

Dedicated Analytical Solutions

KETOSIS SCREENING IN THE FRAME OF DHI TESTING – USABILITY AND EXPERIENCE FROM AROUND THE GLOBE

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ICAR
Chile 2016



THE GLOBAL STANDARD
FOR LIVESTOCK DATA

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KETOSIS – THE PROBLEM

- ▶ Negative energy balance
- ▶ Incidence: 25 to 60%
- ▶ Costs per case: \$289

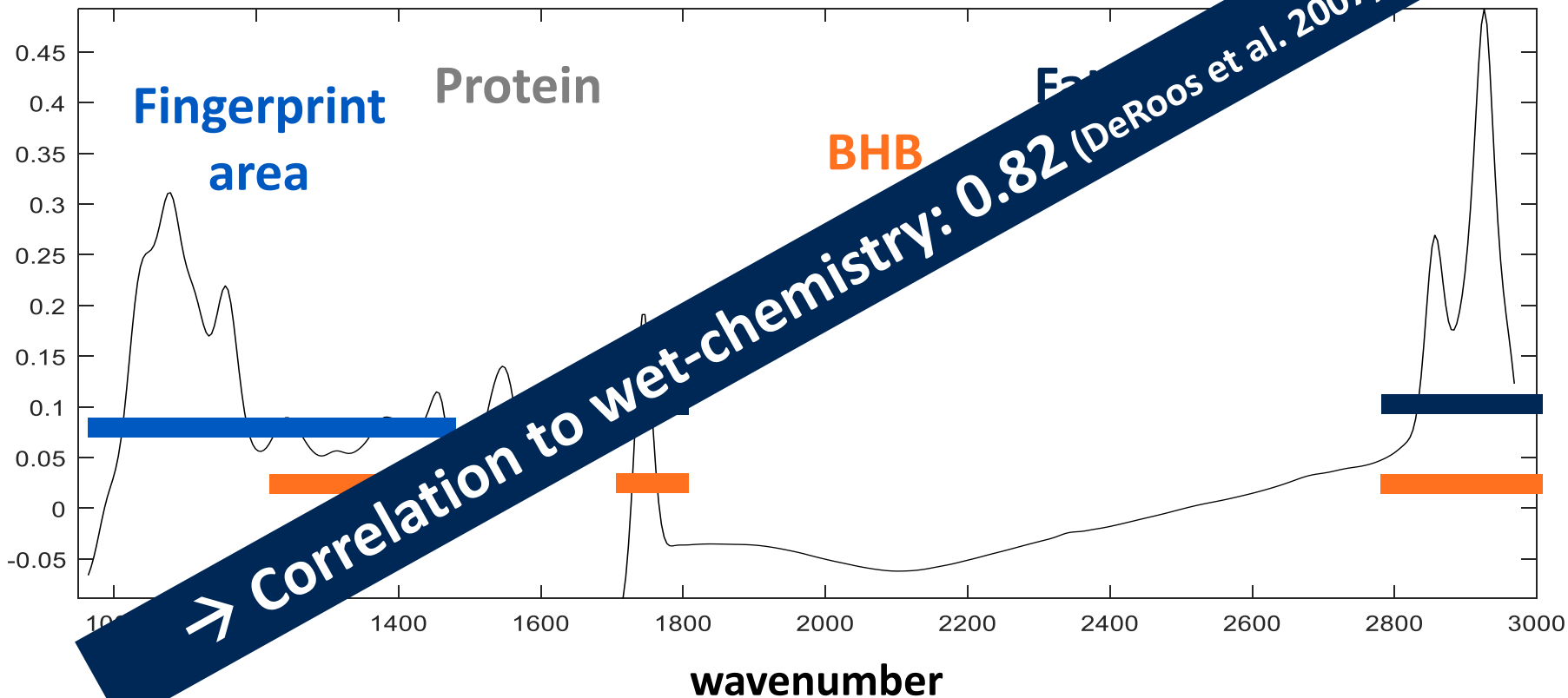


KETOSIS – DEFINITION & TESTING



- ▶ Ketone bodies elevated in blood
- ▶ Cow-side tests labour-intensive
- ▶ Availability of DHI samples and FTIR technology

Indirect calibration developed:



