



هيئة أبوظبي للزراعة والسلامة الغذائية
ABU DHABI AGRICULTURE AND FOOD
SAFETY AUTHORITY



جهاز أبوظبي للرقابة الغذائية
ABU DHABI FOOD CONTROL AUTHORITY

Policy for the Abu Dhabi Animal Identification and Registration System

(AIRS)



Table of Contents

1	The Abu Dhabi Animal Identification and Registration System (AIRS)	5
1.1	Purpose	5
1.2	Justification for an animal identification and registration system in Abu Dhabi	5
1.3	The AIRS overarching policy statement	5
1.4	The development of policy	6
1.5	Division of the issues that policy must address	7
2.	Implementation of AIRS	8
2.1	Establishment and Updating of AIRS	8
2.2	Phased approach to implementation	9
3.	AIRS Policies - Preamble	9
3.1	Introduction	9
3.2	Format for presenting AIRS policy	9
4.	AIRS Policies - Details	10
Group A:	Strategic goals that primarily address the quality aspects of AIRS	10
4.1	Strategic Goal 1: The Competent authority for AIRS	10
4.2	Strategic Goal 2: AIRS includes 4 Basic Components	13
4.3	Strategic Goal 3: to assure maximum coverage of target species	15
4.4	Strategic Goal 4: Standard definitions	20
4.5	Strategic Goal 5: Quality assurance	21
4.6	Strategic Goal 6: AIRS procedures comply with animal welfare legislation	23
4.7	Strategic Goal 7: Updating, expanding or modifying AIRS is facilitated	25
Group B:	Strategic goals that primarily address Traceability and Food Safety Aspects of AIRS	26
4.8	Strategic Goal 8: Database kept up-to-date	26
4.9	Strategic Goal 9: Exemptions	28
4.10	Strategic Goal 10 related to slaughterhouses	29
4.11	Strategic Goal concerning Control of identifiers	31
4.12	Strategic Goal related to capturing data related to Eid Al Adha sacrifices	32
4.13	Strategic goal related to livestock events and mezaina	33
Group C:	Strategic goals that primarily address Trade and Commerce	34
4.14	Strategic Goal 14: All imported livestock must be identified	34
4.15	Strategic Goal 15: Concerning livestock markets	36
4.16	Strategic Goal 16: concerning commercial livestock operations.	37

List of abbreviations

AIRS	Animal Identification and Registration System of the Emirate of Abu Dhabi
AIRU	AIRS Management Unit
ADFCA	Abu Dhabi Food Control Authority
BIP	Border Inspection Post
CA	Competent Authority
DBMS	Database management system
DG	Director General of ADFCA
EC	European Council
EID	Electronic Identification Device
EU	European Union
GCC	Gulf Cooperation Council
ID	Identification Number allocated by AIRS
ICAR	International Committee for Animal Recording
ISO	International Standards Organisation
KPI	Key performance indicator
OIE	Organisation International des Epizooties (the World Animal Health Organisation)
RFID	Radio Frequency Identification Device
RFP	Request for proposal
UAE	United Arab Emirates
UK	United Kingdom of Great Britain and Northern Ireland

1 The Abu Dhabi Animal Identification and Registration System (AIRS)

1.1 Purpose

The purpose of this document is to present a policy statement and strategic goals to govern development of regulations for, and implementation of the Animal Identification and Registration System (AIRS) of the Emirate of Abu Dhabi.

1.2 Justification for an animal identification and registration system in Abu Dhabi

The successful operation of AIRS will provide essential contributions to attainment of several components of high level policy, strategy and vision for the Government of Abu Dhabi. In particular, AIRS will assist in attaining some of the key goals of the Abu Dhabi Policy Agenda 2030. It will also assist in attaining goals stated in the ADFCA Entity Strategic Plan for 2009-2013 and in the Livestock Sector Vision of 2030.

1.2.1 Contributing to attainment of the Abu Dhabi Policy Agenda

The proposed AIRS will, amongst other roles, be a tool for improving the safety of food of animal origin, the livestock support program, the health and productivity of domestic animals, and monitoring and controlling use of grazing land and other resources. AIRS will therefore contribute to attainment of three of the 17 goals cited in the Abu Dhabi Policy Agenda 2030, namely: 'a healthy population able to contribute effectively to society', 'maintain Abu Dhabi's cultural values and heritage', and 'a clean, safe and sustainable environment'

1.2.2 Contributing to attainment of ADFCA's key policy areas, Entity Strategic Plan and Livestock Vision

The scope of responsibilities of the Abu Dhabi Food Control Authority (ADFCA) is being greatly extended so that it can cover the entire domestic food value chain from production to consumption, sometimes referred to as 'from farm to fork'.

Two important processes are required to enable this important expansion of responsibilities and activities. The first of these is legislative empowerment of the authority. The second is the identification of overarching key policy areas for the Authority, which include the following components:

food safety, traceability, stakeholder consultations, the farm to fork approach, inspection, designation of responsibilities, sanctions and penalties, information management and automation, licensing and registration, farmer awareness, animal health and production, animal welfare and live animal transport, and financial support.

The above key policy areas confirm the need for an Abu Dhabi Animal Identification and Registration System (AIRS) to improve food safety by enabling traceability, and a farm to fork approach, helping improve animal health and disease control and generally assisting in improving animal productivity and well being.

The ADFCA Strategic Plan for 2009-2013 establishes six goals that include food safety, animal health, and promotion of environmentally friendly agricultural policies and practices. All three of which would require, or would be greatly assisted by AIRS. The Abu Dhabi Livestock Vision includes the statement 'Clear policies, livestock traceability and an effective regulatory and enforcement system are needed to ensure product integrity and community confidence in consuming animal products. The AIRS will enable traceability of food of animal origin.

AIRS will also contribute to:

- Improved control of zoonotic diseases;
- Improved environmental monitoring particularly of grazing resources, and;
- Identification of selected constraints to animal production and productivity.

As further justification, AIRS will confer many benefits to stakeholders in the Abu Dhabi Emirate, including:

- Improved administration of the livestock support program;
- Improved control of animal disease and product integrity (food safety, residues);
- Improved traceability of animals to aid emergency responses to outbreaks of epizootic diseases;
- Increased ability to differentiate animals and their products on animal health grounds, and;
- Assist in the maintenance and development of access to markets.

1.3 The AIRS overarching policy statement

In close consultation with ADFCA staff the following overarching policy statement has been developed to explain the aims, context and operation of AIRS and guide development of the necessary policy and regulations.

AIRS Overarching Policy Statement

Consistent with the relevant UAE Federal legislation and international standards and to serve Abu Dhabi's Policy Agenda for improving food safety, animal health and productivity, ADFCA is committed to the implementation of a robust Animal Identification and Registration System (AIRS) within the Emirate of Abu Dhabi that will be flexible for integration with any future AIR within the Gulf countries.

Using a risk-based and performance auditing approach to deliver traceability and identification objectives, all livestock and other animals in the Emirate shall be uniquely identified and details of animals, holdings, ownership and other data be recorded and maintained in a dedicated database management system, which is continually updated.

The system shall serve as a tool to enable animal and food traceability and aid emergency responses, enhance food safety, facilitate livestock support programs, improve animal disease control, support animal production, assist rangeland management and environmental protection, and highlight areas for improvement to increase productivity and production of livestock.

Figure 1: The AIRS overarching policy statement

1.4 The development of policy

Policies described in this document were derived from several sources (see Table 1), including:

- The recommendations of international organisations, including the Organisation International des Epizooties (OIE and also known as the World Animal Health Organisation), the International Committee for Animal Recording (ICAR), and the International Standards Organisation (ISO) for specifications of electronic identification devices (EID) and EID readers;
- The policies adopted by countries in which animal identification and registration systems are being successfully implemented – see 1.5.1.
- Written from zero to address issues that are specific to the Abu Dhabi livestock value chain – see 1.5.2.

Table 1: Some of the more important sources of information consulted

Source	Details
Directive 64/432 (EEC)	On animal health problems affecting intra-Community trade in bovine animals
Regulation 1760/2000 (EC)	Establishing a system for the identification and registration of bovine animals and regarding the labelling of beef and beef products
Regulation 1082/2003 (EC)	Laying down detailed rules for the implementation of Regulation (EC) No 1760/2000 of the European Parliament and of the Council as regards the minimum level of controls to be carried out in the framework of the system for the identification and registration of bovine animals
Regulation 644/2005 (EC)	Authorising a special identification system for bovine animals kept for cultural and historical purposes on approved premises as provided for in Regulation (EC) No 1760/2000 of the European Parliament and of the Council
Decision 21/2006 (EC)	Implementing Council Regulation (EC) No 21/2004 as regards guidelines and procedures for the electronic identification of ovine and caprine animals
Regulation 21/2004 (EC)	Establishing a system for the identification and registration of ovine and caprine animals and amending Regulation (EC) No 1782/2003 and Directives 92/102/EEC and 64/432/EEC
Regulation 21/2004 (EC)	establishing a system for the identification and registration of ovine and caprine animals and amending Regulation (EC) No 1782/2003 and Directives 92/102/EEC and 64/432/EEC
Regulation 911/2004 (EC)	Implementing Regulation (EC) No 1760/2000 of the European Parliament and of the Council as regards eartags, passports and holding registers
Regulation 933/2008 (EC)	Amending the Annex to Council Regulation (EC) No 21/2004 as regards the means of identification of animals and the content of the movement documents

Source	Details
Regulation 759/2009 (EC)	Amending the Annex to Council Regulation (EC) No 21/2004 establishing a system for the identification and registration of ovine and caprine animals
Com/2007/0711	Report from the Commission to the Council on the implementation of electronic identification in sheep and goats
DEFRA UK regulation 2007 no. 529	The cattle identification regulations
DEFRA UK Order 2009 no. 3219	Sheep and goats (records, identification and movement)
ISO standards	Standards 11784 and 11785
ICAR, 2009	A synthesis of ICAR guidelines on animal identification
Food and Agriculture of the United Nations, Animal Production and Health, 2004	Good practices for the Meat Industry, chapter 4
OIE Terrestrial Animal Health Code 2009	Chapter 4.1: General principles on identification and traceability of live animals. Chapter 4.2: Design and implementation of identification systems to achieve animal traceability
Animal Health Australia	Policy Paper 'Livestock Identification and Traceability' March 2009
DEFRA, UK	Guidance for Keepers in the UK. Rules for identifying sheep and goats. January 2008
DEFRA, UK	State Veterinary Journal, Vol 15. No 1, 2005 'Animal Passports and Identification' pp 20-27
DEFRA, UK	Explanatory Memorandum to the Cattle Identification Regulations. 2007 No. 529
DEFRA, UK	'Electronic identification of sheep from 31 December 2009. Ordering your tags'
DEFRA, UK	'Electronic identification in sheep. Your technical guide.'
American Registry of Professional Animal Scientists 24 (2008): 287-294	Review: Identification and Traceability of Cattle in Selected Countries Outside of North America
Ministry of Agriculture and Forestry, New Zealand	'National Animal Identification and Tracing (NAIT)' – Information Document January 2010 'Review of Selected Cattle Identification and tracing Systems Worldwide, Lessons for the New Zealand Animal Identification and Tracing Project.' Paper 2009/03. February 2009
USDA, Animal And Plant Health Inspection Service, United States of America	'National Animal Identification System (NAIS). A User Guide and Additional Information Resource.' December 2007
Congressional Research Service, Library of Congress, United States of America	Animal Identification and Meat Traceability, March 7, 2006

1.5 Division of the issues that policy must address

The issues that must be addressed by policy were separated into two divisions (a) General, that is those that would be common to all national animal identification and registration systems, and, (b) Specific, that is those issues that are specific to Abu Dhabi and certain other Emirates and States.

