Webinar 29-10-2021

Lars Nielsen, VikingGenetics

VikingGenetics

- Owned by 22,000 cattle farmers in Denmark, Sweden and Finland

- Daughter companies in:

  - Australia
  - United Kingdom
  - Germany

Hollola, Finland

Skara, Sweden

Headquarter Assentoft, Denmark

Viking Focus

- **Needs for dairy cattle farmers**

  - Profit
  - Easy, fertile, healthy and long lasting cows
  - Easy and clear solutions

  - Respect we are producing **FOOD** with sustainable solutions
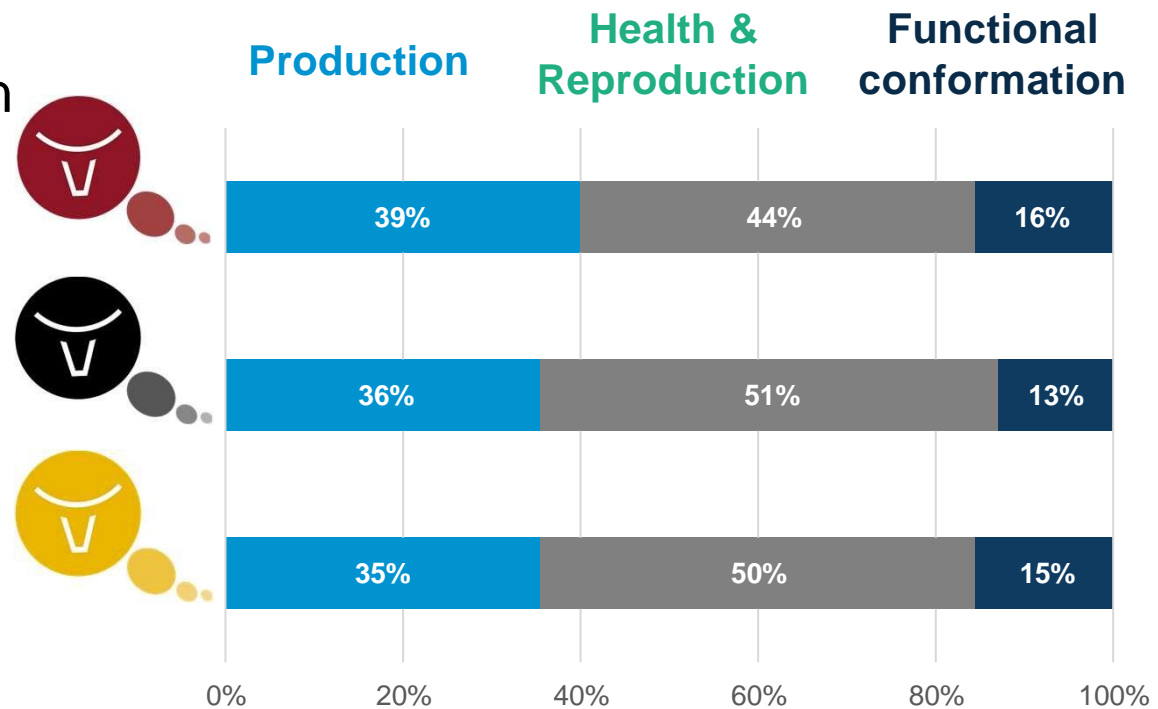
How to create profit

- **Increase income**
  - High production
    - Keep cows longer = higher production
  - Slaughter animals
  - Export / Sale of heifers

- **Lower the costs**
  - Less diseases
  - Easier cows = less work
  - Better reproduction

NTM is profitability

- NTM is composed by all the traits that have an economical impact on the dairy business

- Approx. 10 euro per unit

	Production	Health & Reproduction	Functional conformation
	39%	44%	16%
	36%	51%	13%
	35%	50%	15%

0% 20% 40% 60% 80% 100%

Updated: 2019-02-05

Make a long lasting cow

Trait	Correlation %
NTM	45
Daughter fertility	35
General health	40
Hoof health	32
Udder health	46
Feet & legs	22
Udder	31
Yield	-8
Body	-25

