

ANNEXURE 2003.1.10 – ATTACHMENT 1 DRAFT ANIMAL IMPROVEMENT POLICY FOR SOUTH AFRICA
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DRAFT ANIMAL IMPROVEMENT POLICY FOR SOUTH AFRICA

1. Introduction

A large portion of animal agriculture in South Africa is dependent on natural veld or planted pastures. Veld and pastures are, in turn, dependent on the country's soil and water resources. The optimal and sustainable use of these natural resources will largely determine South Africa's capacity for lasting food security. Care must therefore be taken to farm with adapted and genetically sound animals that are capable of producing under a variety of conditions. This adaptation of genetically sound animals to animal production requires significant inputs from animal improvement.

Genetic resources are a key component of animal improvement. It's through a combination of genetic resources and other factors, that animal production and performance can be improved. The contribution of animal improvement involves a broad range of activities, types of animals and products: from large-scale extensive beef, lamb, wool, mutton and mohair production, intensive dairy, pig and poultry systems, a growing game ranching and aquaculture sector, as well as the small farm animals. Farming with small animals is rapidly becoming a major contributor to national and household food security as well as sustainable farming systems in the country. Animal improvement is a rapidly changing industry with new technologies improving production efficiency - even under conditions initially perceived as being totally unsuitable for any form of animal agriculture.

Significant and effective animal improvement requires a variety of information and the use thereof. It's imperative therefore to effectively and efficiently use animal identification, evaluation and pedigree information on South Africa's animal genetic resources.

The informed, orderly and responsible use of genetically superior animals to improve the efficiency of these resources is the basis of animal improvement.

The need for a more effective and efficient National animal improvement programme led to a review of the Livestock Improvement Act, 1997 (Act No. 25 of 1977). This review yielded a number of concerns, including, inter alia:

- Restriction on the importation of genetic material for registered stud breeders.

- The protection of the local artificial insemination industry and restrictions on local collection and sale of semen.

- The protection of what was seen as an elitist pedigree farm animal industry.

- Support of animal improvement schemes that do not benefit the small-scale and black farmers, particularly in communal settings.

- The absence of provisions in the legislation for the needs and interests of the small farmer.

- Insufficient control over embryo collection and transfer activities.

- Unequal access to information and to genetic material by animal owners.

- Scientific and technological progress has exposed a number of shortcomings.

- Some restrictions disregarded basic individual rights.

- No control over the exportation of genetic material of landrace breeds other than health protocols

These concerns led to the drafting of new legislation and the Animal Improvement Act was passed in September 1998 after two years of extensive consultation and preparation. The Animal Improvement Act, 1998 (Act 62 of 1998) should enable users to make informed decisions and should ensure that suppliers of genetically superior animals and genetic material are bound by

norms and standards that will in turn ensure that the genetic material used in South Africa has the potential to maintain or improve production from both food and fibre producing animals.

The Animal Improvement Act, 1998 (Act No. 62 of 1998) retained the following important provisions from the Livestock Improvement Act:

- Control of the identification and use of genetic material that could be used for animal improvement.
- Control over the persons and centres providing animal reproduction services.
- The orderly establishment and maintenance of animal breeders' societies.

The following new provisions were included to address the inequalities in Act 25 of 1977 and to ensure that legislation would benefit all owners of farm animals in South Africa

- Deregulation of the artificial insemination industry without compromising genetic and health standards.
- Anybody may import animals or genetic material.
- Provision for more than one registering authority.
- Provision for the registration of import agents.
- Provision for the protection of South Africa's indigenous and locally developed breeds.
- Provision for the registration of embryo collectors as a specialised branch of the industry to bring this into line with international standards.
- Provision for the establishment of schemes – a national database to support accurate statistics, animal identification, animal recording and evaluation

This policy will serve as an information document – as well as a guideline for the implementation of actions linked to Act 62 of 1998.

A number of these actions are of critical importance to the long term stability of the livestock industry in South Africa and should be implemented as soon as possible. These include the monitoring and control of exports of genetic material of South African landrace breeds

2. Definitions/Glossary of terms/Acronyms

As this policy document has been developed to support the Animal Improvement Act, relevant definitions in the Act have been included.

