

Herd health and surveillance in Danish cattle herds

Erik Rattenborg
DVM, ph.d.
SEGES Innovation

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Content

- Organization of Danish cattle disease control programmes
- Control strategies
- Cattle disease and zoonoses programmes
- Other programmes
- Surveillance data collection
- Preparedness
- The Danish cattle database

Danish cattle production

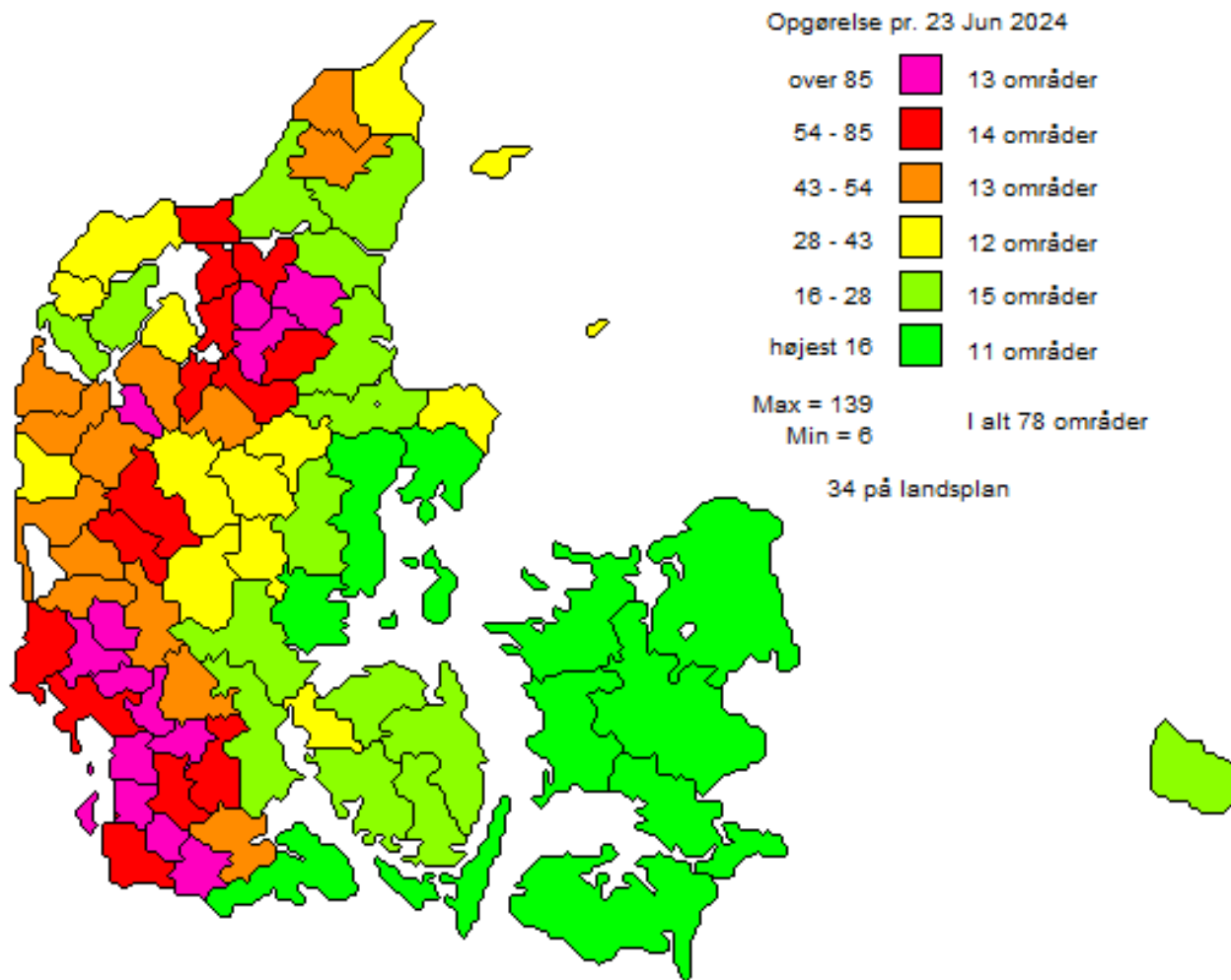
2,141 dairy herds

11,505 other types of herds (beef, slaughter calves, heifer herds)