Figures from Holstein genomically tested cows, NAV 2018

Low use of antibiotics in combination with high production
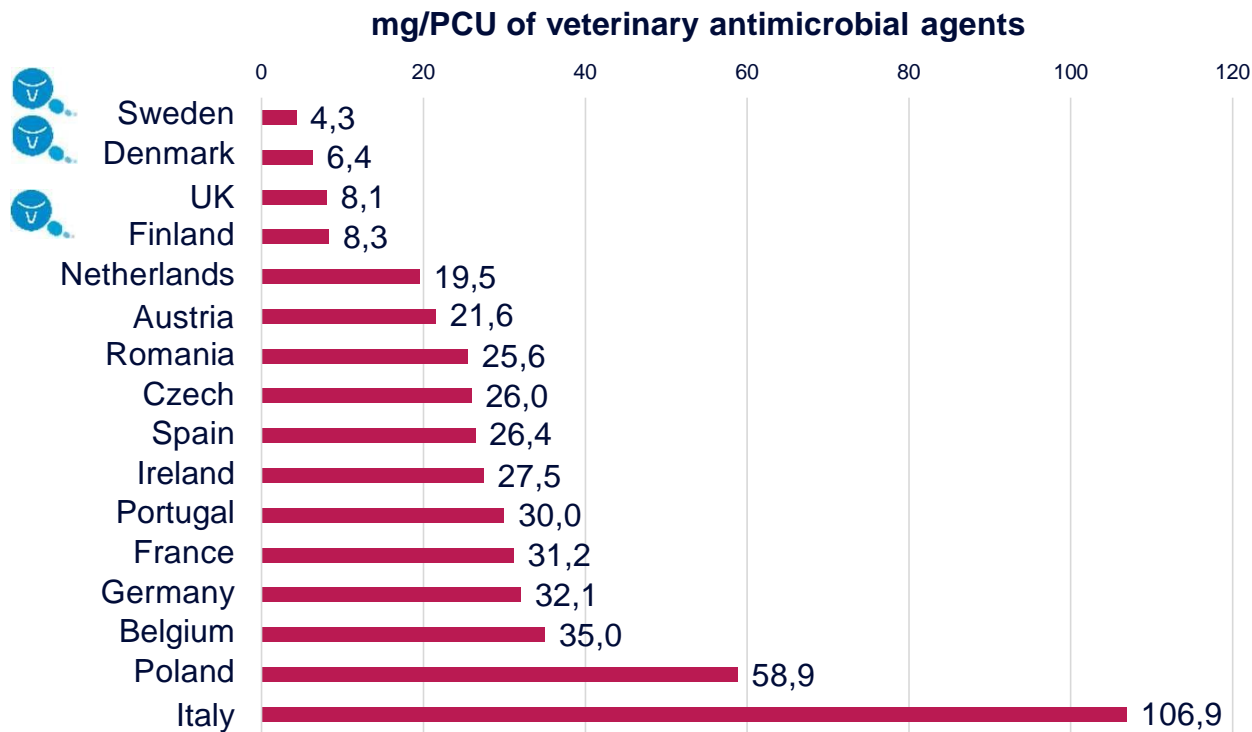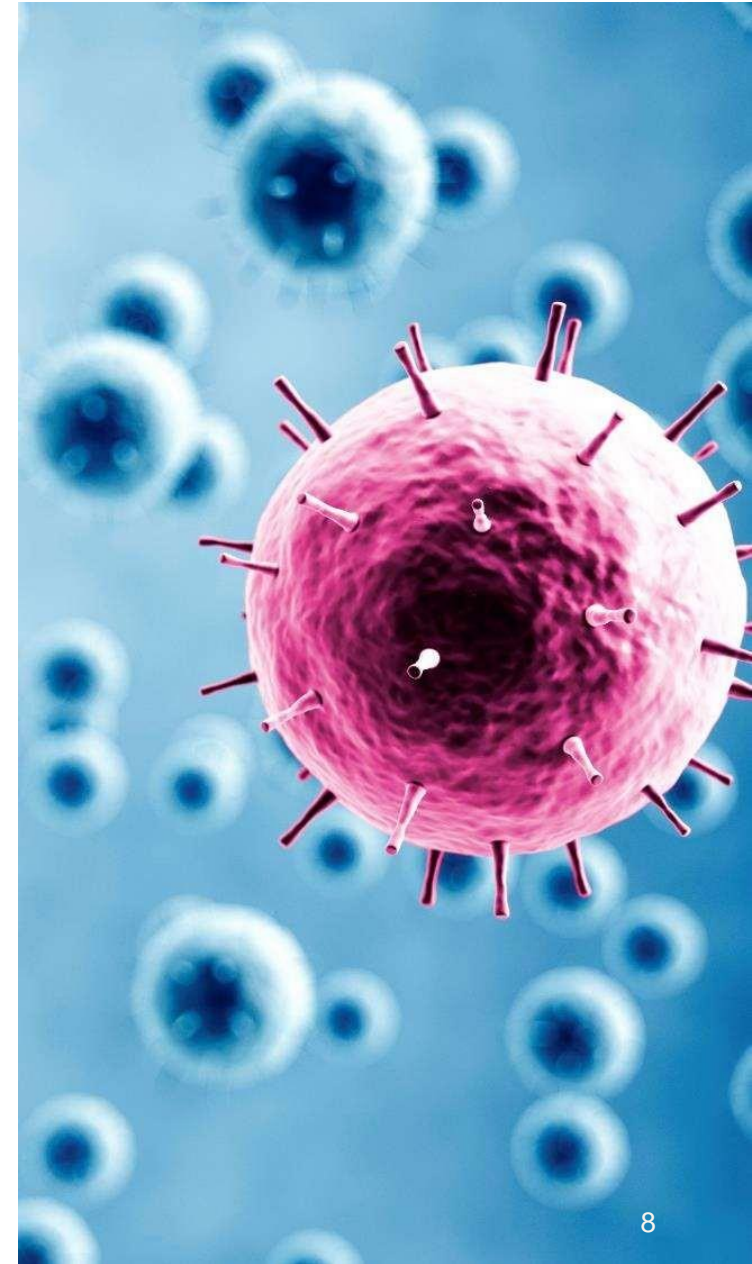
6.2mg/PCU

