



IT-Solutions for
Animal Production



Meeting of IDF and ICAR WGFT at the
ICAR 2017 conference on 14-16 June 2017 in Edinburgh, UK



Animal welfare recording & ICAR - overview of the status quo

K.F. Stock¹, C. Egger-Danner²



¹ IT Solution for Animal Production (vit), Genetic evaluation division, Verden (Aller), Germany

² ZuchtData EDV-Dienstleistungen GmbH, Vienna, Austria

Outline



- ❖ background:
the role of animal welfare and its development
- ❖ results of a cross-analysis
- ❖ status quo of working documents:
animal welfare recording within ICAR,
possible extensions and valuable collaborations (synergistic effects)



Background (I)

- increased awareness of the importance of the quality of not only the animal products, but also their production conditions
- increased expectations of consumers regarding animal welfare standards in livestock production
- increased demands of politics and society regarding animal welfare
 - transparency
 - monitoring and efficient control
 - engagement for optimization



THE GLOBAL STANDARD
FOR LIVESTOCK DATA
Functional Traits Working Group

Background (II)

- increased awareness of the importance of the quality of not only the animal products, but also their production conditions
- increased expectations of consumers regarding animal welfare standards in livestock production
- increased demands of politics and society regarding animal welfare
- increased pressure on farmers
 - to keep up and balance (idealistic concepts vs. production framework / economic needs)
 - to justify modern agriculture and strengthen societal acceptance



THE GLOBAL STANDARD
FOR LIVESTOCK DATA
Functional Traits Working Group

The role of animal welfare & ICAR

- changed circumstances of milk production requiring respective adjustments (all stakeholders)
 - technically
 - conceptually
- requests: ICAR members and ICAR
 - coverage and visibility in the relevant fields of dairy production
→ animal welfare to be included
 - positioning (clear statements through the guidelines provided)
→ direct rather than indirect addressing of animal health and welfare



Actions taken by ICAR

- need for some inventory regarding animal welfare (indicators) to identify concrete needs and proceed efficiently
- Animal Welfare Recording Working Group (ICAR AWR WG)
 - chaired by Pierre-Louis Gastinel
 - members and agreements on information exchange ensuring :
 - involvement of international and interdisciplinary expertise and
 - close links to existing bodies dealing with recording of (potential) animal welfare indicators
 - meeting at ICAR 2014 conference in Berlin, Germany

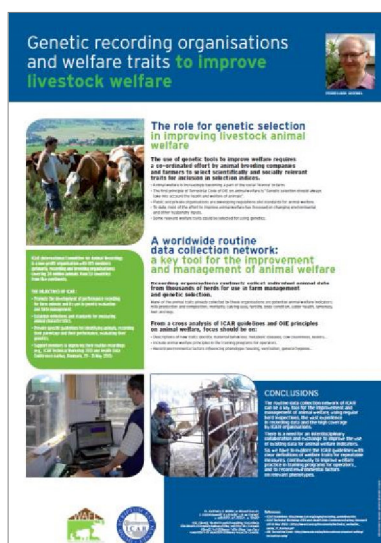


ICAR Animal Welfare Recording WG

- terms of reference (aims and scope, ...)
 - assessing the level of consistency between recommendations and standards from international bodies about animal welfare and the practices of the recording organizations
 - review of ICAR Guidelines for options of improving consistency
- cross analysis
 - between general principles of OIE and its criteria and practices of recording organizations based on ICAR guidelines
 - recording not only of animal traits (animal-based indicators), but also environmental parameters (resource-based indicators)
 - dimensions:
 - trait description (animal traits)
 - process of recording (pain?, stress?, ...)
 - training of operators



Results of the cross-analysis



Genetic recording organisations and welfare traits to improve livestock welfare

The role for genetic selection in improving livestock animal welfare

The use of genetic tools to improve welfare requires a clear understanding of the genetic architecture of welfare traits and the ability to select animals with desirable welfare traits for breeding or selection purposes.

A worldwide routine data collection network: a key tool for the improvement and management of animal welfare

Improving animal welfare requires a systematic approach to data collection, analysis and interpretation. A worldwide routine data collection network is a key tool for the improvement and management of animal welfare.

CONCLUSIONS

The results of the cross-analysis of ICAR guidelines and the principles of animal welfare, focus should be on:

- the development of a common framework for the collection and analysis of data
- the development of a common framework for the interpretation and management of data
- the development of a common framework for the communication and dissemination of data

- poster presentation at WAFL 2014 (International Conference on the Assessment of Animal Welfare at Farm and Group Level) in Clermont-Ferrand, France



Results of the cross-analysis

Genetic recording organisations and welfare traits to improve livestock welfare

The role for genetic selection in improving livestock animal welfare

The use of genetic tools to improve welfare requires a co-ordinated effort by animal breeding companies and farmers to select scientifically and socially relevant traits for inclusion in selection indices.

A worldwide routine data collection network: a key tool for the improvement and management of animal welfare

Recording organisations routinely collect individual animal data from thousands of herds for use in farm management and genetic selection.

Even a cross analysis of ICAR guidelines and ONE principles on animal welfare, focus should be on:

CONCLUSIONS

The routine data collection network of ICAR can be a key tool for the improvement and management of animal welfare, using regular herd inspections, the vast experience in recording data and the high coverage by ICAR organisations.

