

ExtraMIR Workshop

**A NEW ICAR/IDF ACTION TEAM
FOCUSSING ON ADDED VALUE
FROM DHI DATA**

MAY 31, 2022

What is **ExtraMIR**?

the
smart
use of

ExtraMIR → extra value from MIR spectra



What is **ExtraMIR** today?

as of today

Initiative of experts in ICAR and IDF to

- monitor all activities around using MIR-spectra for applications in dairy
- structure and coordinate work done in ICAR and IDF
- harmonize and standardize terminology, analytical methods, QA procedures etc.
- offer a forum for communication and cooperation

goal → more complete and deeper understanding of all activities using MIR spectra in the dairy sector!



What should **ExtraMIR** be in the future?

The actual plans are to create a new **joint action team of ICAR and IDF**

ICAR

- has created an action team under the aegis of MA SC (chair – Hélène Soyeurt, BE)
- understands ExtraMIR as initiative for the whole dairy industry and seeks cooperation with IDF
- has motivated MA SC members to join their national IDF member organization to foster cooperation and easy communication
- organizes this workshop on 31st May 2022 in Montréal (CA)
- holds a scientific session on the use of MIR spectra (11 presentations, 2 posters) during the ICAR/Interbull Annual Conference on 2nd June 2022 in Montréal (CA)
- will intensify communication about the use of MIR-spectra-based tools, jointly with IDF (+100 eMail addresses so far, to be extended)



What should **ExtraMIR** be in the future?

The actual plans are to create a new **joint action team of ICAR and IDF**

IDF

- has taken the topic on board of the Analytical Week in Constance (Germany) April 2022
- informed more than 100 experts and kicked-off the initiative in the IDF structure
- is going to build a structure to partner with ICAR's ExtraMIR action team
 - ➔ NWI proposal in SC SA, AT leader – Hélène Soyeurt, BE; decision will be made end of 2022;
- will especially focus on building awareness and intensifying communication about the use of MIR-spectra-based tools.in the dairy industry (outside milk production), e.g. detection of “abnormal milk” or fatty acid profiling of bulk milk a.o.



Important elements of **ExtraMIR**

References

As models derived from MIR spectra are partly referring to complex functional traits, there is a strong need to find a suitable way anchoring the outcome of the models to a sound reference.



Important elements of **ExtraMIR**

References

Quality Assurance

Experience shows that actual QA procedures are not sufficient to obtain the best quality of spectra; thus, there is a need to find options to standardize and stabilize instruments.

As well, tools must be developed to verify the equivalence of the information obtained in the different areas of the globe for the same functional trait with different models



Important elements of **ExtraMIR**

References

Quality Assurance

Modelling

There is a need to explain what type of information is delivered by statistical models using MIR spectra. Still the nature of information as a prediction (what compound in what concentration, probability of presence or absence of a substance, shaping or markedness of a functional trait) is not understood in many cases.

Agreement should be reached on what references to use, how to standardize them, and what data to use for models based on MIR spectra.



Important elements of **ExtraMIR**

References

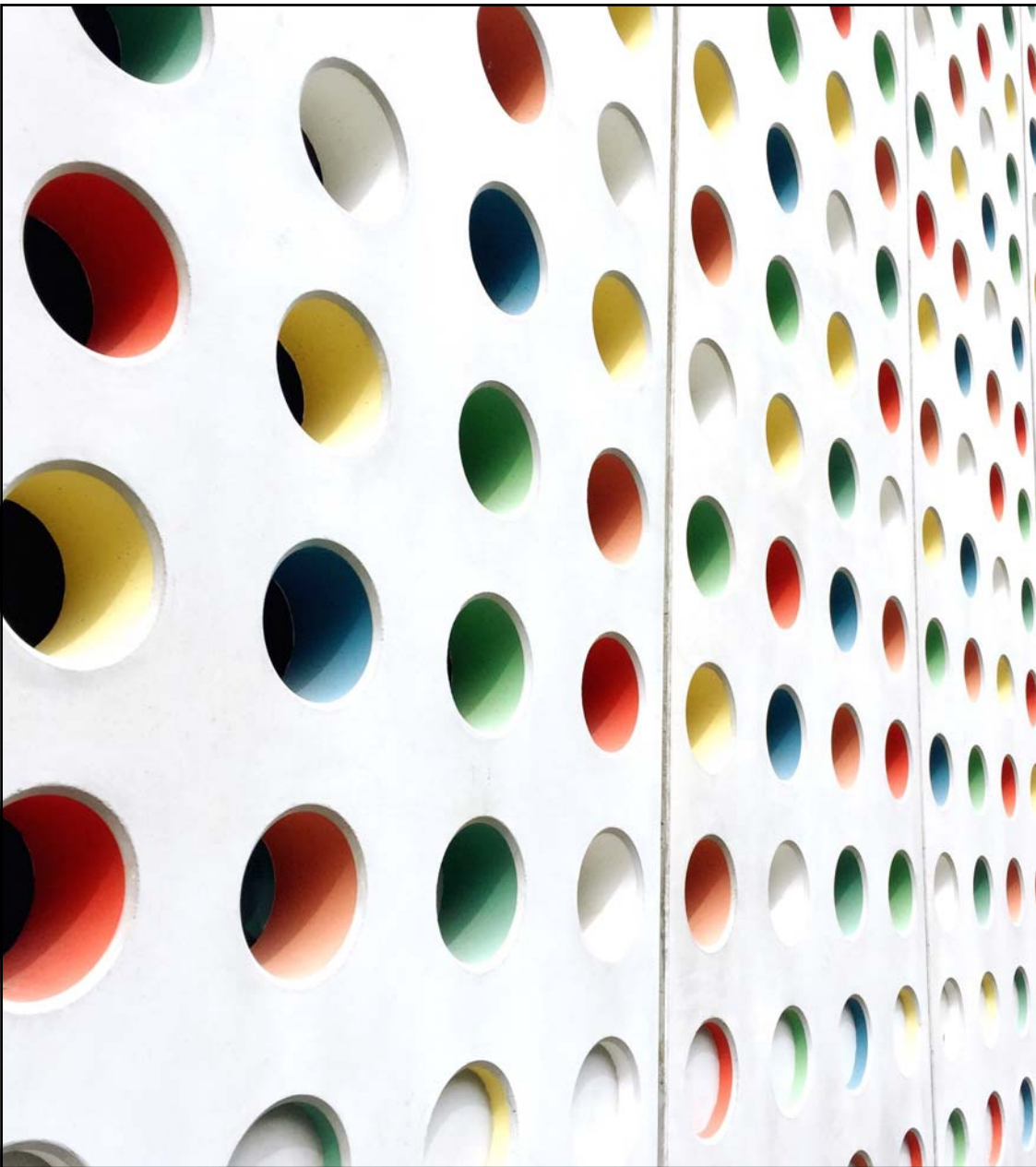
Quality Assurance

Modelling

Communication

It is necessary to standardize the terminology used, as there are some misunderstandings currently. Furthermore, the way to present the information coming from MIR spectra-based models should be simplified, standardized, and expanded extensively to combine and connect science with practice. ExtraMIR should set up an expert group to facilitate the creation of information and its appropriate presentation.





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