



Vision: The experts' choice for **semen quality analysis** accessible to anyone, anywhere.

FOOD
SECURITY

SUSTAINABLE
FUTURE

ZERO
HUNGER



Addressing Global Food Security through efficient livestock production



By 2050

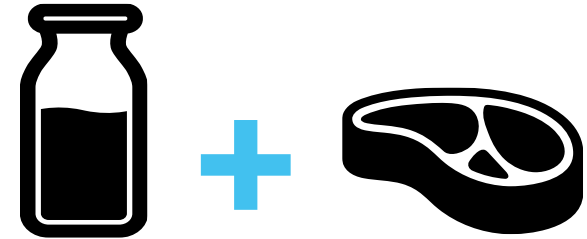
The world population is
projected to reach

9 BILLION

**The world needs to produce
more food than ever**

Global milk and meat
consumption is
expected to increase
50% or more

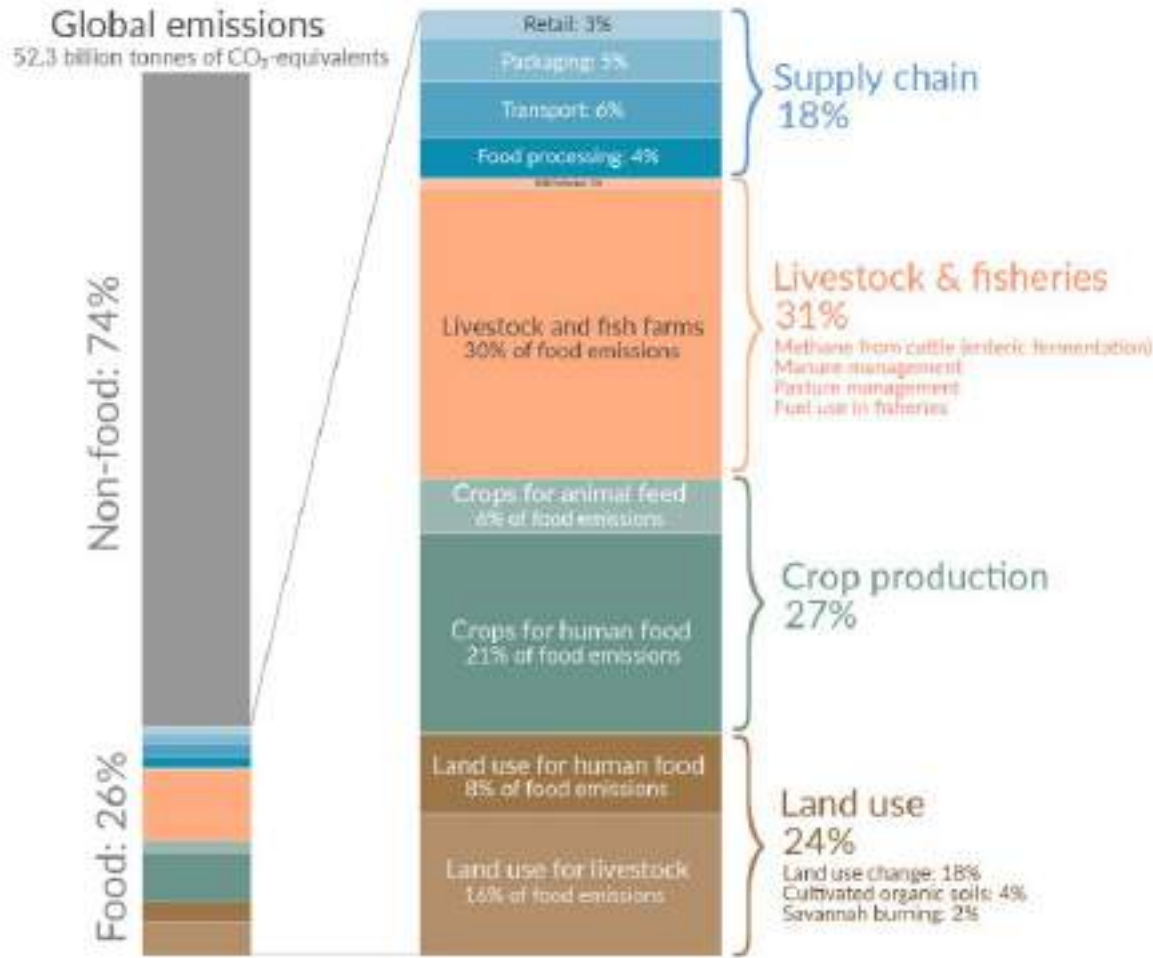
www.ourworldindata.org



**Technology enables more efficient
and sustainable production**

Impact of livestock production on the environment

Global greenhouse gas emissions from food production Our World in Data



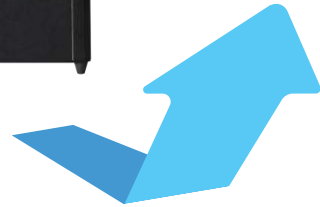
Ruminant livestock, mainly cattle, produce methane through their digestive processes (in a process known as 'enteric fermentation')

GHG emissions intensity 25x worse in pastoral settings

Data source: Joseph Poore & Thomas Nemecek (2018) Reducing food's environmental impacts through producers and consumers. Published in Science. Licensed under CC BY by the author Hannah Ritchie (Nov 2021).

