: 13; 31-32). The parable of the lost sheep calls for an assumption that during Jesus' time there were pastoralists and nomads all who kept sheep. These people lived in the desert where their form of agriculture was tending flocks. " Which one of you with a

hundred sheep, if he lost one, would fail to leave the ninety-nine in the desert and go after the missing one until he found it?" (Luke 15: 4-5). Cf. Matthew: 18:12-13, John: 10:1-21.

In the parable of the prodigal son, it is indicated that his father had a farm of animals (calf mentioned), property and workers. One of his sons asked the share of his property and he left for a far land. In the foreign land the son squandered his property in debauchery, where he misused his property for a short time and later suffered. He experienced famine and had to be employed in the farm to feed the pigs.

A few days later, the younger son got together everything he had and left for a distant country where he squandered his money on a life of debauchery. When he had spent it all, that country experienced a severe famine, and now he began to feel the pinch; so he hired himself out to one of the local inhabitants who put him on his farm to feed the pigs Luke; 15: 13-15).

In his teaching Jesus drew another example of the true vine. During Jesus' time it means vines were grown but care differed from one farmer to another. The farmer who knew how to do pruning (cutting the unwanted branches) got the best harvest than those who never pruned theirs. This parable shows us that good farming system could result to a better yield. And the better yield is only got when the resources (capital, land and labour) are well used. In the Gospels, the farmers are categorised among the class of the poor. The poor never owned land and mostly were used as slaves for the rich people. Also the poor were the small farmers with inadequate or barren land, or just serfs on the large estate.

In the Pauline letters, we are told that Paul was a tent maker. After being called to apostleship, Paul continued to work with his own hands and urged all the Christians

to do the same. His practice and exhortation run against the grain of Greco-Roman culture in which manual work (agriculture) was for slaves, not for free people. Paul's motives were to be self-sufficient so that he would avoid being a burden to others, and to be able to help others through alms giving. He urged all Christians to do the same, especially whose expectation of an imminent Parousia led to idleness. He urges them to gain their own food and keep busy, in this way they will avoid trouble and mind their own business. (1 Thessalonians 2: 4, 4: 11-12).

3.3 The Church's Social Teaching on Agriculture.

The beginning of the Church's social teaching on Agriculture comes from the dignity accorded to people as the likeness of God. The dignity comes with respect and honour of having the basic needs that perpetuates life on earth. These basic needs are food, shelter, security, clothing, health care and education. During the industrial revolution, many people were deprived off these basic needs which were easily found in the rural areas. Many people had moved to towns and cities in search of a better and luxurious life hopefully working in industries. Working in the industries, apart from the deprivation of the basic needs, the worker's conditions of life were deplorable and choking. The encyclical, *Rerum Novarum*, which came out in 1891, addresses the rights, duties and the dignity of the workers. It was the first ever encyclical by which the first step was taken by the Church as far as the wretchedness situation of the farmers is concerned. In his address, Pope Leo XIII, says that workers should not be treated as slaves and that justice demand that the dignity of the human

person be respected. *"Among the most important duties of employers the principal one is to give every worker what is justly due to him."*²⁷

During the time of writing this encyclical, materialism had as well taken root in that society. The workers (who were once farmers) were seen as the property of the rich people (the capitalists). To make the old farmers now working in industries feel taken care of, is the reason why the encyclical called for the just wage, better environmental working conditions and security of job.

In *Mater et Magistra*, agriculture is seen as "*A depressed sector*"²⁸. This is because many farmers leave the rural areas and go to the cities or towns in search of a better living environment. Farmers in rural areas are depressed because of the unreliable climatic factors such as rain, diseases and pesticides that affect their crops and animals. Many farmers regard themselves as inferior as compared to other people who work in industries. This mentality creates an imbalance between agriculture and industry and therefore calls for an urgent step to be taken. Agriculture and industry go hand in hand with one another. The encyclical states that there should be the provision of essential public services such as;

*"highway construction; transport services; marketing facilities; pure drinking water; housing; , medical services; professional schools; elementary, trade, and professional schools; things requisite for religion and recreation; finally, furnishings and equipment needed in the modern farm home."*²⁹

²⁷ Pope Leo XIII. *Rerum Novarum*. (Nairobi: St.Paul Publications, 1891), 19.