National stock Dec. 31st 2023

Cattle in total	1,434,872
Milking cows	546,830
Beef cows	66,155

Cattle density in Denmark: Cattle per km²



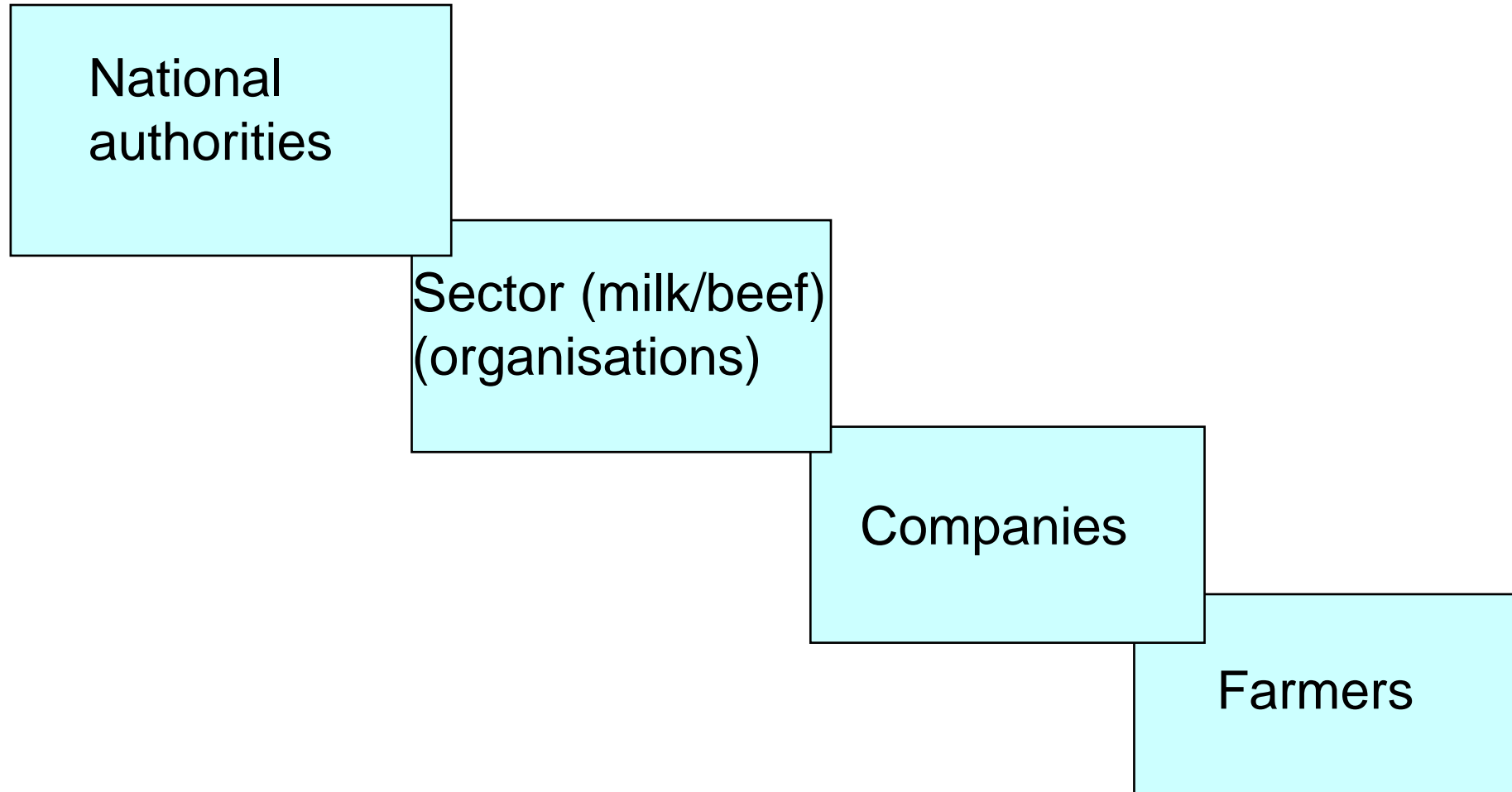
General objectives of disease control and surveillance

- Ensure healthy and clean foods
- Ensure a healthy and sustainable livestock production in terms of good animal welfare
- Maintain the Danish veterinary level

Priorities in animal disease control

- Important infections (FMD, tuberculosis)
- Food safety
- Less important infections (IBR, BVD, a.o.)
- Endemic and production diseases

