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## DELIVERABLE 2 – Key informants and data sources

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### SADC/PRINT – VAIMS PROJECT

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### 1. Introduction

The move towards a more competitive agricultural sector in southern Africa is characterized by an under-supply and inadequate access to relevant information – the very heartbeat of production, investment, financial and strategic decisions. Al-Sudeary (1982) as cited by Van Niekerk (1995) goes further by stating that agriculture has the somewhat dubious distinction of being that field of human endeavour which exhibits the greatest gap between available knowledge and that which is actually practiced. There is ample evidence that the official suppliers of agricultural data in the southern African region are not always providing the necessary data that decision-makers, both public and private, need. This state of affairs is disturbing when one considers that good information improves the competitiveness and the efficiency of markets (Salin, Thurow and Elmer, 1996). The question therefore is how to improve current information systems and, more importantly, where one can actually begin to source the necessary data, which can be converted into information for a specific need. In the context of the theme of this initiative, namely a Value Added Information System (VAIMS) that is specifically applicable to the livestock sector in southern Africa, the discussion that follows will mainly focus on livestock data and information. More specifically, the generic and specific sources of information/data will be discussed.

Frick (1999) states that in the agricultural sector two different types of statistics are used, namely current statistics and basic statistics. Current statistics relates to data that are specific to a sub-sector. Basic statistics consists of household, farming unit, employment, institutional or infrastructure, and economic data.

Data pertaining to **current statistics** on the livestock sector include, amongst others, the following:

- Livestock numbers by category in feedlots
- Herd composition
- Farm slaughter volumes
- Utilization of products
- Consumer prices of products
- Value of imports and exports
- Cost of production
- Number of animals
- Abattoir slaughter volumes
- Producer prices of products
- Consumption of products
- Volume of imports and exports
- Prices of production inputs

Data pertaining to **basic statistics** include, amongst others, the following:

**Basic household**

- Locality
- Type of dwelling
- Access to land for farming purposes
- Access to piped water
- Type of household
- Number of people living in household
- Consumption of electricity
- Number of farmers

**Particulars of farmers**

- Gender
- Occupation
- Years of farming experience
- Age
- Level of education
- Full-time or part-time farmer

**Particulars of farming unit**

- Type of land tenure
- Size of farming unit
- Type of fanning operation
- Number of people living on farm unit

**Employment**

- Number of family workers
- Number of unemployed workers
- Remuneration of employees
- Number of regular workers
- Salary or wage rate

**Institutional or infrastructure**

- Land utilization
- Stocks of products
- Consumption of products
- Capital structure
- Area under irrigation
- Methods of marketing
- Pesticides usage
- Access to training and development
- Quantity of land purchased or sold
- Utilization of products
- Level of mechanization
- Sources of water supply
- Methods of irrigation
- Fertilizer or chemical usage
- Access to government support
- Access to credit and finance

**Economic**

- Income from farm activities
- Intermediate production expenses
- Rent payments
- Household expenditure pattern
- Value of other assets
- Income from non-farm activities
- Interest payments
- Non-farm expenditure
- Value of land

The statistics or data mentioned above can be obtained from different sources, some of which are generic and some of a more specific nature. In fact, many of the sources of data actually add value to the data in that they convert the data into information, which lowers the cost for the user. But, cognizance should always be taken of the fact that data/information might require further analysis for specific needs, i.e. intelligence is created by the user by taking into account his/her specific environment and other factors that the original source of the information did not have access too.

It is furthermore important to consider Metcalfe's (1989) argument that the trouble with (data) information is that everyone thinks they know all about it and can do something to improve it - the result, inevitably, is chaotic. He is of the opinion that there is much worthy but uncoordinated effort. The challenge of information providers therefore lies in establishing a co-ordinated effort to provide relevant and timely information to a heterogeneous population of information users. This will not only enhance the efficiency with which information providers can use their limited resources to provide information to specific target groups, but the target groups themselves would be in a better position to make strategic investments and marketing decisions. Also of critical importance is the fact that having access to information sources is one thing; knowing how to use them best is another thing altogether (Metcalfe, 1989). This is emphasized by Shultz (1975) who states that differences in capacity to process information are a major source of variation in human capital. He also argues that the difference in human capital is an important type of exclusion in information markets. According to Van Niekerk (1995), the challenge for African information workers is to close the communication gap between theory and practice. He also states that although information necessary to increase production levels is available, very few countries in Africa are self sufficient in terms of food production. In fact, Klair, Boggia and Richardson (1998) state that providing information has become the most important part of the extension activity.

