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# Use of electronic identification (EID) associated technologies in marginal sheep farming systems

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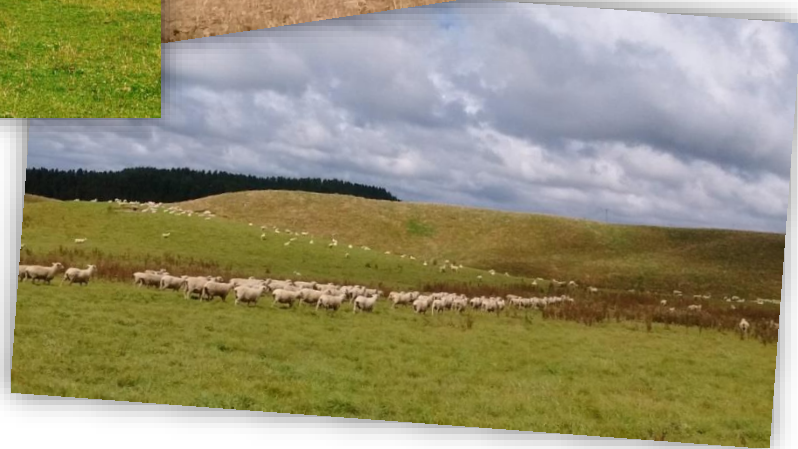
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# Marginal Sheep Systems?



Photo: Grethe Ringdal



# Marginal land?

- Poor quality soil, altitude, climate, vegetation
- Large size flocks (>1000), low stocking density
- Labour critical
- Economic
- Vital for rural

How could EID help these marginal systems?

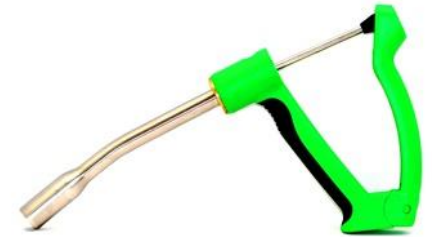


# EID – Electronic Identification

- RFID
- Various forms



Sheep EID bolus  
(with black tag)

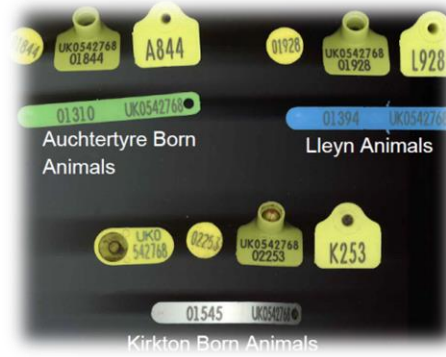


EID ear-tags +  
applicators



# EID technology?

- Tags
- Stick reader
- Handheld Psion
- EID panel reader
- Auto-drafter
- Weigh head



What is used?

What is piloted?

What is researched?



# Research on EID for sheep?

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# For the farmer

- Recording major farming events:
  - On psion & stick reader
  - Breeding records
  - Health treatments
  - Movements
  - Group allocation (mating, scanning, etc.)

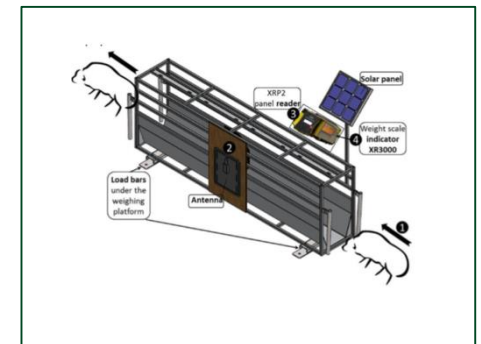
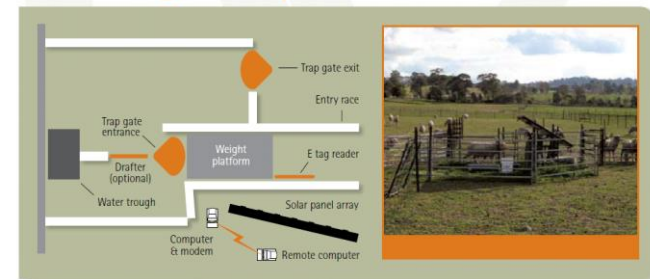


# For the farmer (2)

- EID associated technologies:
  - Autoshedder
  - Automatic weighing
    - Worming gun
    - Targeted worming (TST)
    - Targeted winter feeding
  - Autoweighing:
    - WOW
    - INRA auto-weighing



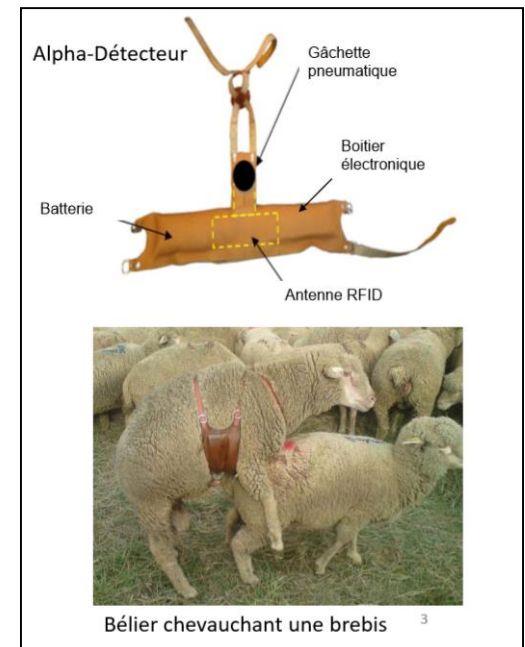
WOW design and operation





# For the farmer (2)

- Automatic feeder (meat)
- Breeding
  - Alpha detector
  - Sensors for dystocia



# For the farmer (3)

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- Main benefits:
  - Better performance monitoring
  - Better information/data exchange & recording
  - Inputs savings
  - Labour savings

But....how to encourage uptake?

- 29% have reader
- 2% have EID crate
- > (perceived) costs, skills



# For the technician?

- Milking breeds
  - Milk counters/monitoring
    - Fixed on farms (milk production)



MM25 – De Laval



afimilk milk meters



LC-TT - WMB

- Portable & automatic
- On-farm performance monitoring (meat)

# Further research? LF/UHF

## Main characteristics



**Low  
Frequency  
(LF)**

**Ultra-High  
Frequency  
(UHF)**

Sensitive to water

**NO**

**YES**

Reading Distance

**Up to 80 cm**

**Up to several  
meters**

Multiple readings

**NO**

**YES**

# Example in France



Antenna



Reader



Module Bluetooth



Application



reader  
(19 x 17,5 x 3 cm)

# EID in sheep marginal systems?

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- Lots of research & opportunities
- Labour savings
- Performance management/monitoring
- Health – detection & prevention
- **Main issues:**
  - **Education/KT of farmers on benefits**
  - **Costs /perceived costs**
  - **Need more pilots, co-designing approach?**



# Acknowledgments

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