



**agriculture,
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LIVESTOCK IDENTIFICATION AND TRACEABILITY SYSTEM (LITS SA) IN SOUTH AFRICA

GENERAL STANDARDS

Prepared by:

Animal Production and Health

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1. DEFINITIONS/ GLOSSARY OF TERMS/ ACRONYM

Definitions:

Animal -means a mammal, reptile, bird or bee.

Animal health information recording -refers to the process by which indicators of the health status of animal populations and related data on prevention, surveillance and outbreak management are systematically collected, recorded, calculated and securely stored and made accessible to users as appropriate.

Animal identification -means the marking of an animal, individually or collectively, by its group, with a unique individual or group identifier.

Animal identification system -means an integrated platform inclusively hosting components such as identification of, owners, the person(s) responsible for the animal(s), animal lifecycle data, animal health status with respect to permanent disease control zones, movements and other records with animal identification. Simultaneous access to authorised users of the competent authority to an animal's individual lifecycle history via electronic medium.

Animal identification and registration -is a core functionality of an animal identification and recording system and covers both animal identification and animal registration.

Animal keeper -is the person responsible for the day-to-day management of animals on the premises.

Animal owner -is a person (physical or moral) who has a legal title or right to the animals regardless of whether he/she owns the premises on which the animals are kept.

Animal recording -is a generic term that integrates animal identification and registration, animal traceability, animal health information and animal performance recording.

Animal traceability -means the ability to follow an animal or group of animals during all stages of its life.

By-products -in relation to slaughtered animals includes all portions of slaughtered animals other than the meat thereof.

Captive Wild Animal -means an animal that has a phenotype not significantly affected by human selection but that is captive or otherwise lives under direct human supervision or control, including zoo animals and pets.

Dip tank mark -a mark allocated in terms of section 18 of the Animal Identification Act, 2000 (Act 6 of 2002) that includes an alphabetical or numerical character to identify the Province and one to two alphabetical characters to identify the specific dip tank including the GPS co-ordinates.

LITS SA -a Livestock Identification and Traceability System South Africa.

LITS SA Committee -a body established that is represented by government and the Livestock Industry to implement LITS in South Africa as per Terms of Reference.

Establishment - (also "holding" or "property") means any premises, structure, location or any environment, in which animals are kept, except for: (a) households keeping small companion animals; (b) non-commercial aquaria keeping aquatic animals.

National mark -a ZA embossed for all official tags and in addition laser marked on the ear tags and the ZAF for Foot-and-Mouth official tags.

Numerical character -a number between one and nine that forms part of a dip tank mark to identify a specific province in South Africa. A numeral mark will have a corresponding meaning to the numerical character.

Manager -means a natural or legal entity, person, having animals and products under their responsibility, including a mandated animal keepers and transporters on behalf of the owner, but excluding pet keepers and veterinarians.

Products of animal origin -means: (a) food of animal origin, including products that require veterinary certification, honey and blood; (b) live bivalve molluscs, live echinoderms, live tunicates and live marine gastropods intended for human consumption; and (c) animals other than those referred to in (b) destined to be prepared with a view to being supplied live to the final consumer.

Registration -is the action by which information on animals, products and establishments is collected, recorded, securely stored and made appropriately accessible and able to be utilised.

Traceability -the ability to verify a document, report, claim or statement that relates to the regulatory compliance or liability or movement, disease management, statistics and other market related history, location or application of an item via an integrated animal identification and traceability management platform.

Transporter -means any person transporting animals on its own account, or for a third party;

Wild Animal -means an animal that has a phenotype unaffected by human selection and lives independent of direct human supervision or control.

Wildlife -means feral animals, captive wild animals and wild animals.

Acronyms:

AIRT	Animal Identification, Recording and Traceability
AIDA	The Animal Identification Act, 2000 (Act no 6 of 2000)
DAFF	Department of Agriculture Forestry and Fisheries
ICAR	International Committee for Animal Recording
MPO	Milk Producers Organisation
NERPO	National Emergent Red Meat Producers Organisation
NSPCA	National Society for the Prevention of Cruelty to Animals
OIE	World Organization for Animal Health (translated from the French)
RMRDT	Red Meat Research and Development Trust
RMAA	Red Meat Abattoir Association
RPO	Red Meat Producers Organization
SAFA	South African Feedlot Association
SAFLA	South African Federation of Livestock Agents
SAMPA	South African Meat Processors Association
SAOBC	South African Ostrich Business Chamber
SAPPO	South African Pork Producers Organization
SAPS	South African Police service
SHALC	Skins, Hides and Leather Council

2.INTRODUCTION

Livestock are farmed in solely livestock producing areas as well as in conjunction with other mixed farming enterprises. Seventy percent of agricultural land in South Africa can be utilized only for livestock and game production. In 2010, the SA livestock population statistics estimated there to be 13.6 million beef cattle, 1.4 million dairy cattle, 24.6 million sheep, 7.0 million goats, 3 million game species (farmed), 1.1 million pigs, 113 million broilers, 31.8 million layers and 1.6 million ostriches. At the end of August 2016, the total number of cattle in South Africa was estimated at 13,57 million, comprising various developed dairy and beef cattle breeds as well as indigenous breeds such as the Afrikaner, Bonsmara, Drakensberger and the Nguni.

Beef cattle comprise approximately 80% of the total number of cattle in the country, while dairy cattle make up the remaining 20%. There are various breeders' organisations representing most developed and indigenous cattle breeds. Organisations are affiliated either to the South African Studbook and Animal Improvement Association, or to the Livestock Registering Federation (LRF). The Milk Producers' Organisation (MPO) is the most prominent producer organisation in the South African dairy sector. The Red Meat Producers' Organisation (RPO) and the National Emergent Red Meat Producers' Organisation (NERPO) represent livestock producers in the large commercial and small commercial agricultural sectors, respectively.

The total number of sheep in South Africa at the end of August 2016 were estimated at 23,71 million, with the largest numbers of sheep estimated to be in the Eastern Cape (29%), Northern Cape (25%), Free State (20%) and Western Cape (12%) provinces. Flock sizes vary between less than 50 to 1 800 animals. Sheep flocks in the Eastern, Western and Northern Cape provinces tend to be much larger than those in the other provinces. The animals are farmed mainly for wool and mutton production and the industry is therefore represented by organisations from the mutton as well as the wool industry. The sheep industry also has various breeders' associations, with the Dorper Sheep Breeders' Society of South Africa and Merino SA being the most prominent.

Flocks of goats intended for meat production are usually smaller than sheep flocks, averaging approximately 300 goats per farm on the larger farms. Although the focus on the commercial goat farming systems the farming and slaughtering practices of the emerging farming sector are included in the current proposal as some traceability program that started in the provinces included the export of goat meat from the emerging farming sector. Several challenges have been experienced in the emerging sector including the lack of IT infrastructure.

Pigs are found predominantly in the Limpopo, North West, Gauteng and Western Cape provinces. There are approximately 400 commercial pork producers and 19 stud breeders in South Africa. As of August 2016, it is estimated that pig numbers have increased by 1,1%, to

1,540 million. The South African Pork Producers' Organisation (SAPPO) is the official mouthpiece of pork producers in South Africa.

The red meat industry is one of the largest agricultural commodities in the South African agricultural sector with a turnover of approximately R60 billion rand. It contributed approximately 17,1% to the gross value of agricultural production in the RSA during 2015/2016 and the value has increased markedly over the past two years. The Red Meat Industry Forum (RMIF) is the umbrella body representing the Red Meat Industry. Its 13 industry bodies include the Red Meat Producers Organization (RPO), National Emergent Red Meat Producers Organization (NERPO), the SA Feedlot Association (SAFA) South African Pork Producers Organization (SAPPO), Association of Meat Importers and Exporters (AMIE), Gauteng Meat Traders Employees (GMTEU), National Federation of Meat Traders (NFMT), Red Meat Abattoir Association (RMAA), SA Federation of Livestock Auctioneers (SAFLA) and the SA National Consumer Union (SANCO)

The poultry industry consists of three distinct, separate branches, namely the day-old chick supply industry, the broiler industry and the egg industry. The Southern African Poultry Association (SAPA) and Poultry Disease Management Agency represents both commercial and non-commercial poultry farmers within these three branches.

The ostrich industry contributes 2% of the total gross value of animal production as well as the added value by abattoirs, meat processors, tanneries, feather processors and agri-tourism. The SAOBC serves as a co-ordinating body for the ostrich industry to benefit both the producers and the processors of ostriches and ostrich products. The Mission of the SAOBC is to promote a sustainable, economically viable ostrich industry through co-operation between stakeholders.