According to Aina (1995), repackaging and dissemination of information is crucial to the provision of relevant and timely information to agricultural information user populations. He goes further by stating that this is the crux of the matter as it is the main source of the problem of providing agricultural information in Africa. ISNAR (1993) reinforced this statement by mentioning that the linkage between information staff and their clients is the weakest part of the information management chain.

The challenge is to breach the information gap. Types of data gaps include basic data gaps, collection methodology gaps and data refinement gaps. Reasons for these data gaps are conceptual obsolescence, (intellectual) property rights, inadequate analysis and an increase in demand for data. This gap does not only exist between information providers and users, but also amongst providers

and users. This inefficiency seriously impedes the effort to increase returns on investment, whether it is investment in human capital, business and even information itself.

VAIMS seeks to contribute and redress the challenges of different stakeholders in the livestock value chain to obtain, use and disseminate information in and about the livestock value chain in a coordinated and systematic manner.

## **2. The livestock value chain**

In order to shed more light on the data/information needs in a generic livestock value chain it is required that one first construct a straightforward map of the livestock value chain. From this one can derive specific and generic data/information needs for different stakeholders. Such needs can be determined through personal interviews, sampling through questionnaires, group interviews, etc with specific stakeholders in the chain. The benefit of this is that different stakeholders will also fulfill a different role in that they will also be key informants in the process of collecting the data/information for which they themselves indicated a need.

Figure 1 represents a typical livestock value chain indicating the key informants, or stakeholders, to be consulted in the primary data collection process. Within the ambit of VAIMS, primary information is collected by means of questionnaires directly from key informants (stakeholders) in order to provide a comprehensive database to analyze a particular segment of or complete livestock value chain. In this regard issues of importance include, but are not necessarily limited to: survey design and sampling frame (e.g. identification of stakeholders), questionnaire design and testing, training of enumerators, logistical design, capturing and analysis of data, report writing, additional consultations with industry stakeholders, etc. The type of data collected in this manner is shown in Appendix A and is also discussed more comprehensively in Deliverable 3. Important to note is that information collected from key informants (stakeholders) can also be used for cross referencing and verification of the accuracy of data collected from other chain players (as has been done in Deliverable 3 where for example, the producer is asked to list where his livestock is sold and the trader is asked where his livestock is purchased from).