'animal' means a kind of animal or an animal of a specified breed of such kind of animal which has in terms of section 2 been declared as an animal for the purposes of the Act;

'animal breeders' society' means a group of persons promoting the breeding, the recording or registration, the genetic improvement and the use of a kind of animal or an animal of a specified breed of such kind of animal, determining and applying breed standards, recommending in its sole discretion the recording or registration of an animal or a specified breed of a kind of animal bred in or imported into the Republic, and who is registered in terms of section 8 (7) (a) (i);

'animal improvement' means the scientifically based identification of genetically superior animals by means of the integrated registration and genetic information system or in a manner approved by the registrar and the discerning use thereof to improve the production or performance ability of the animal population in the interest of the Republic;

'Breed' means a population of animals which produces progeny possessing a high degree of genetic stability as evidenced by identifiable uniformity in breed standards and performance;

'breeder' means the owner of a breeding female animal at the time of natural or artificial conception or at the birth of progeny;

'centre' means premises registered in terms of section 8 (6) (b) for the collection, evaluation, processing, packing, labelling, storing and sale of semen, embryos or ova, as the case may be, of certain kinds of animal;

'Department' means the Department of Agriculture in the national government;

'donor animal' means an animal which has been approved in terms of section 8 (6) (c) for the collection of genetic material;

'Embryo collector' means a person who collects, evaluates, processes, packs or stores genetic material, or who carries out the artificial insemination or the transferring of ova or embryos into recipient female animals and who is registered as such in terms of section 8 (6) (a) in respect of the kind of animal for which he or she has completed the prescribed course of instruction;

'export' means to take out or send an animal or genetic material from the Republic to a country or territory outside the Republic or to cause an animal or genetic material to be so taken or sent out;

'genetic material' means ova, embryos, semen and any other material originating from an animal through which the hereditary factors of such animal can be transferred;

'import' means to bring an animal or genetic material from outside the Republic into the Republic or to cause an animal or genetic material to be so brought into the Republic;

'import agent' means a person who imports genetic material on behalf of another person and who is registered as such in terms of section 8 (6) (a);

'integrated registration and genetic information system' (INTERGIS) means the computer system which has been established in co-operation with the Department to integrate the pedigrees and performance data of animals;

'landrace' means a specified breed of a kind of animal indigenous to or developed in the Republic;

'registering authority' means an animal breeders' society or a group of animal breeders' societies which is registered as such in terms of section 8 (7) (a) (ii);

'Registrar' means the officer designated as Registrar of Animal Improvement in terms of section 3;

'Regulation' means a regulation made under this Act;

'scheme' means a scheme established in terms of section 20;

'Semen collector' means a person who collects, evaluates, processes, packs or stores semen, or who carries out the artificial insemination of an animal, and who is registered as such in terms of section 8 (6) (a) in respect of the kind of animal for which he or she has completed the prescribed course of instruction;

Acronyms

AnGR	Animal Genetic Resources
ARC	Agricultural Research Council
FAnGR	Farm Animal Genetic Resources
FAO	Food and Agriculture Organisation of the United Nations
ICAR	International Commission for Animal Recording
INTERGIS	Integrated Registration and Genetic Information System
SASB	South African Stud Book and Livestock Improvement Association
SOW	State of the Worlds Animal Genetic Resources

3. **Problem Statement**

The Animal Improvement Act was passed in September 1998 and the regulations were finalised in 2002 – after almost four years of extensive evaluation and dialogue that included testing those controlling the establishment of other registering authorities and the registration of donor animals.

One of the shortfalls of the process – was a lack of a holistic policy on animal improvement – to support legislation and regulation – and to serve as a guideline document for the implementation of activities and services aimed at the improvement of animal production at all levels.

This policy has been drafted with the above in mind and the intention is to release the approved draft at the same time as the publication of the regulations and the date of commencement of the Animal Improvement Act, 1998 (Act 62 of 1998).

4. **Objectives**

The objectives of the policy are to:

Facilitate poverty alleviation through the sustainable utilization of animal genetic resources within the framework of the Animal Improvement Act, 1998 (Act 62 of 1998).

Promote and support the identification, evaluation, breeding and use of genetically superior animals to improve the production and performance of animals used for food, agriculture, sport and recreation.

Promote the sustainable use of Animal Genetic resources (AnGR) as a major contributor to National food security.

Facilitate the conservation of animal genetic resources for food and agriculture.

Facilitate reduction in the risk of disease transmission through animal improvement.

Strive for a competitive animal production sector.

Instruments for a National Animal Improvement Policy:

Accurate information (including, but not limited to statistics, pedigree information, animal recording and evaluation, animal health etc)

Animal Improvement Act, 1998 (Act No. 62 of 1998)

Animal Identification Act, 2002 (Act No. 2 of 2002)

Efficient and Effective enforcement of legislation

National animal improvement schemes.