²⁸ Pope John XXIII. *Mater Et Magistra*. (Washington D.C. National Catholic Welfare Conference, 1901), 39.

²⁹ *Ibid.*, 39.

When these requirements are missing in the farming areas, people easily desert them. To ensure a balanced gradual economic growth of a country, both agriculture and industries have to complement one another. Agriculture provides raw materials without which industries cannot operate.

In the encyclical (*Mater et magistra*) there is a call to the authorities to pay attention on matters of taxation, interest rates, insurance, prices and farm income if agriculture is to be a viable and feasible practice. There should be sound taxation, proper insurance compensation and establishment of banks that provide capital to farmers at reasonable rates of interest as regards their low economic life. *"It also seems necessary to make provision for a twofold insurance, one covering agricultural output, the other covering farmers and their families."*³⁰ Such moves will encourage farmers to work hard towards their own liberation after having been initially supported.

3.4 Church's Pastoral Approach to Agriculture. Case Study of Nakuru Diocese.

This part of chapter three is not really a theological reflection but is attached as an approach of the church to the approach on agricultural activities. Since we cannot isolate the Church from its theological teaching, this gives us the basis upon which we place this part here.

In 1928, the first mission was opened at Nakuru under the administration of Mill-Hill Missionaries. The Diocese was created in 1968. The Diocese has 46

³⁰ Ibid., 41.

parishes, "11 administered by 50 Diocesan priests and 38 Missionary priests."³¹ To run the parishes efficiently, the planning and development office was created in 1973.

*"In October, 1973 the Bishop commissioned a development expert to do a survey of the Diocese. The purpose of the survey was to identify the people's development priorities and recommend ways of achieving them."*³²

The identified priorities and programmes for development were; education (formal and informal), agriculture, community water supplies, Justice and peace, women in development, youth development, medical work, disabled programme, social welfare, pastoral development and communications. But for our case we will single out agricultural programme.

*Diocesan involvement in agriculture goes back to 1974 with the setting up of Baraka Farmers Training Centre. The centre was set up to help educate and advice both large and smallscale farmers in post independence period. --- To reaffirm these agricultural development process, the 1983/84 Diocesan synod recommended strongly for the full Diocesan involvement in the agricultural development of its people*³³

The aim of the agricultural programme was based on the assumption that *"The right to food is the right to life."*³⁴

Thus the agricultural programme aimed at facilitating a participatory development and production of food and other agricultural products for the community's socio-economic benefit. Food security was the primary objective, which was to be achieved through agricultural extension and training for community development initiatives. The strategic objectives of the agricultural programme were;

³¹ Catholic Diocese of Nakuru, Diocesan Integrated development Programme, 1991-1993 Overview, 1994-1997 Development Priorities June 1994, 18.

³² Ibid., 28.

³³ Ibid., 49.

³⁴ Ibid., 50.

To plan, implement and co-ordinate agricultural programme within the diocese, to sustain human dignity among the smallscale farmers, to alleviate hunger and its related effects, and to educate farming communities on their role in the protection of the environment. To realise these objectives some strategies were put in place. Capacity building was aimed at placing communities at a self-propelling path in terms of quality leadership skills, decision-making processes and initiatives to ensure food security at household levels, and participatory technology development.

The Baraka Agricultural College, under the jurisdiction of the Catholic Diocese of Nakuru, today trains extension workers, who in turn undertake further training for the farmers. Capacity building emphasises not only on affordable and cost-effective means of interventions, but also on ways that can be operated and maintained by farmers themselves. To enhance capacity building, participatory technology development (PTD) is incorporated. PTD as encouraged by BAC builds on local knowledge, skills and experience of farmers. PTD is encouraged because it

*--- builds trust between farmers and outsiders. This helps to build the farmers' confidence, tapping their potential for innovation and initiative. It strengthens the link between indigenous and scientific knowledge. It builds human capacity for self-reliance.*³⁵

Through BAC, the CDN offers farmer-training techniques on sustainable agriculture. The entire farming activity aims at sustainable agriculture and rural development. Farmers are taught that for agriculture to be sustainable it must take into account not only the physical environment but also the local prevailing conditions such as socio-economic, religious and political. To achieve her agricultural programme, the CDN has developed and promoted sustainable agricultural practices