1.5.1 General issues

For this category it was possible to refer to ongoing animal identification and registration systems and where possible adapt their policies (and regulations) to AIRS. Systems being implemented in the following administrations were examined for this purpose: European Union (EC policy and regulations), the United Kingdom (as an example of a state that has adapted EC policy and regulations to national conditions), Australia as an example of a Federal/State system similar to the UAE and where policies and regulations in two states, New South Wales and Western Australia are used.

1.5.2 Specific issues

Various components of the Emirate of Abu Dhabi livestock production systems, livestock marketing systems and meat value chain

are specific to the Emirate and some of the Arabian Gulf States. They are therefore not addressed by other countries/States (eg those of the EU, Australia) nor by international organisations.

There are no precedents for such issues. The situation in most other GCC countries offers no help as either they have no national animal identification system that extends to meat-producing animals, or if a national system does exist then its aims do not parallel those of AIRS. Therefore, it cannot be considered or used as a policy example for AIRS as it: Therefore it cannot be

- Is focussed solely on supporting the livestock support program
- Relies on the use of injectable transponders in all species
- Uses MS Excel© spreadsheet to store data
- Does not include effective database updating
- Does not extend to abattoirs nor to traceability

The following policy issues for AIRS that are specific to Abu Dhabi have been identified:

- **Border Issues** - Abu Dhabi is one of 7 Emirates of the UAE and will pioneer the introduction of an animal identification and registration system. This poses a number of challenges:
- **Emirate borders** - as there is a very porous border between Abu Dhabi and other Emirates (Dubai and Sharjah) ways must be found to control the movement of domestic (UAE) animals into Abu Dhabi and to ensure that all new 'imports' are identified and registered as required by AIRS
- **International imported animals** - A large number of livestock is imported from many countries into Abu Dhabi each year. However, the import of livestock into the UAE (including Abu Dhabi) is controlled by the federal legislation and implemented by veterinarians employed by the Federal Ministry of Environment and Water. Ways must be identified to ensure that all imported livestock that enter Abu Dhabi are identified in an AIRS-compliant manner and in such a manner that the country of origin is recorded, where possible the holding of origin is recorded, and each animal has a unique identification number.
- **Destination of imported animals** - As a general rule animals entering the UAE, whether or not for slaughter, enter the domestic livestock markets and then destined: (a) for fattening or breeding on a local farm, (b) for a slaughterhouse for immediate slaughter, or (c) exported to a third country. As the fate of any given animal is not be known it follows that all such animals entering Abu Dhabi must be individually identified as specified in the paragraph above.
- **Livestock markets** - The livestock markets in Abu Dhabi do not work on the basis of 'all in' and 'all out', whereby animals enter a market and all are removed (either back to holding of origin if not sold, or on to the buyer if sold) at the end of the day. In Abu Dhabi livestock markets animals may be 'resident' for weeks or even months until a buyer is found. This has a number of consequences:
 - It represents a disease hazard as livestock markets foster the dissemination of animal diseases, and;
 - The location of any animal at any point in time must be known, all animals must be identified and lost identifiers replaced. Systems must therefore be in place at each livestock market to correct deficiencies noted. This represents a significant challenge to financial and human resources.
- **Personnel responsible for AIRS recording** - the vast majority of livestock keepers in Abu Dhabi are expatriate employees with a relatively low educational level. This means that the maintenance of the records required by AIRS (the holding register, details of livestock movements, and movement documents) and the application of AIRS identifiers to newborn animals etc cannot generally be entrusted to the animal keepers. An alternative means of capturing animal movement and herd dynamics data and applying identifiers must be found.
- **Camels** - camels are held in high esteem in Abu Dhabi, and animals that are successful in racing and Mezaina (camel show) are particularly valued and valuable. To be acceptable to camel owners the means of AIRS identification used must not deface or mutilate in any way. An acceptable means of identification of camels must be found.

2. Implementation of AIRS

2.1 Establishment and Updating of AIRS

The most reliable estimates of the total numbers of animals, by species, in Abu Dhabi are shown in Table 2.

Table 2: Estimated numbers of livestock in Abu Dhabi, by species (2009)

Species	Approximate number
Camels	306,400
Sheep	903,700
Goats	866,400
Cattle	31,500
Total to be identified	2,108,000

Source: Ministry of Environment and Water, 2007

The tasks of (a) initial mass identification and registration of animals and (b) keeping the database up-to-date (by capturing and reporting all data on births, deaths, sales, slaughters, purchases, (transfers) and movements, and handling the large numbers of livestock imported each year, are very significant challenges. This will require a detailed strategy and dedicated Unit within ADFCA with an effective management structure.

The system will need to be supported by effective regulations and a commitment from senior management to give AIRS a high priority. AIRS will require a team of well trained and motivated staff.

Most importantly, the successful implementation will need understanding and full cooperation from all stakeholders. To achieve these goals, a comprehensive and well coordinated consultation and communications program will be needed to ensure both staff and stakeholders fully understand why AIRS is being implemented and what their respective roles and responsibilities are.

Keeping the database up-to-date will be a challenge as there will be a huge number of transactions that must be captured, reported and entered into the database each year.

2.2 Phased approach to implementation

In line with one of the findings of our stakeholder consultations it is recommended that AIRS be implemented in phases.

- **Phase 1** would include the initial mass identification program in order to promptly provide accurate livestock population data to the livestock support program. The objective is to complete the mass identification program by July 2010. Systems to collect animal movement and herd dynamics data that are needed to continually update the database would be put into effect, including cattle, sheep, goats and camels.
- **Phase 2** would include integration of imported animals into AIRS including poultry and their products including (hatching eggs and day-old chicks) and fish (batch identification for food safety traceability).
- and would require a relatively long lead time in order to (a) arrange a Memorandum Of Understanding with the Federal Government of the UAE to make AIRS-compliant identification of all animals a condition for entry into the UAE and (b) to give exporting countries time to prepare for identification of all animals to be exported to the UAE.
- **Phase 3** would include implementation of an animal identification and registration system in all Emirates of the UAE. This would enable full traceability of livestock imported into Abu Dhabi from other Emirates,
- **Phase 4** would include expanding the remit of AIRS to additional species if decided to be included by the board.

3. AIRS Policies - Preamble

3.1 Introduction

The following strategic goals have been identified as necessary to ensure attainment of the overarching policy statement:

1. Competent Authority for AIRS has been established
2. Components of AIRS in place
3. Target species 100% covered by AIRS
4. Standard definitions have been drawn up
5. Quality assurance in place
6. Animal welfare standards have been incorporated into AIRS practices
7. Updating AIRS has been facilitated
8. Methods for capturing and recording update data are in place
9. System for granting exemptions from AIRS requirements in place
10. Slaughterhouses have been fully integrated into AIRS
11. System for controlling issue and use of identifiers is in place
12. System for capturing all Eid al Adha sacrifices is in place
13. System for dealing with miscellaneous livestock movements is in place
14. Imported stock have been fully integrated into AIRS
15. Livestock markets have been fully integrated into AIRS
16. Commercial livestock enterprises are fully integrated into AIRS

3.2 Format for presenting AIRS policy

In Section 4 the Strategic Goals are presented, for convenience, by group as follows:

1. Goals that are primarily focused on assuring the quality of AIRS operations,
2. Goals that are primarily focused on traceability and food safety, and;
3. Goals that are primarily focused on market and commercial issues.

Further, each strategic goal is presented in the following format:

- Preamble

- Statement of strategic goal
- Targets, and for each target:
- The key players involved
- An action plan
- Key performance indicators

4. AIRS Policies - Details

Group A: Strategic goals that primarily address the quality aspects of AIRS

4.1 Strategic Goal 1: The Competent authority for AIRS

4.1.1 Preamble:

To ensure AIRS is established with the proper legal authority the Government needs to designate a Competent Authority (CA) to administer the system. The authority may be ADFCA or a Section within ADFCA. As well as designating the Competent Authority, ADFCA needs to appoint an officer to be legally responsible for administering the system and have the legal powers to enforce AIRS. This person may be the Director General of ADFCA or another senior officer in the livestock area such as the Director of Animal Health or Chief Veterinary Officer. ADFCA may wish to designate the position with a formal title such as Registrar of AIRS. The Competent Authority will ensure strict confidentiality of the data is maintained with strict access limits to the data based on approval from the Director General of ADFCA.

4.1.2 Strategic Goal 1: Competent Authority Established

Competent Authority for AIRS has been established

4.1.3 Targets

Achievement of this strategic goal requires actions to achieve the following targets:

Target 1.1 Competent Authority and responsible person identified

Identify Competent Authority and Responsible person

The appropriate section and position within ADFCA to be responsible for administering AIRS are identified.

For legal reasons and for authority and accountability a legally empowered Competent Authority (CA) and a named person (within the CA) must be designated to administer AIRS.

Key players

Senior decision makers in ADFCA.

Action Plan

- A division within ADFCA (probably the Animal Production Division of the Livestock Sector) will be designated as the CA. This decision will be entered in the Official Gazette, or equivalent document, to afford the necessary legal empowerment.
- A specialist unit will be formed within the CA, the Animal Identification and Registration Management Unit (AIRU), to implement AIRS.
- A position within the CA, probably the Head of the Animal Identification and Registration Unit (AIRU), shall be designated as the Officer responsible to the Director, Animal Production Division, for implementation of AIRS – hereinafter called the Manager, AIRS.
- This position must also be gazetted.
- Establish a clear management structure to the AIRS which will include an AIRS Technical Committee within ADFCA, and overseen by a Management Committee, to oversee and advise on the management and operations of AIRS.

KPIs

- Establishment of the Competent Authority is included in AIRS regulations
- The Competent Authority has been established and Manager, AIRS, appointed as evidenced by Gazette notices

Target 1.2 AIRS Persons appointed

AIRS Persons have been appointed

AIRS Persons (Authorised Officers) will be appointed by the Manager, AIRS

Once the legal procedures have been established, AIRS Persons and other Authorised Officers, such as database administrators can be appointed.

Action Plan

- Select and appoint AIRS Persons
- Ensure all staff appointed to these roles receive the appropriate training and that on-going training is provided.
- A register of AIRS Persons to be established and maintained

KPI

AIRS persons have been appointed and designated as evidenced by Gazette notices.

Target 1.3 Powers of AIRS Persons are clearly articulated in law

Powers of AIRS Persons have been specified and clearly defined.

