

**Addendum A:**  
**Progress report - literature review report on red meat traceability systems**

During October and November 2010 the research team commenced with the literature review of studies elsewhere on red meat traceability systems. This stage involves a comprehensive local and international literature review of case studies on traceability systems in red meat industries elsewhere in the world and to identify the different dimensions that should be investigated (both scientific and popular literature). This stage is still ongoing. Presently the focus is specifically on literature on supply chain aspects, while the consumer dimensions will be addressed later in 2011.

The research team envisage that the following aspects will ultimately be included in this literature reviews:

- The development of and driving forces behind red meat traceability systems globally;
- Defining traceability;
- Methodology(ies) to describe traceability systems;
- Overview of existing traceability systems based on identified methodology(ies);
- Costs and benefits of traceability;
- Studies dealing with the factors affecting red meat firms' traceability levels.

The research team is still in the process of gathering and processing relevant literature.

**Please see below for a list of relevant references which have already been gathered and which are in the process of being processed:**

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**Addendum B:**  
**A preliminary description of 'main stream' red meat safety, quality and traceability systems and role-players in South Africa**

**1. Introduction**

The purpose of the information contained in this document is to provide the research team with background information available in the public domain, to better understand the current status of sheep meat safety, quality and traceability in South Africa. Subsequently the content of this document will probably be familiar knowledge to the readers of the addendum, but the information contained in this document is critical to facilitate the formulation of appropriate research questions to be addressed in industry interviews and further research activities during 2011.

In a World Bank publication, Wilson and Abiola (2003) states that in South Africa traceability for animals destined for the domestic market is usually not continued after abattoir level, where meat enters the rest of the supply chain in the form of carcasses or swinging sides. The status of 'mainstream' traceability in SA sheep meat will be further investigated in detail during the 2011 project activities.

**2. 'Mainstream' red meat safety standards**

The 'mainstream' red meat food safety system in South Africa is the Hygiene Assessment System (HAS) for Abattoirs, which was compiled by the National Department of Agriculture (NDA) with assistance from the Red Meat Abattoir Association (RMAA) and the South African Meat Industry Company (SAMIC) (Wilson and Abiola, 2003). The South African Hygiene Assessment System (HAS) for Abattoirs was based on HAS developed in the United Kingdom. In the Meat Inspectors Manual Abattoir Hygiene (2007) within the section on hygiene management systems the NDA states the following regarding hygiene management systems:

*The Meat Safety Act, 2000 (Act 40 of 2000) provides for the implementation of hygiene management systems. The following extract was taken from the regulations in terms of this act.*

*The owner of an abattoir must –*

- (a) provide the provincial executive officer with a documented Hygiene Management System containing detailed information on control measures or programmes required to monitor identified control points, including the methods of monitoring or checking these control points, for approval;*
- b) provide relevant records of observations, checks, measurements or results;*
- (c) provide sampling programmes for laboratory analyses, as well as names of laboratories to do the required analyses;*
- (d) provide written accounts of decisions relating to corrective actions when taken; and*
- (e) assess the hygiene status of the abattoir by means of the Hygiene Assessment System (HAS) and provide results to the provincial executive officer for verification as frequently as he or she may require'*

The RMAA further mentions the results to be made available to the Provincial Executive Officer ([www.rmaa.co.za](http://www.rmaa.co.za), section on Hygiene Management Training).

**RESEARCH QUESTION(S) TO EXPLORE IN FURTHER INDUSTRY INTERVIEWS:**

- Is implementation of the HAS system compulsory for all abattoirs in SA?
- Who inspects the HAS compliance of abattoirs?

**3. 'More advanced' / Other red meat safety standards**

According to (Wilson and Abiola, 2003) few facilities in the South African meat industry are HACCP (Hazard Analysis Critical Control Points) or ISO (International Organization for Standardization) certified and that the country has the capacity to assess an audit these systems.

According to Cross (1994) "HACCP is a production control system for the food industry. It is a process that identifies where potential contamination can occur (the critical control points or CCPs) and strictly manages and monitors these points as a way of ensuring the process is in control and that the safest product possible is being produced. HACCP is designed to prevent rather than catch potential hazards."

According to the International Organization for Standardization (ISO) "ISO 22000:2005 specifies requirements for a food safety management system where an organization in the food chain needs to demonstrate its ability to control food safety hazards in order to ensure that food is safe at the time of human consumption. It is applicable to all organizations, regardless of size, which are involved in any aspect of the food chain and want to implement systems that consistently provide safe products. The means of meeting any requirements of ISO 22000:2005 can be accomplished through the use of internal and/or external resources.". ISO22000 deals with quality management and ensuring food safety along the food chain by covering interactive communication, systems management and hazard control to eliminate 'weak links' in the supply chain (The Butcher Magazine).

The content of this section will be expanded following industry interviews in 2011.