Wild game species are adapted to utilise a wide range of the available habitat and natural vegetation. They have also developed resilience to a plethora of indigenous diseases, making them suitable to keep in areas that are considered marginal for the keeping of domesticated agricultural species or with other domesticated species, to ensure the wise use of the available vegetation types and strata. The potential market also sees the red meat from game as a truly free-range option and it thus represents the opportunity to market it, or at least a portion of it, at a premium, maybe even as an exportable commodity. Game can also be marketed to hunters, creating the opportunity to maximise the income stream for the landowner, while at the same time making a positive contribution to the country's gross domestic product (GDP). It is thus of utmost importance to preserve this wildness, by not boxing the game species in with domesticated stock or creating the perception that game is being domesticated, by requiring individual animals to be marked or tagged. In essence a premium can be realised from the meat, harvested sustainably from truly free range, wild game animals, as long as the perception of free range is maintained. Extensive wildlife systems also add the opportunity for a property to diversify into the ecotourism field, which will be unthinkable if the game animals were walking around with colour coded ear tags, or even if

it is known to potential visitors that individual animals are fitted with sub-cutaneous or indiscernible RFID tags.

Crocodile farmers produce leather and meat under intensive conditions.

Various combinations of pasture-based and intensive systems are employed to raise ruminant livestock for meat production, depending on resources and climate. Environmental and economic conditions influence the profitability of meat production, and often result in shifts from pasture-based (extensive) to concentrate-based (intensive) finishing before marketing. While sheep farming is mainly extensive, around 80% of the annual national cattle slaughters are produced by feedlots. Cattle and sheep are generally grown out for shorter periods to ensure efficient production and to meet market requirements. These objectives are more easily achieved by feeding different proportions of concentrate diets.

Growing domestic and global demand for animal products and emerging opportunities for exporting animal products have encouraged governments and livestock organizations in many countries to invest in developing infrastructure and processes and traceability systems to track animals and their products. Animal traceability forms the basis of sanitary control systems in the production of food of animal origin. It constitutes the link between animal health, public health, and food safety and quality.

International obligations and standards:

World Organization for Animal Health (OIE) – In 2006 and 2008, the OIE adopted a standard on General Principles on Identification and Traceability of Live Animals and Design and implementation of identification systems to achieve animal traceability. The current operational policy proposal is based on OIE standards. It proposes harmonization of the South African LITS legal framework with OIE's guidelines, recommendations and standards. Many importing countries now regard traceability systems based on OIE guidelines as part of their minimum sanitary requirements.

Food and Agricultural Organization of the United Nations (FAO) – In 2016, FAO published Animal Production and Health Guidelines No. 19 on Development of integrated multipurpose animal recording systems with the objective of assisting countries to design and implement sustainable recording systems. The guidelines broadened the scope of animal recording and adopt a multipurpose approach that integrates animal identification and registration, animal traceability, animal health information and performance recording. The current proposed LITS SA implementation plan adopts this multipurpose approach.

Codex Alimentarius Commission (CAC) – The Codex Alimentarius has become the global reference point for consumers, food producers and processors, national food control agencies and the international food trade. CAC defines traceability as “the ability to follow the movement of a food through specified stage(s) of production, processing and distribution”. A key Codex standard on traceability is “CAC/GL 60-2006 – Principles for traceability/product tracing as a tool

within a food inspection and certification system". The current proposed LITS SA design conforms to this standard.

International Organization for Standards (ISO) – ISO has developed and published the following key international standards relevant to LITS SA:

- ISO 11784:1996, Radio-frequency identification of animals – Code structure. This is an international standard, which specifies the structure of the radio-frequency (RF) identification code for animals
- ISO 11785:1996, Radio-frequency identification of animals – Technical concept. This international standard specifies the characteristics of the transmission protocols between RFID transponder and a transceiver.
- ISO 22005:2007, Traceability in the Feed and Food Chain. This international standard gives the principles and specifies basic requirements for the design and implementation of a feed and food traceability system in the feed and food chain

International Committee on Animal Recording (ICAR) – ICAR is now the international guideline reference for animal identification, recording systems, data analysis and genetic evaluation. ICAR delivers ISO 11784:1996 and ISO 11785:1996 certifications for RFID animal identifiers. ICAR also conducts conformance tests and certifications for conventional plastic ear tags. A number of LITS competent authorities recognize ICAR certification as minimum standards for the approval of animal identifiers. This plan recommends adoption of ICAR certification as a prerequisite for approval of animal Identification devices.

Key aspects of a functional and efficient LITS SA (example for farmed bovids)

A functional LITS SA system has as objective to establish a national system to identify, owners, location and link animals individually registering them and record their movements on a central database. A LITS SA program must be able to link with animal movement information, animal health status information, laboratory results for animal diseases and link with residue and microbiological testing for antimicrobial resistance and food safety.

An efficient and functional LITS SA should eventually be able to include:

- Individual animal Identification on a multi species livestock integrated platform and provision for the inclusion of imported livestock to enable the competent authority to manage all entrants' movements and locations up to end of life;
- A national established identification system to accurately establish where livestock are kept coupled to an integrated system that can link to location of, establishment, registration details, and or owner/business legal entity information;
- The integrated exchange platform must be the central registry for all establishments and owners of AIDA brand marks. Registration of establishments must include;
 - Any special registration requirements relating to animal health, restrictions on species etc (e.g. registration of land for the keeping of certain animals).
 - The registration of establishments must include location, district and local municipalities, in relation to permanent disease control zones.
 - Registration of common areas where animals are kept, must include: sale yards, show grounds, pounds, race courses and shearing sheds etc;

- Registration of intensive production facilities
 - Registration of abattoirs and processing plants as such;
- Standardized requirements for: identification devices and the administration and management thereof per species. This must include:
 - Official identification numbers of animals (individual and group) with a unique laser printer must be allocated from a central database. It should be possible to easily distinguish between group and individual identification numbers;
 - Standardized distribution methods of official identification devices, replacement of official identification devices, approved identification sites, campaigns or persons;
 - Registration of identification device distributors;
 - Ability to adapt to and record different identification means;
 - Allocation of herd or flock identification (epidemiological unit) code for marking;
- Animal Owner and livestock keeper's identification;
- Issue or request electronically the required permit(s) for movement of designated animals, identification devices and products of animal origin;
- Notification of the following to the relevant parties within a suitable time frame and with a suitable notification method: (Electronical and automated update)
 - Movement of designated animals, identification devices and products of animal origin;
 - Death, theft or straying of animal;
 - Slaughter at abattoirs;
 - Export of animal or animals
 - Sale of animal or animals
- Duties of officials in relation to notifications received;
- Animal registration and keeping of registers;
 - All relevant fields per animals or group to be captured must be structured in such a way as to create a standardized, efficient and easy to use capturing system for a wide variety of people
 - Opportunity for recording of treatments and vaccinations where required by South African law
- LITS SA central data base which act as an exchange platform and backup;
- Hardware and Software including servers capable of capturing and processing all the relevant data as needed to run a functional LIT System;
- Controlled access by stakeholders;
- Compliance with protection of public information;
- Adaptable LITS SA with a point for future expansion and upgrading of system to ensure compatibility with new technology and programmes. (Scalability)
- Sufficient resources available to implement efficiently, manage, upgrade and maintain LITS SA. This should include the provision of skilled programmers or IT specialists to maintain and further develop or expand the system. The resources must be guided by expertise and in-depth domain knowledge of South African conditions)

Many countries have implemented or are in the process of national traceability systems to enable access to certain markets and to strengthen consumer confidence in farm animal products. Examples include the largest beef-exporting regions – the EU, Australia, Brazil, the US, Canada,

Argentina and Uruguay, including our SADC neighbours which include; Namibia, Botswana, Swaziland, Zambia and Zimbabwe.

The mandatory National Livestock Identification System in Australia since July 2005 is governed by Meat & Livestock Australia and facilitates the tracing of bovines until slaughter or death, for the purposes of controlling infectious diseases and enabling market access. The Canadian system is governed by an industry led organization (the Canadian Cattle Identification Agency), and the primary purpose of this animal recording system is to facilitate the traceability of animals to control infectious diseases and enable market access. The EU Council Regulation(s) sets out the elements of the European tracking of cattle, sheep and goats in order to control the spread of infectious diseases and to improve management of the subsidy payment scheme. EU legislation also stipulates that meat must be identified in terms of the animal or group of animals from which it derived and the country and facility where it was processed. Mandatory animal identification and traceability system which traces animals from birth to slaughter and track resultant animal products from slaughterhouses through the distribution chain to the point of purchase by consumers was created in Japan. The Republic of Korea has operated a mandatory full traceability system for the purpose of controlling infectious diseases and ensuring food safety. Argentina, Uruguay and The Brazilian Ministry of Agriculture, Livestock and Supply created animal Identification and Certification System for the identification and traceability of all cattle. Botswana, Namibia and Swaziland developed and implemented an advanced livestock identification and traceability system that satisfies EU export requirements. Many African countries are at various stages of setting up animal identification and traceability systems.