³⁵ John Adede, OP.Cit., 24.

and principles without jeopardising food security at household levels. Through agricultural programme, CDN does lobbying for dialogue, solidarity and advocacy for land and food policy at Diocesan and national levels. Dialogue, solidarity and advocacy are achieved at grassroots level through community mobilisation and education. Community mobilisation is geared towards empowering people and to enable them to form groups that can enhance and make community work easy. Community farmers' leaders are trained in this perspective. Later these leaders mobilise the farmers in a holistic approach. They do not only talk of farming activities, they also talk on matters of the economy, health, environment and spirituality. Because the farming activities are many and complex the CDN does not work a lone. It closely does her farming activities with the Ministry of Agriculture, Livestock development and marketing of the government of Kenya.

In collaboration with MOALD and Marketing, G.O.K through agricultural Education and extension will disseminate relevant information to the farming community to facilitate effective adoption of new production techniques, application of agricultural inputs, decision making on markets, prices and principles of sustainable agriculture and rural development. The programme will emphasise greater awareness of improved agricultural practices among the farmers in order to facilitate achievement of food security and increased farm farming incomes.³⁶

In agricultural education it was found that there was insufficient technical know-how and skills in; soil erosion process, livestock and crop diseases and lack of record keeping. The CDN development office resolved that through BAC education on the following would be offered; Soil and water conservation measures, animal and crop husbandry practices, book keeping, methods of food preservation, pasture

³⁶ Catholic Diocese of Nakuru, Op.Cit., 83.

establishment and preservation, sustainable agriculture practices and capitalising on community initiatives.

Baraka College is situated in the highland of Nakuru district, about seven kilometres from Molo town. In its present operation, the College philosophy is aimed at integral development of the human person and it confirms to the church's social teaching. Thus;

--- the philosophy of the college is grounded in the desire of the Church to respond to the needs of and aspirations of the poor--- Baraka promotes sustainable agriculture and development through education, training and extension programmes that focus of recognizing the environment, natural and human resources as the foundation of economic and social activity.³⁷

The college offers a certificate in Agriculture and Rural Development, which take two years for on going students. It also offers short courses that are aimed at farmers, development workers and rural business people.

The short courses offered take two to three weeks and they include; sustainable farming, dairying, beekeeping, poultry, farm management, rural development, communal resource management and youth leadership.

After the long survey of the causes of agricultural impoverishment in Kenya, the idea of SARD in partnership, agriculture in the Old and the New Testaments, the social teaching of the Church in agriculture and the pastoral teaching of the Church in agriculture, we now look at the recommendations, challenges to a social minister and the general conclusion.

³⁷ Baraka Agricultural College, Molo-Kenya, Prospectus 2000, 1.

CHAPTER FOUR

Orientation for action and recommendation.

4.0 Introduction.

Chapter four deals with the recommendations and the way forward for sustainable agriculture and rural development through participation. The individual farmer is given the priority, then the groups of farmers the second option. This is because there is an assumption that the change of attitude of one farmer has great impact when he/she meets the other farmer whose mind's attitude has also changed as well. Then considered is the role of the government, Non-governmental organisations, the Church and other voluntary agencies as the third parties of SARD. Finally included are the challenges of the social minister and the conclusion.

4.1 THE ROLE OF FARMERS

The problem of sustainability can be solved by a joint effort. A prerequisite of which is close co-operation and extensive exchange of experience in farm- to- farm partnership after the farmers have been taught by the agricultural extension staff. What is necessary is the agreement of farmers to complement, share and learn from each other.

We do not advocate for a kind of participation whereby the central government plans and the extension team does execution of the plans and when an agricultural project fails the blame is put on the lazy and conservative rural poor farmers but not the extension staff. Nor do we accept benefit induced participation (Extensionist).

where people do not have to understand everything, since the extension staff is always available, and also some area of information is too technical and scientific for the common people to be able to follow But we advocate for autonomous organization for the poor rural farmers. This is an ideal way of empowering the small-scale farmers. Through such organization farmers will succeed to have a foresight and force of action against the selfish and unscrupulous leaders and business people.

