THE ANIMAL BREEDING ACT AS A STRATEGY AND INSTRUMENT IN STREAMLINING ANIMAL BREEDING ACTIVITIES IN UGANDA

H.N. Nakimbugwe, D.K.N. Semambo and D.B. Ndumu

National Animal Genetic Resources Centre and Data Bank, P.O. Box 183, Entebbe, Uganda

INTRODUCTION

In Uganda, just like in any other developing country, the dominant issues relate to reducing under nutrition, enhancing food security, combating rural poverty and achieving rates and patterns of agricultural growth that would contribute to overall economic development (FAO, 1995). It has been realised that increasing productivity per animal through improved management and exploiting the genetic potential is the most feasible alternative to meet the increasing demand for livestock products in the country. However, results of breeding activities in the past have not been satisfactory. Just like in many developing countries, the root cause of such anomalies is lack of well planned and executed breeding programmes exacerbated by no provision of a stable public sector enabling policy. Under its overall policy of modernisation of agriculture, Uganda has recognised a need for a coherent and comprehensive animal breeding policy to guide all stakeholders in the improvement and conservation of animal genetic resources. In 1997, the first ever National Animal Breeding Policy in the country was put in place. It is backed up by an institutional and legal framework in form of the Animal Breeding Act. It is hoped that such an undertaking will assist the country in streamlining breeding activities and take advantage of benefits which accrue from well planned and executed breeding plans in an enabling policy environment.

PRESENT STATUS OF THE LIVESTOCK INDUSTRY IN UGANDA

The bulk of domestic milk and meat is produced by mixed farming smallholders and pastoralists who own over 90% of the national livestock population. Agricultural development has been greater in the crop sector (particularly cash crops) as compared to other sectors like livestock. In comparison to crop production which contributes 30.9% to the total GDP and 72% to Agricultural GDP, livestock production contributes only 7.1% and 17% respectively (MFPED, 2001). This disproportionate is reflected in the per capita availability of livestock products, which is worrying low: 22 litres of milk and 5.6 kg of meat as compared with the FAO recommendation of 200 and 50 respectively.

There has, therefore, been a need to diversify activities within the agricultural sector for any meaningful economic and nutritional advancement. However, increase in animal products through growth in livestock numbers is highly restricted by the limited land resources and the ever-increasing population. Bourn et al. (1999) strikingly point out that Uganda has twice the mean density of people in Kenya, and thrice that of Tanzania. Therefore, increase in productivity per animal through improved management and exploiting the genetic potential provides a more sustainable solution. Hammond (2001) further points out that there is high potential for genetic improvement in breed populations of developing countries if only breeding programmes were well planned, executed and sustained.
Genetic improvement results in small but cumulative and sustainable effects making it one of the most powerful and cheapest means of increasing the efficiency of animal production. As part of a national programme to exploit this potential and to have a coherent and comprehensive policy to guide all stakeholders in the improvement and conservation of animal genetic resources, the National Animal Breeding Policy of Uganda was passed in 1997. This policy is backed up by an institutional and legal framework in the form of the Animal Breeding Act, 2001. In support of such a stance by developing countries, Hammond (2001) notes that whilst animal breeding plans should be technically sound, their success in the field is overwhelmingly dominated by ruling policy environment. In this paper the role and relevance of the Animal Breeding Act as an instrument in streamlining breeding activities in Uganda will be discussed.

BACKGROUND OF BREEDING ACTIVITIES IN UGANDA

Breeding work has been carried out in Uganda mainly on cattle for both dairy and beef, but greater advances have been achieved in the dairy sector. The first attempts were invariably directed towards developing the indigenous cattle by selection. This accrued from a school of thought that if the genotypes of the animals, as far as milk production was concerned, had not been adversely affected by natural selection for adaptability to the tropics, then artificial selection would still provide a means of improving the production traits of the animals (Mahadevan et al., 1961). This was later dropped because it proved to be too slow. Galukande et al. (1962) assert that superior genotypes for milk production were extremely difficult to come by among these populations. Later efforts in the late 1960s and more recently in the 1980s and early 1990s involved the introduction of more exotic breeds for both cross breeding with the indigenous animals and for pure exotic breeding. This was in line with the other school of thought that if the low production of these animals was a result of inferior genotypes resulting from incompatibility, then genetic improvements in production traits would require the introduction of superior germplasm from the more productive European breeds (Mahadevan et al., 1961).