3. PROBLEM STATEMENT

- South African livestock are extremely vulnerable to periodic outbreaks of transboundary or high impact diseases.
- The current disease status of South Africa and the vulnerability to outbreaks of major high impact or trade sensitive diseases (FMD for example) negatively affect domestic trade and exportation of certain products or species This could potentially cost the livestock industry and the country billions of rands in lost revenue if such a disease outbreak had to occur.
- There is currently insufficient enforcement of animal movements, treatment, vaccination and information regarding health status. This compounds the above problems as guarantees regarding these cannot be given to trade partners internationally or within SA, even though by law, all animal movements need to be recorded. Recording animal movements is an integral part of a LITS SA system.
- Livestock theft remains a serious problem in South Africa and could be reduced by having a LITS SA system through adoption of tags with a unique reflector designed on the outside which will reflect in the dark or at night when illuminated by a torch or car headlight making it easier to identify. On tracing, the tags will collect data (based on your animal's health, movement and age) creating a bio for your livestock, which could be sent directly to the phone, email or via post by request. When the tag is cut off from an animal owners are notified immediately on their cell phone by a server, reporting that communication has been lost.
- There is a significant challenge with the management and enforcement of the identification of animals in both the communal and commercial sector.

- A lack of a LITS SA system means that the industry does not have the ability to differentiate between different production/ management or treatment systems to underpin the various brands being used in South Africa.
- Disaster Management such as Drought, Floods and Disease outbreaks are not easily undertaken with the lack of a formal identification system.
- Illegal importation is also exacerbated by not having a formal and recognised identification system.
- Compensation of Livestock-within the Animal Diseases Act-is difficult to control on quantity
Illegal exportation, or incorrect certification of an animal or product as free from a disease or substance, could have a disastrous effect and cause irreparable harm to the reputation of SA that may come from unacceptable practices, The irreparable harm may also be done to brand SA's and its wildlife industry, inclusive of the ecotourism industry, if societally unacceptable practices emanate from the introduction of an individual marking system and harvesting of such animals on game farms.
- Public and Animal Health with regard to zoonotic diseases and food safety is required by the consumer
- LITS SA may be of great help to farmers to manage their own herds for better productivity and genetic improvement of their animals
- There is need for the information system to support export certification and reduce the burden on food producers and the state. Current systems are very labour and administrative intensive. An electronic system will be more accurate and less labour intensive, and it will thus promote exports and trade. The credibility of export certification will be boosted as we will be able to audit the entire food chain according the trading partner requirements.

4. VISION

To establish a functional National Livestock Identification and Traceability System (LITS SA) for South Africa.

5. OBJECTIVES OF THE POLICY

- The overall objective is to ensure the implementation of an internationally recognised LITS SA system in South Africa which promotes sustainable economic growth and creates employment in the livestock sector.
- Specific objectives:
 - To present our industry and trading partners with a credible system for the identification and traceability of livestock and products of animal origin.
 - To establish a Public Private Partnership between government and industry.
 - To provide information to producers, service providers and, policy-makers to enable them to make informed decisions on trade, production and productivity.
 - To implement suitable plans on animal and public health and disease control; food safety and quality; market access, trade and economic growth; genetic improvement and productivity; disaster management; and stock theft mitigation.

- To strengthen existing markets and to open new markets.
- To address the demands of the South African consumer and address the issue of meat safety through the value chain.
- To assist small holder farmers in the improvement of their livestock production and reproduction. To be able to demand a better price and access more lucrative markets. To improve animal health status through proper vaccination and other support programs

6. STRATEGIC SIGNIFICANCE

- Addressing the challenges that currently exist regarding animal health issues.
- To improve production and productivity of livestock systems by means of improving the herd health status and husbandry, continual reduction and prevention of foodborne illness, improving record management systems, and encouraging the use of technologies to improve health and production. To establish and sustain ourselves as a leader in Africa livestock production and trade.
- To ensure that we are internationally competitive in all aspects of livestock production, health and trade.
- To be able to provide effective and credible sanitary guarantees to trading partners.
- To provide an updated livestock census. This is only possible if all animals are tagged at a mandatory age.

7. POLICY OPTIONS

Option 1: Continue with the current Identification system:

The Animal Identification Act, 2002 (Act 6 of 2002) ('AIDA') currently makes provision for a one to three-character brand mark that identifies the legal owner of an animal. These marks are allocated by a central registry and are linked to the residential address and identify details of the owner which provides a limited degree of traceability to an owner/farm of origin regarding the group of animals owned by him/her. In the communal grazing areas livestock owners use owner or group identification as opposed to individual identification. An individual animal identification system is compulsory in the stud breeding industry.

The Stock Theft Act, 1959 (Act 57 of 1959 as amended) requires that a Document of Identification is furnished when an animal is "bartered, sold or disposed of" and retained in the new owner's possession for a period of twelve months. This, however is not a unique individual identification of animals, but indicates owner identification only.

"South Africa had a movement permit system that provided a degree of traceability for disease monitoring among the farms registered to export. This also served as additional proof of purchase and ownership of animals. The system was gradually abandoned with the loss of the European Union market as it required extensive administrative and human resource inputs.

There are in the vicinity of 725 000 registered national brand marks on the DAFF database as at the end of November 2016. These owner marks are registered in the owner's name and address. The AIDA, however, excludes registered stud bred animals which appear on their own register, and are individually identified as per the Animal Improvement Act, 1998 (Act 62 of 1998).

Shortcomings with the AIDA system is the following:

- AIDA database uses an old platform system which is now obsolete.
- the AIDA database continuously generates new marks while the estimation is that the database includes thousands of dormant marks which could be re-allocated;
- the system does not provide for farm location
- no procedure exists to remove or cancel dormant marks; and
- the AIDA and Stock Theft Acts are not linked and are not sufficiently enforced, and feedback is that not more than 30% of animals are marked and very few documents of Identification accompany animal transactions.
- The system is not able to distinguish individual animals that are treated by growth promoters or where specific medicine, vaccinations or prescribed feed is used.
- Where multiple herds belong to the same owner, the system may not be able to clearly distinguish the disease status of a particular herd or property

The AIDA system has been an extremely powerful, unique owner identification system that has now reached its sell by date. It needs to be resuscitated to ensure that all the information on the system is not lost. The AIDA system could provide group traceability back to owner/farm with movement control, but this is an outdated technology. It is assumed that it would not be possible to consider any new individual identification system, without firstly instituting active enforcement of the AIDA.

The AIDA system is difficult to manage in the situation where one owner has multiple herds on different properties as each animal, regardless of origin (and disease status, epidemiological unit, production method etc.) would have the same mark and therefore it would not be possible to easily distinguish these.

Option 2: Develop and Implement LITS SA based on existing Animal Identification Act:

The Animal Identification Act, 2002 (Act 6 of 2002) ('AIDA') is left in its current form and used as the legislation for building the revised LITS SA. One to three-character(s) mark that identifies the legal owner of an animal in the Animal Identification Act, 2002 (Act 6 of 2002). Properties are registered in the updated database. Owners and livestock keepers are also registered in the database. These marks are allocated by a central registry are linked to the residential address and identify details of the owner which provides traceability to an owner/farm of origin regarding the group of animals owned by him/her. Movements are recorded in the database. The system will be able to provide group identification as opposed to individual identification. The system will also not be able to distinguish individual animals that are treated by growth promoters or where specific medicine, vaccination or prescribed feed is used. The system will not track movements from farm to farm. Where multiple herds belong to the same owner, the system may not be able to give clearly distinguish the disease status of a particular herd or property.

The system is outdated by international norms and standards and will not be recognised by many international countries as a valid system. This includes some of South Africa's largest trading partners.

Option 3: LITS SA based on revised legislation and modern methods of animal identification linked to Animal Identification Act principles:

Brands are linked to individual animal identification and property identification. LITS SA is based on good practices detailed in international standards such as OIE, FAO, CAC, ISO and ICAR requirements. Implementation is instituted across the country.

Option 4: Integrated LITS SA System:

1. Define and adopt the norms and standards of a LITS SA system based on international standards requirements and existing national animal identification system.
2. Build and/or upgrade an exchange platform database.
3. Establish a suitable implementation authority,
4. Pilot priority LITS SA projects and thereafter adjust the requirements before full implementation. Current projects in the Northern Cape, Gauteng, Ostrich Industry will be considered. A re-visit to the 600,000 FMD tags already distributed to three Provinces with some placed on animals will be done so as to ensure the placing of the information on a central platform.

8. POLICY STAGES

It is envisaged that the final LITS SA system will take a number of years to implement fully. It will be the function of the LITS SA Committee to determine when the next stage will be implemented after evaluating the outcome of the previous stage(s).

