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Excellence in Research and Development

**Symposium on animal identification and recording systems for
traceability and livestock
development in sub-Saharan Africa**

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Current tools and technologies for animal identification and recording in the dairy chain



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Outline

- ❖ AIR in the dairy chain
- ❖ Dairy Production Systems
 - Unique characteristics
- ❖ Available tools & technologies
- ❖ Conclusion

AIR in the Dairy Chain

❖ Breeding & management

❖ Traceability

– For multiple purposes including:

- Reducing public health risks from zoonosis, e.g. brucellosis
- Providing guarantees to consumers

Is it really organic?



Dairy Breeding & Management

❖ Major driver of AIR

❖ Other commodities are followers

▪ eg. in South Africa:

➤ dairy recording initiated in 1917

➤ beef recording only followed in 1940!

▪ **ICAR** formerly known as **ICRPMA**

▪ Dairy animals recorded more extensively than any other livestock species

Dairy Production Systems

- ❖ Predominantly intensive
- ❖ Regular handling of animals
 - Milking
 - Breeding (AI)
 - etc.
- ❖ Dairy animals naturally docile
- ➔ Simple identification tools

Identification Devices

- ❖ Simple visual ear-tags adequate in most cases
 - Cheaper
 - User friendly
 - reliable
- ❖ Electronic devices may be necessary in large scale automated production units

What's in the glass?



Data Recorded

Production	Milk volume/yield Milk compositional quality Milk hygienic quality
Health	Disease incidence Conformation defects
Breeding Details	Insemination dates Service sire Pregnancy diagnosis
Animal Condition	Condition score

Measuring devices/techniques

Parameter	Measuring device/technology
Yield/volume	Meters Jars Scales
Composition	Wet chemistry Infra-red analysis
Hygienic quality	Spectrophotometry Microscopy Electronic machine

Recording Technologies

- ❖ Paper-based

- ❖ Electronic

 - May be integrated into milking system

- ❖ Mobile communication (cellphone)

Conclusions

❖ Which are the best tools & technologies?

❖ Consider:

① Utility (Horses for courses)

② Cost effectiveness

“Simplicity is the ultimate sophistication”

- Leonardo da Vinci

Thank you!