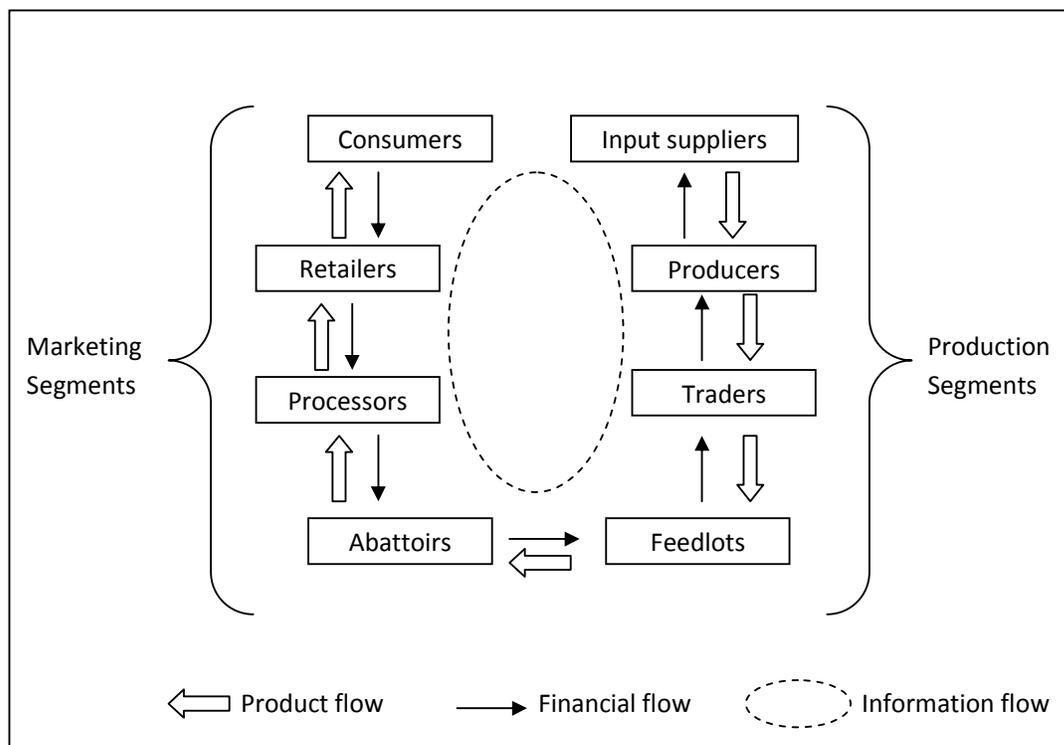


Figure 1: Generic red meat value chain

It is frequently the case that not all the information is available from directly affected groups in the chain that is needed to properly describe and analyze the livestock value chain. For this reason it might also be necessary to collect information from more generic or secondary sources. Typically such sources will include, previous studies obtained from libraries or research institutions, donor agencies (USAID, GTZ), international organizations (e.g. FAO, OECD, UN, World Bank), statistical agencies of government, state owned enterprises (e.g. those involved in research and policy implementation), government veterinary departments at national and regional level, etc.

### 3. Specific data sources

In this section potential key informants' from whom data/information can be sourced are identified, as well as other sources of information within the SADC region.

Firstly, cognizance must be taken that data can be sourced in different ways from stakeholders in the livestock value chain. Data and information can be collected through personal interviews using questionnaires, group interviews (focus groups), by means of telephone interviews and using the postal system. The specific method used will be determined by several factors, including, amongst others, cost and time considerations, the nature and scope of the questionnaire, the type of

information required and the sample size required. Within the ambit of VAIMS, primary data is captured by means of a set of five structured questionnaires, focusing on input suppliers, producers, traders, processors and retailers (the methodological component to design the survey and questionnaires is discussed in Deliverables 3 and 5). Moreover, the key informants to provide primary data within in the livestock chain are the different stakeholders operating at different levels in the chain. Each stakeholder will (should) be able to provide data and information about his/her level of operation, and will (should) also be able to provide an opinion and/or data and information about other levels in the chain (note that opinions might be subjective in nature and should hence be interpreted with the necessary care). The primary objective for interviewing a specific stakeholder is however to obtain data and information about his/her specific operations. Other information obtained can be used, for example, to cross reference and check the validity of data obtained throughout the chain.

As mentioned, for the VAIMS structured questionnaires are used to obtain data and information about different levels of the livestock value chain. The key informants' that should be consulted for primary data is summarized below (the type of information and data that they will be able to provide is summarized in Appendix A):

- **Input suppliers:** Input suppliers include, amongst others, feed suppliers, veterinarians, livestock equipment wholesalers and/or retailers and credit suppliers. They can be based locally and/or regionally and/or nationally with different channels to market their goods and services. They can do direct selling to farmers or used representatives to market their goods and services.
- **Producers:** Producers can have different operating sizes, can be commercial or small-scale, have different reasons for keeping livestock and have different management capabilities. It will be important to understand these differences when interpreting the data obtained from the survey. For the purpose of this study, feedlots are categorized as also producing livestock and will be able to provide similar information than the producer of calves, but will in addition be able to provide data and information on value adding to the live animal (calf).
- **Traders:** Traders act as intermediaries between the producer and the next level in the chain that buys cattle (calves/weaners). They are not necessarily involved in all transactions between farmers and buyers of livestock. They can be locally and/or regionally and/or nationally based and perform an important function in bringing sellers and buyers of livestock together, especially where there is poor flow of information in terms of what is

demanded and what is available to satisfy such demand. They can also play an important role in planning logistics to move livestock from one point to another. Traders may also operate at different levels of the chain, e.g. between farmers and feedlots, farmers and processors, feedlots and processors, processors and wholesalers/retailers.

- **Processing sector:** Processing refers to i) slaughtering of the animal (i.e. abattoir), (ii) further processing where carcasses are deboned and packaged according to a specific need of a buyer that sells fresh meat (wholesale or retail) and (iii) further processing of deboned meat into branded final products. Processors can act as intermediaries that take ownership of the product that is processed or they can merely perform a service for downstream buyers. It is also important to note that the higher the level of processing, the more likely it will require more sophisticated equipment, which in turn requires higher levels of investment and management.
- **Wholesalers and retailers:** This level of key informants can take on different types of operations. Selling to the consumer can be of a formal or informal nature. Typically the formal seller of meat will be in a fixed location, must comply with different legislation and regulations (e.g. acts and municipal by-laws) applicable to selling meat at a national, provincial and municipal level. The outlets where sales take place are more sophisticated in nature and will use, for example, refrigeration to keep meat fresh. Wholesalers and retailers can also differ significantly in size and will have different needs in terms of frequency of buying, quantity and quality being sought and consumers they serve.

