



# Issues and Emerging Technologies in Animal Identification

World Jersey Cattle Bureau  
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# History of Animal ID



- 18<sup>th</sup>-19<sup>th</sup> Century hot brands were introduced
- Most recent decades have shown us adoption of
  - Ear Notching
  - Tattoos
  - Metal Ear Tags
  - Plastic Visual Tags
  - Electronic Tags
  - Tissue Sampling devices
  - Animal Monitoring devices



# Motivation to Evolve...



Motivation for this evolution was driven by key factors:

- Proof of ownership
- Improved herd management through differentiation of individual performance  
(Individual Animal Management)
- Traceability programs for disease surveillance and eradication around the world
- A way of automating the operation of technical equipment  
(Dairy parlors, automated feeding systems, weighing and sorting systems etc.)
- Health Monitoring



The purpose behind Identification  
To connect animals and people  
for a smarter future

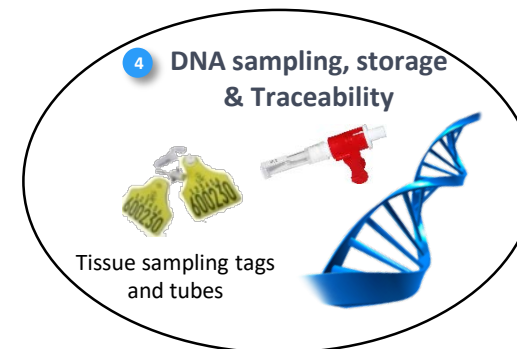
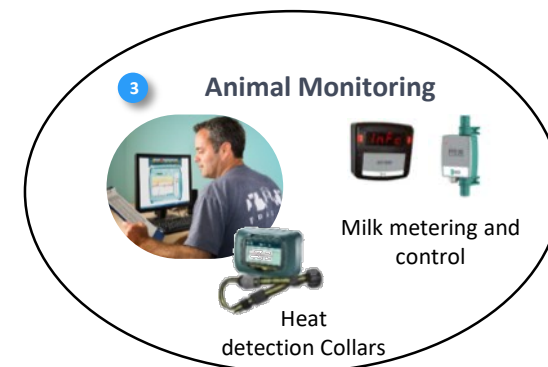
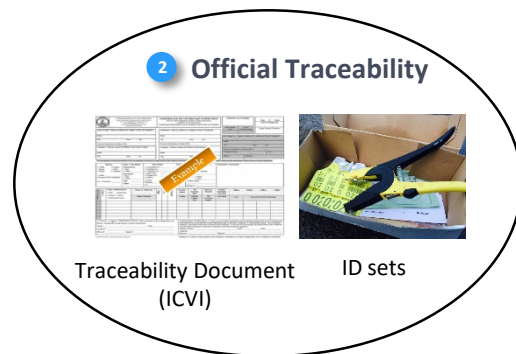
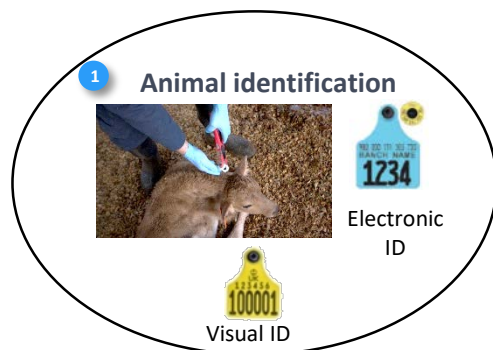
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Through these various elements, Animal Identification is evolving to meet the challenges of Producers, Associations and Animal Health Officials worldwide...

Today



Full products and solutions range in animal identification/intelligence

Traceability

Productivity

Animal health/welfare

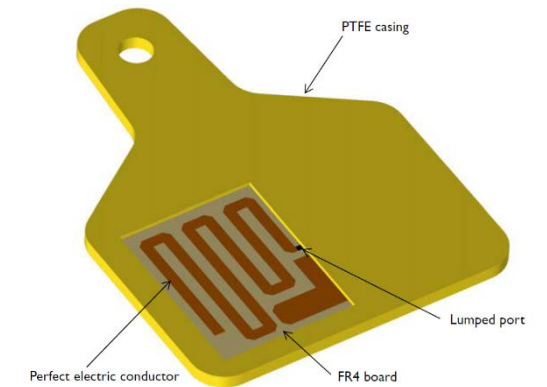
Biosecurity

Internet of Animals

# 1. Animal Identification

▼  
Pre-requisite to a proactive animal health approach :  
being able to identify animals in a clear, secure and simple way

**Visual and RFID solutions have evolved to meet the needs of Producers and Traceability systems worldwide; Technology has brought innovative marking, packaging options, as well as ISO (Low Frequency) and UHF RFID options to the market**



## 2. Animal Monitoring



Individual, thorough livestock monitoring will help recognize physiological and pathological situations at an early stage, enabling timely interventions

**Today, over 10 million animals worldwide utilize advanced Monitoring devices, transforming huge amounts of collected data into actionable information and services**





**Technology has allowed official ID systems to evolve from paper and pencil to full electronic systems that create value on-farm and enhance disease surveillance systems.**



## 4. DNA Sampling, Storage and Traceability



From Disease eradication programs to Genomic sampling and meat Traceability, Tissue sampling provides a unique new tool for management, positively tied to permanent animal ID

**BVD has been eradicated in several countries thanks to tissue sampling tags; and innovative tissue sampling tubes (TSU) provide a effective means of collecting tissue for high-density Genomic Sampling**



# Further progress will be made thanks to the precious data gathered every day by millions of animals through Identification and Monitoring devices



- Today, over 5 million dairy cows are sending their data to local servers
- 1 million already communicating directly with the cloud
- And it is increasing every day...

Every second, huge amounts of data are generated by animals equipped with electronic devices

Further analysis of this data will allow Dairymen to utilize more applications and new services to enhance health and productivity