33.8mg/PCU

7,518 kg

9,387 kg

7

Lowest use of antibiotics

Sales in mg/PCU (Population correction unit) of veterinary antimicrobial agents marketed for food-producing animals 2017 weighted according to the proportion of cattle. The graph includes countries >215 PCU of cattle.
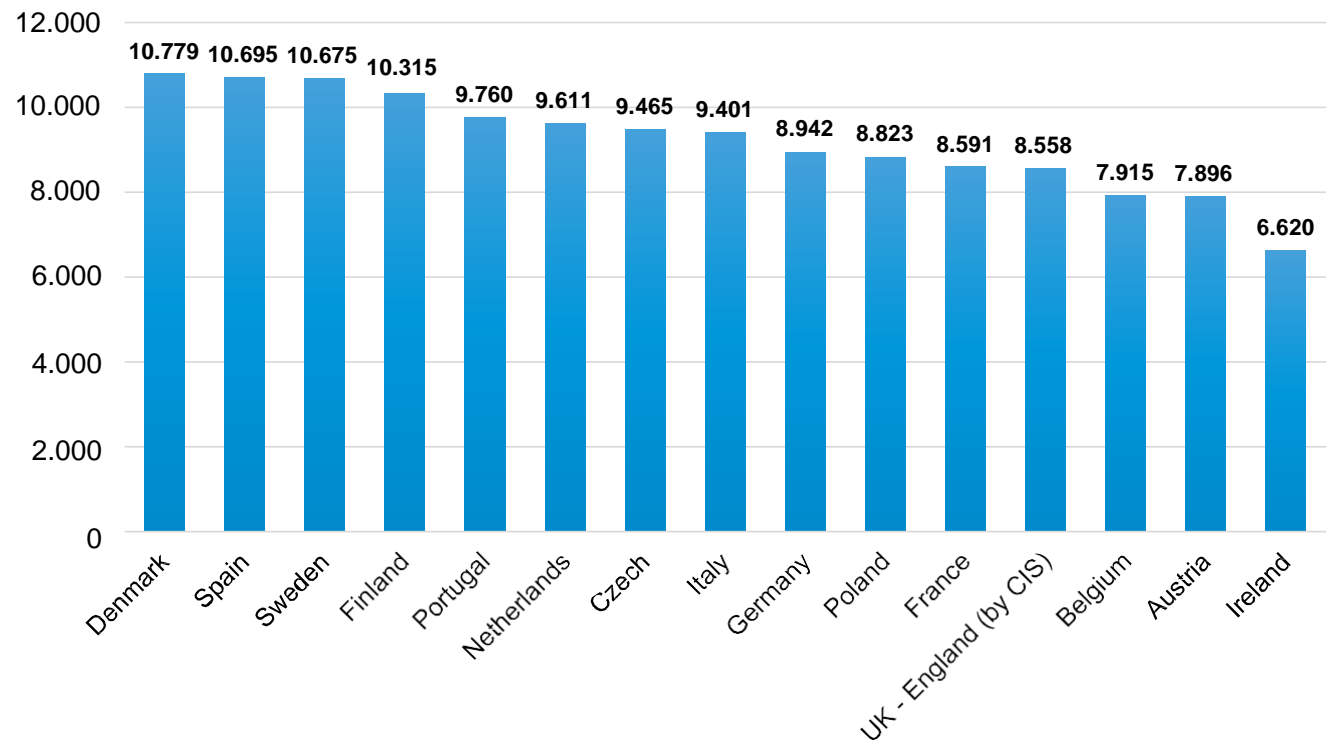
mg/PCU of veterinary antimicrobial agents

Country	mg/PCU
Sweden	4,3
Denmark	6,4
UK	8,1
Finland	8,3
Netherlands	19,5
Austria	21,6
Romania	25,6
Czech	26,0
Spain	26,4
Ireland	27,5
Portugal	30,0
France	31,2
Germany	32,1
Belgium	35,0
Poland	58,9
Italy	106,9

Source: Adapted from the report by the European Medicines Agency, European Surveillance of Veterinary Antimicrobial Consumption, 2019. 'Sales of veterinary antimicrobial agents in 31 European countries in 2017' (EMA/294674/2019).