Stage 1: Continue with the current Identification system

Stage 2: Develop and Implement LITS SA based on existing Animal Identification Act

Stage 3: LITS SA based on revised legislation and Modern methods of animal identification linked to Animal Identification Act principles

Final Stage 4: Integrated LITS SA System

9. LINKAGE TO OTHER POLICIES

The proposed LITS SA policy provides a broad framework for the fulfilment of the government of South Africa's commitments and responsibilities to guarantee citizens of South Africa "the right to have access to sufficient and safe food of animal origin". The policy aligns itself with the New Growth Plan (NGP), the National Development Plan (NDP) and Industrial Policy Action Plan (IPAP) through the Agriculture Policy Action Plan (APAP) and the Veterinary Strategy which

seeks to assist in the achievement of decent employment through inclusive growth, and comprehensive rural development and food security. The policy builds on South Africa's risk based studies as well as the objectives of the relevant international standards. The overarching implementation plan of the NDP and Agricultural Policy Action Plan (APAP) is captured in the Medium Term Strategic Framework (MTSF), 2014 -19, through implementable actions with targets and indicators tracking performances against outcomes 4, 7 and 10. The focus of the MTSF as it relates to the ESEID cluster is the Nine Point Plan of which Revitalisation of the Agriculture and Agro-Processing Value Chain (RAAVC) and Operation Phakisa are highlighted. The policy is also linked to the Animal Diseases Act, Animal Identification Act, Meat Safety Act and Stock Theft Act among others. The National and Provincial Environmental and Conservation legislation be given recognition especially where a Threatened or Protected Species has to be darted to be marked and a TOPS permit is required for the action.

Proposed Animal Identification and Traceability System Implementation Plan:

General Overview:

- Most countries identify one species of animal in the rollout of its LITS. The species should be chosen based on the contribution to the economy, the ease of implementation, the health risk to society and the cost of the identification devise, that should be low relative to the cost of the final product/carcass.
- The roll out of the implementation plan should thus be based on the above and every species or commodity line would need to provide their own inputs to the policy document for prioritization.
- The OIE mandate that the Competent Authority for a LITS SA system should be the Veterinary Authority, however the management of the system is an information technology (IT) related project and can be done by any person competent in the systems.
- The mandate of the veterinary authority is to put in place a competent implementation authority to pilot, rollout and manage the system in a Public Private Partnership.
- The competent authority will need to put in place a database that includes the information from the current database, however, it will be easier to create a "Clean room" and migrate only relevant and accurate legacy data once it has been verified. A parallel environment can be run initially and then phased out.
- The competent authority will need to put in place the required legal framework that supports the implementation of a LITS SA.
- The competent authority will need to put in place a system which ensures monitoring and evaluation.
- The competent authority needs to evaluate and include current pilot projects and pilot new projects into a LITS SA, to ascertain the most viable way forward to the implementation of the LITS SA.

Implementation responsibilities:

This section identifies specific players in implementing LITS SA, their responsibilities, accountabilities and the interaction between them. The ultimate responsibility and accountability for the successful implementation of LITS SA lie with DAFF management. Activities would be embedded in existing structures, which would contribute to enhanced ownership and stronger impact. In addition, administrative and financial procedures used in implementing LITS SA would be harmonized as much as possible with general procedures applicable to all of the activities of DAFF.

Competent Authority:

DAFF is the Competent Authority (CA) regarding LITS SA. The CA's role during will be overseeing planning, establishment, operations and management of the LITS SA, including setting and monitoring national performance standards of the LITS SA components. The Chief Director APH has overall oversight on all aspects related to the development, establishment and maintenance of LITS SA.

Implementation Authority:

An assignee or delegated body or industry organisation under the auspice of a Public Private Partnership (PPP) shall be responsible for the implementation of the LITS SA in collaboration with the applicable national and provincial government sections.

Species and scope prioritization:

South Africa animal identification law requires that cattle, sheep, goats, horses, pigs and ostriches to be owner identified. It is impractical and costly to embark on an all-out drive to individually identify all animals at the same time as explained above. The Department has prioritized the identification of cattle, ostriches and sheep in specific FMD zones, whose meat is destined for export and where vaccinations against certain diseases have taken place. A decision on when the other livestock species are going to be identified and registered will be until a decision has been made.

The South African government would like to see all cattle and ostriches. individually identified but, it is prudent to start by identifying animals that are part of ostrich and beef or cattle export chain assurance scheme, or in areas targeted to be developed into, or are identified as a disease-free zone. Ostriches have been individually identified and manage under the VPN04 for the past 3 years successfully. This approach would ensure sustainability, as commercial interests will drive development and maintenance of the system to a wider set of farmers and species

Similarly, identification of sheep should start with animals that are part of a mutton or lamb and live sheep export chain assurance programme. Experience has shown that development of LITS SA would be mostly successful if the system is required to validate application of sanitary measures required to access export markets.

With regards to animal recording, initial focus will be on recording animal events related to animal health management, animal traceability, food chain information, and application of

animal health measures related to export certification. Animal recording for the purposes of establishing baseline animal performance levels, individual animal management, evaluating production system options, and to achieve genetic improvement will be introduced at a later stage.

Establishment of animal disease risk management zones:

Zoning is employed in the country as a risk management tool with regards to management of certain controlled animal diseases. Establishment of animal disease control zones requires clearly separating and monitoring animal subpopulations of different animal health status, and as a consequence, the implementation of appropriate animal movement monitoring and control systems. With regard to FMD, this occurs between free zone, and protection zone without vaccination. Vaccination is performed in the protection zone and infected zone.

The ear tags for the protection zones with and without vaccination will be laser marked with an "F" after the "ZA" in order to show that the animals do not have FMD free zone status. These tags are ICAR approved and embossed with "ZA" to verify them as official tags. The pink and green ear tags that are used for animals outside the free zone will also be embossed with a capital F above the barcode and unique number to indicate the non-free zone status of the animals. Calves are to be ear tagged at birth or first contact before three months of age, with recording of each application event. Newly introduced cattle are to be ear tagged before they are moved or receive treatment or vaccination, or disease testing done during support programs of the Veterinary services in the areas with recording of each application event and accompanying departure and arrival registers. Cattle of which ear tags have become unreadable are to be re tagged with recording of each replacement event.

A national livestock establishment identification system:

All properties hosting livestock should be identified on the Identification traceability system with GPS co-ordinates and physical address of the farm location for rapid response and land, soil management. This should be linked to the owner of the land, the person leasing the land or the entity that has the right to use the land. This is very well defined in the VPN04 currently used for disease management by the Ostrich industry. Each farm is registered, accredited and audited for compliance according to accreditation status.

Such locations include: crush pen area; ranches; farms; village; cattle post; farms; grazing area; auction point or traditional market; abattoir or other slaughter facility; ports of entry; laboratory; quarantine camp or intensive production unit exhibition ground or any other locations where livestock are raised, held, or commingled.

The definition and examples listed above are guidelines for registering establishments. Some of the locations are difficult to categorize. Industry and Veterinary authority will be better able to address variations in livestock production systems and husbandry practices.

Each establishment where livestock are kept or held will be assigned with a unique identification number UID on a GIS-enabled database thus providing officials with the exact origin and location of an animal in the event of a disease investigation.

The database will contain the following minimum information about each establishment: establishment name; UID; physical address; province; district municipality and local municipality district; veterinary inspection office; GPS coordinates; establishment type; disease risk management zone. It will be important to identify the properties where game is being thus farmed already. A database of these properties and the game animals on them should definitely be created as part of a LITS, as the game animals on these properties are already domesticated or well on their way to being domesticated.

As officials register establishments, they should consider crush pens (service points), the local authority structures, nature of settlements and husbandry practices. In some regions, many farmers have several locations where their livestock are farmed. Therefore, the number of establishments where a keeper may be registered will vary from one area to another. Consultation between livestock keepers and the local veterinary official is needed to decide how many of the locations a keeper should be linked to. Properties where animals are temporarily moved to without the owner being able to predict this movement at registration will need to be linked before such a movement.

This decision should also consider the following epidemiological factors:

Permanence of settlements

Locations that have permanent livestock facilities such as pens, and corrals and/or human dwellings should be registered as establishments, whereas locations where livestock is held on a temporary basis such as seasonal common grazing areas should be registered with a link to primary holdings of the animals in order to produce a comprehensive picture of where the animals are kept.

Sparse settlements

In sparsely populated areas where livestock herds are served by a single crush pen, it is important to identify enough separate establishments under that crush pen in order to establish the true epidemiologic picture of the area. The risk of exposure of establishments through animal contact differs when the distance from one establishments to another is increased. The reference point used will be distant from where animals are located or kept.