Other key informants that could supply primary data on specific components of the value include, for example:

- **Private and public extension officers:** The former is usually employed by a private firm that supplies the industry with (specific) inputs, while the latter will be employed by government with district and/or provincial offices. Their area of competence may be very specific or generic to cover a wide range of activities.
- **Veterinarians (private or public):** As in the case of extension officers, veterinarians can be in the public service or they can have their own businesses or work for a private company. The information that they will be able to contribute will depend largely on the mandate they serve. For example, a veterinarian that owns his own business will most likely only be able to provide information on a limited number of issues applicable to selected clients he/she services (for example cost of medicine, dips and sprays), while the state veterinarian will

most likely be able to provide information of a more national scope pertaining to diseases, trade aspects, animal health regulations, etc.

- **Organizations representing stakeholders:** Such organizations usually operate with a specific mandate to further the interest of the stakeholders they represent. Such organizations are likely to have a specific understanding of the operations of their constituency and will also be able to link the researcher to other key informants. Where such organizations exist is generally a good starting point to identify key informants, and in some cases such organizations might even have specific data/information required.
- **Consultants:** The area of expertise from one consultant to another will differ, which will in turn determine the type of data and information they will be able to supply. It is therefore important to identify their area of expertise prior to consultations with these individuals since it will guide the type of questions that should be asked.

It is important to note that the availability of the sources of information or key informants will differ between regions and countries. It is the responsibility of the researcher or investigator to also map the key informants as applicable to the research problem being investigated. The above discussion can be used as a starting point to identify key informants that could supply primary information about the chain or specific levels in the chain.

#### 4. Generic (secondary) data sources

In the previous section potential sources of primary, value chain specific data and information, were identified. This section will highlight some generic sources of data/information. The main difference between the primary sources of data/information and the generic sources of data/information is the type of data/information that can be supplied. As mentioned key informants supply primary and very specific data/information, while generic data and information providers largely supply data and information that is applicable in a broader sense eg., general economic information such the exchange rate or price trends of products. The providers of such data and information rarely have specific in-depth knowledge of the livestock value chain or segments thereof, but have the mandate to collect data from stakeholders in the chain (e.g. Central Statistic Offices). In other cases data and information providers operate with a mandate to collect and disseminate data and information of a global nature (e.g. the FAO). In selected cases more specific data and information could be available, but this is linked directly to specific projects or initiatives that these organizations have launched in the past or are currently busy with.

Generic data sources that can be consulted to obtain broader sector or economy wide statistics include:

- SADC Livestock Management Information System (LIMS), which integrates technical and socio-economic data from animal production, animal health as well as livestock marketing and trade. <http://www.sadc.int/fanr/print/lims.php>
- The Southern African Development Community (SADC) is an important source of information about the region. For example, one will find the Agricultural Information Management System (AIMS) database that contains information that relates to, amongst others, Regional Early Warning System (REWS), Drought Monitoring Centre (DMC), Vulnerability Analysis (VA), and the Regional Food Reserve Facility. In addition, information on the Livestock Development Programme can be accessed. [www.sadc.int/](http://www.sadc.int/)
- Various central statistical services/offices as well as the individual Departments of Agriculture and/or Veterinary Services.
- Trade and Industrial Policy Strategies (TIPS) have developed a consistent and comprehensive database of Southern African countries' trade flows. The database is available online and is updated regularly. It currently contains data covering the period 2000 to 2006 for most SADC member states and includes a downloadable analytical tool for generating key trade ratios and indicators. <http://www.sadctrade.org/tradedata>
- The International Livestock Research Institute (ILRI) works at the crossroads of livestock and poverty, bringing high-quality science and capacity-building to bear on poverty reduction and sustainable development. ILRI is involved in state of the art research pertaining to livestock in many regions of the World and provides regular news on livestock related issues. [www.ilri.org](http://www.ilri.org)
- The Food and Agricultural Organization (FAO) of the United Nations provides time-series data and cross sectional data relating to food and agriculture for some 200 countries. <http://faostat.fao.org/>
- World Trade Organization (WTO). The WTO provides comprehensive data and information about trade and trade related issues and challenges. <http://www.wto.org/>