**RESEARCH QUESTION(S) TO EXPLORE IN FURTHER INDUSTRY INTERVIEWS:**

- Clarify the different 'roles' / functions of HAS, HACCP and ISO in South African sheep meat abattoirs
- What are the differences between these systems? e.g. compulsory, voluntary, 'strictness', levels of application (e.g. one player in chain for HAS or HACCP vs entire chain for ISO?)
- How many and which sheep abattoirs are HACCP and ISO certified?
- Which domestic and international certification institutes are involved in the auditing of HACCP and ISO in the South African sheep meat industry? Role of RMAA? Role of SAMIC? Role of other inspection role-players?

## 4. The role of industry organisations

### 2.1 RMAA

The RMAA (Red Meat Abattoir Association) is a representative forum (functioning as an independent membership-based organization) for abattoir owners in South Africa. Abattoirs are responsible for the conversion of livestock to meat. The RMAA serves member abattoirs by providing specialised training and technical support, by distributing relevant information and representing owner's interest to secure standards of meat safety and quality to the benefit of the red meat industry and the consumer ([www.rmaa.co.za](http://www.rmaa.co.za)). The strategic objectives of the RMAA are the following ([www.rmaa.co.za](http://www.rmaa.co.za)):

- *Promote meat safety and essential national standards as provided for in the Meat Safety Act, 2000 (Act no. 40 of 2000).*
- *Provide applicable training to ensure the highest standards of animal handling and meat safety and quality.*
- *Contribute to the development and implementation of hygiene management programs in abattoirs.*
- *Participate actively in the establishment of the skills development framework in the meat industry.*
- *Represent the interests of members on forums relating to the abattoir industry.*
- *Assist in the enhancement of meat hygiene awareness in rural communities.*
- *Create an environment conducive to the continuing education of abattoir personnel.*
- *Liaise with governmental and private stakeholders in the interest of common goals*

### **RESEARCH QUESTION(S) TO EXPLORE IN FURTHER INDUSTRY INTERVIEWS:**

- RMAA's view on the status of 'mainstream' and niche red meat traceability in SA?
- RMAA's role in food quality management?
- RMAA's role in food safety management?
- RMAA's role in current sheep meat traceability systems in SA (mainstream and niche systems)

### 2.2 SAMIC

The Red Meat Industry of South Africa created the South African Meat Industry Company (SAMIC) to ensure the quality and safety of meat in South Africa through quality audits and inspections by SAMIC coordinators operating across South Africa ([www.samic.co.za](http://www.samic.co.za)). According to SAMIC the National Department of Agriculture appointed SAMIC as Assignee for the purpose of the application of sections 3(1)(a) and (b) and 8 of the Agricultural Product Standards Act (no 119 of 1990) with regards to the classification and marking of meat intended for sale in the Republic of South Africa.

SAMIC is also responsible for independent 'Brand' auditing on Trademarks (registered at the National Department of Agriculture), at various points in red meat supply chains, namely farms, feedlots, abattoirs, deboning plants and retail outlets.

Other functions of SAMIC include the following ([www.samic.co.za](http://www.samic.co.za)):

- Independent hides and skins audits on behalf of the National Department of Agriculture for export purposes at abattoirs, intermediate stores and harbours;
- Assessment of Meat Classifier Students to become qualified Meat Classifiers;
- Independent inspections for Red Meat Levy purposes.
- Run the National Carcass Competitions.

**RESEARCH QUESTION(S) TO EXPLORE IN FURTHER INDUSTRY INTERVIEWS:**

- SAMIC's view on the status of 'mainstream' and niche red meat traceability in SA?
- SAMIC's role in food quality management?
- SAMIC's role in food safety management?
- SAMIC's role in current sheep meat traceability systems in SA (mainstream and niche systems)
- Exploring the research question whether SAMIC is the appropriate organisation to provide traceability guarantees in the SA sheep meat context by comparing the desired qualities of such an organisation to the actual activities and abilities of SAMIC.

**5. Legislation affecting red meat production and processing in SA**

According to the RMAA the following legislation applies to the SA red meat industry:

- The Red Meat Regulation  
More detail on this regulation will be explored in 2011.
- Code of Practice: Handling and Transport of Livestock  
More detail on this code of practice will be explored in 2011.
- Meat Safety Act (Act 40 of 2000), addressing measures to promote the safety of meat and animal products and to establish and maintain Essential National Standards in respect of abattoirs. In this regard, primary and secondary meat inspections by independent agents are compulsory at approved abattoirs in terms of this act.  
More detail on this act will be explored in 2011, also in terms of the nature of the 'independent agents'.
- Agricultural Product Standards Act (Act 119 of 1990), which controls and promotes specific product standards (e.g. meat and dairy products) from mainly a quality point of view, destined for local and export markets. According to the RMAA a list of products for which standards have been set through Regulations is promulgated under the Act by the Minister responsible for agriculture. (RMAA).  
In terms of meat classification, this act provides a voluntary system for the classification and marking of meat, where an abattoir may only classify meat if it has the services of an experienced person to render such service (The Butcher magazine).

More detail on this act will be explored in 2011, also in terms of the nature of the 'experienced persons' (e.g. qualifications, trained by whom, employed by whom, checked by whom...).

- The 'Concept Bill on the Movement of Animals and Animal Products' aims to protect the community against theft of animals and animal products.

More detail on this concept bill will be explored in 2011.

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