Allocation of herd or flock identification (epidemiological unit) code for branding /Animal Identification Numbering System

The animal identification number (AIN) system that is going to be used will be discussed. Since the area of animal identification is evolving, details on current specifications of the official ear tags to be used is subject to further discussion.

Registration of establishments:

The cornerstone of LITS SA is the registration of places where animals are kept, managed or held. In order to track animals, it will be important to know where the animals originate from and where they are being moved to. The diversity of types of settlements and livestock production systems in South Africa demands flexible definition of establishments where animals are kept, held, handled or pass through in transit. Establishments to be registered

include but are not limited to the following:

- State farms
- Private farms
- Large and small intensive production facilities
- Marketing and processing facilities – markets, abattoir
- Communal Dip tanks,
- Water points and pastures
- Dairy farms
- Show grounds
- Testing stations
- Quarantine stations and other isolation facilities
- Research Stations

A register of establishments will be maintained on the LITS SA database, which will serve as the repository of all relevant information relating to each registered establishment. A person responsible for an establishment is required to notify information relating to the place. Most of the establishments are already in the holdings register held by deeds or Provincial Veterinary offices. Information required include but will not be limited to the following:

- Name of place
- Location number or physical address
- Postal Address
- Geo-coordinates
- Establishment type, e.g. state farm, registered farm or pasture or dip tank
- Disease status zone (Corridor disease, FMD, African swine fever, African Horse Sickness)
- Political or administrative area – municipality and village,
- Geographic landmarks
- Name and contact details of person responsible for animals kept, held or handled at the establishment
- Animal species kept, held or handled
- Abattoirs, meat processing, dairy production, aquaculture farms, and any other establishment where registration is required to support safety of people or animals and establishment where registration is required to support export certification of the final product.
- This registration of farms and animals will be done in such a way that it does not require a full-time internet access as the internet coverage in some areas is not suitable for an on-line system. The system must have alternatives in such a way that registration can be done at a government office and the data is transferable by memory stick.
- Cognisance is taken with regard to the fact that animals might move from one province to the next hence tags with unique identification systems and numbers that cannot be used in other provinces should not be recommended. Considerations should be on putting dip tank and province prefixes on the tags as this cannot be used in other areas and may need the re-tagging of animals.

Registration of livestock keepers:

All people or organisations that keep livestock (livestock keepers) will be registered on the LITS SA database at inception of the system. A unique herd or flock mark will be allocated to

each livestock keeper. The LITS SA database will store the following information in respect of each livestock keeper:

- First name, middle names and family name
- Indication whether the keeper is the owner of stock, a manager, a custodian or both
- Names and contact details of other owners of stock kept by the keeper
- National identification number or company/organization registration number
- Physical address
- Postal address
- Contact mobile number
- Alternate contact numbers
- Herd or flock identification numbers or codes
- Establishments where livestock keeper keeps animals
- The type and number of animal species kept or held
- Name and contact details of authorised veterinarian

These records will be updated at every opportunity possible in order to ensure that they are correct and stay current. It is important to make the LITS SA database the central repository of livestock keeper records.

In order to ensure the timely response to disease incursion and promote the efficient management of activities aimed at reducing risks of introduction of diseases, it is important to maintain an updated register of livestock keepers at each establishment, their primary residence, animals kept or held by them and their current contact details. The livestock keepers' register should be readily accessible at all reasonable times to all those approved by the competent authority.

Animal identification system: Primary animal identifier

The animal identifier selected as the primary means for individual identification of cattle, sheep, goats and pigs is a conventional two-piece plastic visual ear tag. The official visual ear tag set must be ICAR approved, ZA embossed and laser marked to ensure uniqueness must be verifiable to prevent copying or illegal reproduction. It must also be laser marked with a unique numbering system to prevent duplication.

A unique barcode on the visual ear tag will provide verification and authentication of the ear tag and assist with illegal copying of ear tags and next location management. The barcoded visual ear tag will assist with eliminating human error when barcoded blood tubes can be linked to ear tags by using a 2D barcode scanner. DNA tags with visual barcoded verification may form part of the Identification device options

An official EID option should be part of the official system for those owners who may need these devices such as dairy. All RFID devices, microchips must be standardised to ensure that all devices comply to ISO 11784/5. Use of none radio frequency identification devices (RFID) to identify cattle, sheep, goats or pigs maybe on a voluntary basis. The use of RFID ear tags, a technology solution that supports automated data input, will ensure error-free and timely data capturing. RFID microchips will be used to identify horses and other equids. The animal identifier may be changed from time to time as conditions require or technology changes.

In order to ensure the integrity of the identification system, the Department has set ICAR approval as the minimum standard for both visual and electronic animal identifiers. Proof of ICAR performance evaluation and certification of conventional permanent plastic visual ear tags is a primary requirement. ICAR also serves as ISO's registration authority for compliance audits farm animal RFID identifiers. Although use of RFID ear tags is optional under this LITS SA, any such ear tags intended for official identification of cattle, sheep, goats or pigs must be ICAR-certified.

With regards to ear tags, the following key requirements must be met:

- The design must be such that they can only be used once (non reusable)
- Assurance of an uninterrupted supply
- Superior retention is desirable in order to maintain the integrity of the animal identification system and reduce costs and burden related to retagging animals
- The quality and design must render ear tags tamper-resistant
- It should not be possible to remove and re-apply the ear tags without physical evidence showing that this action has taken place (Tamper evident – non-re-usable)
- Ear tags should not adversely affect the health and welfare of tagged animals including new born calves
- Approved ear tag should be made from polyurethane composition with laser mark ability and must maintain structural integrity beyond 10 years
- Each ear tag component must have non-removable inscriptions of the animal identification number and the official logo and must not be easily altered without showing visual evidence of alteration (Each tag must be permanently laser marked with a unique number and "ZA" embossed.
- Legibility of the print should be clear; ear tags must be easily and readily readable at a minimum distance of three metres.

Animal identification numbering system:

The animal identification number (AIN) to be assigned to each bovine animal and printed on ear tags has been set by LITS SA to an alpha numeric combination with digit numbers has been proved to be more effective compared to ten-numeric digit number, that is, 9 999 999 999. All ear tags will be imprinted with the two letters, ZA, the ISO 3166-1 alpha-2 code of South Africa. A lost or damaged ear tag may be replaced by another ear tag bearing a different AIN. The animal must get the new AIN on the replacement ear tag assigned to it on the on the central LITS SA database. If it is anticipated that most records will be captured on paper forms, or preferably electronically, consideration should be given to shorten the AIN to an alpha numeric and digit numbers. A shorter AIN means fewer characters with larger font size, which would reduce the number of transcription errors that are synonymous with visual ear tags and paper-recording systems. This numbering relates to EID.

Official Identification Devices for Cattle Tracing:

Approved Ear tags and where applicable brands linked to a standard will be used as the identification method for recording of individual cattle/livestock life cycle history through the production chain. The underlying principle is that the ear tags must be non-reusable and

tamper-evident and must have a high level of retention in cattle under diverse production environments (ICAR approved).

Official Identification Tags for Small Stock:

The majority of Ovine and Caprine in South Africa maybe identified by means of a group identification system based on the owner's registered stock brands, however such identification does not address a split system where growth promoters are registered and used. Imported and breeding small stock will be required to be individually identified. Individual identification in small stock will be done by means of an ear tag. Like in cattle, the underlying principle is that the ear tags must be non-reusable and tamper-evident and must have a high level of retention in sheep and goats under diverse production environments.

Official Identification Tags for Pigs:

The majority of porcine in South Africa may be identified by means of a group identification system based on the owner's registered stock brands. Imported and porcine kept for breeding purposes will be required to be individually identified. Individual identification of kept porcine species will be done by means of an ear tag with a serial number. Where eartags are used, the underlying principle is that the ear tags must be un-reusable and tamper-evident and must have a high level of retention in porcine under diverse production environments.

Official Identification Tags for Ostriches:

Imported and ostriches kept for breeding purposes will be required to be individually identified. Individual identification in ostriches will be done as per VPN04 requirements.

Official Identification Tags for Poultry and Permit Conditions for Live Bird Buyers and Sellers:

Tag identification is not applicable to poultry. A live bird buyer may not remove birds without a permit issued by a veterinarian or Animal Health Technician or other delegated authority. Flocks must be removed within a determined period of the date from which the permit is issued. The identification shall apply to the poultry farm, flock, house with description of Birds (breed, number, age, etc). when dealing with flock diseases that are hard to detect, Information about the origin of the birds is more important for disease certification.

Official Identification Devices for Equine:

The majority of Equines in South Africa will be identified by means of an individual identification system based on the owner's registered stock mark. Individual identification in equines will be done by means of microchip bearing an ICAR approved serial number. The electronic standard of microchips should be in line with the livestock and other in the industry. ISO11784 transponder to enable reading with universal readers ISO11785.