ADFCA must authorise specific personnel to undertake tagging operations under the AIRS. These personnel (AIRS Persons) need to have legal powers to carry out whatever need to be done to ensure identification of all animals under the AIRS. These powers need to authorise AIRS Persons to require owners to present animals for tagging and also allow AIRS Persons to enter premises / farms to carryout identification procedures and inspect animals to see that their ID is valid. Powers need to be given to the Manager of AIRS to require stakeholders to do whatever is necessary to ensure the effective functioning of AIRS.

Key players

- Manager AIRS
- AIRS Persons
- Database manager and staff

Action plan

Draw up a comprehensive list of the responsibilities of the Manager and ensure that he / she is specifically empowered to discharge these. These responsibilities would include:

- Recommendations for appointment and removal of AIRS Persons (see Glossary, basically an AIRS person is a named officer with powers required to enter a premises, inspect animals, examine records, capture ID numbers of animals present, require explanations regarding missing animals and unidentified animal that are present, require corrective actions to be taken and so on).
- Recommending changes to legislation
- Preparation of animal work plans and budgets
- Taking actions necessary for AIRS to achieve KPIs
- Ensuring that AIRS has the human, material and financial resources required to fulfil its objectives
- Ensuring that any changes to legislation, for example granting exemptions, are promptly implemented
- Oversight of stakeholder consultations
- Undertaking training needs assessments from time-to-time and ensuring that findings and recommendations are promptly implemented
- Ensuring that all field manuals are kept up-to-date with legislation
- Ensuring that findings of AIRS audits of holdings are promptly addressed
- Agreed powers of the manager are reported in the Official Gazette.

KPIs

- The Gazette notice.
- AIRS overall performance is satisfactory (as judged by attainment of KPIs)

Target 1.4 An adequately resourced Competent Authority

The Competent Authority is adequately resourced
The Competent Authority for AIRS is properly resourced with staff and equipment to administer AIRS and that staff are trained to carry out their roles.

Key players

- Senior planners
- Financial officers
- Personnel development
- Technical officers

Action plan

- Draw up a list of all management, administrative, and technical tasks for which the CA is responsible. Utilise this to draw up an organigram and determine the numbers and types of staff required. The technical tasks for which the CA is responsible would include:
 - Efficient day-to-day management of AIRS
 - Stakeholder consultations
 - Management of the database
 - Ensure that all database records are kept up-to-date, including individual animal records and all registers
 - Ensure that all identifiers, readers, registers are clearly described and specified
 - Oversee training needs assessments, training programs, production and distribution of manuals.
 - Develop codes of practice, provide required documentation and training
 - Personnel management
 - Financial controls
 - Assure control over identifiers
 - Design and implementation of an objective-oriented monitoring and evaluation system
 - Responding to findings of monitoring and audits
 - Promote quality assurance throughout the system
 - Liaison with other stakeholder entities such as: livestock support program; veterinary services; environment department; concerned Federal Ministries such as the Ministry of Environment and Water, Department of Municipal Affairs.
 - Estimate accommodation, equipment and transport requirements and satisfy these.
 - Prepare manuals, codes of practice and standard operating procedures and ensure that these are distributed to staff
 - Recruit staff, conduct training needs assessments and design and implement training programs accordingly.

KPIs

Internal audit establishes that AIRS is operating effectively and without any resource constraints.

Target 1.5 Responsibility for AIRS data has been clearly specified

The Competent Authority is made responsible for AIRS data
The Competent Authority has full responsibility for the integrity and confidentiality of the information stored in the AIRS database which will be in the format prescribed in regulations.

AIRS will involve collection, storage, retrieval, compilation and analysis of large quantities of data and the CA will be responsible for the required computerised database, particularly data integrity, security and confidentiality.

Key players

- Manager, AIRU
- Manager AIRS database
- AIRS persons
- Technical officers – for example of veterinary service, animal production service, environmental agency

Action plan

- Draw up and enforce Codes of Practice for data management and security, including back-up schedules, provision of uninterruptible power supply units and voltage regulators, consistent and correct use of firewalls and virus protection software, and limiting management access to data tables to minimise data corruption.
- Draw up and enforce Codes of Practice for access by AIRS staff and stakeholders through use of password protection and different levels of access to different components of the database.

- Facilitate use of the database for purposes such as animal disease control and traceability but draw up clear Codes of Practice to govern and control these and preserve confidentiality.
- Assure access to source code and ready availability of technical back-up at all times (24 hours a day, 7 days a week).

KPIs

- System downtime of <1% and need to restore data on less than 2 occasions per year.
- No breaches of security.

Target 1.6 Central Register of Holdings is established and maintained

The Competent Authority has established and maintains a comprehensive central register of animal owners, livestock holdings, livestock markets, slaughterhouses, livestock traders, and livestock transporters.

A comprehensive central register of animal owners, livestock holdings, livestock markets, slaughterhouses, livestock transporters, showgrounds, race tracks etc. is essential for operation of AIRS and particularly for ensuring total coverage of target livestock populations, and enabling monitoring and backwards and forwards tracing.

Key players

- AIRU
- Database manager
- All livestock owners / keepers
- Managers of livestock camps
- Operators of abattoirs and livestock markets
- Livestock transporters
- Organisers of racetracks

Action plan

- Regulation established
- Establish and implement strategies for identifying all players in each stakeholder category and for collecting required details for entry into the database.
- Establish and enforce rules for accessing these data

KPIs

- Regulation is in force
- Up-to-date registers in AIRS database

4.2 Strategic Goal 2: AIRS includes 4 Basic Components

4.2.1 Preamble

International best practice requires that an AIRS must be built on four basic components: (a) holding registers that contain details of all animals present and details of births, deaths, sales, purchases, slaughters etc and movement into and out of each holding, (b) means of uniquely identifying each animal, (c) movement documents, and (d) a database.

4.2.2 Strategic Goal 2: Components of AIRS in place

Basic components of AIRS in place

AIRS includes four basic components: individual animal identification, holding registers, movement documents and database.

4.2.3 Targets

Attainment of this strategic goal requires actions to achieve the following targets:

Target 2.1 Formats of holding registers and movement documents clearly specified

Formats for holding registers and movement documents are agreed and clearly specified

The holding register and movement document are the only paper-based records in AIRS and play essential roles in enabling audit checks on individual flocks, ensuring that important animal data are recorded by animal owners / keepers and transport/market operators and abattoir operators, and that details of movements between holdings, markets and abattoirs are recorded (very important for traceability).

Key Players

- AIRU
- AIRS persons
- Livestock keepers – livestock farms, markets and slaughterhouses
- AIRS Technical Committee
- Transport and market operators

Action plan

- Examining possible formats and select / generate the most suitable formats for AIRS - considering the objectives of AIRS and using available sources of information including ADFCA RFP documents, EC regulations and UK and Australian legislation
- Include formats in AIRS regulations.

KPIs

Formats are agreed and detailed in AIRS regulations.

Target 2.2 Identifiers are specified

Specifications of AIRS-compliant identifiers are agreed and adopted.
Precise specifications for identifiers are required to ensure that common standards are known and enforced, include material, dimensions, colour, size of lettering, means of fixation etc.

Key players

- AIRS managers
- AIRS Technical Committee

Action plan

- Study the requirements of ICAR, the provisions of ISO and types of identifiers used in existing animal identification systems around the world
- Select the most appropriate specifications for at least three types of AIRS identifier: (1) for cattle and small ruminants - one standard numbered ear tag and one RFID button, (2) for camels - an injectable transponder, and (3) maybe for sheep with very small ears – a pastern band incorporating and RFID.
- Subsequently consider ID devices for other species as required.
- Develop protocols for replacement of lost tags and for identifying animals which have lost both identifiers and for which no history is available

KPIs

- Identifiers that are ICAR- and ISO-compliant (eg ISO 11784 and 11785) and are successfully used elsewhere have been specified
- Specifications included in AIRS regulations

Target 2.3: Suitable database is in use by AIRS

Suitable database management system in use.
A computerised database management system (DBMS) that can satisfy all requirements of AIRS is procured, tailored as required, and installed.

Key players

- AIRU
- Database manager
- Software developers
- Department of Municipal Affairs of Abu Dhabi who are developing very detailed digital map of Abu Dhabi Emirate.

Action plan

- Establish a technical committee to oversee the selection and tailoring of the database
- Select database with great care as its functioning and appropriateness will be key factors in determining the success or failure of AIRS. The following criteria should be used:
- The DBMS is used successfully in an existing AIRS, for example in at least one member country of the EU and is therefore fully compliant with EC requirements
- The source code can be readily accessed
- Includes ability to store and analyse receipt and distribution of identifiers
- The range of DBMS functions can be expanded as required – i.e. it is readily upgradeable
- It can accommodate additional users, for example veterinary division, livestock support program and link to meat inspection service database (when developed).
- Customised reports can be produced
- A tried and tested version is supplied (no beta versions)
- Fully secure
- Web based
- As possible amend design of the database so that existing identification systems (for camels or any other species) can be integrated into AIRS.

KPIs

System downtime of <1% and need to restore data on less than 2 occasions per year, and (b) No breaches of security

4.3 Strategic Goal 3: to assure maximum coverage of target species

4.3.1 Preamble

AIRS shall cover different animal species in phases. Phase 1 will include camels, goats, sheep and cattle. Additional species, for example poultry and fish (batch identified for traceability) and others shall be included as and when determined by the DG, ADFCA, who will issue an Order to this effect.

Given that the primary purposes of the AIRS in phase 1 are to support the livestock support program, improve disease control and enable traceability AIRS should aim at 100% coverage of target species.

4.3.2 Strategic Goal 3: All identifiable animals are AIRS identified

All members of target species in Abu Dhabi are identified in accordance with AIRS.

4.3.3 Targets

Attainment of this strategic goal requires actions to achieve the following targets:

Target 3.1 Stakeholders aware of roles and responsibilities

Widespread awareness or roles and responsibilities amongst all stakeholders, so as to be fully aware of their roles and specific responsibilities as well as the benefits and working practices of AIRS.

It is essential that the roles and responsibilities of all stakeholders, including livestock owners, keepers, transporters, market operators, traders, abattoir operators, veterinary staff, animal husbandry staff, AIRS Persons etc. are (a) developed and clearly and unambiguously articulated, and (b) all stakeholders are made aware of these.

Key Players

- AIRU
- Communications specialist
- AIRS persons
- Extension staff
- Media

Action plan

- Planning and preparation, including development and printing/production of publicity materials (press releases, posters, fliers, video presentations), preparation and printing of a manual for each group of stakeholders, drawing up a work schedule for the publicity and training program.

- Implement the program of public awareness campaigns, staff training programs, stakeholder meetings, press releases and other tools.
- The design and delivery of the above must include:
- The four components of AIRS will be listed and explained: individual animal identification; holding register; movement documents – eg passport, and; database.
- The benefits of AIRS must be emphasised and all working practices explained. The latter include collection of information for the central holding register, program of visits to holdings, restraint of animals for identification, the identification methods that will be used, the need for the livestock owners to maintain an up-to-date Holding Register (including a list of all animals present and all animal movement data - sales, deaths, births, slaughters, purchases, and transfers – and the types of data to be recorded). The role of animal passports, the purpose of audit visits, and the methods that will be used to assist owners and keepers to comply with AIRS will be explained.