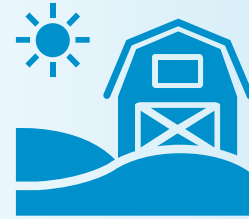
The benefits of raising conception rates (CR)

UK example



=

CR can be raised by 20%
to return to 1960s levels



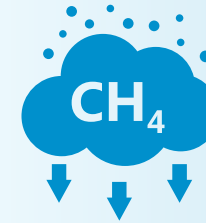
Return Profits

For the average UK Dairy farmer of up to

£37K per year

* Based on a farm with 148 cows

+



Towards Net Zero

Reduce methane emissions by

7.5%



Raise profits on farm

Through reducing calving interval



Reduce greenhouse gas emissions

Per litre of dairy/meat protein produced



Reduce land-use

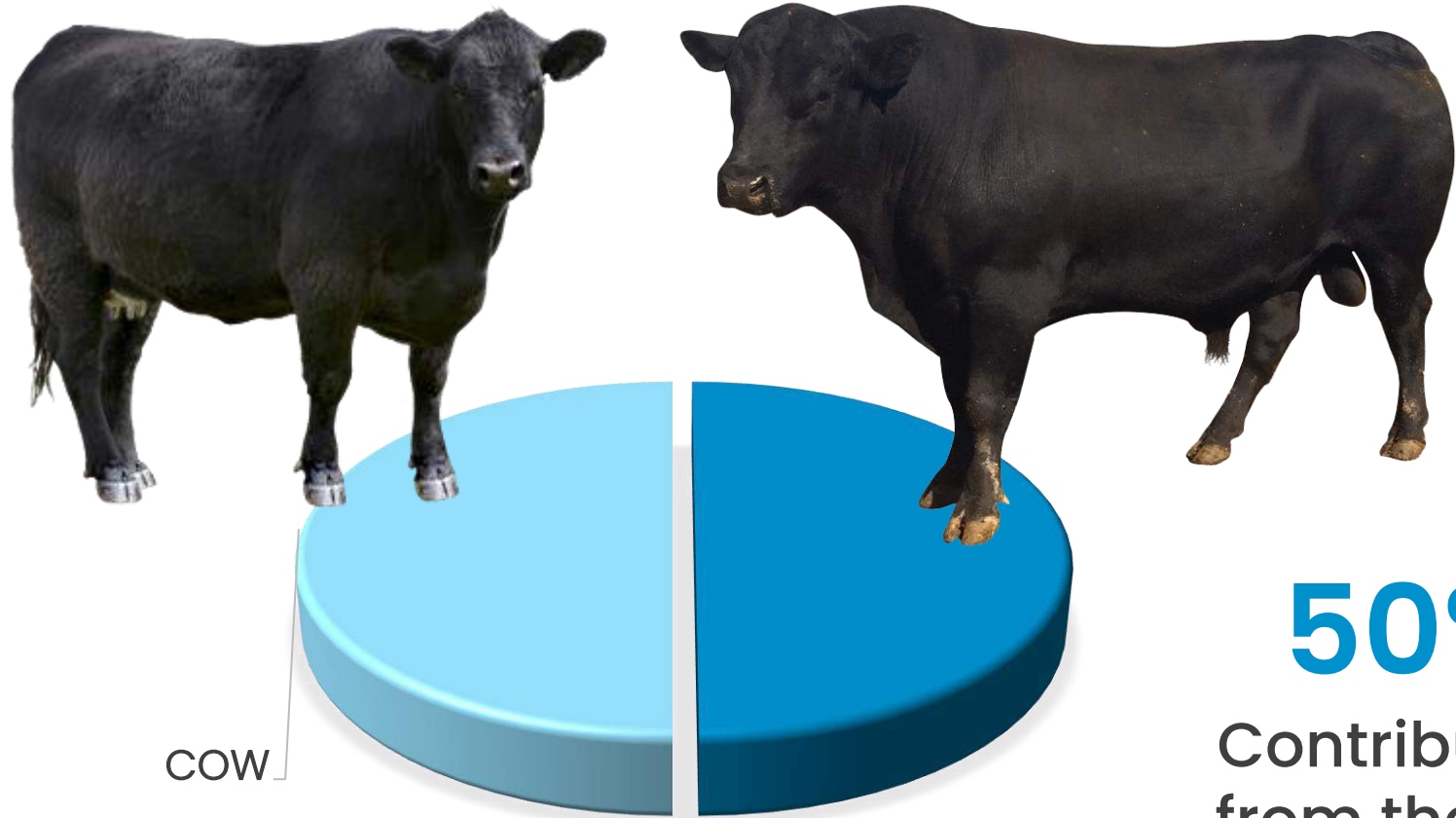
Per litre of dairy/meat protein produced



Accelerate genetic gain

Of fertile cows with high milk yield, able to withstand heat etc.