Official Identification Devices for farmed Game and where applicable wild game species:

Tagging of wildlife will not be made compulsory as it is not practical. It is not practical to tag individual wildlife species – even some intensively farmed wildlife. Farmed game is usually stud and thus would not be used for meat production. Wildlife under “intensive conditions” usually is still held in large camps of up to 200 ha and more – depending on the area and carrying capacity. A further concern with tags in wildlife is the fact that a large income of RSA is derived from hunting and eco-tourism. Trophy hunters and tourists do not like to see wild animals with visible tags as this takes away the “wildlife experience”. Where individual identification is applicable, such as farmed buffalos as in cattle, the underlying principle is that the approved identification device must be un-reusable and tamper-evident and must have a high level of retention in farmed game under diverse production environments. Thus, an identity could be issued to a game farm as such but not to individual animals. Provision will be made for a visual tag format that forms part of the LITS SA platform as there are a large amount of game farmers already making use of visual identification. Some Lion farmers are also using visual tag identification for farmed game.

Official Identification Tags for Aquaculture

With regards to crocodiles (aquaculture) a farm registration – not an individual tag would be applicable. Crocodile farms easily carry 25 000 and more individuals ranging from 15 cm hatchlings to 4 m breeders and it is usually impossible to treat crocodiles as individuals on these farms. They stress when they are handled, and tags are not retained easily and can lead to additional aggression between individuals. Provision is made for a micro-chip ISO11784 that is ICAR approved to allow for verification with an ISO 11785 reader.

Fish in South Africa will be identified by means of a group identification system based on the owner's registered property.

ALLOCATION OF EARTAGS:

Ear tags are to be applied as follows:

Province	FMD infected zone		FMD free zone	
	FMD protection zone with vaccination	FMD protection zone without vaccination	FMD high surveillance area	Rest/whole of the free zone
Limpopo	green	pink	yellow	(yellow)
Mpumalanga	green	pink	yellow	(yellow)
KwaZulu-Natal	green	pink	yellow	(yellow)

Consecutively numbered ear tags should as far as possible be applied to cattle of one herd or owner. The use of a generically numbered ear tag will allow for swift and easy application. Existing F-branding of all FMD vaccinated cattle on the right side of the neck must continue. No untagged cattle must be applied for to move or must be permitted to move.

Farm and Communal Holdings:

All farms and related holdings such as intensive production units, villages and communal areas where livestock are kept are registered in the database. Approval from the implementation authority must be sought for recognition of consolidation or partitioning of holdings where livestock is kept.

LIVESTOCK SALES:

All formal and informal auction pens and other livestock sales facilities must be registered by the implementation authority.

Identification Requirements

1. Livestock presented for public sale must be identified by means of an approved ear tag as prescribe by the authority for the Identification and traceability system "Official Tag";
2. Imported livestock must be identified by means of the imported cattle tag bearing a unique serial number and should be recorded against an official tag if not intended for slaughter;
3. Animals presented at an export abattoir must be identified by means of an official approved ear tag or identification device bearing a registered serial number
4. In addition, all animals presented at an abattoir must bear clear brand marks /tattoo of the owner's registered stock brand.
5. Ovine, caprine and porcine presented at an abattoir must be clearly identified by means of an official identification mark.
6. All animals moved from a surveillance farm to an on-farm isolation camp or quarantine camp, apart from identification provisions of the Animal Identification Act, must be individually identified by means of an approved official ear tag.
7. All animals on a farm must be clearly identified by means of an official ear tag. Small stock younger than three months leaving the flock of origin bear official identification mark
8. Owners keeping animals shall:
 - (a) ensure that those kept animals are identified individually by an approved physical means of identification;
 - (b) ensure that information on movements of those kept animals from and into the establishment is transmitted to the computer database provided for.

Shows and Other Exhibitions

All livestock show grounds or other exhibition facilities must be registered. Any person who intends to hold at least two or more livestock exhibitions where animals come from different establishments will submit an annual calendar to the approved authority, indicating the date, time and location. Any person who intends to hold an *ad hoc* livestock exhibition where animals come from different holdings must notify the approved authority office of the area within a specified period before the intended exhibition date.

SUPPLY AND DISTRIBUTION OF OFFICIAL EAR TAGS:

Proper administration of official identification devices is critical to support animal disease traceability. Responsible authorities will provide certain official identification devices to producers to apply to their animals and to accredited officials to apply to animals. Responsible authority, through an application and approval process, approves ear tags and devices that meet established standards. Approved official ear tag numbering format will be allocated by the competent authority or its mandated local distributor, to supply imprinted or encoded animal identification numbered identification devices only to their approved local resellers or authorised distributors. Identification devices will be controlled until they are disposed of. All numbering must be done from a central database and managed with a proper Tag Manager system to allow electronic verification of location where animal should be according to updated recordkeeping.

All recipients of tags and devices must first be registered in the database and provide their identification number to the person that they are obtaining the devices from. The person responsible for the distribution of the tags is responsible for the entry of the distribution record into the database. The current ostrich industry has a full tag management system, from production to end of animal lifecycle. The can be verified electronically via internet to authorised user where the tag is at any point in time.

Issuance of Replacement Ear tags:

In exceptional circumstance and with the approval of the CA, replacement official identification ear tags may be obtained from approved ear tag manufacturers/distributors when an official ear tag is lost and the owner or person responsible for the animal needs to re-tag the animal with the official identification number of the lost ear tag. Replacement tag should be issued with the original ID tag numbers linked in the system for reference and verification. Duplicate ear tags are a logistical challenge. To keep it simple, a new ear tag with a unique number and linked the old number in the system may be issued.

RECORD KEEPING:

1. Owners of establishments subject to registration or approval shall keep and maintain records containing the prescribed information.
2. A person who holds, keeps or handles prescribed animals on a registered establishment must –
 - (a) keep auditable registers, and record information; and
 - (b) provide accurate returns giving information in respect of the birth, death, loss and movement of prescribed animals on or from the registered establishment as may be prescribed. Such registers should all be linked/recorded on the electronic data management system. Keeping of records of birth, loss, etc. of wild animals is a challenge even under intensive condition as “intensive” means anything from 20 to 200 ha – depending on the environment, species and carrying capacity. It is reasonable however, to record any wild animals that have been sold, bought, hunted or found dead.

TRACEABILITY REQUIREMENTS:

1. A person may not remove any product of animal origin and prescribed animal from a

registered or unregistered establishment to any other place within South Africa, unless -

- (a) the person holds a movement permit which authorises the movement from the registered establishment to that other place and
 - (b) the movement is carried out in accordance with the conditions as prescribed and as specified in the movement permit. If a movement permit system is introduced, it must be captured and managed electronically with a possibility of paper printouts for use by authorised parties.
2. Despite that, a movement permit authorises the movement of a prescribed animal specified in the permit, a person may not move that animal from its registered or unregistered establishment if;
- (a) the person knows or has reason to believe, with or without veterinary advice, that the animal is infected with any controlled animal disease and
 - (b) the permit does not specifically authorise the movement of the animal so infected.
3. An application for a movement permit must be made to a responsible official by means of an application form. A movement permit shall authorise the movement of any specified animal only within the period specified in the permit subject to the specified conditions.

OWNERS OBLIGATIONS FOR THE IDENTIFICATION OF LIVESTOCK AND PRODUCTS

A person may not –

- (a) keep, or cause or permit to be kept prescribed livestock and or livestock products, on any registered establishment;
- (b) move, or cause or permit to be moved prescribed livestock and or livestock products, from a registered establishment;
- (c) receive, or cause or permit to be received onto a registered establishment for any purpose other than to keep;
- (d) by means of any conveyance or otherwise move, or cause or permit to be moved, along any road or any other place not being on the registered establishment, any prescribed animal or product, unless that animal or product is distinctly identified in the prescribed manner by means of an authorized mark, tag, transponder or other indicator approved for the purpose of ascertaining the ownership, origin, location, movement history, disease status and fate of the animal or product.

Veterinary medicine and vaccines database:

The development of an electronic data regulatory management system (EDRMS) linked to LITS SA will offers a new approach to information management and will enable the DAFF to continue the evolution from a completely paper-based system to a sophisticated system using information technology.

It is envisaged that the electronic system will transform fertilizers, veterinary medicine, animal feeds and pesticide regulation in South Africa by allowing companies to conduct secure web-

based transactions when submitting applications and to provide essential health and environmental data to the DAFF more quickly using the On-Line secure channel service.

