

COUNTY GOVERNMENT OF NYAMIRA

COUNTY DAIRY BREEDING POLICY

1. CHAPTER ONE -INTRODUCTION AND BACKGROUND

1.1. Introduction

The overall goal of the Government of Kenya is to eradicate poverty, illiteracy and diseases while creating wealth. Kenya is also a signatory to the Millennium Development Goals (MDGs) Programme of the United Nations, whose goal number one is halving the hunger incidence by the year 2015. Farming, being the mainstay of most rural households, contributes significantly to the livelihoods of the citizenry of this country. It is, therefore, key in the achievement of this important MDG.

Nyamira County is an agricultural based economy as 90% of the residents derive their livelihoods from various on-farms and off-farm agricultural activities. Agriculture is the main stay of Nyamira economy and its performance greatly influences the overall economic performance. It contributes directly 25 % of the GDP and a further 27 % through links with the manufacturing, distribution and other services related to the sector. It is the key sector that will enable the County to realize the economic pillar in Vision 2030. The overall development and growth of the sector is anchored in two strategic thrusts:

- Increasing productivity, commercialization and competitiveness of agricultural commodities and enterprises
- Developing and managing the key factors of production

Currently, the county produces averagely 36 million litres of milk annually, most of which is produced in Borabu sub-county. The county's milk production potential with the current breeds stands at 80 million litres per year. Various interventions will be put in place and it is expected that in the next four years, Nyamira County will produce 240 million litres of milk per year. It is against this background that the County Department of Agriculture, Livestock and Fisheries seeks to put in place a conducive policy environment to facilitate enhanced and sustainable growth of the Dairy sub-sector.

2. CHAPTER TWO - RATIONALE AND OBJECTIVES OF THE POLICY

2.1. Rationale for the County Dairy Breeding Policy

2.1.1. The Development of the Dairy industry has in the past aimed at increasing production of milk. As a result of this, the county is currently not self sufficient in milk production as the recommended per capita milk consumption (90 Lts per year) requirements by the Food and

Agriculture Organization (FAO) has not been met for most citizens. Majority of the Dairy farmers have continued being poor and food insecure mainly due to low productivity, high cost of farm inputs, local market inefficiencies and stringent quality requirements in international markets. The potential of the Dairy sub-sector has, therefore, not been fully exploited.

Various reforms in the Dairy sub-sector have been initiated to spur economic growth over the last two decades. Some of the reforms involved the privatization of Artificial Insemination Services (AI) and cattle dip management, they were not supported by any suitable policy framework. At the time of liberalization, dairy farmers and private sector were not adequately prepared to take over these services. As a result, the costs of AI services and drugs have been prohibitively high to the majority of the poor farmers.

To address the above challenges, it is necessary that a thorough review of both policy and institutional framework of the Dairy Breeding Services be undertaken to allow for the development of a competitive Dairy industry. This policy paper provides various policy options necessary for achieving sustainable development and management of the breeding services. The policy will guide the development of dairy farming to increase household incomes, assure food security and create employment through accelerated germplasm multiplication technologies.

2.2. Objectives of the Dairy Breeding Policy

This policy addresses the challenges in dairy breeding in the context of breeding stock, accessibility and affordability of germplasm materials (semen) , disease control and delivery of timely AI services to farmers(research and extension). The policy will broadly be guided by the following specific objectives and is designed to:

Achieve appropriate breeding management systems for sustainable development of the dairy industry; improve and conserve available animal genetic resources effectively.

3. CHAPTER THREE - CHALLENGES AND POLICY INTERVENTIONS

3.1. Animal Genetic Resources in Nyamira

3.1.1. Characterization and Documentation

The characteristics of an animal are controlled by hereditary factors known as genes. The process of characterization and documentation involves classification and assessment of productivity and other attributes, such as disease resistance. The sum total of both domestic and wild animal species and their breeds may be referred to as animal genetic resources and are a natural resource just like water or land. The county has a large and diverse reservoir of dairy animal genetic resources, the majority of which are crosses between indigenous cattle and exotic breeds introduced by the Europeans in the settlement schemes in 1920s. The locally adapted zebu cattle

are diminishing in number rapidly. Progressive farmers are continuously adopting and adapting high producing dairy breeds with associated disease challenges.

