



SenseHub®

Milk Monitoring Technology



SenseHub® Inline
MilkPlus Sensor



SenseHub® Inline
SCC Sensor

Freedom of **knowing your cow's production** from every milking

Monitoring Milk Quality

Nutrition is one of the key drivers for maximising peak milk yield and sustaining it throughout the lactation. As grass makes up the majority of the diet, grass quality will influence energy intake and milk solids production.

Herds can maintain milk yield by maintaining grass quality and supplementing when needed to meet the total requirements. It is important for milk fat and protein percentages to be continuously improving post peak yield while also limiting milk yield decline (target less than 2.5% per week) to carry these constituents for greater overall milk solids performance.

Variations in milk constituents can be an indicator of metabolic disorders

Apart from the financial benefits of improving milk quality, variations in milk constituents can be an indicator of metabolic disorders.

For example:

- If the butterfat to protein ratio is above 1.2 : 1 in freshly calved cows, it could be an indicator of ketosis, suggestive of an energy deficit.
- Levels of below 1.1 : 1 could be an early indicator of acidosis, suggestive that more structural fibre is required.
- A fall in butterfat or protein of 0.3% or greater in one week is a warning sign for poor rumen function and potentially the occurrence of subacute ruminal acidosis.

The Importance of Mastitis Control

Mastitis can result in significant losses on farm, it can reduce milk yield and lead to poor milk quality, negatively affecting income. Antibiotic treatment of udder infections adds to costs, stress and antibiotic usage on farm. High somatic cell counts (SCC) can also have a major impact on the profitability of dairy farms.

A Teagasc study¹ of the economic impact of mastitis on the profit of Irish dairy farms at five somatic cell counts (SCC) thresholds returned the following figures:

SCC (cell/ml)	<100,000 cels/ml	100,001 – 200,000 cels/ml	200,001 – 300,000 cels/ml	300,001 – 400,000 cels/ml	>400,000 cels/ml
Net farm profit	€31,252	€26,771	€19,661	€16,936	€11,748

The study found that the average dairy farm can improve net profitability by at least 1 cent per litre by improving mastitis control to reduce SCC.

The Veterinary Medicine Regulation (Regulation 2019/6), which became law in January 2022 requires farmers to move towards 'selective dry cow strategies', involving a more targeted use of antibiotic treatments. With preparation, planning and good management this can be successfully adopted on farm.



CostCheck Economic Calculator

The CostCheck calculator allows dairy farmers to estimate the potential gains in profit from reducing the incidence of mastitis on their farm. This tool was developed by Teagasc researchers in consultation with Animal Health Ireland CellCheck Technical Working Group².

SCC threshold (cell/ml)	50,001-100,000	100,001 – 200,000	200,001 – 300,000	300,001 – 400,000	>400,000
Annual milk production loss for each SCC threshold, L/yr ¹	177	351	485	544	601

These figures outline the cost of milk yield loss in a 100 cow herd. Additional costs such as mastitis treatment, culling and heifer replacement are not included.

Milk Price	50,001-100,000	100,001 – 200,000	200,001 – 300,000	300,001 – 400,000	>400,000
€0.60	€10,620	€21,060	€29,100	€32,640	€36,060
€0.50	€8,850	€17,550	€24,250	€27,200	€30,050
€0.40	€7,080	€14,040	€19,400	€21,760	€24,040



For a more detailed calculation visit the **Animal Health Ireland Cost Calculator**

Individual Cow SCC Dynamics

Individual cow SCC is an indirect way of estimating the likelihood of mastitis in a cow. Uninfected cows generally have SCC levels of below 100,000 cells/mL. A rise in SCC above 200,000 cells/mL generally indicates that an infection has occurred. Different infecting bacteria may cause different SCC patterns. Subclinical cases of *Staph. aureus* may have cell counts that rise and fall, showing an irregular pattern during lactation. SCC in cows with *E. coli* tends to rise rapidly and then drops over a short period of time.