The EDRMS will also strengthen the DAFF's ability to process, review and report to the other government departments and the general public on fertilizers, veterinary medicine, animal feeds and pesticide information. Efficiencies gained through electronic information management processes are key to the DAFF's commitment to modernizing the registration system as well as strengthening coordination of Agricultural products control systems

Data will be collected on all prescribed veterinary medicines including vaccines and stock remedies for use in animals to serve as an advisory tool for veterinarians and regulators in order to regulate the consumption of antibiotics and other products on each farm. The following benefits will be realized:

- monitoring and taking action on reports of negative effects from veterinary medicines
- testing for residues of veterinary medicines or illegal substances in animals and animal products
- Registering companies to sell veterinary medicines in South Africa
- controlling how veterinary medicines are made and distributed
- making, updating and enforcing legislation on veterinary medicines

Design of the LITS SA Exchange Platform Database system:

The LITS SA design shall be a product of consultation with key livestock, current service providers, interested parties and meat and animal products sector stakeholders in South Africa. The system design will be guided by international standards and draw lessons from Implementation of the animal and product identification and traceability system in countries with similar livestock production systems. At minimum the LITS exchange platform database system and LITS module shall comply with the requirements stated in the FAO, 2016 version published Animal Production and Health Guidelines No. 19 on development of integrated multipurpose animal recording systems as well as meat and animal product traceability framework to be developed in collaboration with the Consumer Goods Council of South Africa (CGCSA).

For the Red Meat Industry, the Implementation Plan for Cattle is as follows:

For the Red Meat Industry, the Implementation Plan for Cattle is as follows:	
1. Review and come up with recommendations to create a new database to include the AIDA database.	2017-2018
2. Update owner register and brand marks	2018-2019
3. Register properties/include property ID code.	2018-2019
4. Establish competent authority and implementation authority (OIE recognises the Ministry/Department as the competent authority; PPP as implementing authority to implement and manage).	2017-2018
5. Include present programmes i.e. DAFF FMD, Ostrich, stud and dairy industry.	2018-2019
6. Identify and prioritise Pilot projects.	2017-2019
7. Compliance to Stock Theft Act, APAC & other legislation.	2017-2020
8. Vendor & Health Declarations/Attestations.	2017-2020
9. Database/platform development.	2017-2019

10. Method of Identification.	2017-2018
11. Movement Recording System.	2018-2020

10. COMMUNICATION PLAN

PHASED COMMUNICATION PROGRAMME:

This plan aims to deliver an integrated communication programme pre, during and post the launch of the LITS SA. The plan will include content development for traditional, digital and social media platforms as well as media relations across print and broadcast platforms.

Technical Working Group of the Steering Committee:

A national multi-stakeholder consultative forum was established. The forum appointed a coordinator for LITS SA which is the National Animal Health Forum. Animal Identification, Recording and Traceability Combined Committee has been established as a technical working group (TWG) to identify, create, develop, lead, implement and assess specific LITS SA implementation activities and ensure that they are according to the work plans. The TWG will deal with special issues such as providing inputs into, reviewing and endorsing the proposal for changes to elements of the LITS SA and related outputs. None of the committee members may have an interest of whatever sorts in the system, tags or management of the system to ensure a fair system is developed to benefit all the producers in the country. If a member has any conflict of interest he/she must be replaced with any member with no interest in the system.

In practice, the TWG will

- Ensure the requirements of stakeholders are met by the LITS SA's activities outputs
- Help balance conflicting priorities and competition for resources
- Provide guidance to the Department, participants and users of the outputs
- Consider ideas and issues raised by stakeholders
- Review the progress of the activities and pilot projects
- Monitor adherence of project activities to standards of best practice

Stakeholder engagement:

Messengers

Shall consists of executive management of the applicable Departments, Beneficiaries of LITS SA, Other Economic Cluster executive management and Brand South Africa among others.

Communication theme

Communication theme shall be established in the implementation plan covering tasks, responsibilities, dates and progress for the prelaunch, launch and post launch of the LITS SA.

Successful establishment of LITS SA will be determined by buy-in from key stakeholders. The existing LITS SA Committee and coordination body report to a national LITS SA consultative

forum to serve as a consultative, advisory, coordination and reference forum be an advisory and not an executive body. The forum's implementation roles would include:

- Reviewing progress of the project against targets and its success in meeting the performance indicators
- Reviewing the progress against the annual work programme and budget
- Being a 'sounding board' for discussion of issues that arise during implementation and for which it can provide insights and advice to project management
- Providing the opportunity for project management to receive feedback on new ideas or approaches that it is considering introducing under the activities.

The Livestock Identification and Traceability Committee (a public private partnership) shall be responsible for driving the implementation of specific pilot projects that would lay a solid foundation for a more sophisticated national livestock identification and traceability system in future. The industry representatives and National Animal Health Forum (NAHF) shall be the secretariat responsible for reporting on the progress of the LITS SA activities.

Internally within government:

The draft document will be submitted to EXCO, MinMec and MinTech for approval.

External:

The draft operational policy document will be published in the Government Gazette and workshops will be conducted with relevant stakeholders. The final document will be published in the Government Gazette after consideration of all inputs and approval of the policy through the relevant DAFF channels. Before the pilot projects or the drafting of specifications for the system, NAHF and TWG shall conduct Provincial meetings with all stakeholders.

DAFF, Provincial and other national structures personnel, police, private veterinarians, other contracted service providers, livestock keepers and others industry stakeholders should receive adequate training to ensure the system is implemented effectively and efficiently and to avoid creating misunderstanding among the participants. The training relates to overall animal LITS SA management, tagging and registration, the animal movement control, notification of animal movements and other events, system, data entry, help desk functions, staff engaged in ear tagging of animals and collecting data in the field, staff responsible for the data collection at slaughterhouses, and IT support staff.

11. MONITORING AND EVALUATION

In order to monitor progress toward achievement of the outputs and desired outcomes expected from the LITS SA, the Coordinator would track performance against indicators and targets (the expected result and timeframe for achieving it) covering all activities to establish the system. The coordinator would have overall responsibility for the monitoring and evaluation (M&E) system.

A qualified M&E expert would be hired to support the collection of data, its collation and analysis, and preparing reports for use by project management and other stakeholders.

In order to track progress and performance through all phases of implementation, the monitoring and evaluation plan will include indicators at the following levels: process milestones, and output and outcome indicators. Below is the initial list of key indicators to be used to track progress and assess achievements in terms of outputs and associated outcomes, as well as success in achieving the project's objectives.

Process milestones and target dates:

Would measure progress toward completion of activities to establish the LITS SA.

Output indicators:

Below will directly measure progress in implementing elements of the LITS SA activities. Progress is measured against baseline data were available and set targets in all cases.

- Number of establishments registered
- Number of livestock keepers and owners registered
- Number of food producing livestock herds and number of individual animals tagged
- Number of individual animal movements notified to the database
- Number of animal batch movements notified to the database
- Number of diagnostic tests notified to the database
- Number of permits issued using the LITS SA database to the database
- Number of individual animal vaccination records notified to the database
- Number of other key animal events notified to the database

Outcome indicators:

Below will measure the impact of LITS SA activities and outputs.

- The shortest time required to trace an animal or group of animals
- Updated livestock census figures
- Number of personnel accessing the LITS SA database
- Number of herds or flocks with current official vaccination records
- Number of individual animals with current official vaccination records
- Number of days to collate official vaccination records
- Number of slaughtered animals with complete movement history
- Number of slaughtered animals with required food chain information
- Number of certification requirements met
- Number of movement permits issued for products to be exported
- Number of markets exported to
- Number of jobs created

More details on indicators, target results and timeframes, timing and frequency of reporting, units, level, classification, source, and responsible parties for reporting will be provided in the implementation plan.

The coordinator would strive to ensure that the data collected is reliable, accurate, and consistent in order for it to be used for decision-making, drawing conclusions about LITS SA outputs and outcomes, and evaluating progress on establishing the system. The coordinator would be required to report monthly on most of the indicators above. Its M&E team will lead evaluation of progress in the establishment of a credible animal identification and traceability system utilizing quantitative methods where applicable.

12. REFERENCE DOCUMENTS

1. Acceptable and Practical Precision Livestock Farming. Chapters II and III. Pg. 84 – 130. Ed. Ian G Smith and Heiner Lehr. Halifax, UK 2011.2.
2. Strategic Plan for the year 2013/14 to 2017/18 for the Department of Agriculture, Forestry and Fisheries. www.daff.gov.za
3. Agriculture Policy Action Plan for 2014-2019. www.agrisa.co.za/wp-content/uploads/2014/10/011-APAP-AgriSA.pdf
4. An enhanced Animal Identification and traceability information in Namibia – IST OIE conference on animal ID and traceability. Buenos Aires 2009.
5. OIE general principles on identification and traceability of live animals <http://www.oie.int/>
6. ICAR – accredited ear tag physical specifications http://www.icar.org/pages/certified_eartags.htm
7. FAO. 2016. Development of integrated multipurpose animal recording systems. FAO Animal Production and Health Guidelines. No. 19. Rome.
8. Satoto Livestock Projects. <http://www.satotoprojects.com/>

13. POLICY OWNER/COORDINATOR

Chief Directorate: Animal Health and Production

14. DOCUMENT INFORMATION

Document number: LITS SA1/17

Revision number: 6

Issue date: 2018-02-10

Document status: Draft

15. APPENDICES

ANNEX 1:

LIVESTOCK IDENTIFICATION and TRACEABILITY SYSTEM SOUTH AFRICA COMMITTEE TERMS OF REFERENCE

1. NAME

The name of the body is The Livestock Identification, and Traceability System South Africa, hereafter referred to as LITS SA.

