



Terms of Reference for Sensor Device Task Force

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1 Document Controls

Group name and type (acronym):	Sensor Devices Task Force (SD-TF)
Related ICAR Groups:	RSD-SC, DCMR-WG
Group Leader:	Steven Sievert
Group Champion:	Martin Burke
Version:	V1
Date:	11th May 2016

2 Terms of Reference

The purpose of this paper is to outline the terms of reference for the ICAR Sensor Device Task Force (SD-TF).

2.1 Background

ICAR has the role of supporting farmers in their effort to collect valid data for daily management, and to deliver proven and validated information's for genetic evaluations. Technology used on the farm for data collection continues to develop, and there is a need for ICAR constantly to evaluate guidelines to meet these challenges.

ICAR DHI members are coming across sensors/indicators on dairy farms which are not ICAR tested nor ICAR certified. The data from such sensors is unqualified with respect to accuracy levels, calibration and/or validation status. Farmers and breeders are taking the data from such 'sensors' into their farm systems and are making management decisions based on this data. This unqualified data may be transferred from on-farm computer systems into central databases and/or data processing centres, either intentionally or unintentionally at the present time. Certain ICAR SCs and WGs have been discussing these non-ICAR certified indicators on and off in the last few years, however the time has come to formally address the suitability of sensor and indicator data in herd management and genetic evaluation programs through this project called the Sensor Data Task Force (SD-TF).

In 2013, ICAR convened an 'Accuracy Task Force (A-TF) with the goal of developing a sound philosophical basis for ICAR to use in establishing accuracy for the collection of animal recording data that is incorporated into information services. The A-TF reported to the ICAR Board in Krakow 2015 and is expected to complete its work with a final report to the

ICAR Board and General Assembly in Chile 2016. While this A-TF did its job to provide ICAR Sub Committees, Working Groups and Members with a sound basis on accuracy determination, the output however was, by its very nature, theoretical. It is recommended that the work of the ATF be concluded as planned and we move to a more practical phase through a focussed project team to address sensors and data arising.

Note: For ICAR we have to be diligent, for if we on the one hand remain too inflexible then perhaps we become irrelevant. On the other hand, if we are too forgiving and be perceived to drop our "standards", we could end up providing a poor or confusing direction to our farmers/breeders. The challenge for ICAR is to achieve the correct balance.

2.2 The Challenge

ICAR and its members do not have a method to determine the 'fitness for use' of non-ICAR certified sensors (including data from such sensors) currently being used by farmers and breeders to make decisions.

We know this to be the case as our DHI members see non-ICAR certified sensors on farm (and data from such sensors) being used for both management and breeding decisions, e.g. Milk Volume/Speed, Flow sensors, Fat & Protein sensors, and SCC sensors, all providing data to farmers and databases resulting in decisions being made on the local level. These members have asked ICAR to provide guidelines and the methodology to help classify and qualify such sensor data so as to determine their suitability for the respective decisions.

2.3 Goals of the SD-TF

The objectives of the SD-TF are to:

No.	Goal	Achieved when?
1	Provide guidelines/methodology to help classify and qualify non-ICAR certified sensors and sensor data that measures; a) Milk Volume, b) Milk Speed c) Milk Constituents and d) Mastitis, so as to determine their suitability for the respective management and breeding decisions by June 2017.	...the ICAR sensor data determination guidelines/methodologies will be accepted by ICAR General Assembly and will be live on ICAR website.
2	Disseminate new guidelines so members and practitioners are aware of and educated in, the new guidelines for determining suitability of data from non-ICAR certified sensors by Feb 2018.	...ICAR will have sent around technical bulletins, leaflets, web information etc., to members, associate members, manufacturers and presented its report at the ICAR NZ conference in Feb 2018. Uptake to be validated by follow up Survey in Summer 2018.

2.4 Governance

The ICAR SD-TF will be appointed by the ICAR Board and will self govern.

Membership will comprise:

Name:	Role:
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Martin Burke	Champion
Steven Sievert	Leader
Brian Wickham	Expert: Groups Coordinator, Accuracy, Genetics, Big Data
Kees De Koning	Expert: ICAR Test Centre (Recording Devices)
RSD-SC Member	Expert: Milk Meter
Uffe Lauritsen	Expert: Recording Devices and Data Collection/Transfer
DCMR-WG Member	Expert: Lactation Calculations, Genetics
DCMR-WG Member	Expert: Lactation Calculations, Genetics
Technologist (observer)	Milk Meter Manufacturer Rep
Technologist (observer)	Milking Robot Manufacturer Rep

2.5 Secretariat, Timeline & Reporting

Secretariat – person appointed by ICAR CE – role is to:

- a) **Administer** - agree dates and venues in consultation with SD-TF Leader, provide notice of meetings to members, agree agenda with Leader, distribute agenda, take minutes, agree minutes with Leader, and distribute minutes.
- b) **Group Composition** – maintain list of Group members with up-to-date contact details, in consultation with Chairperson and ICAR Board ensure membership is comprised of interested and enthusiastic members representing active stakeholders.
- c) **Website** – maintain website and forum ensuing contents are up-to-date and relevant according to the TOR.

Timeline – track through Gantt worksheets – start 27/5/16 when sanctioned by ICAR Board and planned finish date Summer 2018. Duration of 104 weeks.

2.6 Communications with the ICAR Board

- a. Annual report of the SD-TF Leader to the Board.
- b. The ICAR secretariat support person to maintain files.
- c. Participation of the SD-TF Leader in meetings with the Board, normally on an annual basis coinciding with the ICAR Annual Meetings.

2.7 Priorities

Priorities are to be established by the SD-TF taking account of its terms of reference and any requests from the ICAR Board.

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