KPI

- >80% of livestock owners have been advised of the aims, working practice and benefits of AIRS. This would be estimated using a statistically valid cross sectional survey.

Target 3.2 Central register of livestock holdings in place

A central holding register established by the Competent Authority that includes all livestock holdings in Abu Dhabi in which is recorded all required data for each.

In addition to the public awareness campaign the development of a central holding register is an essential first task for implementation of AIRS. The central register of holdings is an exhaustive list of (a) livestock holdings (b) livestock markets, (c) slaughterhouses, (d) race tracks, (e) mezaina locations, (f) traders and importers, and (g) livestock transporters. For each of these categories details such as name and contact details of owner and animal keeper, location (address and map coordinates) of holding, species of animals at holding, type of holding (farm, slaughterhouse, market etc) and so on.

If the central holding register is incomplete then it will not be possible to achieve 100% coverage of target livestock populations.

Key players

- AIRU
- AIRS persons
- Livestock support unit
- All owners of livestock farms, markets and market operators, slaughterhouses, etc.
- Department of Municipal Affairs of Abu Dhabi

Action plan

- Acquire the current listing of livestock owners who currently receive livestock support – this should not prove difficult as the livestock support program is implemented by ADFCA. This will provide details of some 70% of all livestock owners in Abu Dhabi. As necessary contact these owners to collect the additional data required re AIRS and enter into the database.
- Acquire the listing of livestock farms from Department of Municipal Affairs of Abu Dhabi
- ADFCA may wish to consider a new policy to extend eligibility to receive livestock support to all livestock owners – that is expand from the current 70% of livestock owners to all. This will assist in gaining full coverage for AIRS but could increase the total value of support paid to livestock owners,
- Take advantage of the public awareness campaigns (target 3.1) to inform other livestock owners of the need to register their holding.
- Enlist the assistance of front-line workers (veterinary clinic staff, veterinary laboratory staff, market operators, operators of municipal and private abattoirs etc) to publicise the need for livestock owners to register. To assist in this task provide the foregoing with holding registration application forms to provide to livestock owners,
- Make AIRS registration a pre-requisite of receiving animal treatments at Veterinary Clinics.
- Enter all holding data into the AIRS computerised database and check for anomalies, duplications etc. Immediately resolve each error detected.

KPI

Use a KPI such as >99% of livestock owners are included in the Central Register. Use records of the support program and of the Farmer Service Centre project to identify number of defaulting owners.

Target 3.3: Resourcing of AIRS field teams

Training and equipment

All AIRS staff fully trained and equipped, supplied with manuals of procedures and working methods, and performance monitored.

Successful implementation of AIRS at the holding level will depend in large part on gaining the confidence of the holding owners and animal keepers (especially of camels). This will require high levels of technical competence and a polite and professional approach by AIRS field staff.

Key players

- AIRU
- Procurement
- Personnel Resources

Action plan

- Identify equipment requirements, specifications and quantities required
- Procure equipment.
- Based on training needs assessments develop training programs for AIRS field staff (those who will carry out the initial identification program, collect data required to keep the database continually updated, and carry out audit inspections. Prepare manuals of procedures, conduct training courses, and distribute manuals.
- Distribute equipment.
- Formulate key performance indicators for field teams, publicise these amongst concerned staff, monitor performance and use findings to inform any further action required,

KPIs

- Greater than 90% of staff fully understand AIRS operating procedures
- Successful compensation claims for <0.01% of all animals in AIRS.

Target 3.4: Full compliance by holders/keepers

Promoting Compliance:

Full compliance with the requirements of AIRS shall be a condition for continued receipt of support benefits.

The main driver of AIRS for livestock owners will be continued participation in the livestock support program. The failure of a livestock owner to comply fully with all requirements of AIRS should compromise receipt of further support benefits and may lead to more severe sanctions being applied – see Target 3.6 .

Key players

- Livestock owners
- Livestock keepers
- Livestock support program
- AIRS persons
- Database manager

Action Plan

During the initial mass identification campaign:

- Each holding in the central register will be visited according to a publicised schedule, the benefits and methods of AIRS explained to owners and keepers, and a time and date set for the visit by the ID team.
- The outcome of this first visit shall be reported to the central AIRS unit – in the case of full cooperation this would be in the form of ID number and details of each animal identified. In case on non-cooperation a null return would be made.
- In cases of a null return a visit would be made by a senior AIRS field officer to again explain benefits and procedures, and to make a date for a return visit by the ID team.
- Should this second visit lead to continued lack of cooperation then the Livestock Support administrator would be informed and future support payments blocked.
- Continued refusal to cooperate despite further visits to persuade and inform would lead to legal action and imposition of sanctions.
- During continued management of AIRS:
- Database records, the results of monitoring visits (to collect data required to update the database) and the results of audit

visits will indicate the compliance status of each holding.

- This information will be used as the basis for making visits to assist holders/keepers to comply with AIRS requirements, possible denial of access to support benefits, and in cases of persistent violation to legal action and imposition of sanctions.

KPIs

- More than 75% of livestock are identified and recorded, can be located in correct holding (that is as recorded in the database) and identifiers are correctly applied. Use database records and findings of audit inspections as data sources.
- Proportion of animals included in AIRS to increase by 2% per year, to a maximum KPI of 85%.

Target 3.5: Compensation system in place

Payment of compensation may be made for cases of death or injury directly caused by an AIRS procedure. Claims to be investigated by an ADFCA team and considered by a specialist committee. An appeals process will be established.

It is possible that AIRS procedures such as restraining an animal or applying an identifier could lead to injury and in extreme cases to death of an animal. The probability of this happening is considered to be very low and will be minimised further through careful selection, training and supervision of AIRS staff and adherence to animal welfare standards.

In order to maintain the confidence of livestock owners, AIRS must include provisions for payment of compensation in all proven cases of injury or deaths directly caused by AIRS procedures.

Key players

- Livestock owners
- AIRS persons
- ADFCA compensation committee
- ADFCA investigation team

Action plan

- Through the public awareness program inform livestock owners and keepers etc. that compensation may be paid for cases of injury or deaths directly caused by AIRS procedures
- A protocol is drawn up for the prompt investigation of all claims for compensation by a team from ADFCA.
- ADFCA investigation team is trained and equipped
- Establishment of an AIRS compensation committee. This should include representatives from veterinary services, legal services, livestock community (maybe nominated by the Farmer Service Centre program) and AIRS.
- A fair method of valuing an animal must be developed and used as the basis for the amount of compensation to be paid in each case according to the formula:
 - Compensation amount = (valuation) – (salvage value, if any).
 - By an independent ADFCA approved valuer
- Establish an appeals process through which livestock owners who are dissatisfied with the outcome of their claim for compensation can appeal and request re-investigation / re-evaluation of his/her claim.

KPI

- Compensation committee meets monthly. Source of data – minutes of meetings

Target 3.6: Audit checks

Audits of holdings carried out to compare database records with actual livestock present on a given day. Approximately 3% of holdings shall be audited each year and selected using a risk based approach.

Audit checks are required to enable monitoring of the accuracy of the data held in the database – that is to what extent these match the real situation in the field. They are a check on the promptness, completeness and accuracy of reports of births, deaths, slaughters, sales, purchases and transfers made by livestock keepers/owners and recorded and reported by the AIRS monitors.

Key Players

- Livestock owners and keepers
- Database manager
- Audit teams

Action plan

- Prepare a protocol for audit inspections covering selection of holdings to be checked including: selection (random selection and risk based selection), procedures, and reporting.
- Establish independent audit teams
- Select holdings to be monitored based on random selection supplemented by selection of a proportion of holdings that appear to be in poor compliance (for example from an ad hoc examination of database records, reports from monitors etc).
- Computer generates report of all animals expected to be present on the holding on day of audit visit
- Audit team visits selected holdings to (a) compare contents of holding register with animals actually present with listing on computer print out and identify any discrepancies, (b) get owner/keeper to account for these discrepancies, and (c) identify any untagged animals and get owner/keeper to explain the origin of each. Report of findings prepared.
- On basis of report findings take necessary action – for example deny support benefits and possibly apply other sanctions.

KPIs

- At least 3% of holdings subjected to audit inspections each year.

Target 3.7: Compulsory identification of animals

All animals of target species in Abu Dhabi that are present on holdings, moved, presented for sale or slaughtered must be identified in an AIRS-compliant manner and registered in the central database.

As indicated in 4.2.1 any animal identification and registration system must include as high a proportion of target species as possible. Failure to achieve this will compromise all achievement of all potential benefits of AIRS.

Making identification and registration compulsory removes all doubt and promotes high levels of uptake.

Key persons

- Livestock owners and keepers
- AIRS Persons

Action plan

- Ensure that the principle of universal inclusion in AIRS is made known to all stakeholders.
- AIRS persons to inspect animals at markets, abattoirs, holdings, and during transport to check that this requirement is being implemented.
- Appropriate action must be taken in case of any violation that is detected.

KPI

- Inspections are carried out at 100% of markets and abattoirs each month.

Target 3.8 Protocols for dealing with lost identifiers have been drawn up

Protocols for lost identifiers have been drawn up.
To include cases of loss of one identifier and loss of both identifiers.

Cattle, sheep and goats will each have 2 identifiers. If one of these is lost then the remaining identifier will enable details of the animal to be retrieved from the database. However, unless the keeper can identify the animal in some way, the loss of both identifiers will lead to an animal for which no history is available.

Key persons

- AIRS technical committee
- AIRU
- AIRS Persons
- Owners and keepers
- Database managers

Action plan

- Develop codes of practice for dealing with lost tags, covering
 - Cases where original ID and history of animal can be determined
 - loss of only 1 identifier in cattle, sheep and goats
 - Loss of both identifiers in cattle sheep and goats or loss of the single identifier in camels and:
 - the owner/keeper can help, or

- where scanning all remaining animals would, by elimination, enable identity of the animal to be determined
- Cases where the original ID and history of the animal cannot be determined because of loss of both identifiers in cattle, sheep and goats, or the single identifier in camels.
- Include codes of practice in manuals and ensure that provisions are included in training
- Ensure that the database can cope with re-identification of an animal and link new ID with existing record

KPIs

- Codes of practice have been developed, documented, and are in use.

Target 3.9: Penalties

An ascending scale of penalties is enforced in cases of failure to comply with AIRS requirements

Although every effort will be made to assist violators to comply with AIRS regulations there will be occasions when it is necessary to impose penalties – for example to deal with gross violations and repeated violation.

Key Persons

- AIRS Technical Committee
- AIRS Persons
- Justice system
- Livestock owners, slaughterhouse and livestock market operators, livestock transporters, and
- organisers of races and Mezaina.

