



OMANG WA DIKGOMO

Abstract to WITFRO

Livestock Identification and Trace-back System

In late 1997 and early 1998, the outbreak of Bovine Spongiform Encephalopathy (BSE) or Mad Cow Disease struck the global beef market, with devastating consequences. Subsequently, a series of increasingly stringent regulatory measures pertaining to food trace-ability were introduced over the following three years. These regulations had a bearing on Botswana's beef export to its main market, the European Union (EU).

The Government of Botswana then introduced the Livestock Identification and Trace-back System (LITS) for the computerized individual identification and registration of cattle and origin-based labelling system permitting monitoring, or traceability of beef products to the farm. This was in partial fulfillment of EU export requirements.

Implementation of LITS involved the following steps:

- (i) Purchase and installation of cattle identification devices (boluses, reading devices, Extension Officer's Personal Computers, etc.);
- (ii) Purchase and installation of computer hardware peripherals and related software;
- (iii) Commissioning of a Central Database (both primary and duplicate servers) and Application;
- (iv) Implementation of LITS at the regional and district Offices and connection to the Government Data Network Infrastructure (GDN) in order to support and service the farming community;
- (v) Consolidation of all other systems such as Brands Registration into a single system in order to synchronize data and offer one-stop service to the farming community,
- (VI) Maintain and trace the movement and health status of cattle from birth to slaughter within Botswana. Thus satisfying the requirement by EU (***Council Regulation – EC No. 1760/2000***).

A total of 1,808,045 out of 2 million cattle have been inserted with the bolus country wide so far and can be individually identified. After inserting the bolus into the cattle, the bolus number is read by a reader and is transmitted through radio frequency link to extension officer personal computer. This is then linked with the following information; Owner's name, Omang (PID) number, brand, brand position, sex, colour, location and date.

The information is Up/downloaded to the extension officer personal computer at the district office through a docking station via the Government Data Network. The docking station communicates with the Central database in Gaborone. The Central database comprises the primary server at the Ministry of Agriculture and duplicate cluster server at Department of Information Technology.

Districts have access to the Central database through computer terminals where querying and reporting of the system is carried out.

Online brands registration and renewals is done at district level and brand certificate printed at Gaborone for manual signature by the designated officer.

Digital movement permits are issued through the extension officer personal computer for movement of livestock to export abattoirs and municipal abattoirs as well as movement within the country.