AI4AS · EAAP — GHENT · 2026

Dairylens: AI-enabled decision support delivering measurable time savings, improved farmer well-being, and reduced environmental footprint in dairy systems

M. Atzori · I. E. Cigagna · C. Mariani

Dairy Lens SrL · Via Santa Chiara 17, 09092 Arborea, Italy

THE DAILY REALITY

> «I have data, but
> no time to analyse it.»

— dairy managers, in their own words

THE REAL BOTTLENECK

Not a data problem.

A decision time problem.

The questions have always existed. The answers took hours of skilled analysis — so intervention arrived late, or never.

THE SYSTEM

Raw farm data → an action list, in seconds.

01

Multi-source ingestion

Milk recording, SCC, fat, protein & urea, repro events, BCS, feed rations, field maps — any format.

02

AI synthesis layer

LLM-based analysis reads cross-domain signals together, surfacing interactions no single report would reveal.

03

Structured outputs

A prioritized action list, quantified impact estimates, and contextual explanations across health, nutrition & reproduction.

+ Climate THI heat-stress maps · 7-day forecast

+ Benchmark herd KPIs vs regional baselines

+ Transparency built on validated science

IN ACTION

From raw SCC data to a ranked action list — in seconds.

1. Every animal scored by urgency
2. Mastitis + acidosis + urea read together
3. Three plain-language next steps

PRIORITY ACTION LIST · HERD #04

RANK	FARM NO.	SCC K/ML	MILK KG/D	KEY ALERTS
1	654	**1,539**	11.6	Chronic mastitis · High LS
2	1026	**1,067**	8.5	Chronic mastitis · High LS
3	028	**321**	7.6	SCC high · low urea
4	678	—	43.0	High LS · low urea · acidosis
5	596	—	7.4	Lowest producer · High LS

THREE POINTS TO ACT ON

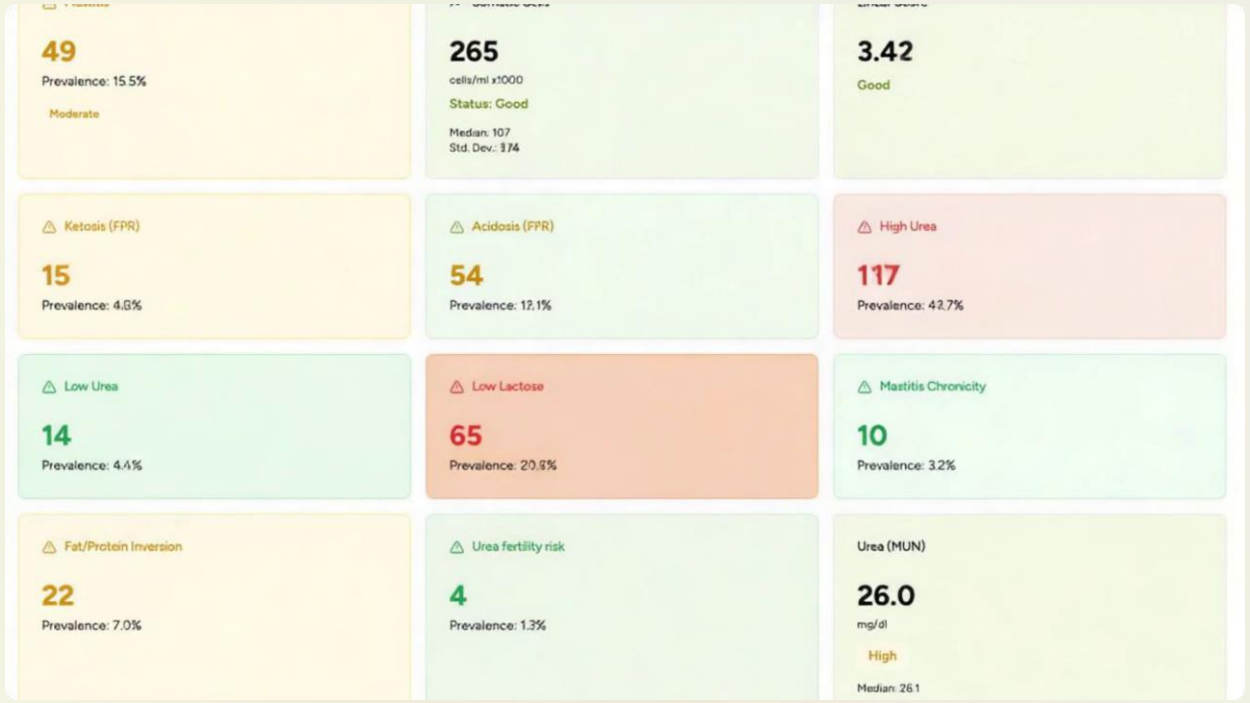
1. Cows 654 & 1026 are urgent — SCC above 1M in dry cows. Do not wait.
2. Cow 678 needs a confirmed SCC before any final decision.
3. Check pregnancy status on cows 596 & 028 before culling.