Highest milk yield

305 days milk production by country, all breeds together

Country	Value
Denmark	10.779
Spain	10.695
Sweden	10.675
Finland	10.315
Portugal	9.760
Netherlands	9.611
Czech	9.465
Italy	9.401
Germany	8.942
Poland	8.823
France	8.591
UK - England (by CIS)	8.558
Belgium	7.915
Austria	7.896
Ireland	6.620

Source: ICAR (2020): Portugal & Italy (2019) & NAV 2021 (DK, SE, FIN)

9

Reliable breeding values – DATA

Health data
90%

Milk recording
95%

Fertility data
100%

Classify the whole herd
50%

Electronic hoof trimming data
35%

RELIABLE BREEDING VALUES

BEST HERD MANAGEMENT TOOL

VIKINGGENETICS
innovative breeding

How to reduce lameness ?

Hoof problems do not only cause pain and distress for dairy cattle, but also have a huge impact on the economy of dairy farms…**and reduce longevity**

Hoof health
Powered by VikingGenetics

registrations since
2003

first Hoof Health index
2011

VIKING
HOOF HEALTH ™

Breed for Hoof Health

VIKING GENETICS
innovative breeding

VH Clark
130 hoof
health index
means

- 20% less heel horn erosion
- 53% less digital and interdigital dermatitis
- 49% less sole ulcer
- 17% less sole hemorrhage
- 20% less double sole & white line
- 70% less verrucose dermatitis

Dairy Cross Concepts

GOLDENCROSS^R
VikingHolstein x VikingRed x VikingJersey
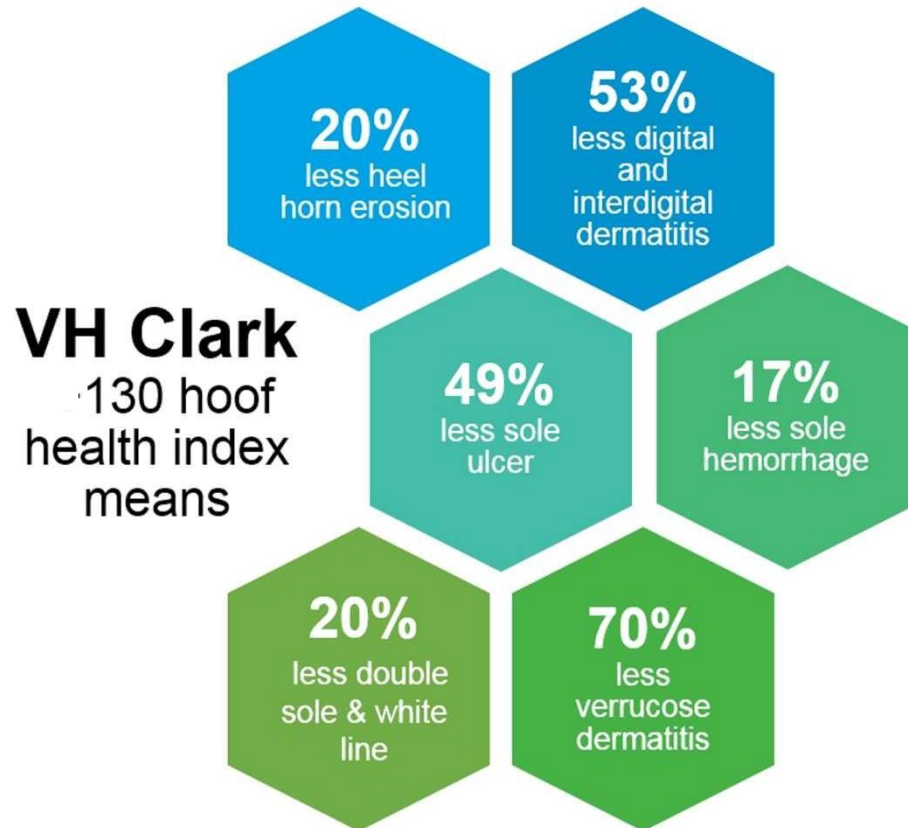
PROCROSS
MONTBELIARDE / HOLSTEIN / VIKINGRED
VIKINGRED / HOLSTEIN / MONTBELIARDE
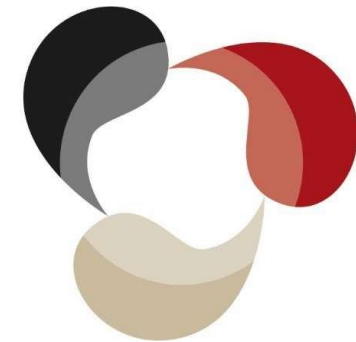
VIKING
BEEF BREEDS[R]