Stress may also increase SCC levels slightly in cows, but the greatest increases are seen in infected cows. Elevated individual cow SCC levels not associated with infection may occur shortly after calving or in late lactation when milk yield is reduced. However, in uninfected quarters this elevation is minimal.



Using milk recording reports and individual cow SCC results, farmers can monitor SCC throughout the lactation.

Measure what counts



SenseHub® Inline MilkPlus Sensor

Provides fast data for milk yield, fat, protein, lactose, blood and conductivity for every cow for every milking.

Make more-informed management decisions using individual cow milk data throughout the entire lactation.

Cows are identified via entrance ID and their milk data is available on the SenseHub® Dairy App.

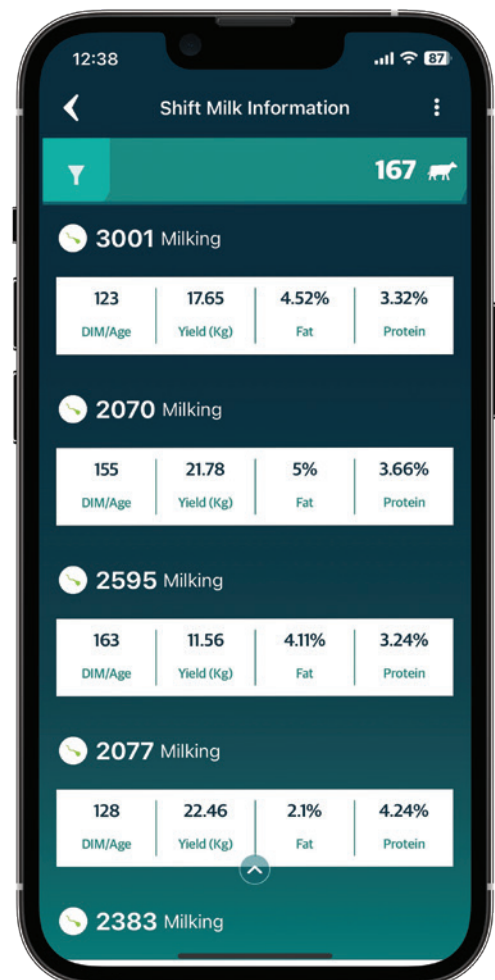
MEASURE. UNDERSTAND. ACT.

Fully connected to the SenseHub® Dairy App

With SenseHub® Dairy milk reports and graphs, farmers have individual milking, daily and lactation milk production insights, so they can make decisions to optimise productivity and animal well-being.

When combined with SenseHub® Dairy heat and health monitoring and drafting, farmers can improve workflow to **farm with more freedom.**