Although some farmers have benefited from such efforts especially the latter one, the results have not been satisfactory. These shortcomings were basically a result of breeding being carried out with no well-defined principles for selection, crossbreeding and introduction of purebreds in accordance with agro-ecological conditions and prevalent management levels. In other words, breeding work was carried out in a rather haphazard manner with no guiding and enabling policies. One major justification for the formulation of the Animal Breeding Policy was to address this shortcoming and provide an enabling policy especially in the face of neo-liberal policies. Evidence from developed countries clearly shows that well planned and executed breeding programmes in an enabling policy environment realize cumulative gains in the breeding goal and highly favourable rate benefit cost ratios (Hammond, 2001).

THE ANIMAL BREEDING ACT

The National Animal Breeding Policy is backed up by a legal framework in form of the Animal Breeding Act. This policy is a result of extensive consultation with stakeholders and synthesis of information gathered from literature, collected from field observations and external visits.
Since it is the farmer who has the better experience in dealing with his farming system, farmers from the various production systems played a leading role in the formulation of the policy. The Act together with the policy are to give guidelines to stakeholders in aspects of animal breeding (NABP, 1997). The Act in essence establishes the National Animal Genetic Resources Centre and Data Bank and provides for the implementation of the National Animal Breeding Policy, promotion, regulation and control, marketing, import and export, and quality assurance of animal and fish genetic materials.

National Animal Genetic Resources Centre and Data Bank (NAGR & DB). In the face of neo-liberal policies like privatisation, stakeholders deemed it necessary to have a body corporate entrusted with protecting and guarding national interest in breeding work. Livestock sectors like disease control and breeding cannot be left in their entirety to the private sector. Results of 40 years of market driven breeding goals which used the strategy of changing the environment to suit unadapted genotypes for quicker results have not been satisfactory. This clearly shows that livestock breeding cannot wholly be left to market forces. There is a need to change genotypes to suit the environment (selection). Improving the quality of animals through selection using local and tropicalised breeds is a long term venture which hardly attracts investment by private enterprises. For any meaningful sustainable breeding activities, this latter approach should go hand in hand with market driven goals. The NAGR & DB was therefore established to cater for both interests and it is to play a leading role in the gradual commercialisation of breeding activities and use of modern breeding technologies.

In order to attain its objectives the centre shall specifically carry out the following commercial activities:

i) Production, procurement and sale of genetic material and their associated equipment.
ii) Management of the centre farms for production and selection of superior dams and sires.
iii) Production and sale of founder brood stock of fisheries resources.
iv) Operate open nucleus breeding schemes and reproduction extension services to farmers.
v) Rearing of sire studs for production and sale of semen.
vi) Production, procurement and sale of liquid nitrogen and associated equipment.

The centre shall also undertake the following activities as directed and funded by government and other funding agencies:

i) Serve as a National Animal Genetic Data Bank, central livestock registry, quarantine, examination and evaluation centre for genetic material.
ii) Conduct training for technicians and farmers in aspects of animal breeding.
iii) Collaborate in research on genetic improvement.
iv) Develop guidelines and implement a field oriented breeding extension service.
v) Encourage formation and development of Breed Societies and Breeders’ Associations.
vi) Provide guidance on breeding and multiplication of improved breeds.
vii) Promote herd recording and performance testing on farms.

Although the NAGR & DB shall operate on a commercial basis in discharging its functions, it has been recognised that substantial public sector resources in its early years of operation are
essential. Plans to cater for the substantial technical and operational capacity that such a centre requires are underway.

**Regulatory and Institutional framework.** Regulatory functions as far as breeding activities are concerned are a responsibility of the Ministry of Agriculture, Animal Industry and Fisheries (MAAIF). MAAIF is responsible for the following:

i) Registration, certification and regulation of all breeds, animal breeders, breeders’ associations, artificial insemination technicians and inovulators.

ii) Registration and issue of animal brands and licences for animal breeding training schools and institutes.

iii) Import and export of animal genetic material.

iv) Establishing and maintaining a system of record keeping.

v) Reviewing, approving and regulating national quality performance standards for animal genetic resources.

vi) Overall policy guidance on animal production.

**CONCLUSION**

The National Animal Breeding Policy, its action plan and legal framework in form of the Animal Breeding Act are a great step taken by Uganda in streamlining its breeding activities which have in the past suffered from unfavourable policies and unsystematic breeding. It is hoped that this comprehensive and systematic move will favourably address the genetic improvement of our farm animal genetic resources and their preservation.

**REFERENCES**