3.1.2. Animal Genetic Resource Conservation

Animal genetic resources may be conserved in-situ, that is, conservation of live animals in the natural state where inbreeding or mixing with other populations of similar species is prevented. It may also be ex-situ, that is, conservation of frozen tissues, ova, embryos, semen or even actual genes in gene banks. Over the years, the country has initiated a few in-situ conservation programmes, for future use and development for some of its Animal Genetic Resources, mostly used for commercial production. In-situ conservation in Kenya is done through efforts of private farms, research institutions, government (public Institutions) and indigenous communities. There are no organized ex-situ conservation programmes for live animals; but there is a facility for freezing at extremely low temperatures (cryo-preservation) at the KAGRIC, Kabete, which can handle semen, embryos and ova storage, but only preserves cattle semen. There is need for the County to establish an AI substation with specialized manpower and equipment to handle the ever increasing demand for timely breeding services.

3.1.3. Challenges and policy interventions

3.1.3.1 Information about breed diversity, population sizes, trends, and distribution is scanty and only available in estimated form, as no comprehensive baseline survey has been undertaken to generate adequate data. In order to address this shortcoming, a survey on demographic distribution of breeds and types of the dairy animal genetic resource will be undertaken and thoroughly evaluated so as to identify potential candidates for further conservation or improvement.

3.1.3.2 Animal genetic resources are inadequately and ineffectively managed and utilized because of incomplete inventory, characterization, documentation and conservation. Although it is believed that valuable genes are contained in our animals, these have neither been identified nor their characteristics documented and, therefore, cannot be protected through patenting and conservation.

To redress this situation, the County government will regulate and facilitate documentation and conservation of genetic resources as well as review indigenous dairy animals' genetic resource and patenting of the genotype: Further establishment of nucleus herds of indigenous breeds and species for breeding, characterization, conservation and utilization will be done. County livestock registration and recording schemes will be established.

3.1.3.3 Many dairy animal improvement programmes in the past have concentrated on upgrading of indigenous animals towards the exotic western breeds with varying degree of success. Breed selection programmes and, especially, indiscriminate crossbreeding programmes should be reviewed. In this regard, effort will be made to improve existing breeding programmes through

the use of recognized experts in formulation of superior breeding programmes. The County Government will institute an affordable and sustainable breeding programme with long term aim of each household having at least two dairy cows of high productivity (20 Lts /cow/day) and with locally adaptive traits.

3.1.3.4 Farmers, Community Based Organizations (CBOs), NGOs, Breed associations, and government are all involved in one way or another in management of Animal Genetic Resources. Decisions on what animals are to parent future animals are made without reference to any authority or consultation and without any generally agreed format. This scenario arises because of the existing weak legal framework and outdated breeding policies. Currently, animal breeding services in Kenya are facilitated by the Kenya Stud Book, the Livestock Recording Centre, the Central Artificial Insemination Station, the Kenya National Artificial Insemination Service and the Breed Associations. There is need for collaboration with relevant stakeholders for a county authority for recording animals and regulating breeding programmes and to undertake other relevant tasks related to self-sustained breeding schemes in the country. In this regard, a county organization charged with the responsibility of developing and coordinating self-sustaining breeding programmes will be established. This body shall encourage other relevant stakeholders to invest in breeding services, formulate appropriate policy and legal framework to support animal breeding programmes,(including importation and exportation of genetic material), strengthen and modernize the County livestock breeders associations, encourage farmers to take part in progeny testing programmes, and serve as the Focal Point to co-ordinate Animal Genetic Resources activities within the county, and as a link to similar regional or global focal points.

3.1.3.5 The responsibility of producing and supplying breeding stock lies with the farmers. In the past, the government has been supplementing this effort through its multiplication farms. This initiative, however, has been unable to cope with the high demand for quality breeding animals. The major challenges facing production and supply of breeding stock include; high mortality rate of young stocks, and inadequate breeding and recording services. Consequently, this has resulted in indiscriminate cross-breeding and poor breeding records which have impeded the development of quality breeding stock. Currently, the cost of breeding animals is beyond the reach of most smallholder farmers. There is need, therefore, to urgently address these challenges and subsequently facilitate the development of a thriving dairy industry.

In this regard, the county government will setup mechanisms to strengthen the management of breeding services and regulate all breeding service providers, intensify extension services and regularly train inseminators to increase efficiency in the provision of breeding services. To facilitate selection and use of superior sires, farmers will be encouraged to register their animals with the Kenya Stud Book and to keep proper breeding records to facilitate selection and use of superior sires, while availing reliable information in marketing of breeding cows and heifers. A livestock multiplication center for dairy animals will also be established while the private sector, farmer groups, associations and societies will be encouraged to undertake livestock breeding and multiplication.