Chain of commitment for successful veterinary programmes



Eradication of infectious diseases in Danish cattle – approach

1

- Screening
- Voluntary actions

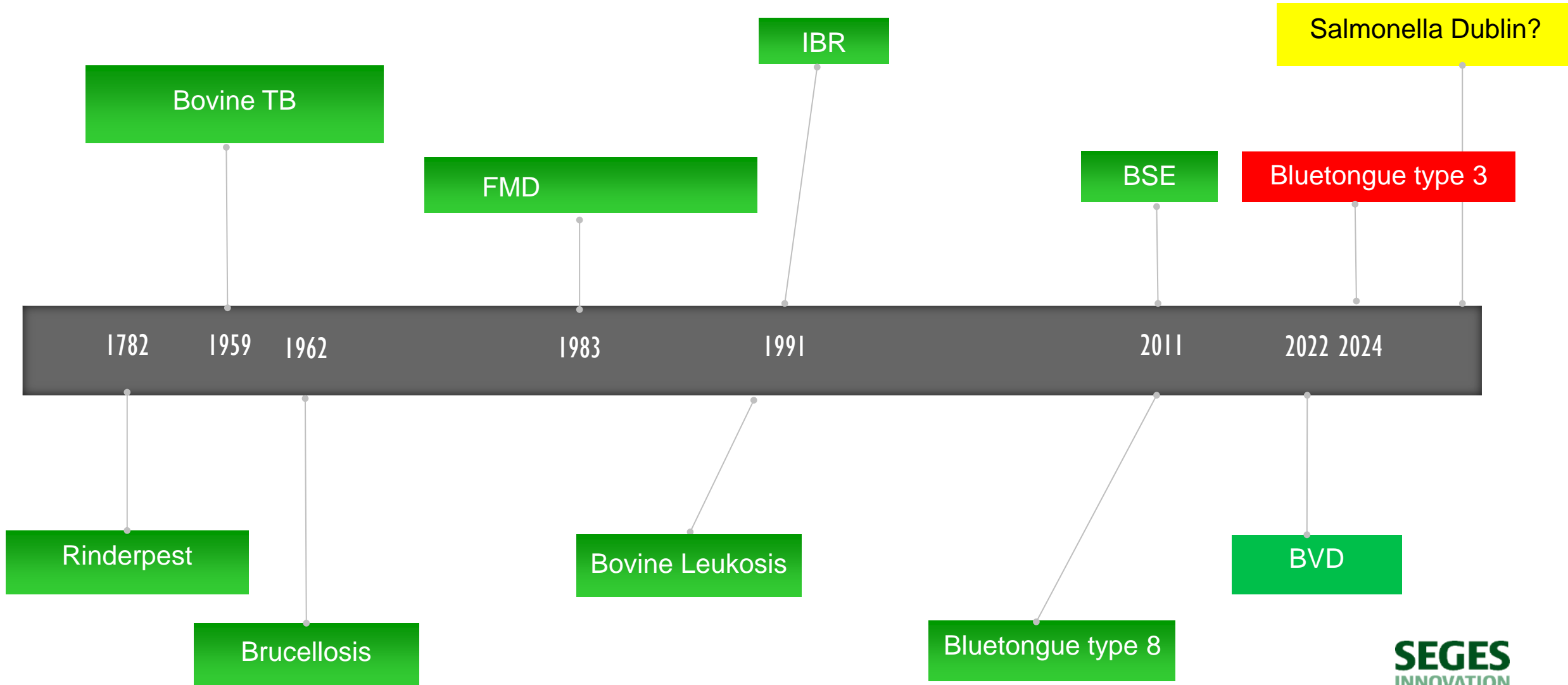
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- Eradication
- Compulsory actions

