

35th ICAR session Kuopio Finland

Summary report

ICAR working group on AI and other relevant technologies

Established in 1998 after the ICAR Session in Roturoa

Alain MALAFOSSE
Chairman

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Terms of reference

- To harmonise items for recording AI data
- To harmonise and to improve data collection and exchange of data
- To produce description of existing systems of data processing
- To harmonise definition of relevant concepts and ratio used in the industry
- **To gather statistics**

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Group's Members

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Deliveries up-to now : Recommendations

- Straw identification 2000
- Non-return rate 2002
- Recording and validation of bovine AI data 2003
- Procedure to handle breed codes on semen straws 2004
- Recording and validation of data for embryo Production & transfer (proposed to the ICAR general assembly in Kuopio 2006) : published on the ICAR web site for comments

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Deliveries up-to now : surveys

“Survey on recording and validation of bovine AI data”
(Available on the ICAR web site since 2005)

“Survey on recording and validation of bovine data for embryo production and transfer among some ICAR members countries” 2006

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Recording & validation of bovine data on embryos & associated technologies

Characteristics of embryo technologies :

- Production of breeding animals from top cows
- management of nuclei
- outstanding tool for exchanges of genetic materials
- Few numbers
- Valuable & expensive genetic material
- Existing procedures to follow the process and warranty chances of pregnancy

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Recording & validation of bovine data on embryos & associated technologies

The ICAR group had

- focused on data used in the process of parentage's assessment of animals on recording schemes
- taken into account provisions of national & international legislation
- stick to IETS forms and nomenclature to record technical matters related to embryo processing (freezing, quality, spec charact.)

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Working method : 1) Elaboration of a questionnaire

Topics	Details
A. General principles	Needs for recording
B. Recording of data	Information recording various requirements
C. Processing & validation	Data flow, test quality control
D. Integration in Genetics systems	Parentage assessing

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2) Structure of the recommendation

Object of the recommendation
Field of application and definitions
Recording of relevant data
Transmission of embryo data to data bases
Parentage assessment
Quality controls
Annexe 1 Embryos storage & movements
Annexe 2 Tests for Validation of Embryo data

Note that the recommendation draft was presented during the AETE scientific meeting in KESZTHELY Hungary on September 10th of 2005.

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Recording relevant data : embryo production

Recapitulative of data necessary for assessment of future calves born out of embryos :

Embryo reference number
Identification of the approved team
ID + breed code of sires
ID + breed code of dams
ID Herd of donor
Age of embryo

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Straw identification containing embryos

An unique reference number to set cross-reference with following items recorded on paper or accessible electronic files has to be printed or hand written.

Identification team operator
Date of freezing
Embryo' sire (s) ID + breed code
Embryo's dam ID + breed code
Number of embryos per straw

Remark : No request about order, format of items, structure of embryo's reference

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Transfer of embryos

Operator
ID Herd of recipient
ID recipient female
Date of transfer
Embryo's identification

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Parentage assessment (1)

Either parentage assessment requires :

That both parents and calf are compulsory analysed on markers (or blood types) on the basis of the recorded data.

Data have to be available at birth and processed afterward.

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Parentage assessment (2)

Or

That relevant data undergo successfully requested tests & are transmitted prior to the birth.

If dates of implantation and birth are consistent w. gestation length (including age of embryo), genetic parents may be attributed to calf.

Parentage of the more valuable animals should be anyways confirmed by DNA analyses.

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Work's plan 2006 2007

- 1) Continuous Implementation of recommendations
 - New codes on the list for the Norwegian Red and the Swedish red & white Cattle (NR, SR) Kuopio 2006
 - New products: heterospermic semen, sexed semen, somatic clones...
- 2) Connexion with the group on parentage recording
- 3) Exploring the semen traceability issue
- 4) Feasibility to design a programme on AI issues for the 2008 ICAR congress

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Thinking about future activities

New topics

- Better involvement of AI industry within ICAR
- New traits (pregnancy diagnose)

Chair and group's composition

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THANK YOU

FOR YOUR ATTENTION !