Action plan

- Draw up a list of violations and for each specify a penalty, ranging from denial of access to support payments to large fines and possibility of imprisonment. The penalties specified in the ADFCA Food safety law could be used as a basis for AIRS violations.
- Increasingly severe penalties will be specified for repeated violations of an AIRS regulations
- Include an appeals process for the AIRS penalty system

KPIs

- At least 50% of gross violations or repeated violations of AIRS regulations result in imposition of penalties.

4.4 Strategic Goal 4: Standard definitions

4.4.1 Preamble

Comprehensive definitions for all aspects of AIRS need to be documented so that there is no ambiguity about what is meant by the terms used in the system. Examples of terms would include 'owner', 'keeper', 'each animal species', 'identifier', etc. etc.

4.4.2 Strategic Goal 4: Standard definitions

Standard definitions have been developed for all aspects of the AIRS.

4.4.3 Targets

Achievement of this strategic goal requires actions to realise the following targets.

Target 4.1 Documentation of Standard Definitions

Document the standards and definitions for the various stakeholders, animals, equipment and other relevant components of AIRS.

Comprehensive Definitions of all aspects of AIRS need to be documented so there is no ambiguity about what is meant by the terms used in AIRS. This will relate to all aspects, such as the definition of an owner, each animal species, age of identification, type of ID device used etc.

Key players

- AIRS Technical Committee

- Livestock owners and keepers
- AIRS Persons
- Trainers

Action plan

- Draw up a list of the Standard Definitions used in other animal ID systems.
- Bench mark these against international ID systems.
- Review and refine Standard Definitions.

KPIs

Details of Standard definitions are available.

Target 4.2 Standard definitions are published

Standard definitions are published:

Ensure that standard definitions are published and details are documented and circulated / published and all stakeholders are trained

Details of the Standard Definitions need to be transformed into appropriate extension documents so they can be distributed to relevant stakeholders. The information needs to be segregated into Stakeholder groupings as some Standard Definitions will have little relevance for some groups.

Key players

- AIRU

Action plan

- Convert the list of the Standard Definitions into extension material relevant for the different stakeholder groups
- Incorporate into the stakeholder communications/publicity campaign material
- Design and implement training programs
- Include definitions in training manuals

KPIs

- Standard definitions are included in legislation
- Greater than 75% of stakeholders are familiar with the standard definitions that concern them – as determined by an ad hoc survey.

4.5 Strategic Goal 5: Quality assurance

4.5.1 Preamble

The value of AIRS as a management tool for supporting the livestock support program, assisting animal disease control, enabling traceability (for food safety and animal disease control), improving animal production and productivity, and assisting in environmental protection will depend on the quality of data collection, management and reporting of data collected and the quality of its operations and procedures.

4.5.2 Strategic goal 5: Maximising quality standards

Maximising in place Quality Assurance Standards

AIRS management shall work at all times towards assuring the highest possible quality in all of its operations.

4.5.3 Targets

Attainment of this strategic goal will require actions to achieve the following target

Target 5.1 High level of data quality

Ensuring high quality Data through:

Accurate capture of all required data in a timely manner, error-free recording and uploading into the central database, and efficient and accurate data management and reporting functions

The output of AIRS will be in the form of reports:

- Lists of livestock owners and the numbers of animals, by species, present on their holding(s) on a given day.
- List of animals present on a given holding on a given day, including for each animal a minimum of ID number, species, age, and sex.
- Results of tracing the movement history of a given animal over a given period – holding of birth, date of birth, holdings visited (livestock holdings, markets, showground, slaughterhouse, etc) with dates
- Results of tracing the movement of animals onto and off a given holding (livestock holding, market, abattoir, etc) over a given time period – to include dates and animal identification numbers.
- Summary of animal movements through a given market over a given time period – useful for market managers
- Summary of animals slaughtered at a given abattoir over a given time period – useful for abattoir managers
- Maps showing distribution of livestock by species, holdings, abattoirs, markets, animal movement routes etc.
- And many more

This entire output is totally reliant on data quality. It is essential therefore that AIRS devotes resources required to achieve the highest possible quality of data.

Key players

- AIRS Technical Committee
- AIRU
- AIRS Persons
- Livestock owners and keepers
- Database manager

Action plan

- Conduct training and motivational programmes to improve staff performance and ensure that quality and quality assurance is institutionalised within AIRS.

KPIs

All AIRS staff attends at least 2 training and motivational courses annually

Proportion of missing, anomalous or incorrect data detected by the database <0.01%

Target 5.2 High quality and professionalism in work of field teams

This requires careful recruitment of staff, correct behaviour, targeted training, good hygiene practices, and supervision.

A good working relationship must be established between AIRS staff and livestock holders, livestock keepers, market and abattoir operators, transports, and all other stakeholders. This will require careful recruitment of staff, correct behaviour, targeted training, good hygiene practices, and supervision.

Key players

- AIRS Technical committee
- AIRU
- AIRS Persons

Action plan

- AIRS staff at all times behaving in a socially acceptable manner by respecting local traditions, norms of behaviour, politeness and language.
- Each member of a field team must be issued with good quality protective clothing, including overalls, disposable plastic overshoes, overalls, face masks and gloves.
- Good hygiene practices are consistently applied by field teams to minimise the risks of transferring disease agents from one holding to another. This will require that:
- Animals to be identified / inspected are visually examined by the team leader before any work is done. If signs suspicious of epizootic disease are noted then the visit would be abandoned, a report made to the Official Veterinary Services, and no more visits to holdings made until personnel, equipment and vehicle are cleaned and disinfected.
- Each team member cleans and disinfects boots and gloves, and fits new plastic overshoes before entering and at the time of leaving each holding visited.
- Clean and disinfected equipment is used on each holding – for example fit new/disinfected change transponder needles, clean wash in disinfectant all ear tag / button applicators, nose holders, etc.

KPIs

Proportion of compensation claims is less than 0.01%

Target 5.3 Prompt correction of problems

Problems are promptly corrected

An over-riding principle must be that action is taken immediately to correct a detected problem.

Prompt correction of problems is always a good principle but this is particularly important with AIRS data. If problems go uncorrected – for example anomalies in holding register contents then the negative impacts will gradually escalate, making AIRS reports unreliable and eventual resolution a long and complicated process.

Key players

- AIRS Persons
- AIRS managers
- Database manager

Action plan

- Develop systems for rapid identification and reporting of problems
- Ensure that immediate action is taken at the appropriate level to correct each reported problems

KPIs

- >90% satisfaction rating by livestock holders. Source of verification: survey of livestock holders
- 0% of incidents of spread of animal disease ascribed to AIRS field activities. Source of verification: disease investigation reports of Official Veterinary Services.

Target 5.4 Monitoring and Evaluation in place

Monitoring and Evaluation system in place.

AIRS shall establish a sound ongoing monitoring and evaluation program so that progress can be measured against targets

AIRS shall implement a well-conceived monitoring and evaluation system based on targets and key performance indicators. Actual performance will be measured using activity reports generated from the database and the findings of surveys. The aim shall be to identify areas of success and build on these, and to pinpoint problems so that corrective action can be promptly introduced.

Key players

- AIRS technical committee
- AIRU
- M&E specialist
- AIRS persons
- Database manager
- Veterinary services, livestock support system, environment department

Action plan

- Develop key performance indicators and targets for important areas, including field operations (identification and registration, capturing update data, monitoring holdings, audits)
- Identify systems to measure actual performance made for each KPI and target
- Analyse findings and take appropriate action

KPIs

- At least 75% of holdings visited by AIRS Persons each month
- At least 3% of holdings audited each year

4.6 Strategic Goal 6: AIRS procedures comply with animal welfare legislation

4.6.1 Preamble

All procedures and identification requirements under AIRS will need to comply with the relevant Animal Welfare legislation in place: this is currently the Federal Law No 16 of 2007. This will relate to the restraint of an animal required to enable application of the ID device and the welfare aspects of applying or inserting the ID itself. Working to high professional standards and ensuring animal welfare will be important factors in gaining and maintaining the confidence of livestock owners (especially camel owners)

in AIRS.

4.6.2 Strategic goal 6: All AIRS field procedures shall comply with animal welfare legislation

AIRS procedures comply with Federal animal welfare regulations

The procedures for applying or inserting an AIRS-approved ID device and restraining an animal for this purpose will comply with the relevant Animal Welfare Regulations.

4.6.3 Targets

Achievement of this strategic goal would require attainment of the following targets:

Target 6.1 Humane procedures for applying identifiers

The procedures for applying or inserting an ID device under AIRS will be established in accordance with the law.

Identifiers must be attached to an animal (ear tags and buttons) or inserted (injectable transponders). These procedures can be distressing, injurious and painful unless carried out in accordance with best practice and animal welfare legislation. For AIRS the Federal Law: Animal Welfare Law 16 of 2007 would be applied.

Key players

- AIRS technical committee
- AIRS manager
- AIRS Persons

Action plan

- Based on legislation and manufacturer's recommendations develop humane methods for applying identifiers
- Include these methods in field manuals
- Ensure that all persons involved in applying identifiers are trained in these methods and are supplied with suitable equipment and spares
- Monitor performance of AIRS persons

KPIs

- Less than 0.005% approved compensation claims relate to damage resulting from application of identifiers.

Target 6.2 Humane restraint of animals

Procedure for restraining animals for application / insertion of an identifier established in accordance with the Federal Law

Similarly animal restraint can be distressing, injurious and painful unless carried out in accordance with best practice and animal welfare legislation.

Key players

- AIRS technical committee
- AIRS manager
- AIRS Persons

Action plan

- Based on Federal Law and regulations and best practice develop humane methods for restraining livestock
- Include these methods in field manuals
- Ensure that all persons involved in animal restraint are trained in these methods
- Ensure that field teams are supplied with suitable restraining equipment
- Monitor performance of AIRS persons

KPIs

- Less than 0.005% approved compensation claims relate to damage resulting from restraint of animals.

4.7 Strategic Goal 7: Updating, expanding or modifying AIRS is facilitated

4.7.1 Preamble

Because circumstances can change, mistakes are made and lessons are learnt; it is certain that AIRS policies and regulations will require amendment in the future.

Improving the efficiency and efficacy of a complex system such as AIRS requires an iterative process in which strategies/activities are devised, implemented and monitored. Whenever monitoring indicates a problem this would be investigated and, as required, remedial changes made to policy and regulations.

Policies are relatively simple to adjust: all that is required is a new policy statement. However, as they are legal instruments, AIRS regulations require particular attention and the regulatory framework must be able to incorporate required changes with minimal disruption and in as short a time frame as possible.

4.7.2 Strategic goal 7: Changes to AIRS procedures are facilitated.

Change to AIRS policies, regulations, working practices etc. is facilitated.

4.7.3 Targets

Achievement of this strategic goal would require attainment of the following targets:

Target 7.1 Process for changing AIRS regulations is in place.

Process for changing regulations is established

AIRS regulations must be easily understandable by stakeholders, thus duplication must be avoided and there should be a number of short specific regulations, supported by one general regulation. A simple process is needed to enable changes to be made to regulations when required.