- The Foreign Agricultural Service (FAS) of the United States Department of Agriculture (USDA) provides generic information pertaining to a wide range of agricultural issues on a global, regional and country level. <http://www.fas.usda.gov/>
- The Organization for Economic Cooperation and Development (OECD) is increasingly interested in agriculture in non-OECD member countries. Cognizance should be taken that they focus mainly on policy issues, but the research by the OECD provides a good source of information to determine the impact of certain policy responses in other countries, should such policy responses be considered. [www.oecd.org](http://www.oecd.org)
- The World Bank is a vital source of financial and technical assistance to developing countries around the world. In addition, it is a rich source of data and research reports on a wide array of topics related to development (e.g. economic data on a per country basis). [www.worldbank.org](http://www.worldbank.org)
- The Common Market for Eastern and Southern Africa (COMESA) has produced a video on commodity-based trade that is available online as follows:
  - English version <http://r4d.blip.tv/file989242>
  - French version <http://r4d.blip.tv/file989544>

## APPENDIX A

### TYPE OF DATA AND INFORMATION FROM DIFFERENT SOURCES

As indicated in the main text, questionnaires are used in VAIMS to collect primary data from key informants in the livestock value chain under investigation. Table A.1 provides an overview of the main information categories on which data is collected. Note that there are four different questionnaires for four broad categories of key informants; they are (i) input suppliers, (ii) producers, (iii) traders and (iv) processors and retailers (Note that the questionnaire used for processors is also used for retailers). The input supplier questionnaire only has four sections, the producer questionnaire has 7 sections, the trader questionnaire has 6 sections and the processor and retailer questionnaire has 7 sections.

**Table A.1: Overview of data captured in questionnaires**

Section	Input supplier	Producers	Traders	Processor and Retailer
1	General information on input suppliers	General household information	General household information	General business information
2	Questions to feed suppliers ranging from size of the business, focus of business, logistical issues, payment methods and regulatory issues.	Household assets and activities	Basic information and livestock operations	Basic information and livestock operations
3	Questions to dip, medicine and vaccine suppliers with the same array of questions as used for the feed suppliers.	Detail of livestock operations	Livestock purchases	Livestock/meat purchases
4	Questions to credit providers ranging from issues of business type, loan criteria and future strategies.	Livestock purchases and sales	Livestock sales	Primary and secondary processing
5		Cost of production	Cost of production	Meat sales
6		Infrastructure	Miscellaneous information	Cost of production
7		Miscellaneous information		Miscellaneous information

Table A.2 provides more detail of specific data collected by using the questionnaires.

**Table A.2: Specific information required from informants.**

Category	Producer	Trader	Processor	Retailer
Prices	X	X	X	X
Sales	X	X	X	X
Product specifics	X	X	X	X
Inputs	X	X	X	X
Labour	X	X	X	X
Family vs. hired labour	X	X	X	X
Costs (seasonal)	X	X	X	X
Market strategies (specifics, buyers, new markets)	X	X	X	X
Constraints	X	X	X	X
Form of payment (credit cash)	X	X	X	X
Assets and profits	X	X	X	X
Reason for losses	X	X	X	X
Risk management strategies	X	X	X	X
Seasonality of sales and inputs	X	X	X	X
Sources and level of information (marketing, technical and price discovering)	X	X	X	X
Gender (who is in charge)	X	X	X	X
Breakdown of income and expenditure	X	X	X	X
Access to credit	X	X	X	X
Access to government/private services	X	X	X	X
Off-takes/losses (marketing frequency)	X	X	X	X
Membership and participation in associations	X	X	X	X
Input procurement	X	X	X	X
Product offset (markets)	X	X	X	X
Reasons for being in the specific business	X	X	X	X
Herd demographics	X			
Size	X			

Category	Producer	Trader	Processor	Retailer
Dynamics/structure	X			
Level of herd management	X			
Input use (feed)	X			
Awareness compliance with standards	X			
Cultural religious issues	X			
Land ownership (access to resources)	X			
Type of production system	X			
Access to markets (perceptions)	X			
Volumes and storage	X	X	X	X
Type of transport	X	X	X	X
Cost of transport (capacity of truck)	X	X	X	X
Prices (local regional information)	X	X	X	X
Distance to market	X	X	X	X
How procurement takes place	X	X	X	X
Awareness and setting of standards	X	X	X	X
Level of integration in the chain activities	X	X	X	X
Access to infrastructure, trucks, facilities	X	X	X	X
Mode of payment	X	X	X	X
Access to animal meat and markets (perceptions)	X	X	X	X
Where do you sell your animals (markets)	X			
Frequency of sales	X			
Animal health status	X			
Awareness of consumers				X
Food safety status				X

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