There is a need for an interdisciplinary collaboration and exchange to improve the use of existing data for animal welfare indicators. So, we have to explore the ICAR guidelines with clear definitions of welfare traits for repeatable measures, continuously to improve welfare practice in training programs for operators, and to record environmental factors on relevant phenotypes.

The role for genetic selection in improving livestock animal welfare

The use of genetic tools to improve welfare requires a co-ordinated effort by animal breeding companies and farmers to select scientifically and socially relevant traits for inclusion in selection indices.

- Animal welfare is increasingly becoming a part of the social 'licence' to farm.
- The first principle of Terrestrial Code of OIE on animal welfare is "Genetic selection should always take into account the health and welfare of animals".
- Public and private organisations are developing regulations and standards for animal welfare.
- To date, most of the effort to improve animal welfare has focussed on changing environmental and other husbandry inputs.
- Some relevant welfare traits could be selected for using genetics.

A worldwide routine data collection network: a key tool for the improvement and management of animal welfare

Recording organisations routinely collect individual animal data from thousands of herds for use in farm management and genetic selection.

Many of the animal traits already collected by these organisations are potential animal welfare indicators: milk production and composition, mortality, calving ease, fertility, body condition, udder health, lameness, feet and legs.

Results of the cross-analysis

Genetic recording organisations and welfare traits to improve livestock welfare

The role for genetic selection in improving livestock animal welfare

The use of genetic tools to improve welfare requires a co-ordinated effort by animal breeding companies and farmers to select scientifically and socially relevant traits for inclusion in selection indices.

A worldwide routine data collection network: a key tool for the improvement and management of animal welfare

Recording organisations routinely collect individual animal data from thousands of herds for use in farm management and genetic selection.

Even a cross analysis of ICAR guidelines and ONE principles on animal welfare, focus should be on:

CONCLUSIONS

The routine data collection network of ICAR can be a key tool for the improvement and management of animal welfare, using regular herd inspections, the vast experience in recording data and the high coverage by ICAR organisations.

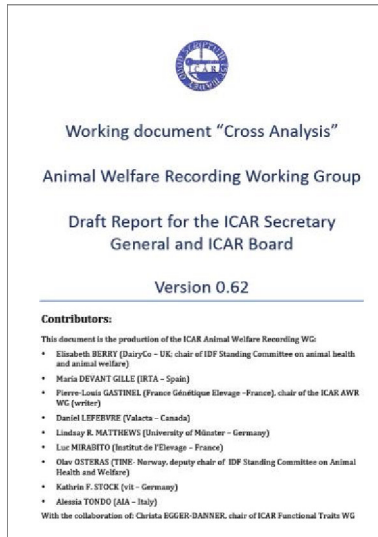
There is a need for an interdisciplinary collaboration and exchange to improve the use of existing data for animal welfare indicators. So, we have to explore the ICAR guidelines with clear definitions of welfare traits for repeatable measures, continuously to improve welfare practice in training programs for operators, and to record environmental factors on relevant phenotypes.

CONCLUSIONS

The routine data collection network of ICAR can be a key tool for the improvement and management of animal welfare, using regular herd inspections, the vast experience in recording data and the high coverage by ICAR organisations.

There is a need for an interdisciplinary collaboration and exchange to improve the use of existing data for animal welfare indicators. So, we have to explore the ICAR guidelines with clear definitions of welfare traits for repeatable measures, continuously to improve welfare practice in training programs for operators, and to record environmental factors on relevant phenotypes.

Results of the cross-analysis



- poster presentation at WAFL 2014 (International Conference on the Assessment of Animal Welfare at Farm and Group Level) in Clermont-Ferrand, France
- internal report as basis for planning of actions of ICAR, its WG and members in the field of animal welfare



ICAR AWR WG: internal report

Suggestions:

- improving clearness and visibility of ICAR recommendations for monitoring and improving animal health (restructuring, improved referencing / cross-linking)
- new guidelines for behavior traits (docility, temperament, ...), with appropriate consideration of necessary concurrent recording of animal- and resource-based recording
- consideration of the role of resource-based indicators in ICAR guidelines, with appropriate reference to existing approved guidelines
- reflection of analogous trait recording in beef and dairy cattle in the guidelines (reciprocal structure, improved cross-referencing)
- standardized descriptions of routine on-farm procedures
- consideration of animal welfare principles in training of operators



Animal welfare & ICAR's strategy

- underlining the social impact of animal welfare requirements on the future of producers and their activities
- considering new traits to better address animal welfare among the main strategic goals
- close collaborations within ICAR and beyond
 - ICAR WGFT
 - IDF and IDF Standing Committee on Animal Health and Welfare
 - FAO
 - ...



THE GLOBAL STANDARD
FOR LIVESTOCK DATA
Functional Traits Working Group

Animal welfare recording & ICAR - overview (STOCK et al.), ICAR 2017, 13 June 2017, Edinburgh, UK

12



IT-Solutions for
Animal Production



Thank you!



Contact information:
PD Dr. habil. Kathrin F. Stock
E-mail: friederike.katharina.stock@vit.de
Phone: +49-4231-955623; Mobile: +49-176-60931357