A National Advisory Committee for Animal Genetic Resources.

5. **Policy to address the problem**

- 5.1 To achieve the objectives of the animal improvement policy, a supportive regulatory framework is essential. The regulatory framework needs to remain user friendly and geared towards national goals. Legislation should also be used to facilitate the development of specific activities - for example, trade in landrace breeds or a national animal recording scheme. It is, however, important to monitor such activities to ensure that they do not become counter-productive. Close liaison with stockowners, farmers, agricultural non-government organisations and the industry is the most effective way to monitor both activities and legislation.

In developing a policy, the following must be taken into consideration

5.1.1 Animal Science Principles

To achieve animal improvement in an efficient and effective manner, there needs to be a harmonious balance between the animal and the available food resources. Therefore, sustainable use of animal and plant genetic resources is essential to maintain an ecosystem balance.

Sound animal science (incorporating husbandry, biodiversity and scientific information) includes:

Recognizing the importance of animal nutrition as a prerequisite for effective animal improvement - and the fact that most of South Africa's animal production is off the veld.
 Animal recording and evaluation is relatively ineffective without sound veld management.
 Matching animals with the production environment and the capabilities of the stockowner
 Reduction in disease transmission to ensure effective animal improvement.
 Ensuring that the animals live in an environment that is as stress free as possible – and that they are cared for as effectively as possible.

5.1.2 Animal Performance Recording

To meet present and future challenges of agriculture in South Africa, animal improvement needs to occur in a sustainable manner. Such sustainable development will need to involve both the identification of activities to improve production and productivity (output per unit of input) of current herds and flocks as well as the establishment of long-term strategic programs for comparative evaluation and continued genetic improvement. In both cases, accurate and consistent decisions based on objective information and an in depth understanding of the key input-output relationships involved in animal production would be needed. Recording animal performance will provide information for sound decision-making and will establish key input-output relationships. To achieve efficient animal improvement, it's important to provide comprehensive and consistent information – for fair comparisons of indigenous versus exotic germplasm as well as long-term genetic improvement.

Benefits from sustainable farm animal improvement will accrue to:

Farmers - through increased income, better risk management and the maintenance of a vital expanding rural economy;
 Consumers - through improvements in quantity and quality of animal products at affordable prices, and
 Government through enhanced national food security, more favourable trade balances involving animal products and feed grains, and greater social and environmental stability.

The establishment of animal performance recording schemes in rural communities can serve as a platform for economic and community development. The organizational structures to support animal recording schemes will provide useful opportunities for educational programs; development of co-operative, value-based marketing schemes and the emergence of a more informed and assertive rural population. In addition, efficient and effective animal recording programmes could aid in disease surveillance and traceability systems (effective risk management).

The recent recognition of the value of indigenous people's knowledge has led to a realization that effective animal recording cannot be viewed in isolation.

Procedures and institutional mechanisms should be adapted or, where necessary, developed to involve resource poor farmers to enable them to collect appropriate information within existing production systems and to interpret and act on the results.

Animal recording should include the following:

- Performance benchmark data;
- Recording for genetic improvement;
- Recording for animal management (including production alternatives), and
- Recording for research purposes to improve on food security.

5.1.3 Indigenous and Locally Developed/Adapted Breeds

South Africa has a variety of indigenous breeds of farm animals that had their origins in Eastern and Northern Africa and moved southwards with migrating nations to reach and enter South Africa between 200 and 700 AD. In the process, they travelled through areas rife with animal diseases and parasites and adapted to and settled in a variety of biomes. Some early settlers saw potential in the hardy ecotypes that had evolved in the process and began farming with identified types such as fat-tailed sheep and lateral horned Sanga cattle. Selection for uniformity and specific characteristics led to the establishment of recognised breeds such as the Afrikaner sheep and the Afrikaner cattle.

A number of the early breeds are still here to this day. Some like the Nguni and Afrikaner cattle and the improved Zulu (Boer) goat have been commercialised - while others have been severely depleted by continued crossbreeding and replacement. Some have also been used to develop hardy composites for increased production from the veld in specific biomes. The Dorper sheep and the Bonsmara cattle breed are typical examples of breeds that were developed for a specific purpose. All these breeds are classified as landraces - indigenous and locally developed breeds closely linked to a country by way of name, local content, breeding programs and origin.