Male fertility is 50% contribution to successful conception



Data Courtesy of: Dr. Sergio Marcantonio

What is motility?

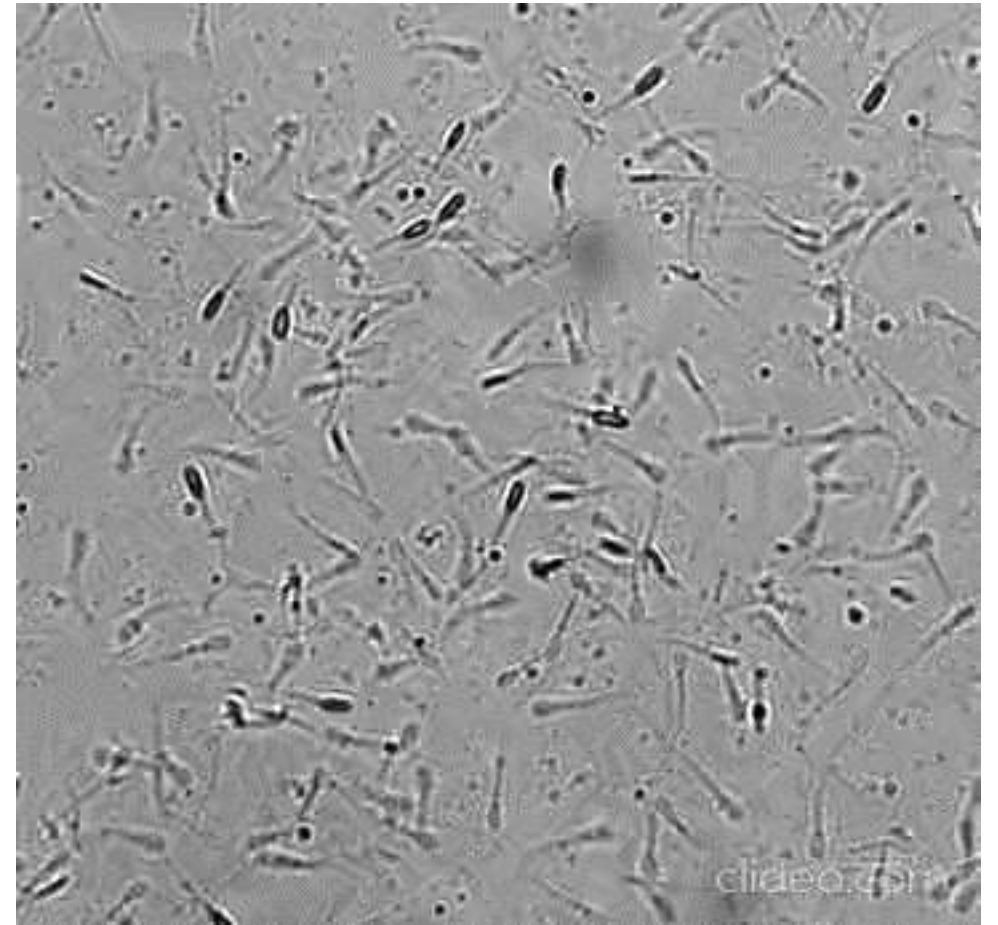
Motility describes the ability of a microorganism, such as a sperm cell, to propel itself.

% Progressive Motility

The number of sperm cells moving in fairly straight lines x 100 / total population.

Mean Swimming Speed

Average swimming speed for all cells that are considered progressively motile.






Dynescan Semen Quality Analyser



The first semen lifetime analyser

DYNESCAN

Brought to market for
Livestock Production in
2022

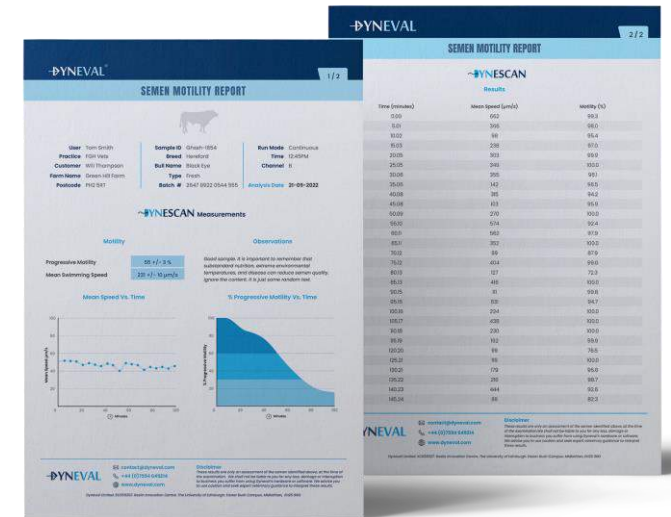


-  Portable
-  Precise
-  Practical

-  % Progressive Motility
-  Mean Swimming Speed

INNOVATIVE PATENTED TECHNOLOGY

At the click of a button, customers download **PDF certificate reports** of their results



