



The ICAR “Artificial Insemination and Related Technologies” Working Group: its goals and current projects

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The “Artificial Insemination and Related Technologies” Working Group (AI & RT WG) is a body of ICAR. Its task is

- to maintain, update, promote and extend universal guidelines for recording data associated with artificial breeding (for both male and female gametes, primarily in cattle) and its use to assess reproductive success;
- to conduct and report the results of international surveys in this context;
- to identify and specify services that can be provided by Service ICAR;
- to stimulate and facilitate international collaboration in research and development on all aspects of recording artificial breeding data and its use to assess reproductive success

Currently the AI & RT WG consists of 7 ordinary members, 2 associated members representing the industry supplying instruments etc. for AI, plus 2 members representing ICAR Board and ICAR Secretariat.

An overview of the recent and planned activities of the Working Group is given.

Keywords: artificial insemination, embryo transfer, guidelines

Abstract

Annually in cattle breeding several hundred million semen units are produced worldwide. Additionally, several hundred thousand embryos are transferred per year. The intensive international trading of semen and embryos asks for guidelines, among

Introduction

others on how to produce and label semen units, how to record data in the context of artificial insemination (AI) and embryo transfer (ET) and on how to assess fertility. To address these tasks, ICAR established a specific working group, called "Artificial Insemination and Related Technologies Working Group" (AI & RT WG). In this document the recent activities of the AI & RT WG are summarized, and an overview of the planned actions is given.

The ICAR Guidelines on AI and ET data and fertility analysis

The AI & RT WG is responsible to maintain, update, promote and extend the section "06 AI and ET Data and Fertility Analysis" of the ICAR Guidelines. These guidelines are openly accessible under www.icar.org. Section 06 covers the following subjects:

1. Bovine Semen Straw Marking
Information to be printed on the straw, barcoding, breed codes
2. Bovine Embryo Production and Transfer
Recording of relevant data, parentage assessment, quality control
3. Fertility Reporting for AI organisations
Measurements/definitions, rules of calculation
4. Annexes
 - Incidence of the chosen option for the exclusion of short returns
 - Consideration of cattle reproductive physiology
 - Embryos storage and movements
 - Validation of data
 - Survey results

Recent activities of the Working Group

Besides of its own constitution, the AI & RT WG addressed in the recent time the following subjects:

1. Maintain the guidelines.
2. Update the information on what is printed by large AI organisations on semen straws.
3. Conduct a worldwide survey on barcoding semen units.
4. Initiate a project for establishing an International Database for Semen Information.

There are separate reports are given at the ICAR Congress 2019 on the activities 3 and 4.

Planned activities

Within the next months the AI & RT WG plans - besides maintaining the guidelines - to address the following topics:

- Establish the International Database for Semen Information, starting with a proof of concept.

- Evaluate the relevance and impact of new technologies (RFID etc.).
- Collaborate closer with:
 - Other bodies of ICAR (Interbull, Animal Data Exchange, etc.).
 - The International Embryo Technology Society (IETS).
 - The industry.

With its activities, the AI & RT WG endeavours to contribute significantly to the needs of all stakeholders in the field of artificial breeding.