Global concern about the loss of diversity in the Worlds' farm animal genetic resources - along with a growing awareness of the real value of adapted minimum care breeds for sustainable animal agriculture off natural vegetation has led to the emergence of a world market for these breeds. The international popularity of the South African Boer Goat, Dorper sheep and Bonsmara cattle breeds are typical examples of this trend.

South Africa's Landrace breeds should be marketed with pride and with a guarantee on genetic purity and soundness. This can, however, only be successful if breed societies, registering authorities, service providers and traders in farm animal genetic material work together to provide the necessary certification on positive identification, purity, pedigrees and performance.

5.1.3 Other Breeds

South Africa also has a wide variety of exotic or introduced breeds that have adapted over time to local conditions – often to such an extent that they are more suitable to conditions on the Subcontinent than the original stock in the countries of origin.

These breeds have played a major role in the livestock industry and include the Holstein and Jersey cattle breeds, the Merino sheep breed and the SA Warm blood horse and the Thoroughbred horse. These breeds are equally important and should be used and promoted in a responsible way to ensure that they can be matched with production environments and the capabilities of those who wish to use them in farming systems.

5.1.4 What Animals Should Be Included in the Policy?

- o All farm animals (animals used for food and agriculture purposes)
- o Game animals used in commercial ranching and production systems
- o Animals used for sport and recreation

5.2 Recommended policy options

5.2.1 National Survey of Animal Genetic Resources

There is an urgent need for accurate statistics and information on breeds, numbers, locality, production systems and the management skills of stockowners, breeders and producers. Reliable statistics and information are needed to assess the current status of FAnGR in South Africa and to facilitate more effective and strategic planning and management at all levels. Data will be stored on a National databank as part of a National Animal Recording Scheme.

This information will also facilitate the identification of breeds that have been eroded or depleted to the extent where in situ and ex situ conservation actions may be needed.

In addition, locating populations of specific breeds and owners will facilitate actions to broaden the access of such owners to improvement services and to markets where these breeds are in demand.

The census should be co-ordinated by an identified National co-ordinating institute – and should include contacts/co-coordinators in all the Provinces. As data on pure breeds and breeds in the sector involved in animal recording and evaluation is fairly accurate, the initial survey should concentrate on animals in the rural/traditional developing areas – and on the breeds traditionally used in these areas. Local knowledge and practices relating to animal breeding and improvement must be included in such surveys.

The initial survey of AnGR is currently taking place and will be linked to a country report on the state of animal genetic resources in South Africa that is being prepared for submission to the FAO as part of the initiative to draft a report on the State of the Worlds Animal Genetic Resources (SOW). The survey should be repeated as part of a National Agricultural Census every five years. This action will also link with South Africa's commitments with regard to international agreements and commitments such as Sustainable Development and the management of Farm Animal Genetic Resources as well as Agro Biodiversity within an eco-system.

5.2.2 National Advisory Committee (NAC) for Farm Animal Genetic Resources

Effective and efficient management of Farm Animal Genetic Resources is a concerted effort requiring technical expertise from a range of team players. To achieve animal improvement in a sustainable manner a team consisting of a range of experts knowledgeable in the field will be required. In other words, a National Advisory Committee on Animal Genetic Resources, comprised of suitably qualified and experienced people should be formed. This committee will assist the

National co-ordinator with recommendations and advice on key issues such as the improvement of FAnGR, the sustainable use and conservation of these resources as well as on institutional support and policy issues. To be effective, the NAC for FAnGR needs to be formalised and recognised by the Department of Agriculture (NDA) – and endorsed in this policy.

Ideally, the NAC should include representatives from the following:

- SA Stud Book (Breed Societies)
- The ARC
- Provincial Departments of Agriculture
- Agricultural and Veterinary Faculties
- Red Meat Producers
- Milk producers
- Small stock (sheep and goats) sector
- Animal Fibre Growers (NWGA/ Mohair)
- Poultry breeders and producers (SAPA)
- Pig producers
- The Emergent Farmer Sector (NERPO, NAFU etc)
- The Directorate: Genetic resources – NDA
- Animal Production and Health – NDA
- Breed Conservation Organisations
- Ex Situ Conservation Organisations
- Animal Genetics Trade (Import and export) Association (AGTA)
- Relevant Professional bodies (SA Veterinary Association; SA Society for Animal production)

5.2.3 Animal Improvement Schemes

National Animal Recording Scheme

Basic but accurate data – basic information on births, birth weights, weaning and post weaning weights - on the different breeds used for food and agriculture can be used to identify superior animals in registered and non-registered herds and flocks. This data can be processed into information that could be used to broaden the reference base of specific breed evaluations.