3

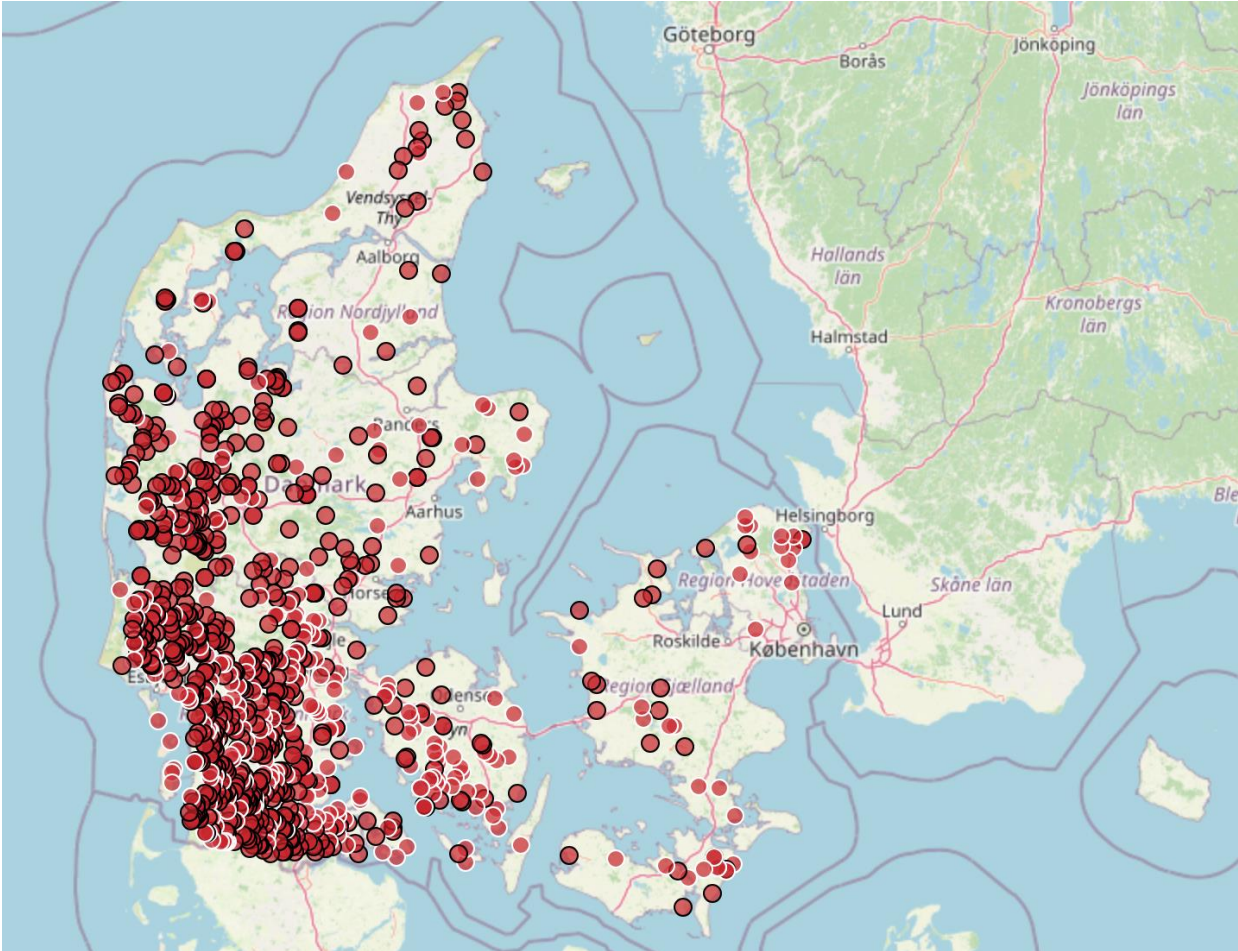
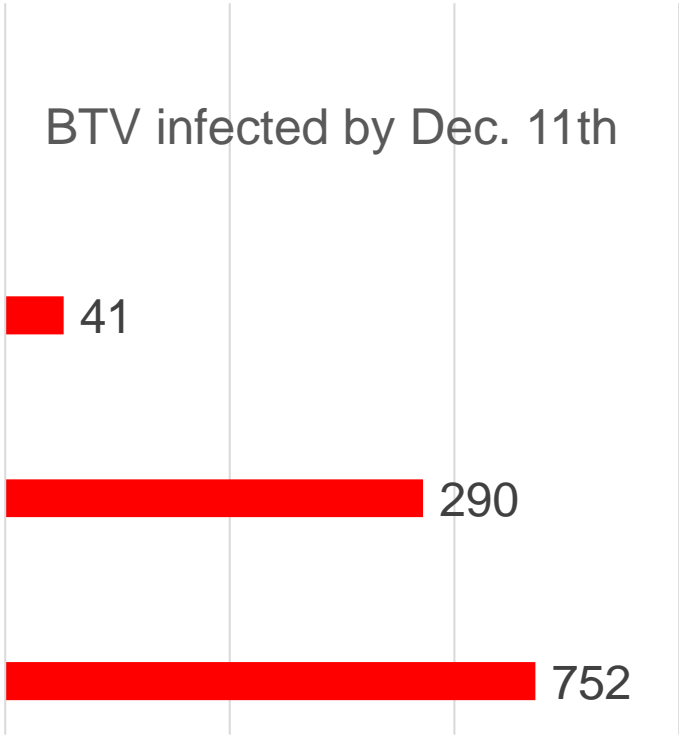
- Surveillance
- Official restrictions for infected herds