Competitive advantages

Overcoming existing limitations



	1677	1985	2022
Portable	✓	X	✓
Wide concentration range (1–550 M cells/ml)	✓	X	✓
Precision <5% standard deviation	X	X	✓
User independent	X	X	✓
Assess Sustained Motility Lifetime NEW !	X	X	✓
API available	X	X	✓
Measure within minutes	X	X	✓
Price	LOW	HIGH	MEDIUM

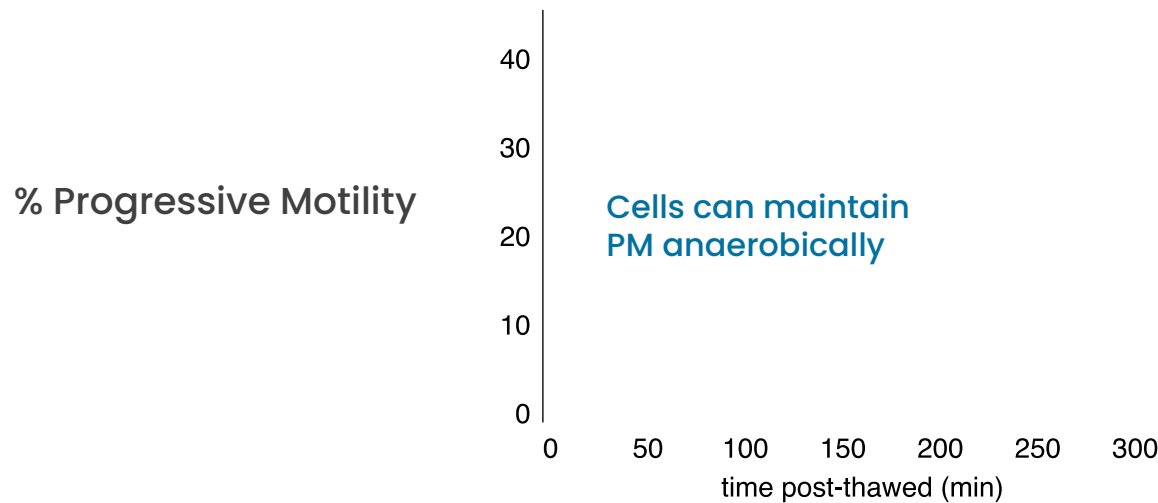
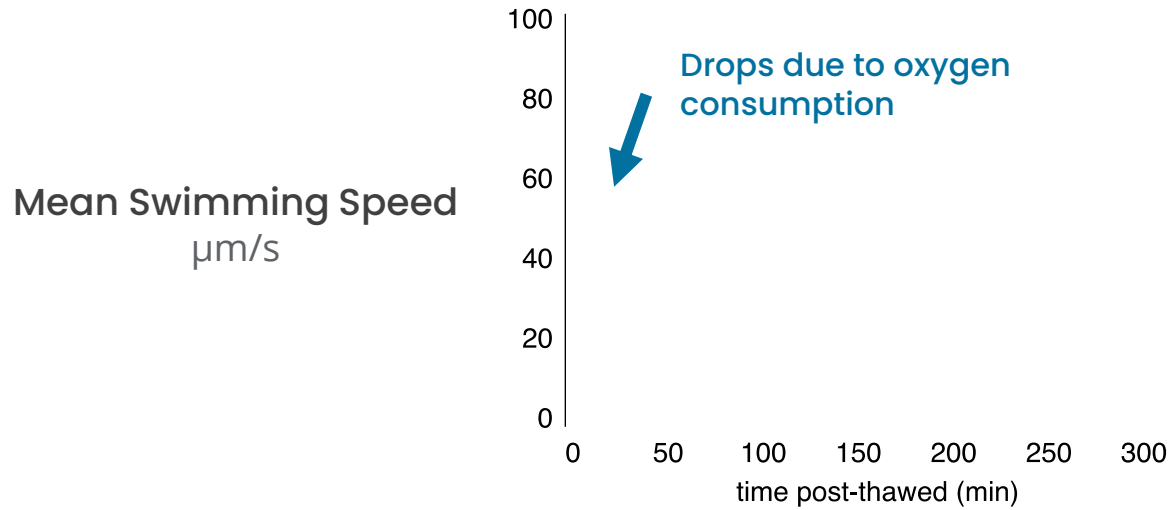
Purchase

£ 9,950




Software license from £1,125 p.a.