A National Animal recording scheme should therefore be declared when the Animal Improvement Act, 1998 (Act No. 62 of 1998) comes into effect.

This scheme will enable all breed Societies to download pedigree and other data onto the INTERGIS. This data will then be available for national breed evaluations that would include both registered and non-registered animals

National Animal Improvement Scheme for Emergent (Black) Farmers

A National animal recording and improvement scheme for black emergent farmers – including stockowners on communal rangeland is needed – to complement a national animal recording scheme. This scheme should be based on sound animal husbandry principles – and should concentrate on effective identification of animals and the recording of basic information on births, birth weights, weaning and post weaning weights. This data will be processed to identify superior animals within indigenous (Landrace) and adapted exotic breed populations and to establish breeding and improvement schemes to benefit both large and small-scale animal production among resource poor farmers. Breed Societies should be encouraged to become involved in pilot

improvement schemes wherever possible. It is also hoped that entrants at this level will progress to the other National Recording schemes to facilitate an eventual merge as one National scheme catering for stock owners at all levels. However, this particular recording scheme should not be isolated from the National Recording scheme, but rather serve as an instrument for agricultural development, particularly the Land Reform programme.

5.2.4 Effective Control Over the Import and Export of Genetic Material

Genetic material should be imported for the improvement of existing resources or for the establishment of new animal populations and industries for food and agriculture. To facilitate biodiversity conservation, the import of genetic material should be allowed. Care must be taken to ensure that imports will, in fact be beneficial, to avoid dumping (the distribution of genetic material that is no longer of value on the international market – and that can be obtained at prices below the cost of producing similar material in the country). Specific measures need to be taken to discourage dumping. To ensure that dumping does not take place – and that genetic material is imported in accordance with the policy, the following regulatory provisions need to be applied as effectively as possible:

(a) Import of New Breeds

Biological Impact Assessment

No new breeds will be considered for recognition and import before a detailed risk assessment including an environmental impact study has been carried out. This includes a literature study as well as on farm (contained use) trials where justified – and where the risk factor can be controlled effectively. Guidelines for impact studies are available from the Registrar. A limited amount of genetic material may be imported to carry out on farm trials but no material should be sold for commercial purposes until the study has been completed.

Recognition of breeds

Only genetic material of recognized animal breeds may be imported as prescribed. New breeds will be published in the Government gazette on a quarterly basis.

Monitoring of progress with new breeds

It is important to monitor progress with new breeds – and this should be done on a regular basis. Should it be shown that no progress – no commercial use – has been made with a new breed, it should be removed from the list of recognized breeds.

The body responsible for the National Database should advise the Registrar annually on such matters.

(b) Import of Genetic Material of Recognized Breeds

Procedures

All applications to import genetic material of recognized breeds should be subject to the minimum breed standards of the respective breed society or breeders club. Breed Societies and breeders clubs will therefore assume more responsibility for the improvement of their respective breeds in this way. This will ensure that only the best material is imported. In the case of semen, donor animals that have been screened and approved will be registered on the NDA import database. Any person

should be able to import genetic material from such animals with the assurance that this has the potential to improve the local gene pool.

Monitoring

Imports should be monitored to enable an ongoing assessment of the spread of genetic material – and to enable breed societies to include non-registered herds and animals in breed assessments.

The role of import agents

Import agents play a major role in the importation of genetic material and should operate under a strict code of ethics to ensure that only the best material enters the country. Agents will be registered in terms of section of Act 62 but this sector should preferably be self regulating – and should co-operate with the registrar in keeping an accurate record of what is imported and where it goes.

(c) Export of Indigenous and Locally Developed Breeds (Landraces)

There is a growing international demand for South African Landrace breeds and it is important to ensure that the flow of benefits from such markets reach all levels and that the rights of breeders in the country are taken into consideration at all times.

In terms of the Convention for Biological Diversity, South Africa has sovereignty over its genetic resources, including the names of such breeds. Therefore, intellectual property rights should be vested in South Africa.

As there are efforts to revise the intellectual property system in South Africa, it may be necessary for a consultation process that provides inputs on whether patenting of live animals or genetic material should be allowed. In the interim, however, it is important to monitor exports as effectively as possible and to ensure that only quality genetic material leaves the country. Exporting of sub-standard genetic material will only jeopardize future markets and will also be counter productive as far as broadening the access of stock owners in the resource poor areas to these markets. It may be prudent to establish an export facility for black emergent farmers within the farmer support and development programme.