Designed for Beef x Dairy

Trends in dairy cattle sector

- Longer lasting cows

- More sexed semen

- More Beef semen

Cattle Feed Intake System - CFIT

measuring individual feed intake
in commercial herds using 3D
camera technology
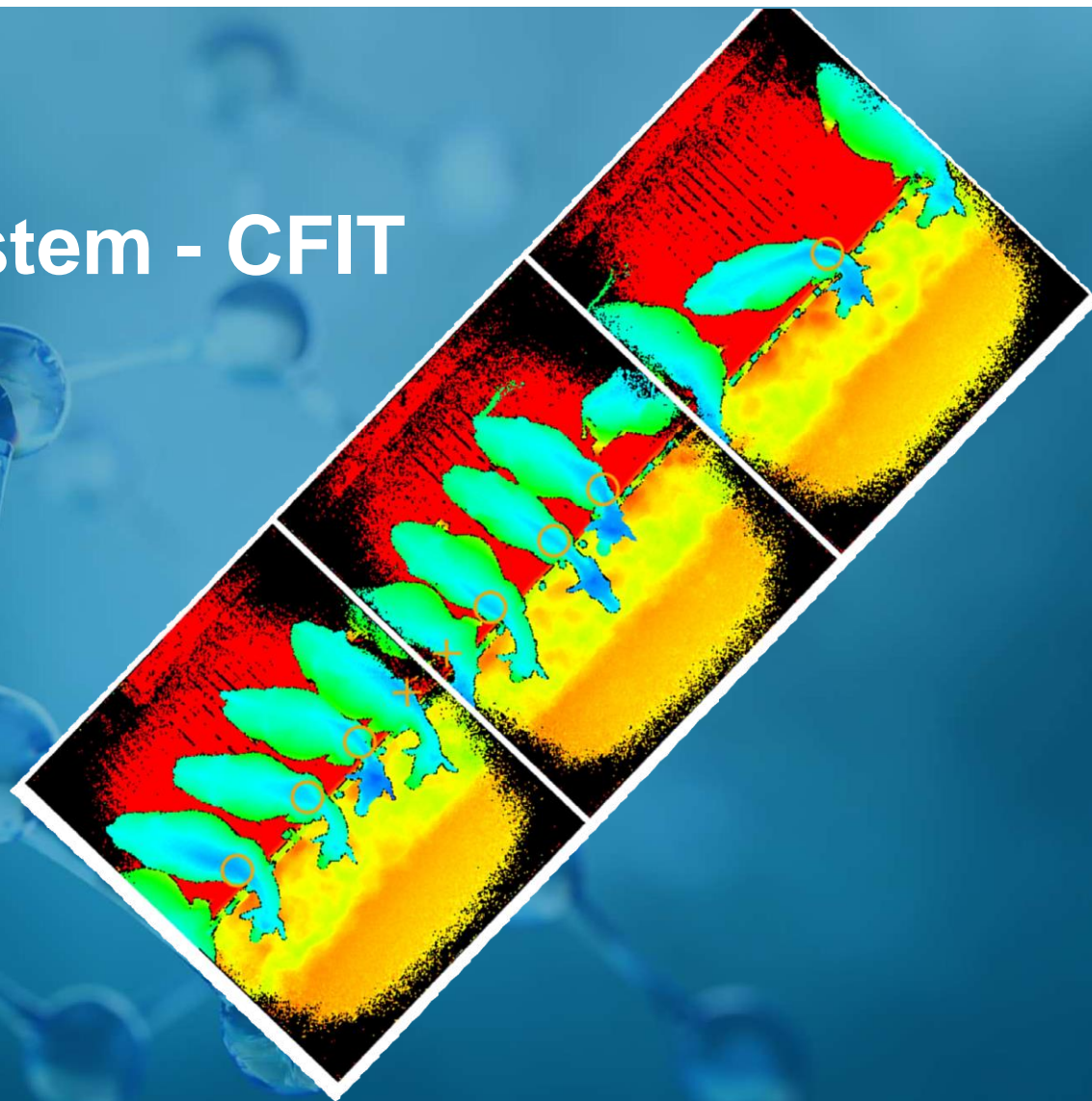
Saved feed index timeline

VIKINGGENETICS
innovative breeding

2013 The research activities for developing a genetic evaluation for feed efficiency initiated

2015

Work to develop **Cattle Feed Intake Technology (CFIT)** started

2019 Aug

EBV for **Maintenance** Efficiency published

2020 Aug

Saved feed index **included in NTM**

2020 Nov

EBV for **Metabolic Efficiency** published

18

Saved feed index

SAVED FEED = **Maintenance** + **Metabolic Efficiency**

Data: Live weight measurements and conformation traits (stature, body depth and chest width)

Require information about individual cow's feed intake, yield, weight, pregnancy, etc.