Key players

- AIRU
- Stakeholders, through stakeholder consultations

Action Plan

- Consult with stakeholders regarding the structure of the regulatory framework. For example the division of required legislation into separate regulations
- Consult with legal experts to ensure compliance with legislative norms
- Establish mechanism for changing regulations.

KPIs

- >70% of stakeholders find regulations fairly simple to understand

Target 7.2 Acceptance of New Legislation by Stakeholders is facilitated

Acceptance of new legislation by stakeholders is facilitated.

The success of AIRS is dependent on a number of factors including the cooperation of stakeholders which can be gained through consultation and communication. Thus changes in legislation should be discussed with stakeholders through formal and informal consultations, and their expressed views taken into account

Key players

AIRU
Stakeholders

Work Plan

Inform stakeholders of proposed changes to legislation, including reasons for the change, benefits, and details of the proposed changes.

Organise stakeholder consultations to further explain the changes and solicit opinions

Take stakeholders views into account when drafting changes to legislation

KPIs

100% of changes to AIRS legislation involve stakeholder consultations.

Target 7.3 Changes in AIRS Legislation lead to action

Changes to AIRS legislation are widely publicised and include, where necessary, training of AIRS persons.

It is essential that concerned stakeholders are made aware in advance of any new legislation so that they understand their (new) roles and responsibilities and have time to make any necessary preparations to comply. Substantial changes or new requirements may require targeted training programs for AIRS Persons.

Key players

- AIRU
- Stakeholders
- Extension department

Action Plan

- Inform stakeholders of changes to legislation.
- As required plan and implement training for AIRS Persons.
- AIRS persons assist stakeholders to understand and comply with new provisions.

KPIs

- Greater than 80% of changes to AIRS legislation involve no serious problems for AIRS persons or stakeholders.

Group B: Strategic goals that primarily address Traceability and Food Safety Aspects of AIRS

4.8 Strategic Goal 8: Database kept up-to-date

4.8.1 Preamble

The initial mass identification and registration of animals in Abu Dhabi will require some 1.9 million database transactions. A larger number of transactions will be required each year to maintain the database in an up-to-date state.

An animal identification and registration system database that does not reflect the actual size, composition, distribution and movements of livestock is useless as it will not be able to deliver the required outputs. It is essential that details of all births, purchases, exports, sales, deaths, slaughters and movements are recorded and reported to the database.

4.8.2 Strategic goal 8: Database kept up-to-date

Database is kept up-to-date at all times:

Data in the AIRS database will be continually updated so that it always reflects the actual size, composition, distribution and movements of animals in the target populations.

4.8.3 Targets

Achievement of this strategic goal will require attainment of the following targets:

Target 8.1 Required data are defined

The data elements that must be collected are clearly specified

This should include all types of data required for AIRS to fulfil its objectives, including births, deaths, purchases, sales, and transfers,

Key players

- AIRS technical committee
- AIRU
- AIRS database manager

Action plan

- Consultations within ADFCA to identify the types of data that are essential for AIRS to meet its objectives

KPI

- Comprehensive list of data is available

Target 8.2 Time limits for reporting are specified

Time limits for reporting are specified

Time limits should take into account local conditions and the methods used (see 4.8.3.3) to collect and report data. In general, the principle that ‘the sooner the better’ is applicable

Key persons

- AIRU
- Database managers

Action plan

- Consult with ADFCA stakeholders to determine the time scales required of database output – for example: for traceability for food safety purposes; for backwards and forwards tracing of animals in cases of outbreaks of epizootic disease; for livestock support program.
- Define time periods by reconciling the findings of the above consultation with data collection methods.
- Incorporate results in AIRS field manuals and regulations.
- Publicise results

KPIs

- Rational time periods for reporting are defined for all data types and included in regulations

Target 8.3 Methods for collecting update data are described.

Method(s) of collecting the required data are described.

Specify the methods that must be used to collect the required data taking into account local circumstances.

In countries where livestock keepers have good standards of education and access to good communications, responsibility for applying identifiers to newborn animals and collecting and reporting data falls to the animal keeper.

As referenced earlier, In Abu Dhabi animal keepers tend to have a low educational level and should not be expected to apply identifiers, and use readers to capture EID data and enter other required data (type of transaction – birth, death, sale, purchase, transfer, holding of origin / destination, date of birth, sex, species etc).

Key players

- AIRS technical committee
- AIRS manager
- AIRS Persons
- All AIRS stakeholders
- Livestock vaccination teams
- Veterinary clinicians

Action plan

- Taking into account the constraints found in Abu Dhabi (for example the low educational level of the majority of animal keepers and the remoteness of some eizabs) the technical committee shall identify the best method(s) for collecting high quality update data.
- Test practicability of selected methods
- Train staff and incorporate selected method(s) in training manuals

KPIs

- Findings of audit inspections show >80% agreement between database contents and actual numbers and types of livestock on audited holdings.

Target 8.4 Required resources are allocated

Required resources are allocated,

These will include a sufficient number of trained staff, required equipment and transport.

Staff must be trained in what data to collect, how to collect this data, the purpose of the holding register, movement document, Individual identifier and database, use of readers and method of appending additional data, and so on. Transport and operating costs will be required as will access to the internet to upload data into the database.

Key players

- AIRU
- Personnel department

Action Plan

- Review the magnitude and types of activities required
- Determine numbers and types of staff and equipment required
- Recruit and train staff
- Procure equipment

KPIs

- Data are collected at least monthly from >80% of holdings

Target 8.5 Audit checks carried out

Audit checks

These will be essential to check and monitor the accuracy of the work of the AIRS facilitators.

Audit inspections will be used to check the work of facilitators and are described in section 3.6.

4.9 Strategic Goal 9: Exemptions

4.9.1 Preamble:

There must be a provision in AIRS regulations and codes of practice to allow for exemptions from identifying animals. This may be due to certain justifiable reasons for not using the prescribed tagging devices such as for religious reasons, and in cases of pedigree animals where the application of an ear tag may significantly affect the desired attributes of the animal. A comprehensive identification system can accommodate a limited number of exemptions, providing the traceability of the exempted animals does not compromise the ability to achieve the goal of universal whole of life identification and traceability of all animals.

4.9.2 Strategic Goal 9

A system is in place for granting exemptions from AIRS requirements

4.9.3 Targets

Achievement of this strategic goal requires attainment of the following targets:

Target 9.1 Conditions agreed for granting exemptions

Conditions for granting exemption would be developed by the competent authority and publicised

Exemptions may be granted from using the prescribed method of identifying animals providing the owner can guarantee to the satisfaction of the Competent Authority that whole-of-life traceability of the animal can be guaranteed by an alternative method and that all details of all movements and ownership transfers of that animal can be recorded on the AIRS database.

Key players

- Director General of ADFCA
- Manager AIRU
- AIRS technical committee
- Stakeholders

Action plan

- Technical committee formed by ADFCA that includes a range of key stakeholders determines conditions for granting exemptions
- AIRS Persons and other concerned staff are informed of conditions for exemption are
- These conditions are Gazetted
- Exemptions are reviewed annually by AIRS technical committee

KPIs

- List of conditions given in Gazette
- Review committee conducts annual reviews

Target 9.2 Procedure developed for applications for exemption

Procedure developed

A clear procedure is established for livestock owners to apply for exemptions.

A clear procedure is required for owners to apply for exemptions, including submission of details of how whole-of-life traceability can be guaranteed.

Key players

- Director General of ADFCA
- AIRS technical committee
- Manager AIRS
- Stakeholders

Action plan

- AIRS Technical Committee formed by ADFCA that includes a range of key stakeholders develops system under which stakeholders can apply for exemption and the decision-making process.
- AIRS Persons and other concerned staff are informed of details of the selected system
- These conditions, including application form, are Gazetted

KPIs

A system for granting exemptions has been developed and is in use.

4.10 Strategic Goal 10 related to slaughterhouses

4.10.1 Preamble

The slaughterhouse is the final destination of the majority of livestock and a critical point in traceability for food safety purposes. As collection centres for animals from many different locations slaughterhouses also serve as indicators for presence of epizootic diseases - for example animals in the incubatory stage may be transported for slaughter and present clinical signs during lairage. Slaughterhouses are thus also critical points for animal disease control purposes.

Consequently it is important that all movements of animals to slaughterhouses are recorded together with individual animal identification numbers, holding of origin (as shown in the movement document) and date of slaughter. At a later date additional data could be incorporated, for example significant post mortem findings, results of screening tests for animal diseases, residues etc.

Laboratory specimens (for example serum) could be collected for laboratory testing from randomly selected samples of slaughter stock as part of the veterinary department's active disease surveillance program.

It is recognised that there are two types of slaughterhouse in Abu Dhabi:

- Commercial slaughterhouses:** Here animals are slaughtered for the retail market. It is assumed that the (AIRS) identification numbers of animals slaughtered in these facilities will be linked to the identification numbers allocated to meat and meat products thereby permitting traceability from 'farm to fork'.
- Public slaughterhouses:** Here animals are slaughtered for home consumption. Assuming that entire carcasses of animals slaughtered in these facilities are all consumed at home then there is no need to allocate identification numbers to meat.

4.10.2 Strategic Goal 10: Slaughterhouses are integrated into AIRS

Slaughterhouses are classified as holdings for the purposes of AIRS

4.10.3 Targets

Achievement of this strategic goal requires attainment of the following targets:

Target 10.1 Slaughterhouse operators gazetted as temporary animal keepers

Slaughterhouse operators shall be considered as temporary animal keepers.

As (temporary) animal keepers slaughterhouse operators must comply with all relevant AIRS requirements, including recording of all movements, animals present on the premises and all movements off slaughterhouses) with animal ID and date. They must ensure that all animals presented for slaughter have AIRS-compliant identification and are accompanied by a movement document, and that unidentified animals are not permitted access.

Key players

- Slaughterhouse operators
- Slaughterhouse staff
- AIRS persons

Action plan

- Prepare regulation
- Develop Memorandum of Understanding between AIRS Management and Municipalities

KPI

Regulation is promulgated

Target 10.2. Slaughterhouses appropriately resourced

Slaughterhouses have equipment and trained staff to enable them to discharge AIRS responsibilities.

Slaughterhouses will require equipment to read identifiers of animals presented for slaughter. Hand-held readers would be suitable for small scale operations but static readers will be required for the commercial operations. A computer with access to the internet will be required to upload data to the AIRS database.

Key players

- Slaughterhouse operators
- AIRS Person

Action Plan

- Slaughterhouse operators informed of resources and equipment required for them to comply with AIRS regulations
- Slaughterhouse staff trained by AIRS Persons and issued with a manual outlining AIRS regulations, and methods of reading and reporting data.

KPIs

All slaughterhouses fully equipped for AIRS purposes

All concerned slaughterhouse staff are aware of their AIRS roles and responsibilities

Target 10.3 Slaughterhouses subjected to more intensive audit checks than livestock holdings

Monitoring and audit inspections shall be carried out in slaughterhouses at a higher frequency than for holdings.