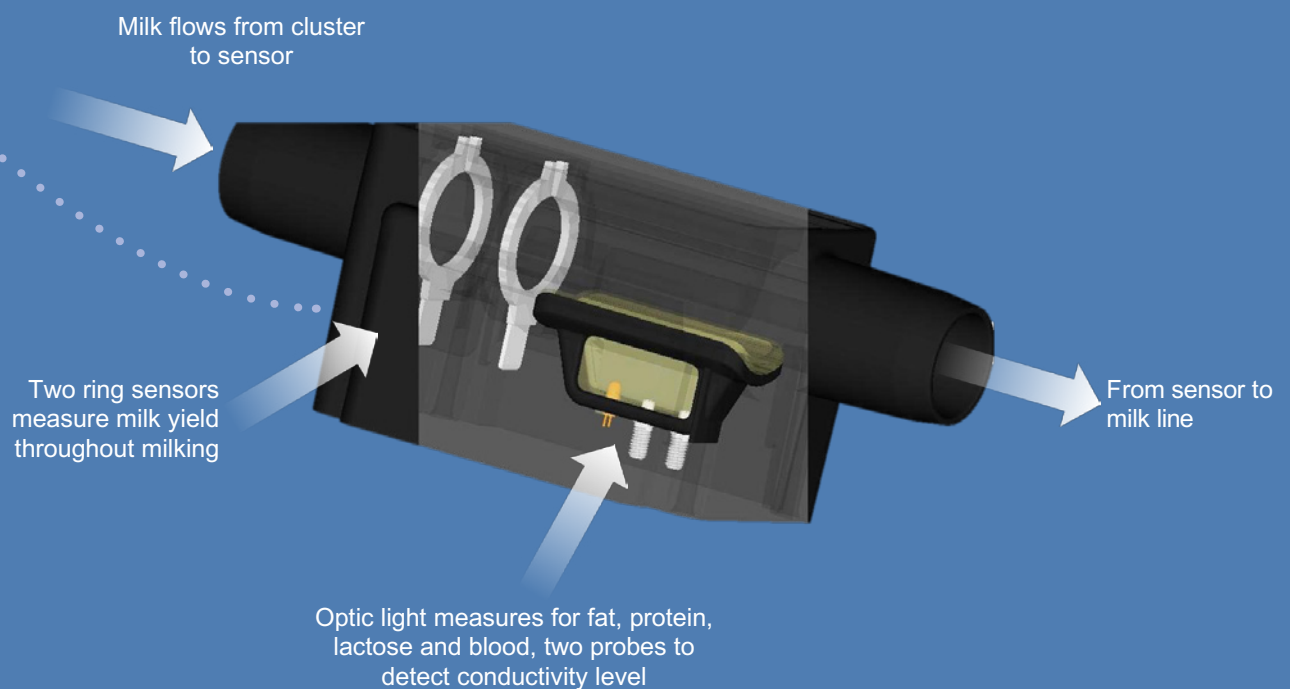
- ✓ Gain knowledge of each cow's milk production
- ✓ Assess your nutrition and feeding strategy
- ✓ Insights for informed breeding decisions



**Actionable insights
into your cow's milk
quality and yield – no
matter which milking
parlour type or brand –
with the SenseHub® Dairy
Inline MilkPlus Sensor**



How it works



Maintain milking schedules with installation and support from MSD Animal Health

Irrespective of whether you're a SenseHub® customer today, you can take advantage of enhanced insights and milk quality control.

Test what matters



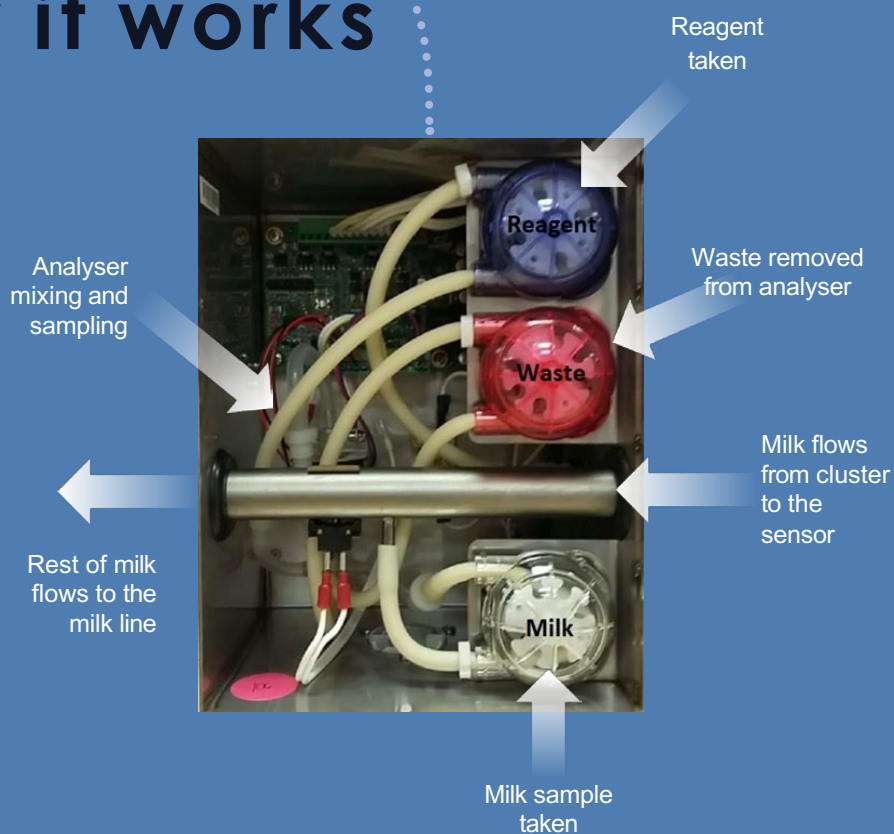
SenseHub® Inline SCC Sensor

Provides automated somatic cell counts count readings at individual cow level at every milking.