Reliable data

1 Data collected from the **commercial herds** – without disturbing the daily routines and not only from a limited number of research farms

2 Data on **individual cow's feed intake** over her **lifetime** available for the different periods in lactation
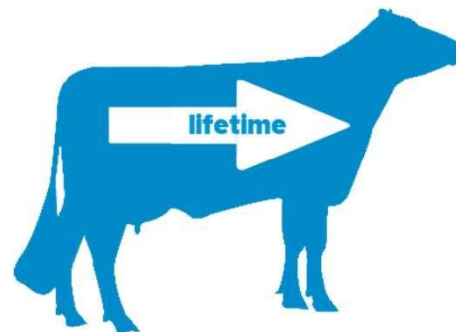
3 Data collected **across the breeds** and **herds** with different management levels

lifetime
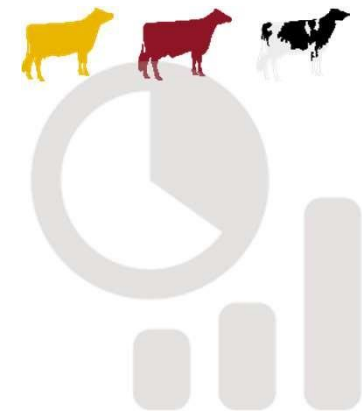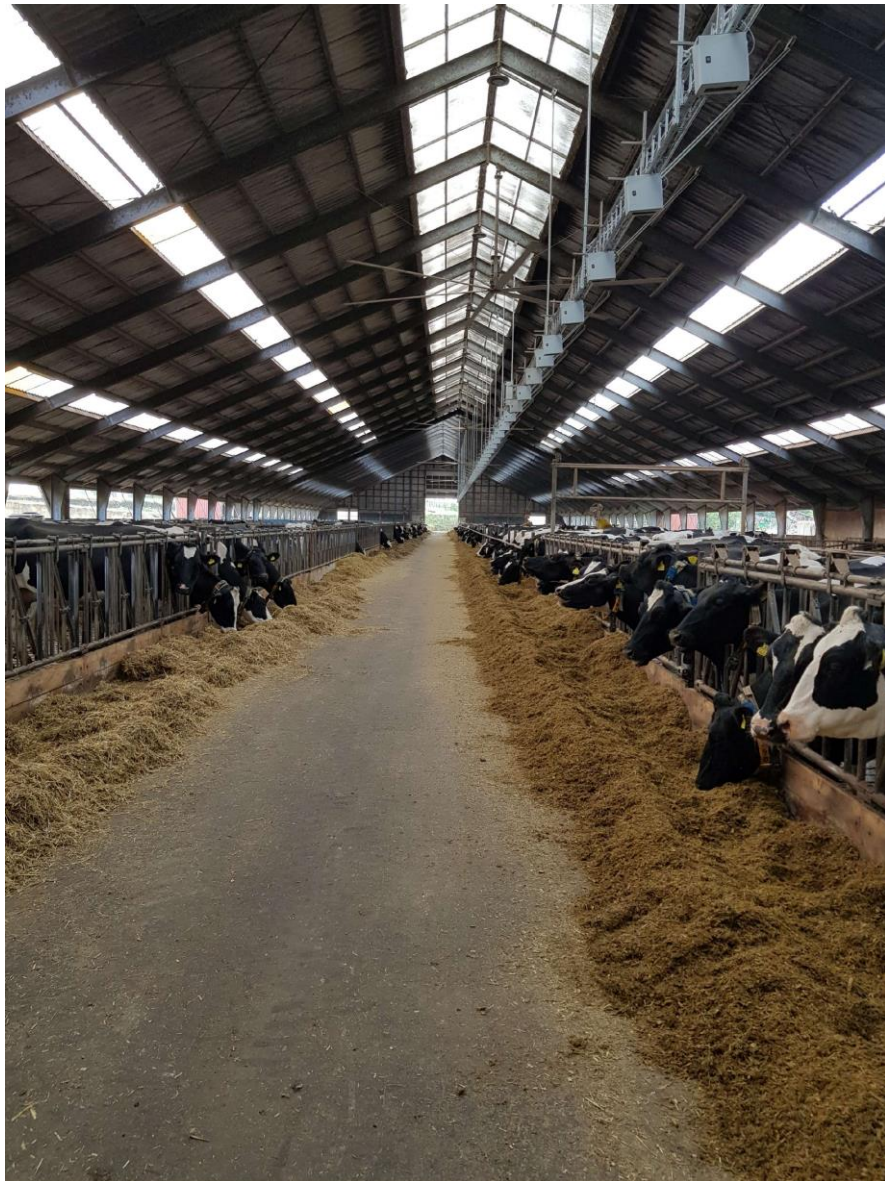
The 3 focus areas are all patented