Such organisations are formed, planned, controlled and managed by poor rural farmers themselves. Agriculture as a common activity for the rural folk should have a free political environment. This means that such organisations should be legally authorised to give people freedom to organise and maintain them selves autonomously.

Hence any development agency providing support and development services to such organizations has to act as a catalyst and not as a manipulator (FAO 1979,33), as a facilitator not as a dominator and, even more important, as a collaborator in development and not as a paternal provider of charity.³⁸

Through organisations, farmers could form powerful pressure groups to put their case before the legislators. The formation of such groups will help farmers to participate in improving the conditions of their farming. They will be able to advocate and lobby for better services such as improving the roads, better prices of their farm produce and insurance cover among other things.

Though advocacy, solidarity and co-operation among farmers is enhanced and they feel that they are in the same footing with the rest of the working class who claim their rights through strikes when their terms of service are not met. Farmers' rights will be well represented in parliament when farmer organisations are strongly

³⁸ Ibid., 45.

empowered to demand what is their due. The efforts of farmers need to be directed towards serving the interests of the common good a part from satisfying individual needs.

On credit schemes, farmers need funds to start or run their farm activities. They should be encouraged to have their own savings for use. Institutes for instance Kenya Framers Association (KFA), from which farmers can borrow, should give them money, materials and services at reasonable rates of interests. The development of micro-enterprises for the rural poor farmers is desirable because in addition to providing them with purchasing power, these farmers' production activities lay the foundation for improved rural living standards, therefore reducing rural-urban migration. It helps also to address the issue of poverty, by teaching the poor farmers new skills and thus making them self-reliant through greater savings for investment. Priorities for micro-enterprise development are; participatory development and maximum involvement of beneficiaries (farmers) in design, planning, implementation and maintenance of such projects. The formation of associations will facilitate the exchange of relevant experience among farmers and provide a useful mechanism to deal with credit agencies, and extension agencies. In this way they will break the historic exploitative relationships that bind them to the chain of scrupulous middlemen. Thus the institutions providing the rural farmers with credit and extension services for technology must have an appropriate delivery system that does not compromise with corruption.

There are sometimes problems, which go beyond the ability of the farmers' control. For example drought, too much rains, hailstones, an outbreak of a contagious disease among animals and fire outbreaks. Due to this, farmers get great losses. In

order to ensure that farmers do not suffer, it is necessary to have their farming business insured. The farmer needs to insure crops, animals, buildings and machinery. Using irrigation instead of relying on rain to produce even during the dry season is another good alternative. Thus boreholes, wells and irrigation pumps to be provided by NGOs or Government at reasonable prices.

Both men and women as farmers should have access to and control of agricultural activities. On the other hand, if women appear to be more committed and consistent in agricultural production, then they should have the *lion's share* of the control than men do. Elsewhere, women should have much say in decision making as regards the time spent in the garden and the kind of remuneration they deserve. Access to credit facilities and new technological skills should be improved. Since women form the majority of rural agricultural production, many chances should be allocated to them to train as extension workers. Men on the other hand should be aware of the heavy workload of women and consciously come to their assistance. To make social justice prevail, there should be equitable distribution of workload and resources.

A part from access and control of resources and benefits, women should have the right, guaranteed both customarily and constitutionally, to own land. That is, they can buy or sell the land without any interference from men. The right to own land will guarantee them the power to plan for agricultural activities without fear of traditional biases or professional prejudices. The right to land will make women be fully recognised by all stakeholders in agricultural production.

Akinyi Nzioki had this to say during women's day on 8th March 2000.

- *We call on the commission of land to recommend administration and legislative reforms to give women full and equal access to economic resources, including the right to inheritance and land ownership-indeed, ownership of property in general. We expect commission to recommend:*
- *Joint husband –wife ownership of primary household estates, including the house, the farm, to promote equity and efficiency.*
- *Land law should provide equal, not token, representation of men and women on all statutory bodies that make decisions on land, including land transfer and determining land disputes.*
- *Positive discrimination, giving priority to women with children in a warding grants or loans to improve access to land or security of tenure; and to rural women with children in land allocation on government resettlement schemes for land less people*
- *A land bill addressing gender inequality in land tenure.*³⁹

We recommend the revision of family law and the amendment of the Law of Succession, which gives sons certain property rights that daughters do not have. The law should guarantee daughters' rights to inherit land and provide guidance in handling land inheritance.