THE PRODUCT

Every indicator on one screen.

Mastitis, somatic cells, ketosis, acidosis, urea, lactose and fertility risk — read together and color-coded by severity, the moment a test lands.

No dashboards to build. No reports to cross-reference.



ASK YOUR FARM ANYTHING

A barn that answers back.

- Answers based on your specific farm data
- Simple language, no complex dashboards
- 24/7 — answers at 11 PM, not next week

Which cows should I check first today?

Start with **654 and 1026** — chronic mastitis, SCC over 1M. Confirm 678's SCC before deciding, and check pregnancy on 596 & 028 first.

Why is herd urea high this week?

Protein oversupply in the current ration — 20% of samples show excess. Trimming it cuts nitrogen waste without touching yield.

THE COST OF WAITING

An alert three weeks late isn't a slow alert.

It's a missed intervention.

TRANSITION COW · 5–40 DIM

The performance window

Miss the first test-day and the whole lactation trajectory is set — repeating in **54%** of underperformers.

METABOLIC HEALTH · 0–100 DIM

The intervention window

Risk caught at this stage prevents milk loss averaging **0.6 kg/day** across the full lactation.

KETOSIS RISK · 0–42 DIM

The critical window

High-risk cows are **3×** more likely to fall in the worst percentile — and only cross-domain data catches them.

Fourdraine · Adriaens et al. · ICAR 2026

WHY IT MATTERS

The value is in the timing, not just the insight.

1 **Time is a production input**

Hours spent parsing reports are hours not spent intervening. DairyLens reassigns them.

2 **Speed changes the decision**

Cross-domain signals read together, before the window closes

BEYOND THE PRESENT · PREDICTIVE MODELLING

From today's snapshot to mid-range scenarios.

The same cross-domain model that reads today's data projects it forward — simulating how the herd is likely to evolve weeks ahead, so decisions land before the trend sets.

01

Production trajectory

The expected yield curve under current management — and how it shifts the moment you intervene.

02

Health & risk horizon

Where ketosis, mastitis and fertility risk are heading — weeks before the clinical signs appear.

03

Quality & footprint

Projected milk composition and emissions per litre — the PDO and sustainability view, ahead of time.

SCENARIO PLANNING

Test the decision before you make it.

Take a herd with a rising somatic-cell trend. The model projects each path 60 days out — so the trade-off is visible before, not after.

STAY THE COURSE

↑

Loss compounds

SCC keeps climbing; the 0.6 kg/day gap widens across the whole lactation.

ACT THIS WEEK

✓

Trajectory stabilises

Early correction holds the yield curve and caps the loss inside the first 60 days.

WAIT THREE WEEKS

→

Only partial recovery

The window is half-closed — most of the recoverable value is already gone.

Illustrative mid-range projection · model output, not a guarantee

dairylens

Smarter farms, sustainable future.

-35–50%

Less time on analysis

Q4 2026

Go to market

20+

Pilot farms in Italy

—

Claudio Mariani

claudio.mariani@dairylens.ai