- Identification of the cow

- Feed intake on individual level

- Body weight predicted based on shape of the back
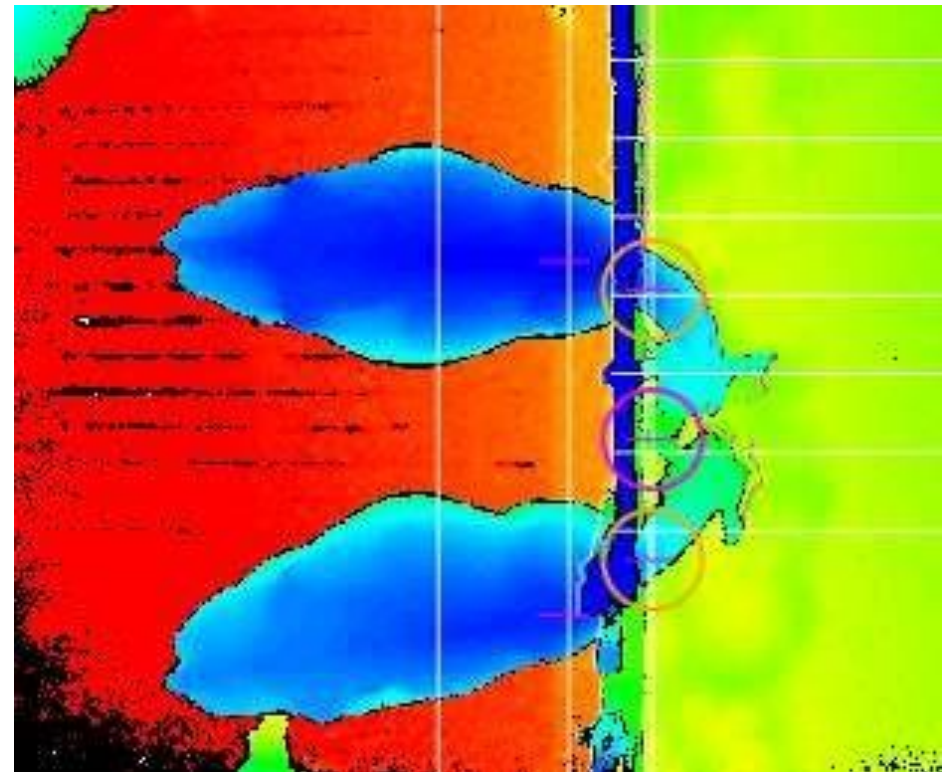
How 3D cameras work

4.5 m   2.7 m
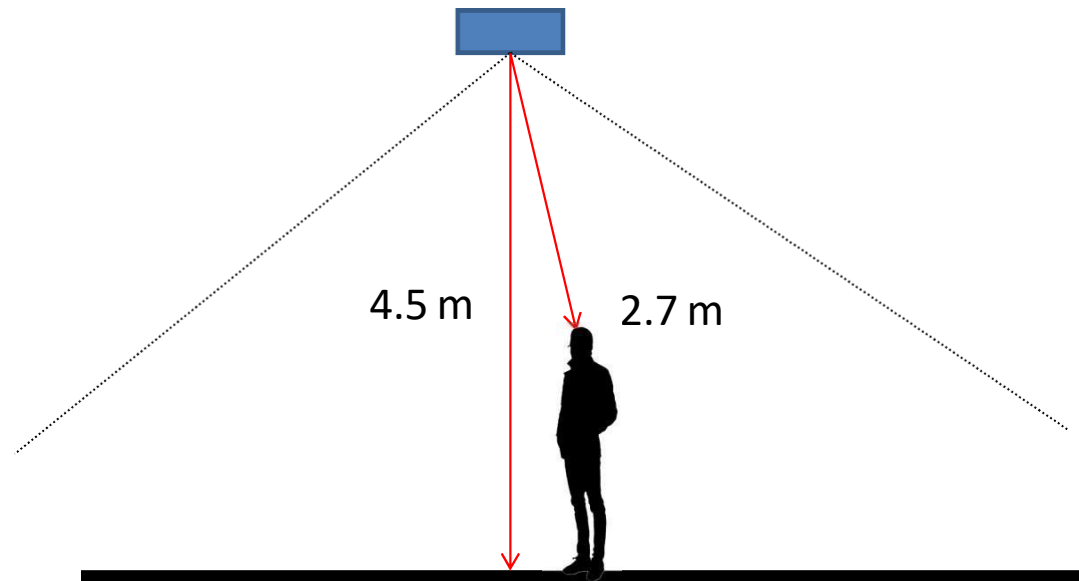
We can quantify the height of an object across and along the object – here a person which is 180 cm high

What is the relationship between camera and scale weight?

