24118 Pires, P.-P.
Precision tools for Brazilian beef production systems.
EMBRAPA
Brazilian Agricultural Research Corporation
Research & Development on Animal Science
Founded April, 1973
www.embrapa.br
“Provide feasible solutions for the sustainable development of Brazilian agribusiness, through knowledge and technology generation and transfer.”
Embrapa in Brazil

Unidades da Embrapa Brasil

1. Embrapa Clima Temperado
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34. Embrapa Estudos e Capacitação

© Capitais
Internationalization

• Labex USA (USDA/ARS) – Beltsville, MD

• Labex Europe
  • France – Agropolis, Montpellier
  • Netherlands – Wageningen
  • England – Hertfordshire

• Labex Korea – Seoul

• Embrapa America Project – Venezuela and Panama

• Embrapa Africa Project (Ghana, Mali, Mozambique and Senegal)

• 56 countries / 89 institutions
International Recognition

- Technology adoption
- Expanding collaboration
- International awards
- Media attention
- ”Way round” Labex
- Law MP 504/2010
Embrapa Beef Cattle

Founded in April, 1977
Personnel

• 208 employees
• 53 researchers
  - 46 Ph.D.
  - 7 M.Sc.
• 30 Analysts
• 125 Assistants
Research Areas

- Pastures
- Animal Nutrition
- Animal Breeding
- Animal Health
- Sheep and Goats
- Environment
- Traceability and Risk Analysis
- Farm Management and Economics
- Technology for Hides and Skins
- Technology Transfer

Embrapa
Research Area

Precision Livestock Farming

- Good Practices
- Traceability & Certification Methods
- Electronic identification (chips)
- Certification systems
- Farm & herd management software

Embrapa
82% of all distributed orange juice in the world,
38% world soybean market,
29% of all sugar,
28% of all coffee consumed in the world,
23% of all tobacco consumed in the world,
Leader in export of chicken, alcohol, leather and shoes,
Leader in export of meat since 2003.
Precision Livestock In Brazil
Embrapa Beef Cattle
Pedro Paulo Pires
pedropaulo.pires@embrapa.br
Precision Livestock In Brazil

Development of precision tools directed at the competitiveness and sustainability of livestock

» Introduction
» History
» Perspective
Brazilian Beef Industry
Precision Livestock
Introduction

Increased global demand for safe food has changed the behaviour of consumers all over the world.

Both the consumer and producer of livestock products must be concerned not only with productivity and profitability, but also with respect for the environment and animal welfare.

There is a lack of manpower in rural areas, as well as a need to provide more training and tools to increase productivity.
Introduction

In summary we need:

- livestock products with verifiable high-quality;
- produced in sustainable systems with
- high animal welfare and
- low environmental impact.

As a result of these changes, there is increasing need to manage several variables throughout the production process simultaneously.

Development of precision tools directed at the competitiveness and sustainability of livestock
Introduction

Precision Livestock

"Tools" increasingly being used to assist in the correct treatment of products, in search of increasingly healthy food, in adequate control of the business, aiming at increasing productivity and satisfying the demands of new markets - both internal and external.

Precision livestock introduces new information and communication techniques for control and automation of production. Because of this, electronic devices such as RFID transponders, electronic scales, GPS, barcode readers, sensors of biometrics, among others, are increasingly used on farms and processing sites.
Introduction

Precision Livestock

- The use of electronic devices is, without doubt, the most secure and efficient method for identification of animals, however they can be expensive.

- Consequently, EID should be aligned to development of tools that encourage producers to productivity and traceability.

- It is crucial that these tools provide producers with new information for better management of the herd.

- And that they help produce more food for a growing population and in line with food safety, environmental and animal welfare requirements.
History

Pioneering in Precision Livestock -
Working in the area since 2001:

- electronic identification of bovine animals (RFID);
- umbilical chip with treatment;
- cowboy keyboard;
- scale of passage;
- umbilical chip thermometer;
History

Pioneering in Precision Livestock - Working in the area since 2001:

- web portal for information transfer to SISBOV service and access to the various applications;
- many software packages for cattle management and production;
- data transmission from the field;
- mobile alert system;
History

Pioneering in Precision Livestock - Working in the area since 2001:

- satellite assessment of pasture conditions;
- necklace with GPS for ethological evaluations;
- semantic analysis of displacement of animals;
- e-APART;
- preventive veterinary alerts, via the web;
- “Digital Corral” with range of recording systems.

Reminder of OTAG system
Precision Livestock Farming

BNDES, Embrapa, UFMS, UCDB, S-Inova

90% dos custos
Empresas
10% dos custos

GenePlus GenePlus
e-IATF Melhore
Suplementa Certo Olimpo
PESA+ SEMEMBRAS
PEMSI Fundação MS
Cordeiro no gancho RastroVet
Chip Term. Passivo UFMS
Leitora RFID INPE Eng Automação
BPA-EAD HighTech
Balança 3D HighTech
e-Land Agripa
e-BI Bovibi
e-SAT INPE
Thank You!
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