Successful eradication programmes in the Danish cattle population



Bluetongue type 3 in Denmark 2024

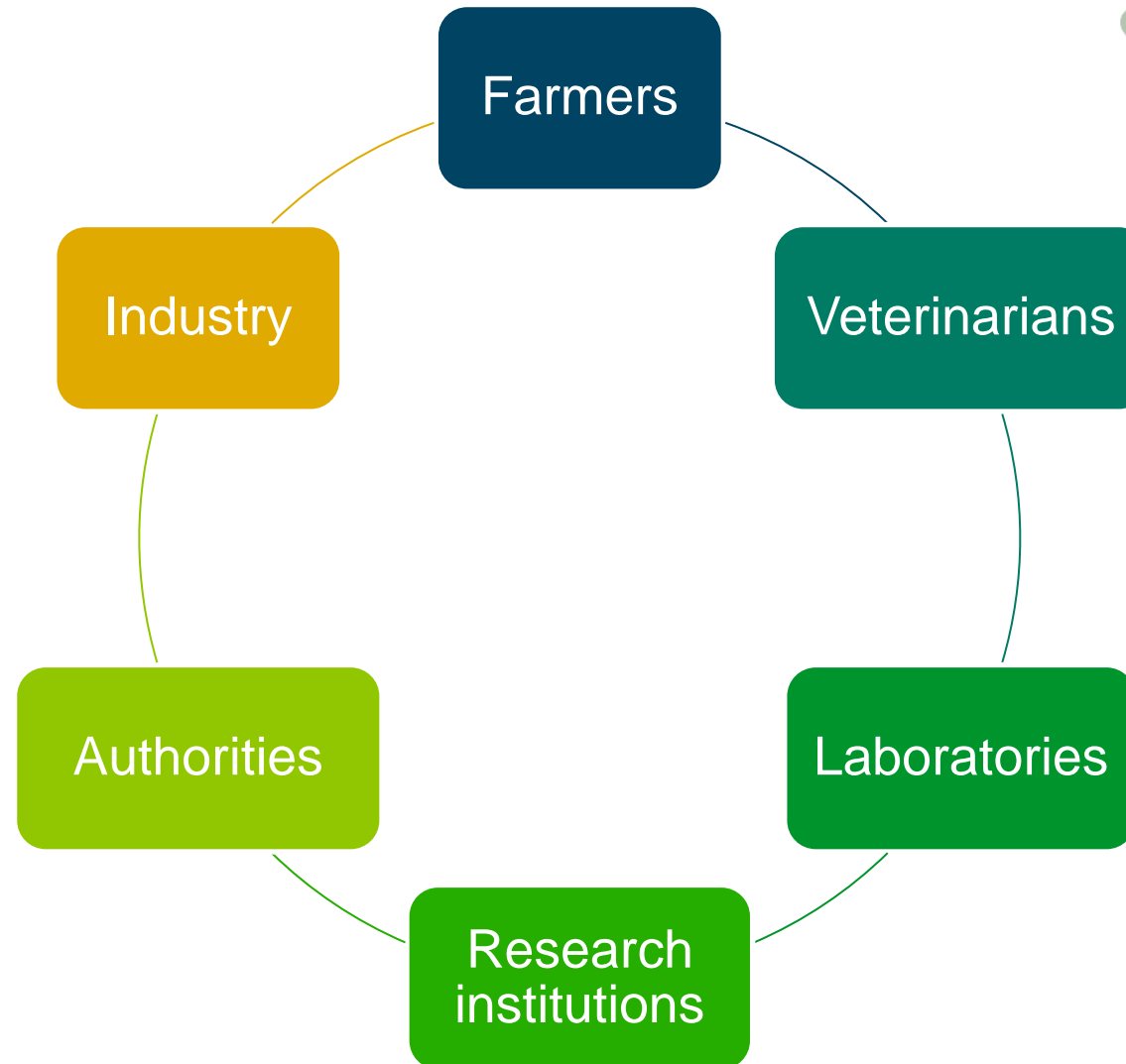
First case detected August 9th



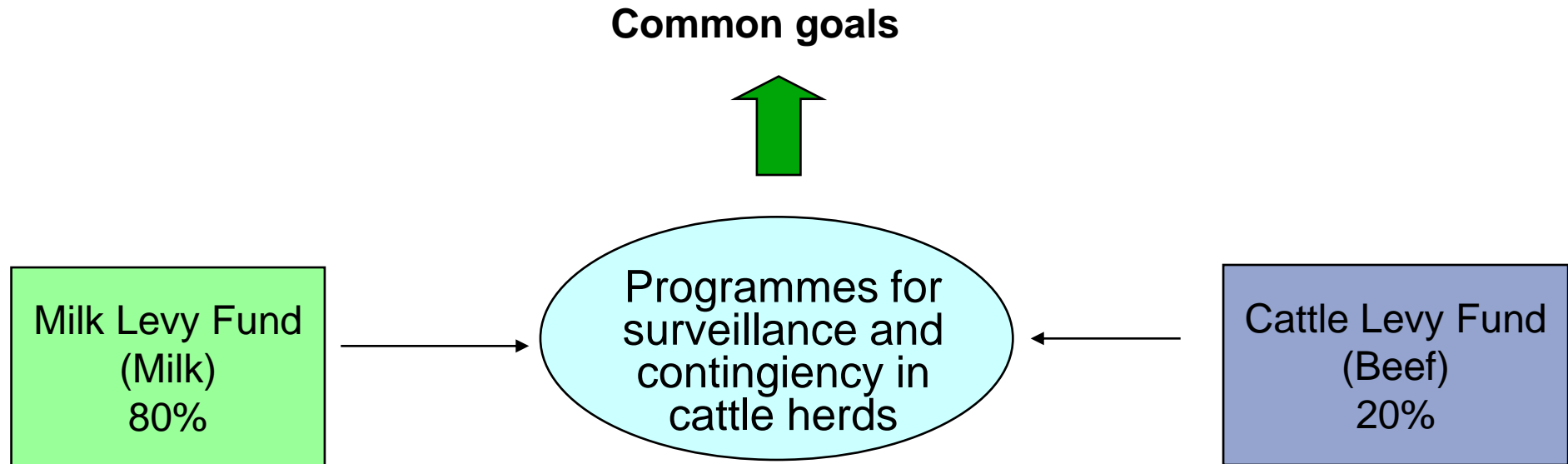
Purpose of disease surveillance and control

- To carry out the surveillance for 'infectious bovine rhinotracheitis' (IBR), 'bovine virus diarrhoea' (BVD), Salmonella Dublin and Streptococcus agalactiae and BTV according to the Danish legislation
- Assure early detection of outbreaks of 'exotic' infectious cattle diseases
- Take care of the cattle industry's veterinary preparedness
- Take care of the cattle industry's preparedness concerning zoonoses

SEGES' partners in disease control



Financing common veterinary issues



Veterinary active surveillance programmes in Danish cattle herds

SEGES

- Infectious Bovine Rhinotracheitis (IBR)
- Bovine Virus Diarrhea (BVD)
- Salmonella Dublin
- Streptococcus agalactia
- Bluetongue