Francis asserts;

*It has been stressed that the establishment of autonomous small farmer groups/organizations at lower levels is imperative as a means to counter-balance the large uncontrollable power concentration at higher levels and strengthen the small farmers' collective capacity of self-defence.*⁴⁰

To help rural farmers to monitor these climatic variations, they should be organised into groups of their own they deem necessary within their areas of operations. Through such groups, farmers will be kept informed on new agricultural developments, and to receive technical and instructional assistance from trained

³⁹ Akinyi Nzioki, Op.Cit., 12.

⁴⁰ Ibid., 32.

people. In most developing countries, for example, Kenya, politics determines very much the share of financial allocation on agriculture during the budget reading. Thus;

*It is also necessary that farmers form among themselves mutual-aid associations; that they establish professional associations; that they function efficiently in public life, that is, in various administrative bodies and in political affairs.*⁴¹

4.2 THE GOVERNMENT

The government should work in harmony with other interested parties to ensure agricultural sustainability and rural development. The most immediate imperative step will be to ensure that senior government ministers, civil servants, and all employees are fully possessed of the gravity and urgency of what must be done.

The government should ensure that those who have more direct responsibility for preparing policies, and establishing the mechanism for implementing the policies are tutored in line with those policies which are most likely to produce sustainable agriculture and rural development.

The government should provide enough security for the NGOs personnel. This is because security is the prerequisite and foundation upon which peace and developmental activities are founded. For example the tribal clashes of 1992 and 1997 made lots of NGOs leave the affected areas at the expense and closure of the agricultural projects they had started.

There should be enough allocation of funds to the MoALDM during the beginning of the budgeting year. Adequate funds from the government will facilitate the agricultural activities as planned by the ministry. The government agricultural

⁴¹ Pope John XXXIII, Op.Cit., 41.

personnel should be encouraged to know that their work is of great importance to the nation well-being. They should be well remunerated as an incentive of motivation.

The government should ensure that the causes of land degradation need to be checked before an irreversible damage takes place by employing practical measures and appropriate government policies. At national, continental and global level, it must be recognised that the world belongs to all people and no particular group of people or nation should be exempted from the issue of sustainability. For example, if Lake Victoria is polluted, it means that the Egyptians, who rely on River Nile, whose source is the Lake, their agricultural activities will suffer drastically. Hence dialogue and co-operation in all sectors of agriculture are the tools to overcome the major challenges of humility and to ensure sustainability for the current and future generations. We advocate a call for action from the grassroots level to international levels. We therefore say;

We are one earth, one humanity and one future. Our call to action is to change our way of thinking from " I, HERE and NOW" to WE, EVERYWHERE for TODAY and TOMORROW." Unless we become the responsible stewards of current and future generations, we will face unprecedented regional and global pressures and environmental inequities.⁴²

Educators should also ensure that training is clear as soon as possible and the messages of sustainability are incorporated in farmer's daily activities. There should be training on programs that bring farmers together in an atmosphere conducive to the sharing of information and experiences. Such training should be aimed at providing farmers with the skills of sustainability, and increasing competence and commitment

⁴² Bassam, OP.Cit., 14.

to group action. Trainers should consider that each community may be unique in response to new ideas of SARD due to their different world views.

The government because it works for the entire development of her citizens, should ensure that there is an extension and a research centre at divisional or community level. The staff of the research centre should participate in programme planning and provide the necessary support during implementation in order to ensure that the technology being offered is appropriate to the locality. Extension workers should be encouraged to diagnose the farmers' needs and return to the research station with questions raised by the farmers themselves. Only by co-operation of extension and research staff will it be possible to adapt innovations to the needs of the local farmers. The extension worker should sustain the self-confidence of the farmers by giving advice and by obtaining the help of the scientists, pastoral agents and researchers to assist the farmers to plan and implement the desired improvements in agricultural systems. The extension agent should persuade the people that by their own efforts, they can do much to improve living conditions by the wise and effective use of the community resources; material and human. He/she should encourage every individual to participate in community affairs, especially in matters relating to SARD. Extension in general should be seen not only in the context of increasing agricultural products, but also as an effort of achieving a balanced socio-economic development in rural areas. This is because extension has been seen as only providing agricultural assistance. But extension also covers other areas like health, education, business and leadership if sustainability is to be achieved.