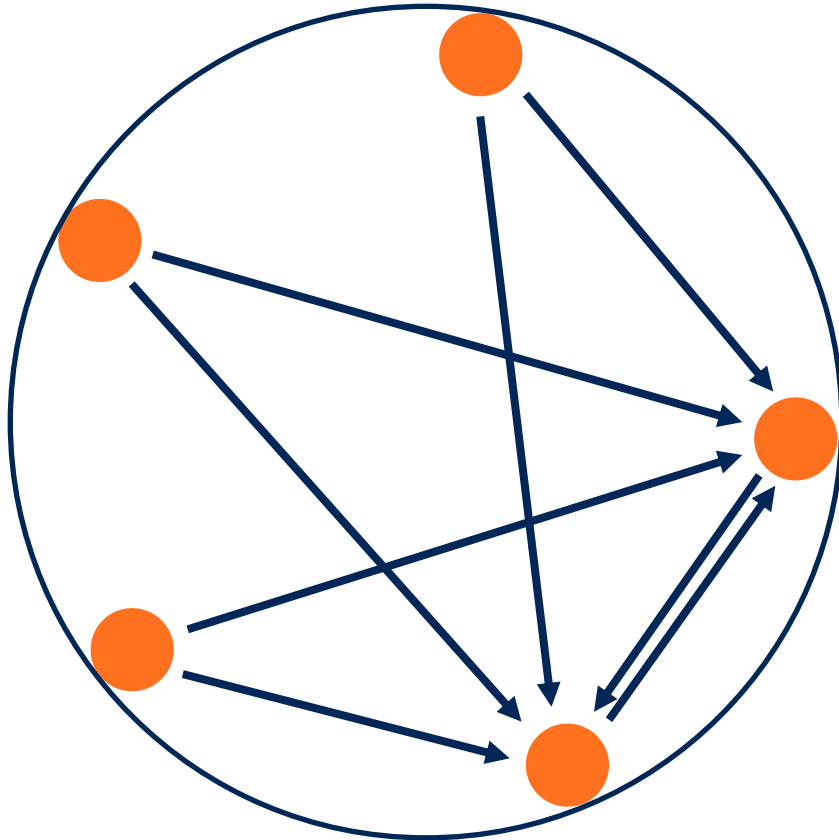
KETOSIS SCREENING – KEYS TO SUCCESS

- 1) Performance of laboratory analysis
- 2) Communication of results to dairy farmers



QA PROGRAMME IN CANADA

- ▶ All laboratories offering ketosis screening participate in QA programme:



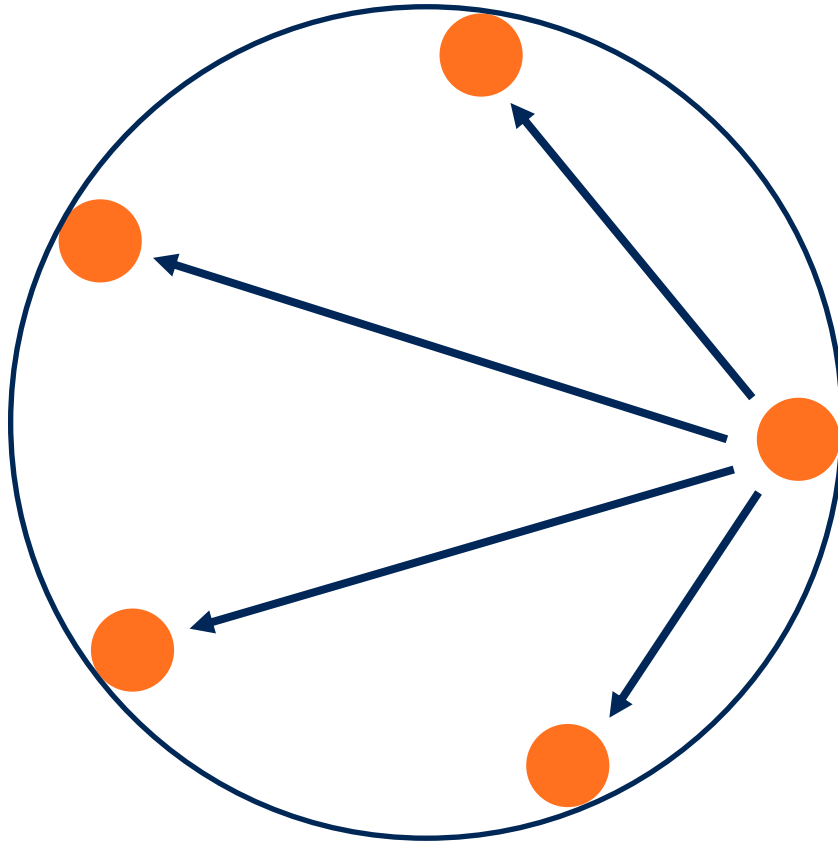
Valacta, reference results (wet chemistry method) for 100 random samples