Danish Veterinary and Food Administration

- *BSE*
- *Bovine Tuberculosis*
- *Bovine Brucellosis*

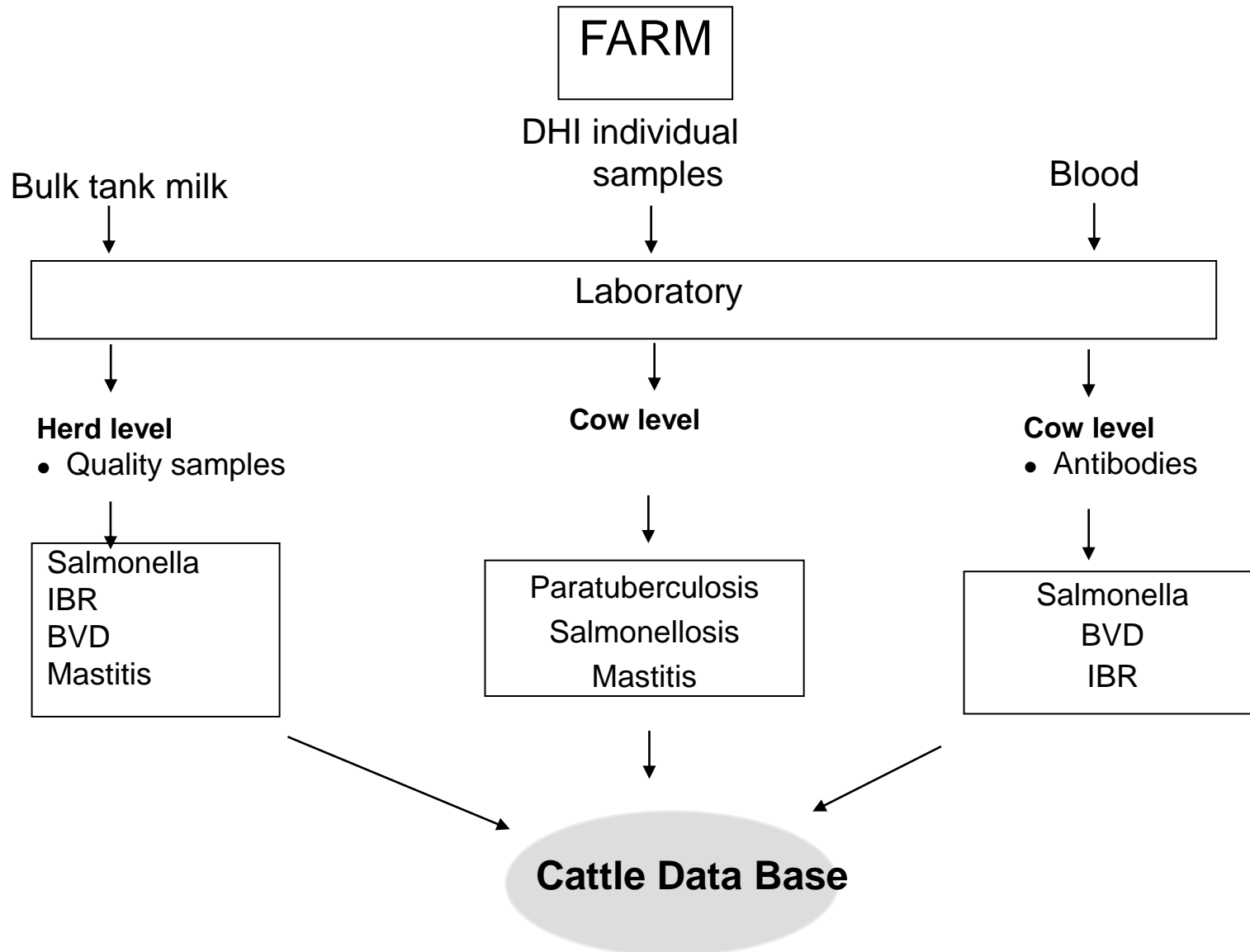
Other types of surveillance (SEGES)

Other

- Mycoplasma bovis
- Antibiotic resistance: (MRSA)
- Operation Paratuberculosis (Johnes disease)
- Herds importing live animals

Research screenings

Surveillance - sampling scheme



Sampling and administration of surveillance programmes

According to governmental amendments:

- All dairy herds sampled by bulk tank milk:
 - 4 times annually (BVD, Salmonella)
 - 1 time annually (IBR)
 - 2 times annually (Streptococcus agalactia)
- Non-dairy herds: IT technology automatically points out slaughtered cattle to be blood sampled for IBR, BVD and Salm. Dublin examination by disease specific periods.
- SEGES Innovation administrate all clarifications of suspected herds