Agricultural products have to be transported from the farmers to the buyers. Most of the farm products have to be sold through travelling by road, a few by rail,

water or air. The government has to try and improve roads in rural areas so that farmers can take their produce to the market easily and quickly. Transport for long distance is very expensive. Farmers have to be encouraged to form organisations/co-operatives through which they can transport their produce easily and cheaply.

Display of materials, which contain the message of SARD on show stands, along the roads, on office doors, in the parking and market places. Preparation of radio and television programs which show how unsustainable practices may be avoided or overcome; and networking with radio and television broadcasters in local, national and regional level to ensure that these programs have the widest possible audience. There should be regular preparation of articles, featuring on topics of SARD for publications in newspapers, journals and magazines. We recommend the use of local languages by extension staff for the sake of farmers who cannot read and write either English or Kiswahili. Networking with bilateral and multilateral aid agencies of the world to ensure that funds are directed towards courses, which promote SARD.

There is need for reversals, that is to bottom-up strategy instead of top-down approach. The agricultural poor farmers require that processes which deprive them and which maintain their deprivation be halted and turned back. The reversals on several approaches such as professionals to talk of rural agricultural development while they live and work with the farmers, instead of living in towns and only executing their agricultural message in written research work. Besides the reversals, practical actions need to surpass the rhetoric of politicians and theories that are shelved and never implemented. For example, political will is needed to device and use cost-effective ways of revamping rural agriculture. There is need to listen and learn from rural people because they are at the core of the agricultural problems.

4.3 THE NGOS

Before NGOs, any voluntary agency or Government starts an agricultural project for rural development in an area, the following factors should be taken into consideration; availability of the local resources (materials), source of capital, availability of market, source of labour, and climatic factors. Also to be considered is security and availability of extension services for offering advice on sustainable agriculture and rural development. The government has to make policies that promote SARD. Some of the policies to be put in place are; improving credit facilities, guaranteeing maximum prices for farm produce and improving transportation facilities for farm produce. Also making available farm inputs such as fertilisers, seeds and machinery, policies on soil and forest conservation, ready market for farm produce and land tenure and registration and national food security.

There is on universal rule as to the way rural farming affairs should definitely be planned, organised and managed. The reason is that there exists within each country considerable environmental variations that affect agriculture. We have the tropical environment and the temperate environment. Together with the NGOs, the sponsors of any agricultural activities should learn and know under what circumstances is the money used.

The NGOs should work in co-operation to avoid the duplication of services offered to the farmers. As noted in chapter one, many NGOs work in isolation and compete to serve the same farmer. Also NGOs have been known of giving handout to farmers. This creates a sense of dependence. Instead, they should try to create a sense of independence and sustainability of the agricultural projects they initiate.. NGOs have been seen leaving the giant project they have started without any further

following on how they are doing. We recommend that all the agricultural projects started by any NGO should be followed afterwards but never be abandoned. In this way continuity and sustainability is ensured in case the farmers are poor to maintain the project themselves.

4.4 THE CHURCH.

As shown in the Old Testament, we should be responsible stewards and co-creators as far as agricultural activities are concerned. For in this sense we may achieve a continuous supply of resources that enhance agriculture. In the story of Joseph, we are called to device storage facilities and store enough food during times of good harvest so that in times of famine we do not starve. Prophet Amos condemned the exploitation of farmers, so is the call of a social minister of this century. Prophet Micah advocated for land ownership at the individual and family level and de-stratification of economic structures in the society that created the poor farmers and the rich landlords. Thus the social minister should strive to achieve somewhat a classless society as was envisioned by Karl Marx in the 19th century.

Good farming practices always yield a better harvest as shown in the parable of the sower. As a good Christian's faith strives and grows, so shall the farmer's activities when all resources are maintained at a sustainable and controllable base. It is mentioned in Mater et Magistra that agriculture is a depressed sector and it is true. Action should start taking place now starting from the individual level to the international level.

