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Animal Identification and Traceability
Public Sector Perspective and Experience From Botswana

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Outline of Presentation

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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.
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 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
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