2. MANDATE OF THE COMMITTEE

The World Organization for Animal Health (OIE) recognises South Africa's Chief Directorate of Animal Production and Health as the Competent Authority. During the Animal Identification, Recording and Traceability Consultative Workshop of 14 August 2017, the resolution was that DAFF and the Livestock Industry should form an interim steering committee, led by the National Animal Health Forum, to establish a public private partnership to drive the implementation of a practical national system for livestock identification and traceability.

3. SCOPE

The LITS SA was established to develop and drive the implementation of the national livestock identification and traceability system for animals and animal products.

4. VISION

The vision is to institute a National Livestock Identification and Traceability System for South Africa.

5. AIM

The overall aim is to ensure the implementation of an internationally recognised LITS system in South Africa.

6. RESPONSIBILITIES

The LITS SA shall do the following and have the following functions:

- 6.1 to develop the Livestock Identification and Traceability System policy for South Africa and submit the draft policy to DAFF for the said policy to be taken through the required legislative processes;
- 6.2. to develop and coordinate national responses to LITS SA matters to ensure that the most effective responses are implemented;
- 6.3. to review relevant legislation, national operating procedures, and new and existing standards on LITS SA and submit proposed changes to DAFF to be taken through DAFF processes;
- 6.4. to provide a mechanism to enable a national multi-stakeholder consultation, and to facilitate a consistent governmental approach to LITS SA;

- 6.5. to establish a network of livestock and product identification and traceability experts within and outside of the Republic (i.e. national, regional and international cooperation);
- 6.6. to develop and recommend a funding model for LITS SA;
- 6.7. to establish the implementation authority;
- 6.8. to develop a business and implementation plan;
- 6.9. to develop/test/deploy/operate an electronic LITS SA system which would facilitate the exchange of information between all role players; public/private in a trusted environment. The ownership, IP and source must be with the Competent Authority and the function will be managed and overseen by DAFF ICT in conjunction with private sector;
- 6.10. To facilitate the traceability of all livestock which would enable backward and forward tracing of animal movements during disease control activities.
- 6.11. To facilitate the traceability of all products of animal origin (farm to the fork), that would enable ability to issue a local/international electronic food safety and sanitary certificate that meets the minimum requirements of both local retailers and trading partners.

7 COMPOSITION OF THE LITS SA COMMITTEE

7.1 Members

The LITS SA Committee shall **initially** consist of the following:

- a) 5 (Five) members representing the Department of Agriculture, Forestry and Fisheries (DAFF). Members are nominated to represent the Directorates of Veterinary Public Health, of Animal Health, and that of Animal Production.

Representation:

- 7.1.1 Two members representing the Directorate of Veterinary Public Health (VPH);
- 7.1.2 One member representing the Directorate of Animal Health (AH);
- 7.1.3 One member representing the Directorate of Animal Production (AP); and
- 7.1.4 One member representing the Provincial Veterinary Services (MinTec).
- 7.1.5 The following directorates have been identified and should be consulted and co-opted into working committees:

- 7.1.5.1 Directorate Inspection Services
- 7.1.5.2 Directorate ICT reporting to NATCCIM
- 7.1.5.3 Directorate International Trade and or
- 7.1.5.4 Directorate Marketing

- b) 5 (Five) members representing the Livestock Industry. Members are nominated to represent the National Animal Health Forum, the Red Meat Industry Forum, the National Stock Theft Prevention Forum; the Red Meat Producers Organization and the National Emergent Red Meat Producers Organization.

Representation:

- 7.1.6 One member representing the National Animal Health Forum (NAHF);
- 7.1.7 One member representing the Red Meat Industry Forum (RMIF or one of its relevant member organizations);
- 7.1.8 One member representing the Red Meat Producers Organization (RPO);
- 7.1.9 One member representing the National Stock Theft Prevention Forum (NSTPF); and
- 7.1.10 One member representing the National Emergent Red Meat Producers Organization (NERPO).
- 7.1.11 The following organisations have been identified and should be consulted and co-opted for working committees:
 - 7.1.11.1 Department of Health
 - 7.1.11.2 Manufacturing, Abattoir and Processing Industry
 - 7.1.11.3 Retail industry
 - 7.1.11.4 South African Revenue Service
 - 7.1.11.5 South African Police Service
 - 7.1.11.6 Department of Environmental Affairs
 - 7.1.11.7 Department of Home Affairs; South Africa Revenue Services (SARS) and Statistics South Africa

- c) The LITS SA has the right to co-opt further members with relevant technical expertise as and when the need arises. Provision will be made to form smaller sub-committees as the need arises.

7.2 Meetings

Meetings will be conducted as follows:

- 7.2.1 The chairman will be appointed by the committee
- 7.2.2 Decisions should preferably be reached via consensus, failing which by majority;
- 7.2.3 Representatives nominated into the LITS SA are assumed to carry the full mandate from their representative organisations during attendance at the meetings
- 7.2.4 A minimum of four meetings to be held per year;
- 7.2.5 Notice of meetings must be given at least 14 days in advance
- 7.2.6 Members present will form a quorum.

8 PROCESS TO DERIVE RECOMMENDATIONS

(This should be done by members tabled in 7.1 representing their respective organisations)

The LITS SA Committee shall report its activities to the respective Livestock and Food Industry constituents and DAFF executive through MinTech Veterinary working group.

- 8.1 The LITS SA shall make recommendations on the basis that the Chairperson is satisfied, that there is consensus amongst the members of the committee.
- 8.2 Relevant recommendations shall be made available to and presented to the applicable Livestock, Food Industry constituents and MinTec Veterinary Working Group.
- 8.3 Where there is no consensus amongst members of the LITS SA, recommendations will be made on the basis of further consultation.

9 AMENDMENT OF THE TERM OF REFERENCE

The Terms of Reference can be altered at a formal meeting of the LITS SA, under the following conditions:

- 9.1 Two weeks notification must be given in this regard with a motivation;
- 9.2 The rules may be amended by the consent of the Members of the LITS SA
- 9.3 A quorum for such will consist of at least 50% of members consisting of 6.1 (a) and at least 50% of members consisting of 6.1 (b);
- 9.4 Written notice shall be given in advance to the LITS SA by a Member seeking to amend the rules.
- 9.5 Any amendment to the terms of reference has to be endorsed by the LITS SA.

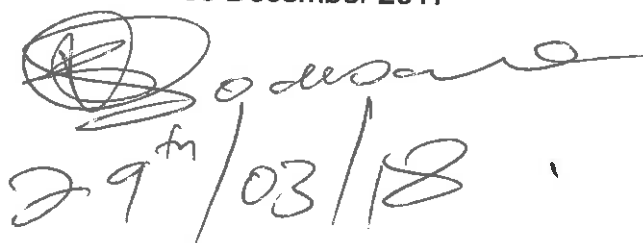
10 OFFICIAL LANGUAGE

English will be the official language for the terms of reference.

COMPILED: 08 December 2017

AMENDMENTS: 08 December 2017

APPROVED:



Handwritten signature and date: 29th / 03 / 18

ADDENDUM A

(This will possibly not be included in the TOR but in the Memorandum of Incorporation of the PPP to be formed)

Functions of the chairpersons

The Chairperson of the LITS SA Committee shall be accountable and responsible for:

- Convening meetings through the Secretariat of the LITS SA.
- Determining and finalizing the agenda of the meeting after members have suggested items for inclusion.
- Inviting any person not mentioned under section 7 above to attend the meeting of the LITS SA
- Once every quarter, report to the MINTEC Veterinary Working Group on pertinent issues, as well as the outcomes of the previous quarterly activities.
- Delegating the responsibility of chairing the meetings to a representative chairperson in his/her absence.
- Implementing the terms of reference for the LITS SA.

Functions of the secretariat

The Secretariat of the LITS SA Committee shall be accountable and responsible for:

- Distributing meetings agendas and documentation and solicit inputs thereto from all members.
- Shall record the minutes of meetings and distribute to all attending members for comment before finalizing for record purposes.
- The minutes shall be recorded electronically and approved at each subsequent LITS SA meetings.
- Shall maintain all files relating to the LITS SA including a record of recommendations made by the committee.
- Shall maintain an up to date distribution list for relevant documentation.