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From Farm to Fork

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Animal Identification and Traceability
Public Sector Perspective and Experience From Botswana

Paper Presented by
Dr. Musa Fanikiso, Former CVO for Botswana

Outline of Presentation

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Introduction

- ▶ Botswana has a human population of about 2 million people and a cattle population of about 3 million
- ▶ Botswana has an arid climate that favour livestock farming more than crop farming and as such cattle are very important resource
- ▶ 80% of the national herd is owned by people with 1–20 cattle in extensively managed open grazing areas
- ▶ Botswana beef is primarily produced for export(>80%) with 70–75% going to the EU countries and 15% and 10% going to South Africa and Norway respectively
- ▶ Therefore changes in global market requirement and consumer demands affect Botswana beef export

Introduction (Contd)

- ▶ Traditionally Botswana was dependent on manual branding system which identified cattle at herd level with the owner
- ▶ In 1997 the EU introduced Council Directive EC820/97 which made it mandatory for beef going to the EU to be identifiable and traceable through a computerised system
- ▶ This Directive totally changed the landscape for animal identification and trace-back in Botswana and the country could not fulfil the requirement of that Directive using the traditional branding system

Introduction of LITS in Botswana

- ▶ Livestock Identification and Trace-back System (LITS) is Botswana's national system for cattle identification and traceability to facilitate market access, food safety and disease control
- ▶ LITS was initiated in 1999 as a pilot project and was fully introduced in 2001 and LITS is limited to cattle only and is countrywide
- ▶ Before it was introduced there were elaborate stakeholder consultation and feasibility studies that informed government on the appropriate animal identification system suitable for Botswana
- ▶ Individual animal identification and traceability using a reticular bolus with a unique number in a microchip was adopted as the preferred method
- ▶ System based on computerised information management
- ▶ Legal Instrument developed to support LITS Implementation

Objectives of LITS



- ▶ To establish a computerised system for cattle identification and trace-back to ensure market access for Botswana beef
- ▶ To computerise separate cattle, animal disease and brand databases into a single computerised database system that can be used to achieve cattle identification and beef traceability in fulfilment of EU requirements and rapid disease trace-back and trace-forward (security and cross-border movements)
- ▶ To bring about efficiency in livestock and disease information management system

LITS Coordination

- ▶ LITS coordinated by the Dept. of Vet. Services with support from the Computer Bureau and contracts to private sector
- ▶ LITS fully funded by Government and initial costs amounted to over US\$35.0 million
- ▶ Cost recovery mechanism in place (slaughter levy)
- ▶ Coordination unit established at headquarters with senior manager
- ▶ Field operations of LITS done by departmental extension staff

Features of LITS

- ▶ LITS has three major components:
 - ❖ Computerised Central Database
 - ❖ Extension Officer Field Data Acquisition System (FDAS)
 - ❖ Animal Identification Device (bolus with a microchip with unique number)

The Computerised Central Database

- ▶ The central database stores and processes all the data on animal identification, brand registration, bolus insertions, movement records, cattle imports, etc
- ▶ It is housed in the Min. of Agric. With duplicate copy in the Computer Bureau
- ▶ Codes and filters restricts who can enter or manipulate data; data from field transmitted automatically during down loading
- ▶ Central Database linked to other crucial databases

Extension officer Field Data Acquisition System

- ▶ Consists of field computers, hand held/static readers, bolus applicator, wands, printer and battery for charging the computer in the field
- ▶ Primarily used to capture data in the field
- ▶ Also used for issuing movement permits and ownership verification

Animal Identification Device (bolus)

- ▶ A bolus is about the size of a *'baby'* carrot and has a ceramic coating that covers a microchip with unique number
- ▶ Bolus inserted only in branded cattle three months old and above
- ▶ Bolus number linked to animal owner, crush of insertion, zone of residence of the animal and the animal itself
- ▶ A new bolus costs about US\$2.50 and a recycled bolus costs US\$1.45

LITS Outputs / Benefits

- ▶ Assured Botswana beef market access
- ▶ Timely production of various reports such as cattle movements reports, census, ownership
- ▶ Improved brand registration
- ▶ Means for ownership verification
- ▶ Quicker means of tracing cattle movements in case of a disease events
- ▶ Temper proof means for cattle identification

LITS Challenges

- ▶ Most LITS equipment were designed for the programme and are not easily available in the market
- ▶ Frequent equipment break down due to rough terrain to farming areas
- ▶ Limited suppliers of LITS equipments and boluses (sourced from outside the country)
- ▶ Currently the system is mostly public sector driven
- ▶ Poor support from the private sector service providers

Conclusion

- ▶ LITS has provided an avenue for the Botswana cattle industry to access international markets
- ▶ There is strong political and stakeholder support for the programme because of its benefits
- ▶ LITS complies with OIE Standards and Guidelines on Animal identification and Traceability
- ▶ LITS continuously assessed for sustainability in terms of costs and applicability



Thank you
Gracias