- Automated California Mastitis Test (CMT)
- Reliable results in less than two minutes
- Aids to reduce the spread of mastitis in the herd
- Identify high SCC cases during milking
- Make more-informed decisions
- Act quickly to protect milk quality and profitability

TEST. UNDERSTAND. ACT.

How it works





Integrate into any parlour type and brand

- SenseHub® Inline SCC Sensor can be retrofitted into any existing milking parlour
- This inline technology functions without interruption to your milking routine
- Can be part of the connected SenseHub Ecosystem or operate as a standalone

Make informed decisions using the traffic light system

As milking begins, the SCC Sensor takes a milk sample from each cow. Within two minutes the result is displayed using a traffic light system, enabling farmers to quickly identify high SCC cases.

Once the SenseHub Inline SCC Sensor has tested the milk sample, the result is displayed via the optical warning lights in the parlour and the information is also available on the SenseHub Dairy App.

SCC Ranges

SCC level 0-200

1 Green



SCC level 201-400

2 Orange



SCC level 401-800

3 Orange



SCC level 801-2M

4 Orange



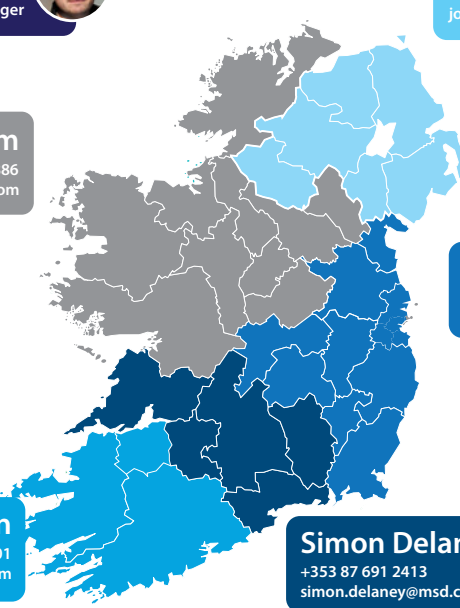
SCC level >2M

4 Red



Freedom is knowing help is always on hand when you need it

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Regions:

- Antrim, Down, Derry, Armagh, Fermanagh, Tyrone
- Carlow, Dublin, Louth, Laois, Meath, Offaly, Wexford, Wicklow, Kildare
- Clare, Kilkenny, East Limerick, Tipperary, Waterford
- Cavan, Donegal, Galway, Leitrim, Longford, Mayo, Monaghan, Roscommon, Sligo, Westmeath
- Cork, Kerry, West Limerick

SenseHub® Dairy Milk Monitoring is part of the SenseHub® Dairy Ecosystem.

Get more from SenseHub® with dedicated teams and tools.

References

1. Geary, U., N. Lopez-Villalobos, N. Begley, F. McCoy, B. O'Brien, L. O'Grady and L. Shalloo. 2012. Estimating the effect of mastitis on the profitability of Irish dairy farms. J. Dairy Sci. 95(7): 36623673.
2. <https://animalhealthireland.ie/programmes/cellcheck/costcheck-economic-calculator/>



Learn more on our website

Open the camera on your phone and scan this QR code to visit website.



This product is not intended to diagnose, treat, cure, or prevent any disease in animals. For the diagnosis, treatment, cure, or prevention of disease in animals, you should consult your veterinarian. The accuracy of the data collected and presented through this product is not intended to match that of medical devices or scientific measurement devices.

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