3.1.3.6 When AI service was introduced in Kenya, its adoption grew until it covered about 80% of the national dairy herd and a significant portion of the beef herd. It was initially largely a government supported initiative through introduction of heavy subsidy to the service. Following the economic reforms that were introduced in the 1980s, the government, partially, withdrew its support for the distribution of semen and inseminators, leading to instances where farmers reverted to use of inferior bulls because they could not afford the AI services. The use of such untested bulls has caused a resurgence of sexually transmitted diseases and other reproductive health disorders in cattle. In addition, there is a high degree of inbreeding within the livestock, especially those owned by smallholder farmers, because of low level of inter-farmer exchange of breeding stock.

To address these concerns, the County government will promote efficient delivery of comprehensive breeding services by subsidizing AI thus making it accessible and affordable to all farmers. In this connection, the County government will expand its mandate to be able to serve as a sub agent of KAGRIC in the storage and distribution of semen and nitrogen to farmer groups, co-operatives and other community-based organizations undertaking A.I services.

3.1.3.7 Substantial amounts of resources are needed to effectively manage the various activities necessary for attaining acceptable and sustainable standards of breeding. However, inadequate budgetary provision for that kind of animal breeding management has meant that various institutions are unable to organize and coordinate their activities efficiently, thus resulting in poor service. To complement the available public expenditure on management of animal breeding activities, the County government will encourage lending institutions to provide credit at favorable terms to farmers, farmers' organizations', or private entrepreneurs to participate in commercialized animal breeding programmes.

4. CHAPTER FOUR - INSTITUTIONAL AND LEGAL FRAMEWORK

4.1. Institutional Framework

4.1.0 The County Department of Agriculture, Livestock and Fisheries has the major responsibility of creating and promoting an enabling environment for players in the dairy industry, through development and implementation of effective sectoral policies and strategies. It achieves this through the Directorate of Livestock Production and Directorate Veterinary Services.

To address new challenges and enhance service delivery, the Department will undertake internal restructuring and reorganization, within the context of the larger on-going County Public Sector Reform Programme. In this regard, the various, Units within the Directorates of Livestock Production and Veterinary Services will be harmonized and rationalized to be in line with the professional competences and international protocols.

4.1.1 Currently, livestock breeding services are fragmented, thus making coordination of breeding activities difficult. In this regard, Animal Breeding Unit will be established in the Department to co-ordinate and regulate all breeding services and give direction on breeding strategies of all animal species.

4.2. Monitoring and Evaluation (M&E)

4.2.0 Prudent resource management is critical for achieving the objectives of this policy. This can only be achieved by instituting an effective mechanism for monitoring the resource use, which will be possible through the development of a well-coordinated information management system that provides for information sharing among stakeholders.

Towards this goal, the Department will ensure efficient management of financial resources through ensuring strict adherence to various budget rationalization schemes as well as following the laid down public finance management procedures and regulations. The Department will also work closely with all stakeholders to ensure stronger coordination and harmonization of the activities undertaken by the development partners and the NGOs involved in dairy development. An appropriate participatory M&E system will be established in order to ensure that the necessary corrective measures are taken at the right time during the implementation of projects and programmes in the sub-sector. To this end, a pro-active information management and information sharing system will be institutionalized.

5.1. Annex I Summary Table on the Proposed Policy Interventions

Policy issue	Policy constraint	Proposed policy intervention
3.1.1 Characterization and documentation	i) Information about breed diversity, population sizes, trends, and distribution is scanty and only available in estimate form ii) Inadequate characterization, documentation and conservation	i) County Government will regulate and facilitate documentation and conservation of genetic resources ii) A survey on demographic distribution of dairy animals will be done to identify potential candidates for further conservation
3.1.2 Animal genetic resource conservation	i) Absence of a central authority to record and regulate breeding ii) Low usage of AI services and high degree of inbreeding	i) A county livestock breeding Association will be established ii) The county government will subsidize AI thus making it accessible and affordable iii) The county government will establish substation for the storage and distribution of semen.
4.0 Institutional and	i) Institutional weaknesses	i) The Department will be restructured

legal framework		<p>and reorganized to create more efficiency</p> <p>ii) Animal breeding unit will be established to co-ordinate and regulate all breeding activities in the county</p>
4.2 Monitoring and Evaluation	i) Weak Monitoring and Evaluation (M&E) framework	i) An appropriate participatory M&E system will be put in place in order to facilitate corrective measures be taken at the right time and a pro-active information management and sharing system will be institutionalized.