Monitoring visits, aimed at detecting problems and assisting slaughterhouse operators to correct these will be carried out frequently during the first year of operation of AIRS. Thereafter training will continue as required and audit inspections conducted such that each slaughterhouse is covered at least four times per year.

Key players

- Slaughterhouse staff
- AIRS Persons

Action Plan

- AIRS management draw up protocol for inspections at slaughterhouses
- Implement inspections and take action, as appropriate on findings

KPIs

- 100% of slaughterhouses audited at least four times per year

4.11 Strategic Goal concerning Control of identifiers

4.11.1 Preamble

Individual animal identification is a core requirement of AIRS. Thus only approved identifiers, namely ear tags, buttons and injectable transponders (and possibly also pastern EIDs) can be permitted for use in Abu Dhabi. It is essential that the fate (in store, issued, applied to an animal, destroyed) of each identifier is known at any point in time.

4.11.2 Strategic Goal 11

Full control has been established over stocks, distribution and use of AIRS identifiers.

4.11.3 Targets

Achievement of this strategic goal requires attainment of the following targets:

Target 11.1 Identifiers are treated in the same way as accountable documents

AIRS identifiers shall be treated in the same way as accountable documents. Receipts and issues at each level must be recorded and signatures obtained.

In line with ADFCA's accounting practices a system will be established to specify an audit trail for each and every identifier.

Key persons

- AIRS accounting staff
- AIRU
- AIRS Persons
- Stakeholders
- Database manager

Action Plan

- With assistance of ADFCA accounting staff develop a system for recording and reporting storage, issue, receipt, use and destruction of identifiers.
- Develop database functions to record all identifier-related data
- Produce and distribute supporting documentation – eg receipts, issue vouchers, etc
- Train staff in use of system

KPI

- Less than 0.01% of identifiers cannot be accounted for.

Target 11.2 After use all identifiers are destroyed in an approved manner

After use AIRS identifiers shall be destroyed in an approved manner.

Identifiers recovered from animals that have died or been slaughtered must be destroyed. Reporting a death or slaughter to the database will be taken to imply destruction of the concerned identifier.

Key persons

- Animal keepers
- Slaughterhouse operators
- AIRS Persons

Action plan

- Define approved methods of destroying identifiers
- Include in regulations
- Train concerned persons, especially those at slaughter houses

KPI

- No used identifiers are detected as having been re-used.

4.12 Strategic Goal related to capturing data related to Eid Al Adha sacrifices

4.12.1 Preamble

Very large numbers of animals are sacrificed over a period of four days at Eid al Adha. It is believed that some of these sacrifices are carried out at home, often by private individuals who have no need to be registered by AIRS

4.12.2 Strategic Goal 12: Capturing the data of slaughtered animals of Eid Al Adha

All data related to Eid Al Adha sacrifices are captured and recorded in the AIRS database

4.12.3 Targets

Achievement of this strategic goal requires attainment of the following targets:

Target 12.1 Capture all accessible data

All accessible data are captured and reported.
AIRS registered establishments to report as provided for in policies outlined above.

Key players

- AIRS Persons
- All animal keepers
- Public slaughterhouse staff
- Livestock market operators

Action plan

- Ensure that all actions specified in 4.8 to capture update data are efficiently carried out

KPIs

- Findings of audit inspections show >80% agreement between database contents and actual numbers and types of livestock on audited holdings.

Target 12.2 Enforce current regulations regarding home slaughter

Enforce current regulations.
Authorities to work towards enforcing current regulations that ban sacrifice at home and utilise public slaughterhouses.

Key players

- Members of public
- Police
- AIRS Persons

Action plan

- Ensure that public are made aware that home slaughter is illegal

KPIs

- The number of slaughtering carried out at home is reduced

Target 12.3 Accounting for data discrepancies

Database function to identify possible unreported sacrifices and if concerned animals not included in routine reports then classify as sacrifices and remove from list of 'active' animals

It is assumed that all animals for sacrifice are AIRS-identified, as they will be obtained from a registered holding (livestock farm, livestock market) in Abu Dhabi, or are imported and are identified before or after arrival.

The movement records of animals that are sacrificed by private individuals at home will be 'one sided': only the sale will be recorded. In the normal course of events a movement record will be 'two sided' as the database will include details of (a) movement from the holding of origin (sale) and (b) arrival at destination (holding, market, slaughterhouse, or export).]

Key players

- Database manager

Action Plan

- Database expert includes a function in the database to identify 'incomplete' movement records.
- For the purpose of capturing private Eid Al Adha sacrifices any animal with (a) a 'one sided' movement record commencing in the 2 weeks before Eid AL Adha and which (b) has not been recorded as entering a holding within 2 months from the date of Eid Al Adha will (c) be considered as having been sacrificed at a private home. This will be noted in the animal's database record.

KPIs

- The database function has been developed, installed and proven to work
- The database function identifies incomplete movements

4.13 Strategic goal related to livestock events and mezaina

4.13.1 Preamble

Animals may be moved for sports and other non-commercial purposes. Examples include movement of racing camels between holdings and race tracks and between holdings and the venues of mezaina (pageants). These movements are of interest as they involve collecting animals together followed by their dispersion which would enable the spread of animal diseases. All such movements must be recorded and reported to AIRS in the interests of traceability for the purposes of disease control.

4.13.2 Strategic goal 13: All movements of animals between holdings and racetracks and mezaina are recorded

All movements of animals between a holding and a racetrack or mezaina are recorded.

4.13.3 Targets

Achievement of this strategic goal requires attainment of the following targets:

Target 13.1 Appropriate data capture systems in place

Systems must be developed and put in place to record movement of each animal onto and off race courses and pageant locations.

Key players

- AIRS Technical Committee
- Organisers of races and mezaina
- AIRS Persons

Action plan

- Each racing and pageant venue must be registered, recorded in the AIRS database, allocated a holding identification code and obliged to use an approved system to record the arrival and departure of all animals to and from the event.
- Organisers shall ensure that the approved system is used. This will involve the use of hand-held or static scanners. Data would be uploaded into the AIRS database giving details of date, holding code and the individual identification numbers of all animals that attended.
- Livestock keepers shall ensure that corresponding movements on and off holdings are recorded and reported.
- AIRS Persons to attend race days and days on which mezaina are held to inspect recording of animal movements.
- Prepare regulation

KPI

- No instances of unregistered races or mezaina
- Less than 10% of reports of visits of AIRS persons to races and mezaina indicate failure to comply with recording entry and exit of all attending animals

Group C: Strategic goals that primarily address Trade and Commerce

4.14 Strategic Goal 14: All imported livestock must be identified

4.14.1 Preamble:

More than 70% of meat and meat products consumed in Abu Dhabi is imported (for example Australia, Iran, Somalia, Pakistan) either as live animals, carcasses, part carcasses, de-boned meat or meat products. This policy deals only with live animals that are imported into Abu Dhabi from elsewhere.

The AIRS policy towards livestock imported into Abu Dhabi will depend on the import policy adopted by the Federal Government and Governments of other Emirates. Three scenarios are foreseen and these are presented below in order of preference:

1. In the absence of a Federal Government policy that all animals imported into the UAE must be identified in the country of origin – this is the current position - imported animals that enter Abu Dhabi would be identified as 'imports' by application of a special import identifier, for example a red button tag. With the exception of Australia (all exports to the UAE are tagged before shipment) the country of origin will not be known hence traceability will be restricted to 'import' (i.e. not from the domestic livestock production system)
2. The Federal Government enforces a policy that all animals imported into the UAE must be identified (using a specified identifier) in the country of origin, and this condition shall be included in all livestock import permits. This is the desired position and as a matter of policy the Abu Dhabi authorities would work to persuade the Federal Government to adopt this condition for all livestock imports. The fact that the Federal Government has just commenced the process of developing policy and regulations for a UAE-wide animal identification and registration system would assist in this. A further driver for this pre-identification policy would be that the UAE is a large and significant market for exporting countries, thus compliance would be commerce-led. However, the Director General of ADFCA in collaboration with the Minister, Federal Ministry of Environment and Water shall be empowered to exempt certain animals from pre-identification.
3. All Emirates participate in a Federal UAE animal identification and registration system in which all imported livestock are pre-identified and the individual animal identification codes of domestic livestock include an Emirate code.

4.14.2 Strategic Goal 14: concerning the mandatory identification of all animals imported into the Emirate of Abu Dhabi

All animals imported into Abu Dhabi are identified with uniquely coloured electronic identification devices either at border control points or at an Abu Dhabi market or holding.

4.14.3 Targets

Achievement of this strategic goal requires attainment of the following targets:

Target 14.1 Work towards a change in UAE livestock import policy

Work for change in UAE livestock import policy:
Work with Federal Authorities to develop a Memorandum of Understanding between Abu Dhabi Emirate and the Federal Authorities that would require that all animals imported into the UAE are AIRS-identified before departure from the country of origin

Key players

- The Government of Abu Dhabi Emirate
- The Federal Government
- ADFCA
- The Ministry of Environment and Water

Action plan

- ADFCA to make high level representations to the Abu Dhabi Government to explain and justify the need for identification of livestock imports into the UAE.
- High level political representation from Abu Dhabi Government to the Federal Government will be required.

KPIs

Memorandum of Understanding

Target 14.2 Specifications drawn up for the identifier of imported stock

Specifications for 'Import identifiers' applied in the UAE / Abu Dhabi
Specifications have been drawn up, by species, for 'import' identifiers.

For purposes of control of animal diseases and management of the livestock support program it is desirable that imported stock (the vast majority of which are destined for slaughter) are uniquely identified using an electronic identifier.

Key players

- AIRS Technical Committee
- AIRU
- AIRS Persons
- Database manager

Action plan

- Draw up detailed specifications for the import tag for (a) cattle, (b) camels and (c) small ruminants, detailing size, material, type of RFID and colour for non-camels (red is recommended). Database records will include a code to show that the animal was imported.
- It shall be a strict rule that red tags are only used for imported animals.
- Prepare regulation.

KPIs

- Specifications in place and publicised.

Target 14.3 Procedures have been developed for identification of imported stock

Procedures drawn up for identification of imported livestock.

AIRS Persons require clear instructions on which animal must be identified, the identification method to be used, and collection and reporting of data.

Key players

- Importers and traders
- Staff at BIPs
- AIRS persons

Actions plan

- Specify exactly which animals are to be included – basically this will be all unidentified animals. At this stage animals originating from foreign countries and from other Emirates would be considered as one group. Animals already identified with an electronic identification device that can be read by the AIRS readers, or other identification system approved by the Director General of ADFCA, will not be re-identified.
- Importers shall be encouraged to identify all imported identifiable animals with an AIRS-import identifier before transporting them to Abu Dhabi
- Any unidentified animal that has probably been imported and is detected in Abu Dhabi must be identified with import identifiers.
- Ensure that the AIRS manual of procedures includes requirements for imported livestock
- Ensure that all concerned stakeholders are made aware of procedures for identifying imports
- If an imported animal - identified by presence of a red identifier and 'import code, or for camels the import code alone – remains on a holding for more than 3 months then it shall be retagged using a standard AIRS identifier, however its database record will link to the former 'import' record.
- When it is agreed that a condition of import of identifiable animals into the UAE is that they must be identified in the country of origin, then draw up code of practice for this, specifying type of identifier, by species, where on animal identifier is to be applied, data recording, etc.