Dynescan is the first semen lifetime analyser

A single "click & go"



Precise data to explore factors affecting motility

-  Metabolic health
-  Genetic factors for good flagellum structure and function
-  Improved extenders

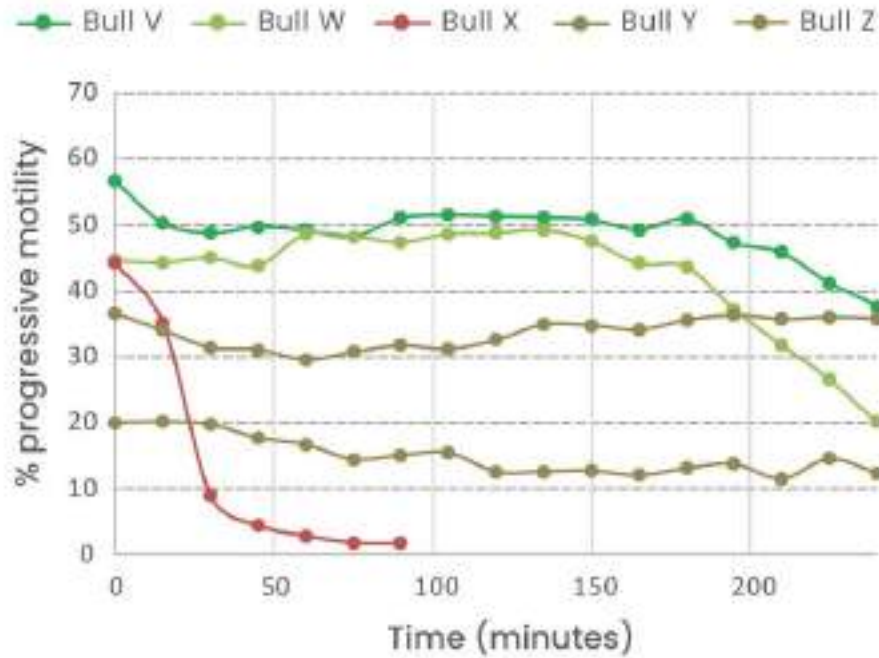
Identify whether semen is robust

in warm, low oxygen conditions similar to the oviduct



Variability between straws from different bulls

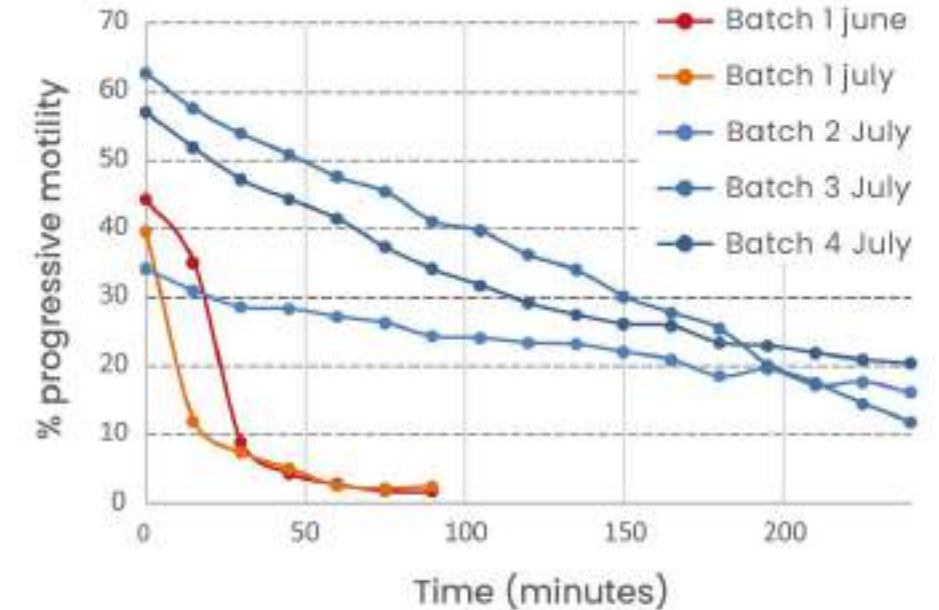
Dynescan measurements on 5 straws from different bulls
Bull X could not sustain motility



Variability between batches from the same bull

Dynescan measurements on Bull X but different batches
Clearly, an issue with batch 1 - batch to batch variability huge

Consistent decline in % prog motility – genetic factor?

