Experiences in the development of an Electronic System Support for Livestock Management in the Southern Region of Mexico and its contribution for international recognition as TB low prevalence area.

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Subcommittee for the promotion and protection of livestock in southern Veracruz

120th USAHA meeting, Greensboro North Carolina EUA, Oct 18, 2016.
Veracruz

- Surface: 72,815 km² - 3.7% Mx.

- 1st National Cattle Inventory

- 2 TB zones:
  - “A zone” – MA – 165 municipalities
    1.4 million heads.
  - “B zone” – NA– 47 municipalities
    2.7 million heads.
Background


The Strategic Plan of the National Campaign against Bovine Tuberculosis 2008 – 2012. (SAGARPA MX).

SAGGA

Sistema de Apoyo a la Gestión Ganadera

(Support System for Livestock Management)
Scope and usefulness of SAGGA system

The United States - Mexico Joint Strategic Plan for Collaboration on Bovine Tuberculosis 2013-2018

✓ Goal 1: Minimize the risk of TB-affected or exposed animals moving in domestic or international trade.

✓ Objective A: Decrease TB prevalence.
✓ Objective B: Improve disease program activities
  (Epi Inv, affected herd management, movement controls)
◆ Objective C: Improve diagnostic testing
✓ Objective D: Improve TB surveillance
✓ Objective E: Establish and maintain an effective traceability system
Scope and usefulness of SAGGA system

✓ Goal 2: Provide a collaborative framework to define and measure needed improvements in both the Mexican and U.S. TB programs to facilitate trade.

✓ Objective A: Ensure transparency and open communications between Mexico and the United States (including process)
◆ Objective B: Expedite regulatory changes through streamlined processes
✓ Objective C: Harmonize regulatory definitions and actions, where possible.
✓ Objective D: Establish an effective training and supervisory component.
◆ Objective E: Improve stakeholder communication and participation.
✓ Objective F: Ensure State and Committee accountability
SAGGA

- Modular design and multilayers access the database.
- Concurrency up to 500 users simultaneously
- Module for interaction with other systems under the JSON standard.
- Based on Linux Operating System Red DATABASE & Last Generation Distributed Programming Language.
- Scalable Design
- Logical and physical security
USER AUTHENTICATION

ACCESS LEVELS
- ADMINISTRATOR
- EXECUTIVE
- SOP SUPERVISOR
- FIELD OPERATOR
- TYPISTS.
- SPECIFIC TECHNICAL ASSISTANT
- TECHNICAL SUPPORT
HOME SCREEN

SAGGA

Sistema de Apoyo para la Gestión Ganadera
EPIDEMIOLOGY TOOL

- **EPI INV**
- **NON BOVINE SOURCES OF INFECTION INVESTIGATIONS**
- **ID MPHO**
- **INFECTED HERD MANAGEMENT PLAN**
- **Q RELEASE**
- **OVERSURVEILLANCE**
## CATTLE MOVEMENT – TRANSIT GUIDE

### Movement

<table>
<thead>
<tr>
<th>Folio</th>
<th>UPP Origen</th>
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<th>Guía</th>
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**Movimiento:**
- Darwin: UPP - MUNICIPAL, PEDROSTILMA, Estado: Viana
- Dos Hermanas: UPP - PEDROSTILMA, Estado: Viana
- Santa Rosa: UPP - PEDROSTILMA, Estado: Viana
- El Capitán: UPP - PEDROSTILMA, Estado: Viana
- El Búfalo: UPP - PEDROSTILMA, Estado: Viana

**Guía:**
- Estado: En tránsito

**Animales:**
- 1 CABEZAS
- 3 CABEZAS
- 2 CABEZAS
- 1 CABEZAS
TRAZABILITY & INTERACTION OF DATABASES
TRAZABILITY & CATTLE MOVEMENT INSPECTION

### Estado de una guía de trabajo

#### Puntos de verificación

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MAPPING
CONCLUSIONS

- It allows to carry out a more efficient control of the tasks of field veterinarians.
- SAGGA makes possible to monitor online the TB program performance.
- It is possible to generate timely and accurate information for better Epi analysis.
- Oriented tool for tracing cattle associated with the national identification program.
- It represents an option to establish public policies to strengthen inspection of cattle mobilization, risk control of diseases and statistics.
- Boost for electronic management of tasks associated with livestock using current computer tools.
- Tool for verification of animal health programs and identifying reporting information incidents or weaknesses in databases or at field level.
Our thanks to USAHA for the opportunity to present these works.

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