KPIs

- Less than 5% of identifiable imported animals in livestock markets in Abu Dhabi lack an identifier.
- Once identification of animals in country of origin is mandatory then >95% of animals in all imported batches are correctly identified.

Target 14.4 Resourcing at Border Inspection Posts and of AIRS Persons

Ensure that all border inspection posts are resourced so that all livestock entering Abu Dhabi are identified as imports.
Ensure that AIRS Persons within Abu Dhabi are resourced so that any unidentified imported livestock can be identified.

The aim here is to ensure that resources are available at BIPs, markets, holdings etc. to enable each unidentified animals to be AIRS identified as an import.

Key Players

- BIP personnel
- AIRU
- AIRS Persons
- Livestock traders and importers

Action plan

- Lists of minimum equipment required to identify imported animals shall be gazetted
- Provide all required equipment and consumables, including readers, identifiers, applicators, disinfectant etc.
- Conduct training of BIP staff and provide each with an AIRS Manual
- Ensure that AIRS Persons are trained and equipped to identify and register any unidentified imports that are detected
- Unidentified animals that the owner can prove to be of Abu Dhabi origin will be identified as a resident animal. All other animals will be identified as imports of unknown origin.

KPIs

- Less than 10% of livestock included in audit inspections are unidentified.

4.15 Strategic Goal 15: Concerning livestock markets

4.15.1 Preamble

As centres at which animals are collected together and then dispersed, livestock markets present a ready means of the transmission and dissemination of infectious animal diseases. As such, it is important that all movements of animals through markets are recorded to allow traceability in cases of epizootic diseases.

Markets in Abu Dhabi differ from the standard market model in that many animals are resident for weeks, even months, until a buyer is found. The EC Regulation 92/102/EEC specifies that operators of livestock markets shall be considered as temporary animal keepers, this should be modified to permanent keeper for Abu Dhabi markets.

It will be necessary for AIRS management (AIRU) to coordinate closely with the Municipalities who operate markets, ideally via a Memorandum of Understanding, to ensure that AIRS practices can be applied and enforced.

4.15.2 Strategic Goal 15 concerning livestock markets

Livestock Markets
are treated as livestock holdings.
Therefore up-to-date records of animals present, movements in and out, deaths and births shall be accurately and fully recorded.

4.15.3 Targets

Achievement of this strategic goal requires attainment of the following targets:

Target 15.1 Market traders designated as animal keepers

Market traders are designated and trained as animal keepers and thus legally responsible for maintaining up-to-date records of animals and events.

Traders must be trained and issued with manuals so they understand their roles and responsibilities as animal keepers and are able to record the required data, report changes in the group of animals in their care, and maintain movement records.

Key players

- Livestock market operators
- AIRS Persons
- Livestock Traders

Action plan

- Prepare required legislation
- Train livestock market traders in roles and responsibilities of animal keepers and issue manuals describing these.
- AIRS Persons make weekly visits to all livestock markets to monitor and assist traders to comply with AIRS requirements
- Markets provided with the necessary equipment such as readers to record AIRS livestock ownership transfers

KPIs

- 100% of livestock market traders registers as keepers and receive training
- Accuracy and completeness of records kept by livestock market traders is >80%

Target 15.2 Audits of market traders carried out

Monitoring and Audit inspections

Audit inspections are conducted in livestock markets at a higher frequency than other holding.

Audit inspections aimed at detecting problems and informing future actions (eg more training) will be carried out and include each trader at least once per year.

Key persons

- AIRU
- Municipalities / Market operators
- Market traders
- AIRS Persons
- Database manager

Action plan

- Draw up a protocol for audits of groups of animals kept by livestock market traders
- Prepare Manual
- Provide required training to AIRS Persons
- Select markets and traders to be audited on basis of (a) risk analysis (50%), and random selection (50%).
-
- Ensure that AIRS database contains an exhaustive listing of all market traders

KPI

- More than 50% of market traders are audited each year

4.16 Strategic Goal 16: concerning commercial livestock operations.

4.16.1 Preamble

The large commercial cattle and camel dairy enterprises in Abu Dhabi already have animal identification systems in operation with all animals having individual identification and related breeding, production and health records stored and managed in a computerised DBMS. These systems are used as management tools to assist in identifying culls, informing reproduction strategies and feeding regimes. Some enterprises use electronic identification devices. However these systems are not AIRS compliant as they were established before AIRS policies and regulations were known.

These commercial dairy enterprises are keen to cooperate with and participate in AIRS and policies should be developed to encourage this.

It is noted that commercial camel dairy operations have been established elsewhere (eg Dubai) and the rules for cattle dairy operations would also apply to these.

4.16.2 Strategic Goal 16 concerning integration of existing identification systems

The animal identification systems already in operation on commercial dairy enterprises will be integrated into AIRS with minimum inconvenience caused.

4.16.3 Targets

Achievement of this strategic goal requires attainment of the following targets:

Target 16.1 AIRS compliant identification system is gradually introduced

AIRS compliant identification system is gradually introduced
Commencing with animals born after start of AIRS, large commercial livestock operations will use AIRS compliant identifiers on all new animals.

Farm staff will apply AIRS identifiers to all born after, say, 1/4/2010, record all required details using an intelligent reader and upload to the AIRS database. Thus in, say, 10 years or so all animals on commercial dairy units will be identified in an AIRS-compliant manner.

Key persons

- AIRU
- AIRS Persons
- Large commercial livestock farm managers and workers

Action plan

- Develop protocol for issuing identifiers to large livestock commercial operations
- Train staff of large commercial livestock operations in application of AIRS identifiers

KPIs

- 100% of animals born after introduction of AIRS have been identified with AIRS identifiers

Target 16.2 Animals already identified will be integrated into AIRS

Animals identified before 1 April 2010 will retain current identifiers.
They will each be allocated an AIRS identifier which must be applied, and the former identifier removed, before they leave the commercial dairy enterprise for any reason. The AIRS database will contain all AIRS ID numbers together with farm ID and animal details.

This will ensure that traceability is maintained. An exemption order will be issued on a farm-by-farm basis to enable retention of current identification systems.

Key players

- AIRU
- AIRS Persons
- Large commercial livestock farm managers
- Large commercial livestock farm workers
- AIRS database manager

Action plan

- Develop system for integrating current identification system (identifiers, numbering system etc) into the AIRS system
- If current system cannot be integrated then apply system to replace all existing identifiers with AIRS identifiers whilst retaining readability for farm database

KPIs

- 100% of animals sold off large commercial livestock enterprises have AIRS identifiers.

Target 16.3 Large commercial livestock enterprises comply with all AIRS requirements

Compliance with all AIRS requirements:

Other than described above the managers of commercial dairy enterprises shall have the same roles and responsibilities as all other livestock owners/keepers. They will be subject to audit inspections and penalties as appropriate.

Commercial livestock enterprises shall be considered as holdings for the purposes of AIRS and must therefore comply with all AIRS requirements

Key players

- Managers and staff of large scale livestock enterprises
- AIRU
- AIRS Persons

Action plan

- Issue manuals and conduct training
- Carry out audits

KPIs

- Audit inspections detect an error rate of <5% on commercial enterprises

ANNEX I: List of Standard Definitions

Term	Interpretation
AIRS Person	A person appointed and empowered for the purposes of applying the provisions of AIRS regulations
Animal	Any animal of the camelid, bovine, ovine, or caprine species, or other species as determined by the Board
Audit	An inspection of a holding to determine how well the keeper is complying with AIRS regulations. This will involve comparing the numbers and types of animals actually present on the holding against the records in the Holding Register and the current set of records in the database.
Border inspection post	An official point for inspection of all animals (and agricultural and other products) that enter into the Emirate of Abu Dhabi.
Central register of holdings	An exhaustive list of all holdings, by type, in the Emirate of Abu Dhabi in the format required by AIRS regulations
Code of practice	Written guidelines issued by AIRS management to AIRS Persons and others to help them comply with the standards and responsibilities of AIRS
Commercial livestock operation	A (generally large scale) livestock holding that utilizes improved husbandry methods and aims to maximize profitability
Competent Authority	The central authority responsible for implementing AIRS
Database	The computerized set of AIRS-related data, together with the database management system that validates, stores, retrieves, summarizes and generates reports of these data.
Export	Means sending an animal to another Emirate or country
Farm to Fork	Traceability of animal products through the entire value chain from place of birth of animal, holding(s) where held, place of slaughter, and then through meat distribution system to place of consumption.
Gazette	The official Government Gazette of the Emirate of Abu Dhabi
Holding	An area of land (including an area comprising one or more parcels of land that are proximate) that is worked as a single unit, including any of the following: (a) a livestock farm (b) a market or abattoir, (c) racetrack or location of a Mezaina
Holding register	A list of all animals that are, or have been present on a holding including details of all additions and removals in the format required by AIRS regulations
Identification and registration	The unique identification of an animal with an AIRS-compliant identifier and the storage of this in the database together with the additional data required by AIRS regulations
Identifier	A read-only passive transponder as defined in ISO standards 11784 and 11785 Also an ear tag, electronic ear tag, injectable transponder, pastern tag, or electronic pastern tag
Individual animal identification number	A 12 digit numeric code to identify an animal at the national level

Policy for the Abu Dhabi Animal Identification and Registration System

Term	Interpretation
Import	Receiving an animal into Abu Dhabi from another Emirate or country
Keeper	Any natural person with responsibility for animals, even temporarily, except in veterinary clinics
Key performance indicator	A high level quantifiable measurement used to determine progress towards a defined goal.
Livestock owner	The natural person who legally owns an animal or animals
Livestock support program	The program that involves payments, in cash or kind, by the Government of Abu Dhabi to support the livestock sector of the Emirate
Market	Any registered place where identifiable animals are sold.
Market operator	The entity or person in charge of market operations
Market trader	A livestock trader who holds and trades animals in a market
Mass identification campaign	The initial identification and registration of all identifiable animals that will be carried out as the first stage of implementation of AIRS
Movement	The transfer an animal from one holding to another. Such transfers must be recorded as required by AIRS regulations
Movement document or passport	A document giving individual animal details including holding of origin and issued under AIRS regulations
Reader	A synchronized or non-synchronized transceiver which is capable of reading identifiers and displaying the country code and animal identification number
Slaughterhouse	A registered place or building where animals are killed for meat
Slaughterhouse operator	The entity or person responsible for slaughterhouse operations
Stakeholder	A person or group of persons who has a direct or indirect stake in AIRS because they can be affected by AIRS' actions, objectives and policies.
Traceability	The ability to trace (including locations and dates) and follow an animal and animal product through all stages of production, processing and distribution.
Update data	Data that must be collected, recorded and reported so that database records are kept up-to-date and reflect the actual size, composition and distribution of animal populations. The required data include details of births, purchases, transfers, deaths, sales, slaughters and movements.