Procedures

All exports of Landrace breeds should be monitored by way of an authorization that should precede any veterinary export permit. Only genetic material that complies with the relevant minimum breed standards should be exported. Procedures are set out in the regulations of the Animal Improvement Act, 1998 (Act No. 62 of 1998).

Monitoring

State Veterinarians issuing export permits should send in monthly returns to the registrar's office to facilitate effective monitoring. If it happens that exports reach levels where it could be construed as being potentially harmful to the rights of breeders in the country, exports should be scaled down accordingly.

Export agents

Export agents – like import agents should work according to an own code of ethics – and should preferably be registered as well. In addition, export agents should be expected to comply with national policy on animal improvement.

5.2.5 Responsible Development of Composite Breeds

Composite breeds are often the best way to combine the good qualities of two or more breeds for effective and efficient production. Composites can also be bred to fit in more effectively with specific environments and production systems where management and nutritional inputs lend themselves to increased production. Examples of highly successful composites include the Bonsmara, Brangus, Simbra and Drakensberger cattle breeds and the Dorper, Dohne Merino and Dormer sheep breeds. Development should, however, be done in a responsible way. If the breeds are to be recognized in terms of the Act, it is important to have breeding plans to ensure the long-term stability of the breed. Risk management in terms of the environment, disease susceptibility and transmission should form part of the composite breed development plan.

Guidelines for submissions

New composite breeds must also be subject to an evaluation that includes a detailed submission on how the breed is to be established and stabilized. Guidelines will be available from the registrar.

Monitoring and evaluation

Regular monitoring of locally developed composite breeds is also necessary as these can qualify for Landrace breed status. Accurate identification and recording will therefore be a prerequisite. The breeds will also be evaluated by a competent authority for possible genetic impact on relevant indigenous breed populations

5.2.6 Farmer Support and Information Services

Information packages (Info packs)

It is important to enable all farmers and stockowners to make an informed choice as far as breeds and farming systems are concerned to enable them to match the breed with the environment and their own management inputs and capabilities.

In addition, information on legislation should also be available in a user-friendly form. Info packs on Act 62, the regulations and procedures should be developed to be available when the Act commences

Support for black emergent farmers

The establishment of integrated service centers for the emergent farmer sector, especially black farmers should be considered as a priority. Such centers should ensure that attention is given to good animal science principles, including effective veld and pasture management and animal nutrition. Centers should also include an animal identification and recoding facility. Consideration should also be given to the establishment of a Landrace breed marketing center – in close proximity to an International port – where animals could be collected, tested, certified and quarantined for exportation. This facility could be established with donor assistance – and could be jointly managed by entrepreneurs from the emergent farmer sector.

Breed societies should be encouraged to assist this sector in a responsible way by becoming involved in projects that include both genetic material and supportive training

5.2.7 Registering Authorities

The Animal Improvement Act of 1998 makes provision for more than one registering authority – provided the breed society or group of breeders’ societies applying for such recognition can comply with regulations that have been structured to ensure that International standards are not compromised in any way – and that the basic breed information is compatible with the INTERGIS – to facilitate the downloading of the basic information needed for a National Database on AnGR.

5.2.8 Collection and Sale of Animal Genetic Material

Certification of donor animals

It is important to have a system whereby donor animals and genetic material can be certified for both health and genetic purity and quality. Ideally, all donor animals should comply with South African and International standards – but this would require all genetic material to be collected at a center. Material for local use need not be collected at a center – provided the necessary guarantees on health and genetic quality can be given.

Certification of collection centers

Centers where genetic material is collected for export purposes should comply with International standards. The regulations controlling such centers need to be reviewed from time to time and in close cooperation with the relevant stakeholders to ensure that all standards are complied with

Certification of collectors

A collection involves working with the animal for a longer period that could include minor intrusions, it is important that all collectors should be evaluated and registered as being competent to carry out the necessary procedures. This is particularly important when it comes to the collection of embryos – and all those doing embryo collection should be registered. Veterinarians should not have a blanket exemption from this registration, as they are not trained adequately during the normal curriculum. In addition, collection should not be limited to veterinarians; individuals with specific training could be utilized.

Promoting user confidence

Registration and certification provide the user with confidence and allow the regulatory authorities to monitor and evaluate animal improvement effectively. In addition, this would facilitate the provision of other services by regulatory authorities, including possible disease surveillance.

Partners

Partnerships between animal scientists and veterinarians should be encouraged as embryo collection in particular involves breeding inputs and the combination of the two disciplines will benefit the end user.