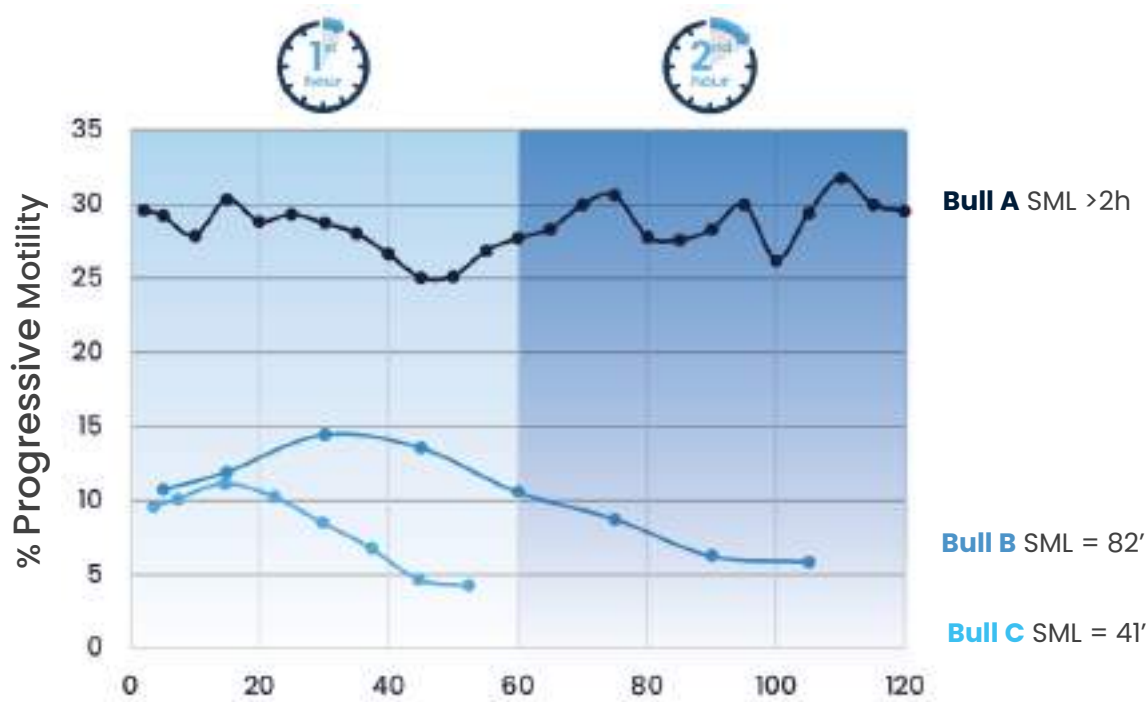


A new index to compare batches: SML

Semen quality is highly variable and can deteriorate over time.

Introducing a new index Sustained Motility Lifetime

SML | Time taken for % motility to reduce by 40%



SML quantifies whether semen is robust

Helps to inform breeding plans, e.g.

- Recommend fixed time AI?
- Choice of batch for heifers versus COWS

Conception rate versus Semen Motility Lifetime (SML)

On farm data collected by 2 independent vets using 28 batches of semen over 7 farms, over 2000 inseminations

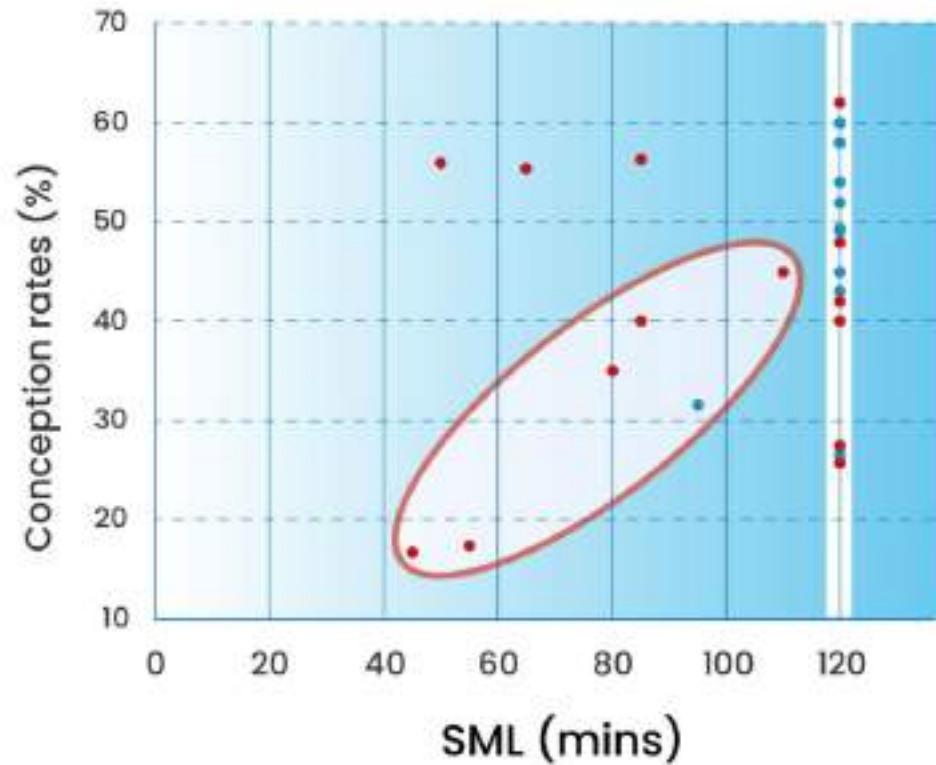
7.8% Average CR increase if semen lifetime is > 2h