Correlation between weight and CFIT

$r^2=0.96$
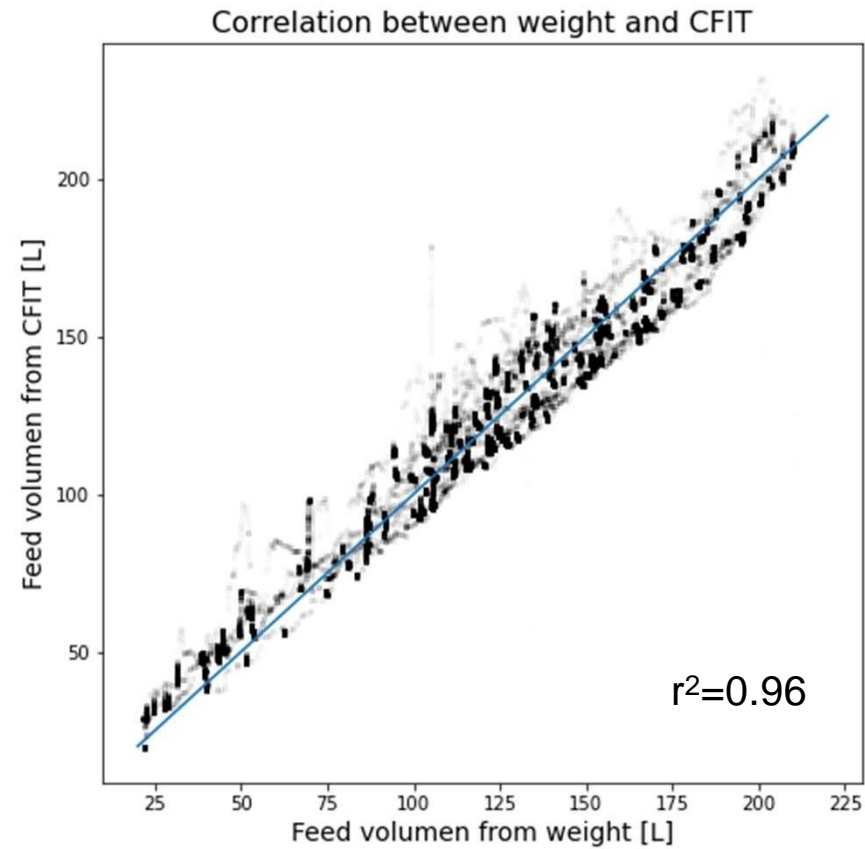
Three strong partners

I dag

NR.	Firma	Land	TOTAL DOSER Millioner	TOTAL INTERNATIONALT Millioner	% EXPORT	Racer
1	**URUS**		32	19	53%	Holstein, Jersey, Angus, Nelore, Brahman
2	**Select Sires**		24	14	55%	Holstein, Jersey, Angus, Herford, Simmental
3	**ABS-Genus**		18	14	75%	Holstein, Jersey, Angus, Herford, Simmental, Zebu
4	**Semex**		12,7	6	47%	Holstein, Jersey, Angus, Brahman
5	**CRV**		9,5	2,8	29%	Holstein, Jersey, Fleckvieh, Nelore
6	**STgenetics**		7,5	5,5	73%	Holstein, Jersey, Angus
7	**Evolution**		6	2	33%	Holstein, Normande, Charolais, Limousine
8	**LIC**		4,5	1	22%	Jersey, Holstein
9	**GGI**		3,5	1	29%	Holstein, Fleckvieh, Angus, Limousin, Simmental
10	**Genes Diffusion**		3,5	1,1	31%	Holstein, Charolais
11	**AWE**		3,5	3,2	91%	Belgien Blue
12	**VikingGenetics**		3,2	1,2	38%	Holstein, Jersey, VikingRed plus Beef
13	**Masterrind**		3	1	33%	Holstein, Jersey, Angus, Limousine, Simmental

Efter fusion

NR.	Firma	Country	TOTAL DOSER Millioner	TOTAL INTERNATIONALT Millioner	% EXPORT	Breeds
1	**URUS**		32	19	53%	Holstein, Jersey, Angus, Nelore, Brahman
2	**Select Sires**		24	14	55%	Holstein, Jersey, Angus, Herford, Simental
3	**ABS-Genus**		18	14	75%	Holstein, Jersey, Angus, Herford, Sim,ental, Zebu
4	**Semex**		12,7	6	47%	Holstein, Jersey, Angus, Brahman
5	**ARCOWIN**		**12,2**	**4,2**	**34%**	Holstein, VikingRed, Jersey, Normande, Charolais, Limousine, Jersey, Angus, Simmental, Blue
6	**CRV**		*9,5*	2,8	29%	Holstein, Jersey, Fleckvieh, Nelore
7	**ST**		7,5	5,5	73%	Holstein, Jersey, Angus
8	**LIC**		4,5	1	22%	Jersey, Holstein
9	**GGI (et coop domestiques)**		3,5	1	29%	Holstein, Fleckvieh, Angus, Limousin, Simental
10	**Genes Diffusion**		3,5	1,1	31%	Holstein, Charolais
11	**AWE**		3,5	3,2	91%	Belgien Blue