5.2.9 Conservation of Endangered Landrace and Locally Adapted Breeds

Recent global concerns on the loss of diversity of farm animal genetic resources have led to renewed initiatives to conserve these resources and to identify and characterize the many breeds that were once considered inferior to the more conventional international breeds of cattle, sheep, goats, horses, pigs and poultry. As a member of the United Nations Convention on Biological diversity, South Africa participates in the global and regional projects that include the SADC/FAO/UNDP

project for the management of FAnGR. Conservation through sustainable use is a major part of the program. Policy should therefore support initiatives that are linked to animal improvement.

Farm Animal Genetic Resource centers (FAnGR)

There are a number of Agricultural development Centers and breeding units in the Provinces that should be classified as FAnGR centers as they have populations of indigenous and locally developed breeds. In the past, many of these centers provided breeding material – and even co-ordinated the development of breeds such as the Dorper (Grootfontein) the Dohne Merino (Dohne) the Bonsmara (Mara) and the Dormer (Elsenburg). Some of these centers face closure due to lack of resources and capacity problems. Effort must be made to maintain these as FAnGR centers for *in situ* breeding and conservation. Where this is not possible, relocation of herds and flocks should be considered, including exploring the transfer of the centers to the ARC.

A register of all FAnGR centers must be opened and maintained – listing the breeds, their status in terms of FAO/RBI classification and their relative importance to the country as a whole. The NC/FAnGR should advise on the classification as well as the advisability to maintain such centers and/ or herds and flocks of animals that are considered to be at risk – and resources of National Importance.

Herds and Flocks of National Importance

An inventory of all FAnGR herds and flocks that could be considered at risk or to be of National Importance should be compiled and maintained by the National Focal Point or the National Coordinating Institute. The NC/FAnGR should advise on the classification as well as possible steps to ensure that the resource is not lost.

This would include any privately owned herds and flocks as well. Maintenance of State/Provincial herds and flocks at risk / national importance should be seen as a National responsibility. Where a Province is unable to maintain such herds and flocks, the NFP should be in a position to either allocate funds – or contract an able body to carry out this function.

Where individual's own herds and flocks of National importance, some form of compensation should be considered to ensure that these are maintained in National interest.

- 5.1 Justification of the recommendation in terms of efficiency, effectiveness, social effects, environmental impact and technical feasibility of the option. (See 5.2)

5.4 Institutional considerations

5.4.1 The Role of Breed Societies in Animal Improvement

Custodian/stewardship/mentorship

Breed Societies are recognized in terms of the Legislation as custodians of the respective breeds – and are responsible for the standards that govern identification, recording, evaluation and improvement of the breed in question.

Breed Societies should also consider a system of stewardship where black emergent farmers can be assisted. Established breeders should consider mentoring one or more emergent farmers to assist with their development into effective and operational producers/breeders.

This should be done in a responsible way to ensure that people are not encouraged to farm with animals that are not suited to their production environments and management capabilities.

Promotion

Breed promotion is an important part of the responsibilities of a breed Society. Factual, user-friendly information on the breed in question should be made available to enable prospective breeders/farmers to make an informed choice.

5.4.2 The Role of SA Stud Book

The SA Stud Book (SASB) and Livestock Improvement Association have a proud history of service to the pedigree livestock sector – and has been one of the foundations of livestock improvement in the country. SASB is also recognized by the International Commission on Animal Recording (ICAR). SASB is funded by the respective breed societies and acts as a mouthpiece for the pedigree livestock industry. As such, it is important that the organization is represented on the NAC for AnGR. To date, SASB has been a co-developer and manager of the INTERGIS, which is important for a National Database on animal genetic resources. In that regard, it's important for SASB to endorse the principle of stewardship, equity, particularly by encouraging more active and responsible involvement in the development of the black emergent farmers.

5.4.3 The Role of INTERGIS

INTERGIS has the potential to become one of the most efficient animal identification and improvement tools in the world. Considerable time and expense has gone into the development of the program and it should be used as optimally as possible. As the custodian of the National database as well as herd prefixes and suffixes, SASB is an integral part of the system – and should be involved in as many animal improvement programmes as possible.

INTERGIS will provide owners, breeders and breed societies with information that can be used to identify animals with genetically superior traits – and to predict trends within breeds to enable the users to make more informed decisions on the use of breeding animals and future breeding strategies. It will also be possible to trace animals with unique traits to the herd/flock of origin to facilitate a more effective spread of genetic benefits.