Number of sampled herds 2023

Bulk tank milk

Disease	Herds
BVD	2,300
IBR	2,250
Salmonella Dublin	2,300
Str. agalactiae	2,300

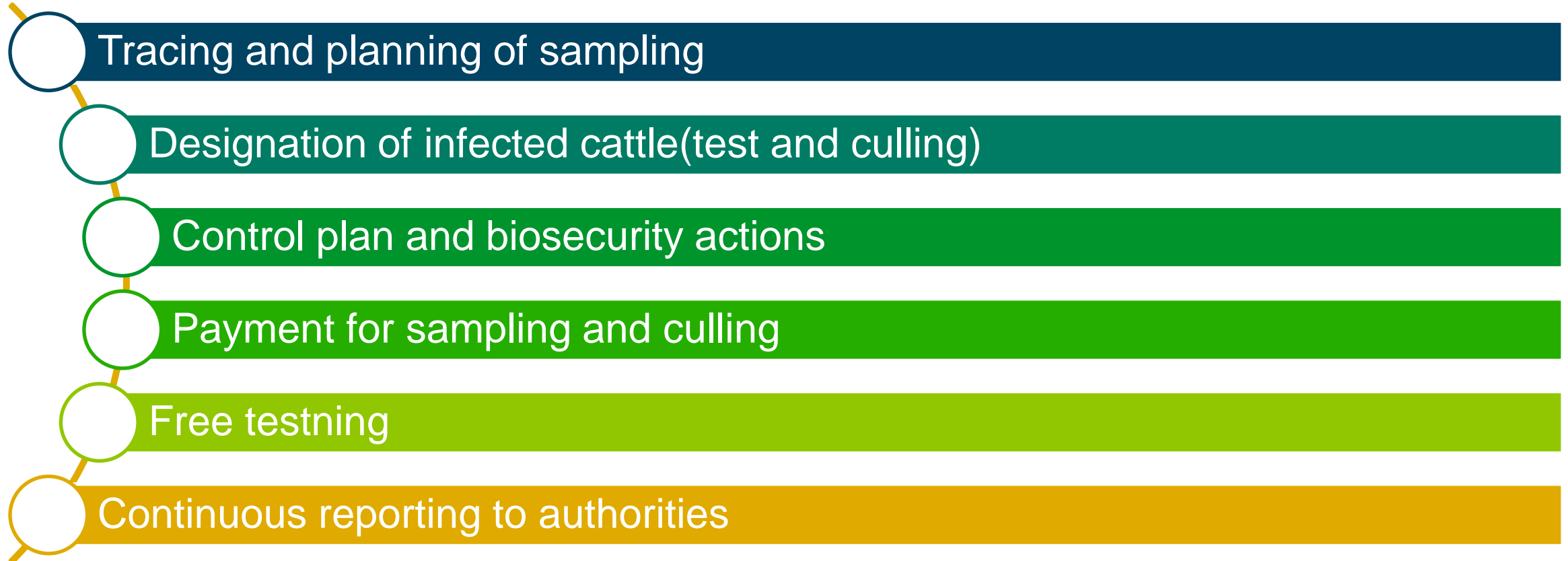
Blood samples

Disease	Herds
BVD	7,700
IBR	7,400
Salmonella Dublin	8,500

Number of analyses 2023

Disease	Analyses
BVD	
Blood at slaughter	18,000
Bulk tank milk	10,000
IBR	
Blood at slaughter	10,000
Bulk tank milk	2,300
Salmonella Dublin	
Blood at slaughter	14,000
Bulk tank milk	14,500
Str. agalactiae	
Bulk tank milk	6,700

SEGES' role in disease control



Threads of disease introduction from abroad

Import of live cattle

Indirect infection, eg:

- Hoof trimmers
- Veterinarians
- Technicians
- Semen, feed, a.s.o.
- Visitors
- Vehicles
- Everything else

Insects

- bluetongue



Import and export of live cattle

- Annual import of 100-300 cattle
- Export of
 - 50,000 calves
 - 55,000 heifers

Risk assessment countries

Low risk

Country
Finland
Iceland
Norway
Sveden

High risk

Country
Belgium
France
Holland
Ireland
Italy
Latvia
Poland
Schwizerland
Spain
UK
Germany
Hungary
Austria
Other countries

Basis of health and high veterinary status

Registration



Identification

Recording of
transfers

The Danish Cattle Database System

- **100% of all data about cattle in Denmark** - both statutory and voluntary data
- Data reported by farmers or transferred from breeding association, dairies, meat processing companies, ear label manufacturers and veterinarians
- In collaboration with the Danish Veterinary and Food Administration, SEGES Innovation also operates a Common Database, which contains statutory registrations for the CHR (Central Animal Husbandry Registry)