The Catholic Church for teaching farmers new farming techniques should use the Small Christian Communities as the entry point. The Church ought to sponsor

school leavers to higher institutes of agriculture. Jesus in his teaching drew examples from the agricultural environment. This may imply that Jesus valued agricultural practices. Therefore we call upon the Church to do rigorous inculturation of agricultural practices in line with the gospel values. Those trained and employed by the Church should be given good salaries that would motivate them. Like in the Gospels, we are told the 'sower' (farmer) harvested hundred-fold. This harvest is equal to the salary a committed farmer is likely to receive. The Church as an instrument of peace should act as a link between the NGOs and the government and lobby for the farmers' rights and needs.

4.5 Challenges to a social minister

Sustainability in agriculture and development is a great challenge. It requires full and equal participation of all people. This is from the village level to the international level. Social ministry's vision is to deal with the integral human development. Integral means the whole and therefore it implies sustainability. The social minister ought to enable the people to speak for themselves and to be the servant of the marginalised. Like the prophets, he/she may not be liked and as the result would be ostracised, exiled, silenced or killed. To speak on the rights of the farmers as far as marketing and consumption of agricultural products is concerned needs a courageous person. Like prophet Amos, the Social Minister should lobby for the justice of farmers on market issues. To see that the correct balances and scales are used for the products sold in the market.

God's attitude towards agriculture is clearly shown for He nourishes His people in time of hardships (in Egypt, and in the desert) and in time of abundance as at Canaan with milk and honey. The Social Minister is challenged to find ways of storing food during a bumper harvest for usage during the dry season. That is, the best storage methods should be designed for all crops both perishable and long-lasting ones.

People at all levels of the society should be encouraged to acknowledge the value and importance of agriculture. There is a common belief that *un empty stomach* forces one to steal or kill in order to get food. Like in some court cases, those judged are found guilty of stealing something to quench their hunger. Laziness should be condemned and discouraged because it creates the aspect of dependence on those

practising charity. All scientific machinery, expertise and skills should be given to people for use instead of giving them already prepared food either from external donors and internal sources.

A Social Minister talking of SARD should be an example to the extension agents and the research scientists. That is he should courageously stay with farmers and execute the agricultural duties while he/she is with them. This is indeed a challenge that a Social Minister must accept unlike other graduates and put a side the degrees he/she has received and serve people. A Social Minister is a tool of evangelisation, therefore, like Jesus who walked and stayed with farmers he/she should embrace the same example.

For the NGOs and voluntary agencies, which work in isolation, he/she should reconcile them such that they work by networking their activities to avoid duplication of services and unhealthy competition.

General Conclusion

SARD can be achieved only when resources, inputs, and technologies involved are within the capacities of the farmers to own, hire and maintain efficiency on the resource base and environmental quality. The kingdom of God preached by Jesus Christ was a complete one. This was his (Jesus') development at that time. For the Christian to be complete these days, it must include the aspects of sustainability. For when the Christians have their agricultural activities maintained at a level that feeds the present population while preserving some resources for the future generation, then the kingdom God is preached.

In an agricultural community, people should be helped to discuss, recognise and define their needs. This requires involving the people in planning and in actions necessary to satisfy their needs and to encourage them to assume increasing responsibility for those actions.

Since agriculture is the back-bone of Kenya's economy, it must receive lots of political will and financial assistance during budget reading. Other Diocese in Kenya should emulate the example on the Catholic Diocese of Nakuru. That is by implementing agricultural programs through opening up agricultural institution or having agricultural extension centres. These programmes or extension centres will subsidise the government's efforts, whereby majority of students are educated at college and university levels. The agricultural centres will most probably focus on the poor farmers. Some of these farmers might be among the unlucky members of the society who had no opportunity of attending formal education. Thus short courses like

the ones offered at Baraka Agricultural College are necessary for poor farmers may be able to afford the little fees that is charged.

The sense of awareness about the idea of sustainability should be taught to farmers. For the farmers are the beginning and the end of all agricultural activities. Therefore, farmers need to be at the centre of all that pertain to SARD.