Provision of BHB pilot samples

Frequency: 1/month

QA PROGRAMME IN FRANCE

- ▶ All laboratories offering ketosis screening participate in QA programme:



Reference laboratory, wet chemistry method

10 reference samples for BHB (0.05-0.25 mmol/l) and 5 samples for acetone (0.10-0.20 mmol/l)

Frequency: 1/month

IDF GUIDELINE



- ▶ Action Team S03b:
New applications of IR spectrometry
- ▶ New guideline to be published in
2017

COMMUNICATION OF RESULTS

BHB (and Ac)

Cow-related data (e.g. DIM)

+ other parameters, e.g. %fat



+ cow-site test



Ketosis:

- yes/no
- risk group (e.g. 1-5)
- index (e.g. K!)

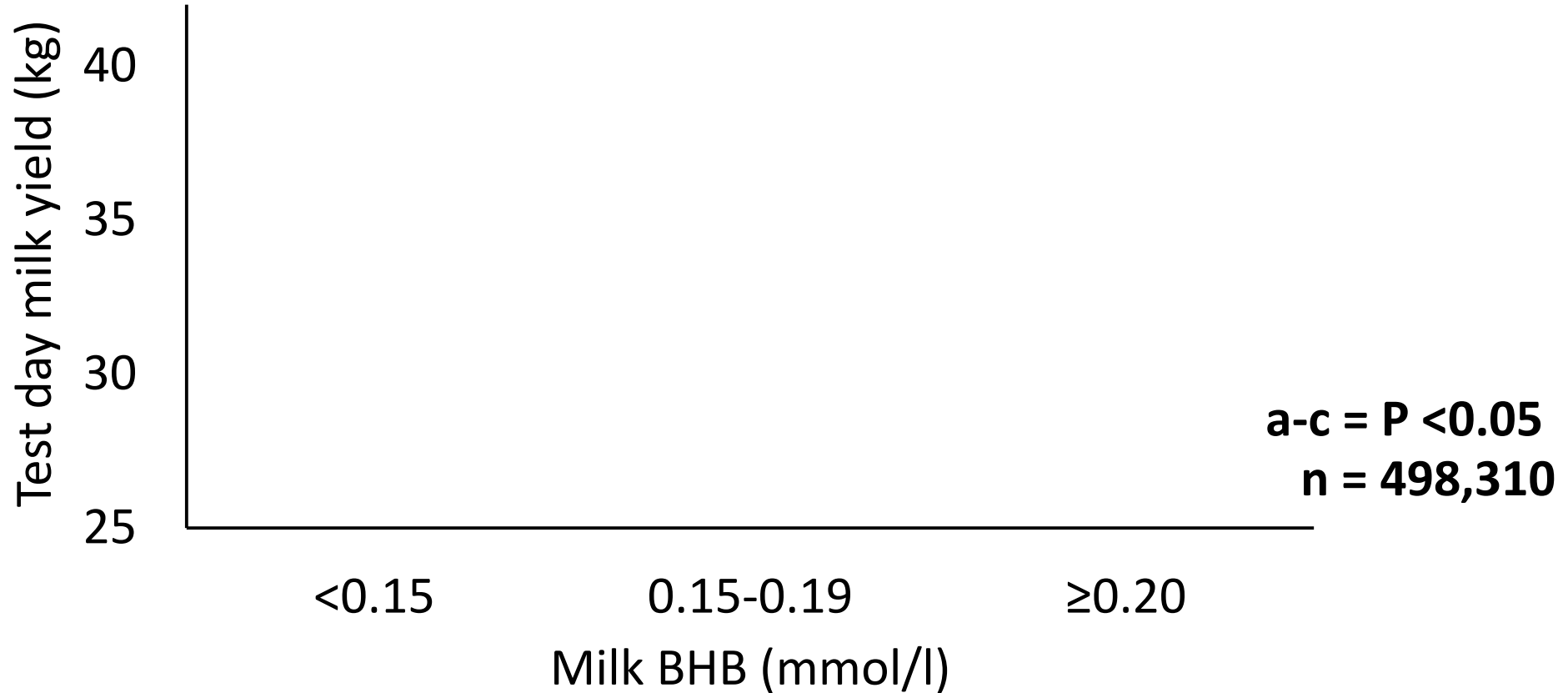


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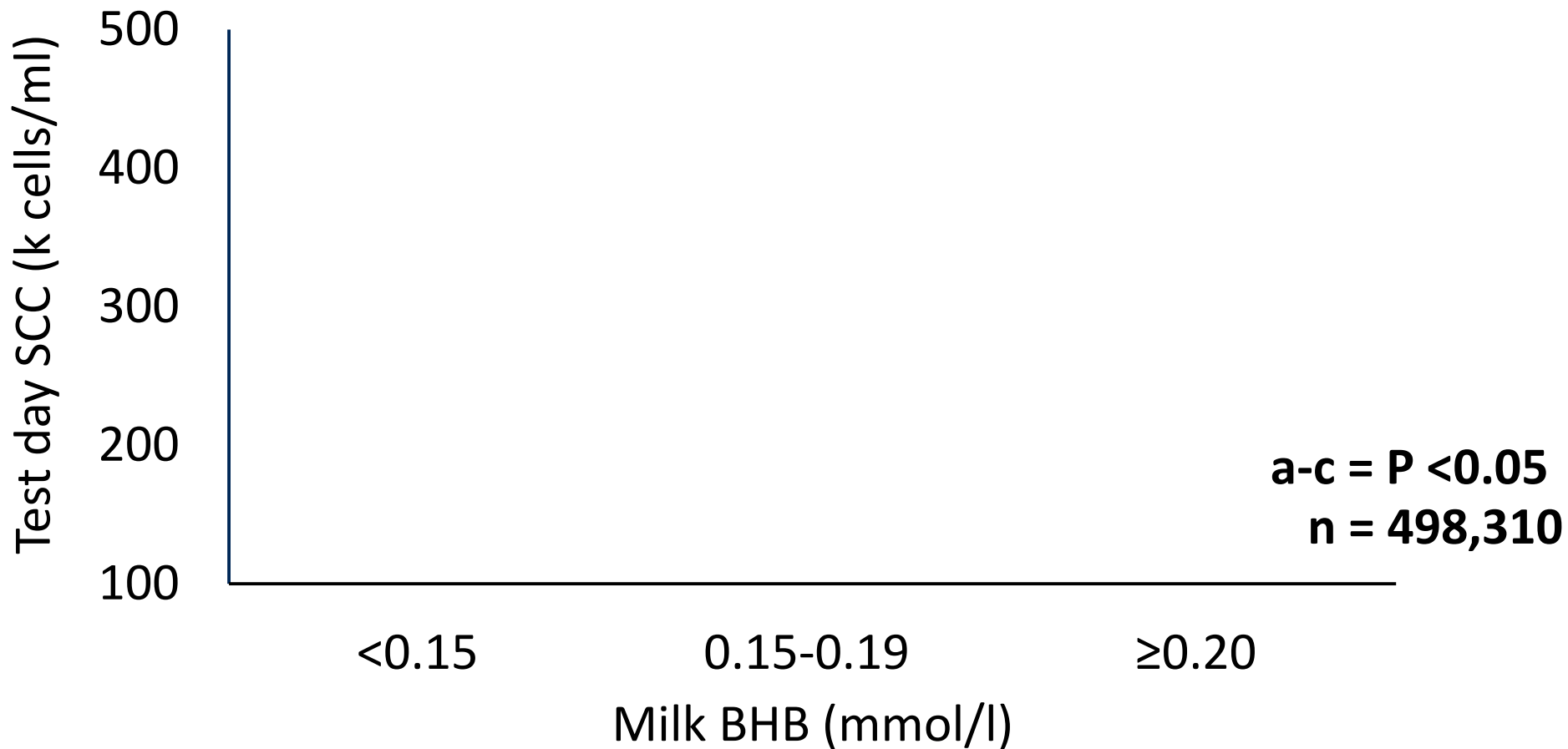


▶ No consensus on correlation

MILK BHB AND MILK YIELD



MILK BHB AND MASTITIS



FARMER'S COMMENT



Mike Larson, general manager of Larson Acres (2,400 dairy cows)

“We were surprised to learn just how many of the cows in our herd had subclinical ketosis. Since there were no symptoms, the condition went otherwise undetected and untreated.”

**PROGRESSIVE
DAIRYMAN**



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“It has helped us to not only understand the frequency of subclinical ketosis in our herd but also the patterns behind the subclinical cases. This allowed us to focus on those challenge areas.”

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A MESSAGE TO TAKE HOME



- ▶ Simple, practical, rapid and inexpensive tool
- ▶ Keys to success in establishment: QA and communication
- ▶ Evidence of success of ketosis screening in various countries