SML guides breeding plans for optimal conception results

SML > 2 hours
47.1%

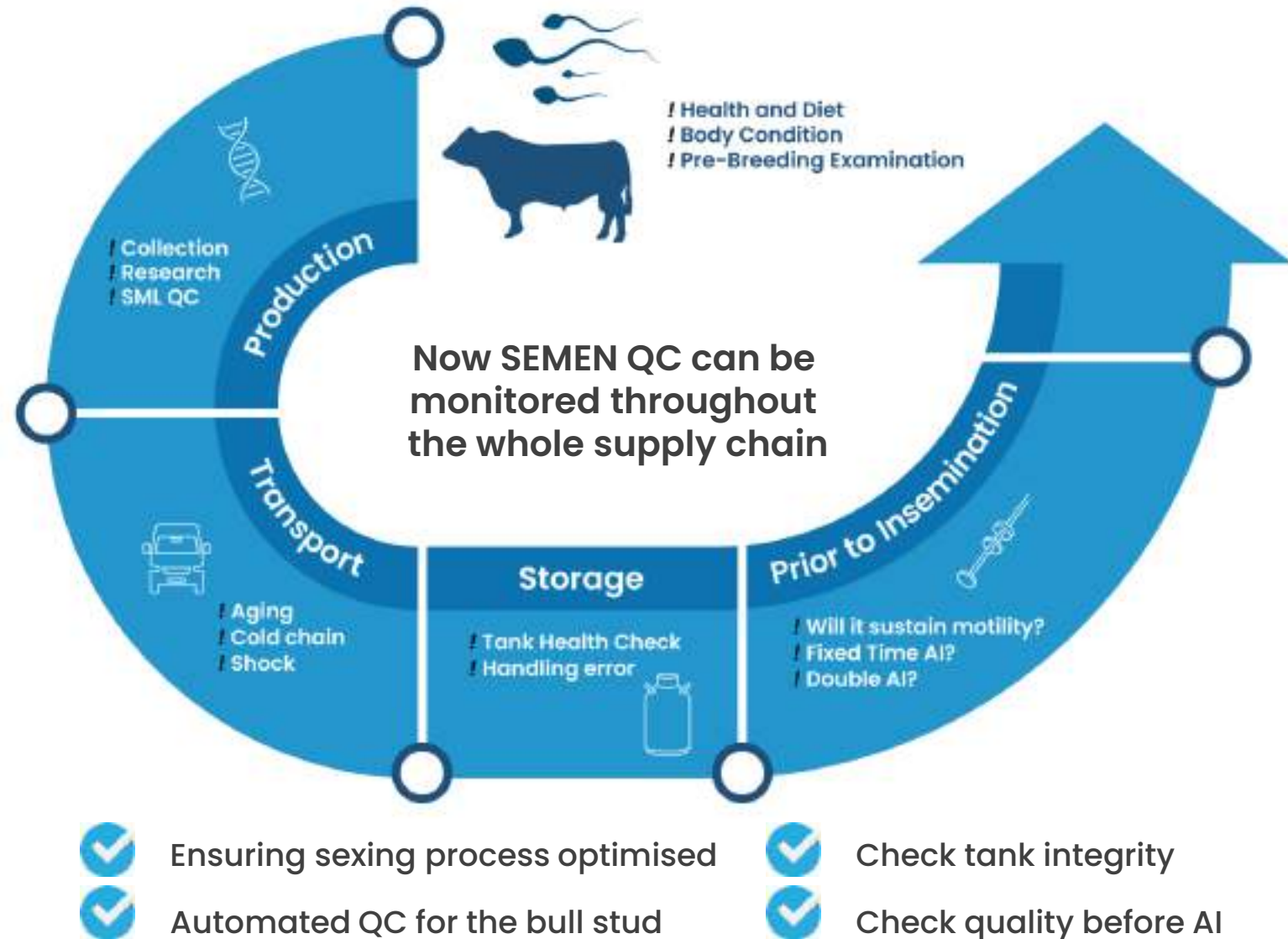
SML < 2 hours
39.3%



Red – sexed
Blue – conventional

QC for importation and distribution, from stud to farm

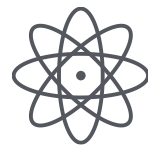
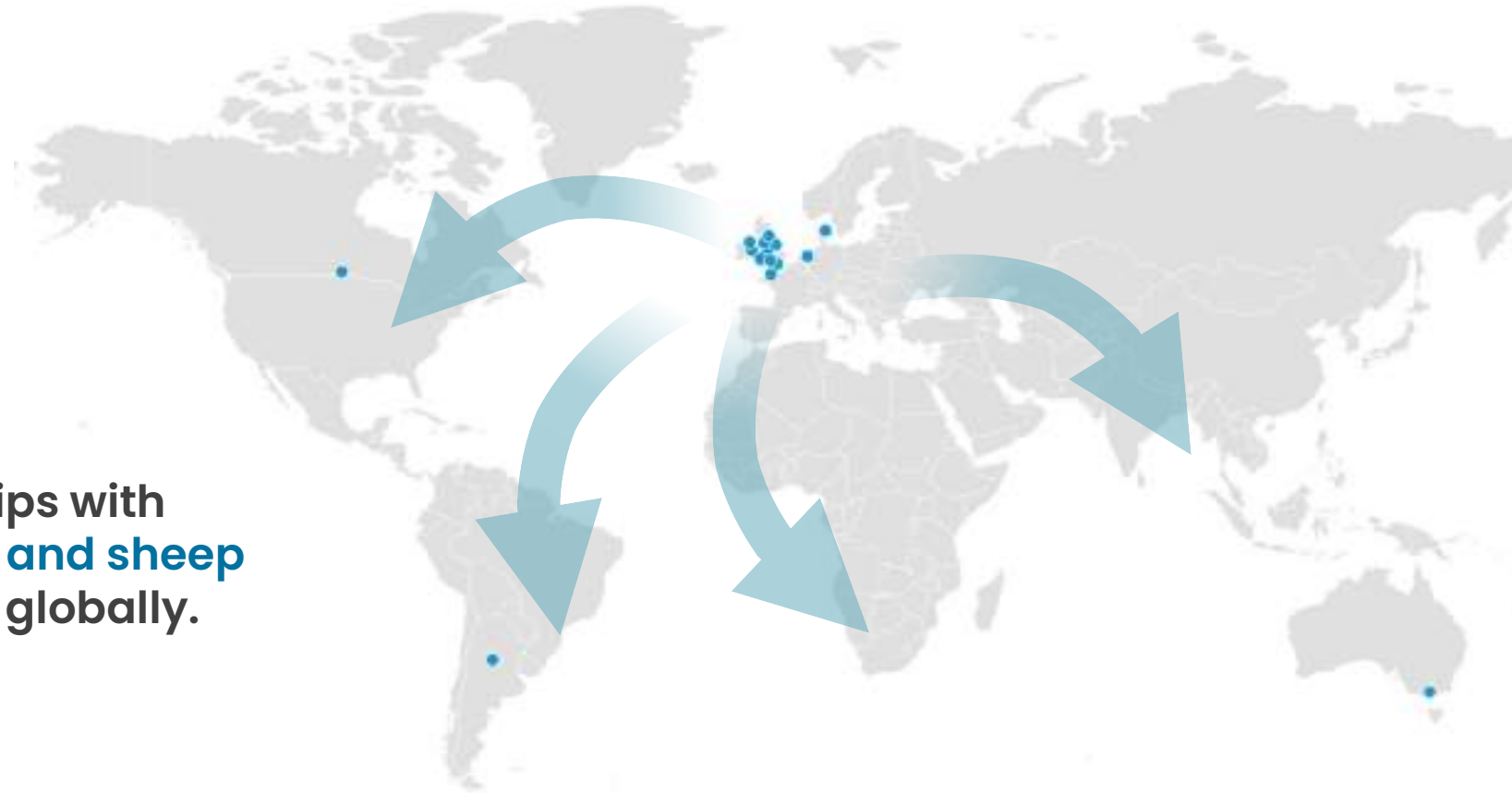
Automated Dynescan measurements should be reproducible within 5%



Dynescan Certified Users

Dyneval's global network is growing fast

Building relationships with partners in **dairy, beef and sheep** production markets, globally.



Genetic Companies



Veterinarians



Large Farms

Vet and farmer case studies

A new standard for Semen Quality Assessment



" Dynescan measurements ensure that vets can provide speedy and reliable advice to farmers looking to **improve productivity and profit margins** rates. "

Tom Oxtoby
UK Vet



" Preg Rate drives the efficiency of our AYR calving herd. A poor batch of semen can destroy planned calvings **having a Dynescan to test semen on farm seems a logical step forward.** "

Scott C.
UK farmer



" am exhilarated with the amazing technology that you are working on... Its one of the things that can really **help in sorting out so many infertility and genetic concerns when it comes to selection of right bulls to collect semen from.** "

Roulex G. Owino
MW Vet &
One health Advocate



FOR MORE INFO

Get in touch!



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