It is not just a system for registered /pure animals – and could be used to identify superior genetics in hybrid populations as well – provided breeders participated in the relevant recording and evaluation schemes. In this way, INTERGIS could also benefit the poultry and pig industries where hybrids are used more extensively for enhanced production.

5.4.4 The Role of the ARC and Other Research and Development Institutes

The ARC and other research and development institutes play a key role in animal improvement – from basic research to the management of specific recording and evaluation schemes and the conservation of animal genetic resources. These institutes should form part of the National initiative to improve animal genetic resources and to conserve these resources through sustainable use. It is therefore important that they are represented on a NAC for AnGR – and that they endorse this policy in principle

5.4.5 The Role of Organized Agriculture and Marketing Bodies

Organized agriculture and the relevant marketing bodies in the country should also endorse this policy as a framework to facilitate more effective production through the sustainable use of improved animal genetic material – and should also endorse the policy and be represented on a NAC for AnGR

- 5.5 The draft policy was distributed to the National Advisory Committee on FAnGR – that included representatives from the Provinces. In addition, the Departmental Science and Technology Standing Committee reviewed the document and recommended its submission to DEXCO following minuted changes.

Contributions from the following were used in the preparation of the draft submitted to DSTSC.

ARC Animal Improvement Institute
 Dr M M Scholtz (ARC) – verbal communication
 Mr D P Visser (ARC)
 Ms J Bester (ARC)
 KwaZulu Natal Department of Agriculture
 North West Department of Agriculture
 Northern Cape Department of Agriculture
 Dr J H Hofmeyr (verbal communication)
 SA Stud Book and Livestock Improvement Association

- 5.6 Institutional implications.

See 5.4

- 5.7 Financial implications.

Publication of the regulations and policy document (R 30 000)
 R 500 000 annual grant for the maintenance of a National database
 Total R 530 000 (2002/2003) R 500 000 (2003 /4 onwards)

- 5.8 Communication implications.

Publication of the regulations and policy document with notices in the popular media

- 5.9 Legislative and regulatory implications.

Act 62/ 98 and the regulations will come into effect from a date approved by the State President.

6. **Indicators of Performance**

Table 1. - Performance indicators and monitoring and evaluation

Objective	Indicator	Monitoring and evaluation
Commencement of Act 62/98	Publication of regulations, Policy document and date of commencement	Quarterly review of the progress with the implementation of the Act
National Bred survey	Completed Survey	Quarterly review
National animal recording scheme	Established and functional National database	Participation by all breed societies and clubs
National Scheme for emergent farmers	Active participation in the scheme	Quarterly review
Breed Conservation	Increased use of indigenous breeds at all levels	Quarterly review Provincial reports
Increased productivity in the resource poor sector	Increased marketing and off take	Quarterly review Provincial reports

7. **Timetable and Implementation**

Table 2. - Implementation timetable and Key Actors

Action	Time frame	Key Actors	Other links
Publication of the draft policy for public scrutiny	March 2003	NDA/GR	Livestock development strategy
Publication of the policy and regulations	April 2003	NDA/GR	
Commencement of Act 62/98	May 2003	NDA/GR	NDA strategic plan – Program 7
Info packs on specific sections of the Act	April 2003	GR	Integrated service centres NDA Strategic plan P7
Establishment of a National database	April 2003	INTERGIS ARC	
National animal Improvement scheme for emergent farmers	April 2003	NDA ARC Provinces	Livestock development strategy
NAC/FAnGR	March 2003	NDA Provinces Stakeholder Organisations	SA Country report for the SOW

8. **The main policy areas concerning the department are clustered around the inherent needs of those engaged in agricultural activities namely:**

- 8.1 Access to and sustainable utilisation of natural resources such as land, water, flora and fauna.
- 8.2 Capacity to optimally utilise the resources dependent on infrastructure, finance, technology, services and skills development.
- 8.3 Competitiveness of the individual enterprises and the entire sector relative to that of similarly endowed or competing economies to be addressed through improved efficiency and productivity, free and fair markets and innovation.
- 8.4 Confidence and stability brought about by objective and effective regulation, by risk alleviation measures, sound customer relations and effective governance of the sector.
- 8.5 Responsibility underpinned by the sector's strategic role as society's basic food provider, employer of the less skilled, and as social safety net for rural society.

9. **Reference documents**

- 9.1 Animal Improvement Act, 1998 (Act 62 of 1998)
- 9.2 Regulations for the Act
- 9.3 Policy document as approved by DSTSC

10. **Policy owner**

- 10.1 Directorate: Genetic resources