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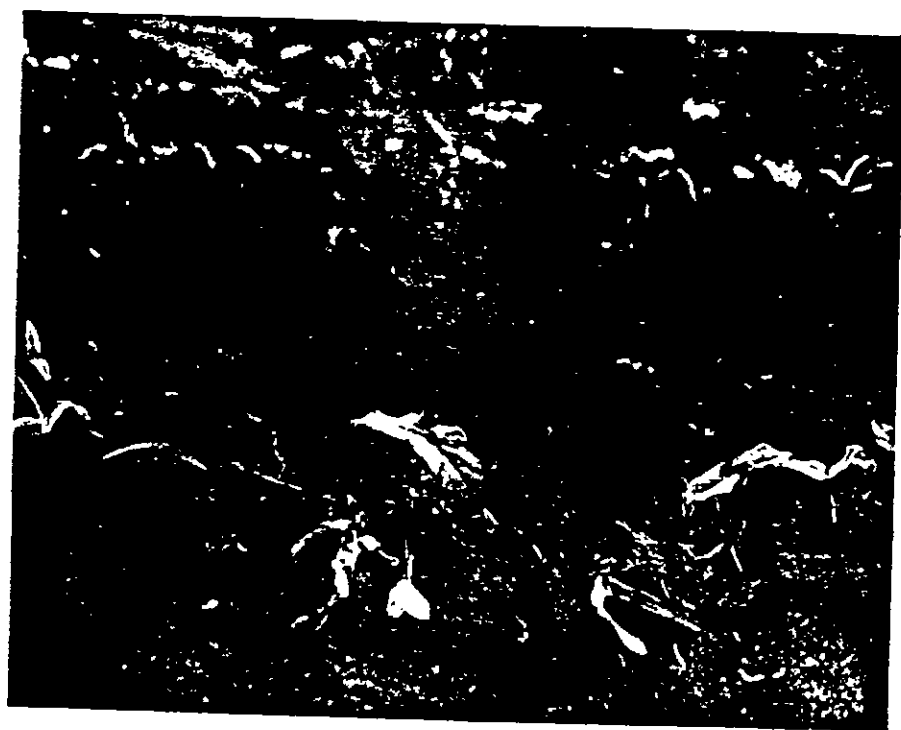


Fig. 1.52 Erosion caused by wrong cultural practices (ploughing up and down the hill, as opposed to on the contour). This sort of agriculture is simply not sustainable. Land like this can be completely destroyed within 3 years.

DAILY NATION, THURSDAY, APRIL 20, 2000



Woman with a donkey carrying a load of firewood to the Moyale market recently. A load of firewood costs Sh100 in the town. (Picture by REBECCA NDUKU)

Mystery over theft of society's records

By NATION Correspondent
Members of a Machakos coffee society yesterday intercepted a package containing its files in transit to an unknown destination.

The files, of the Kyaume Coffee Farmers Society in Kangundo division, were found in a shop at the Tala market.

A good Samaritan spotted one of the society's workers carrying a box-full of the records and tipped off the shareholders.

The shareholders, among them the Kangundo Kanu sub branch chairman, Mr Peter Kyallo, raided

They then frogmarched him to a nearby police post where he was booked.

Police also retained the files.

The shareholders suspected that the files were headed for destruction since the current management is expected to lose elections in today's annual general meeting.

Yesterday, the shareholders vowed to raise the issue at the meeting to know where the files were being taken.

"We want to know who was behind the smuggling of the office records and where they were

Aids ravages the youth

By NATION Correspondent

Pupils and students make up 30 per cent of the total Aids cases reported in the country, a new report reveals.

The report says that girls between 15-19 years of age and 20-24 years are more than twice as likely to contract Aids as boys.

It says that misconceptions on Aids among school children and campaigns aimed at creating awareness without stressing the need for behavioural change were to blame.

The report has been prepared by a group of medics from the

AGRICULTURE

HEALTH

THE ENVIRONMENT

SCIENCE

After the researchers have recorded all the growth and yield parameters, the Furadan treated harvest is given to the farmer as compensation for use of their plot.



Farmers pose beside a healthy maize crop. Most are ignorant of the components used in production which in some cases include dangerous chemicals like Furadan.