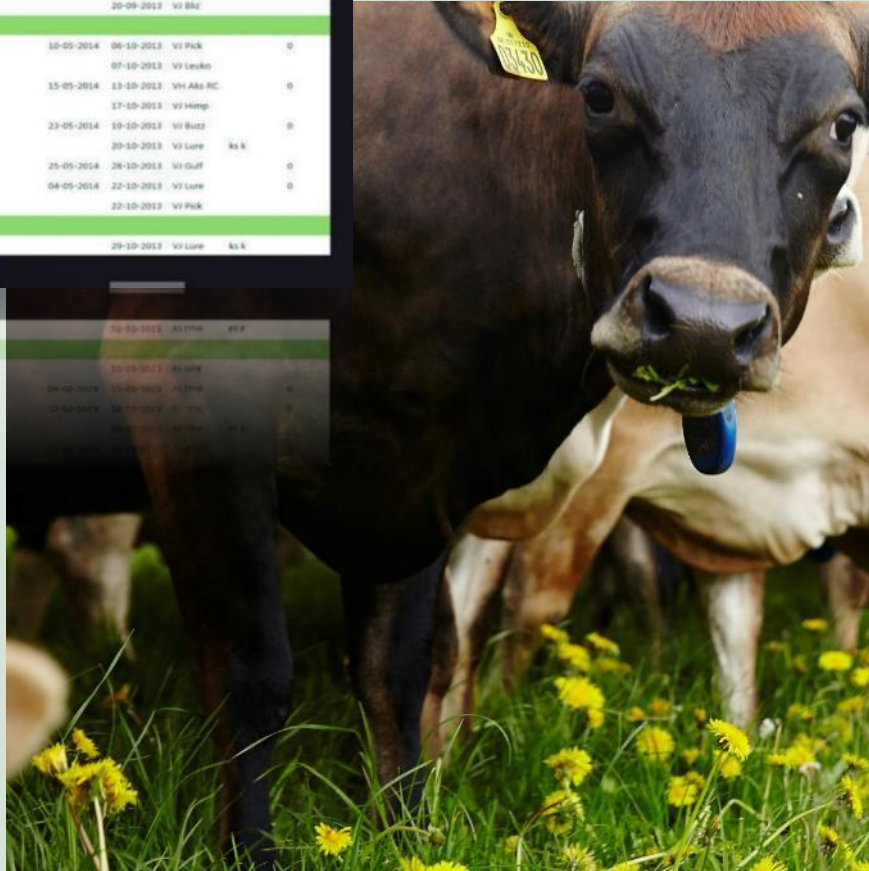


LISTEUDSKRIFTER > FORVENTEDE KÆLVNINGER

Udskrift Overfør Udvalgte
Siderne 1/1 Sider PDF Standardvis

VÆLG RØDLØNNER FORVENTEDE KÆLVNINGER

DVR NR.	KØD DAG	STATUS	LÆGT. NR.	ÆG. EKM TAL	CELLE FORK. GOLODDATO	INSLÆBEN DATO	TVR	PASATE KSS STATUS	UD-SÆT
Jun. 14									
29	Kvæ					20-09-2013	V3 Blz		
Jul. 14									
15	Kv	3			10-05-2014	06-10-2013	V3 Plk		0
16	Kvæ					07-10-2013	V3 Leuko		0
20	Kv	5			15-05-2014	13-10-2013	V3 Aba PC		0
24	Kvæ					17-10-2013	V3 Himp		0
26	Kv	2			23-05-2014	19-10-2013	V3 Bu22		0
29	Kvæ					20-10-2013	V3 Lure	85 K	0
30	Kv	3			25-05-2014	28-10-2013	V3 Guf		0
31	Kv	1			04-05-2014	22-10-2013	V3 Lure		0
32	Kvæ					22-10-2013	V3 Plk		0
Aug. 14									
07	Kvæ					29-10-2013	V3 Lure	85 K	



What is the Danish Cattle Database?

Complete database of cattle farmers and cattle in Denmark

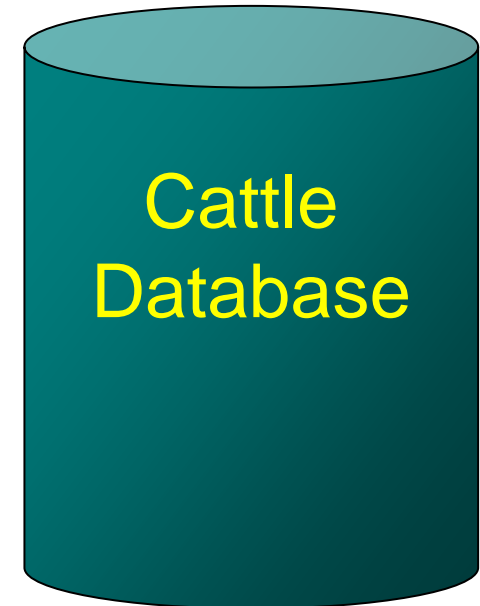
- **Information on every cattle farm in Denmark**
- **All cattle by individual ear tag (both dairy and beef)**
- **All herds (animal at all times and the herds location)**



Cooperation with the authorities

Used by research institutions

Statistics

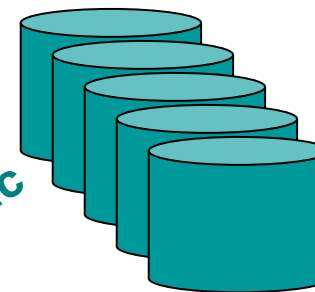
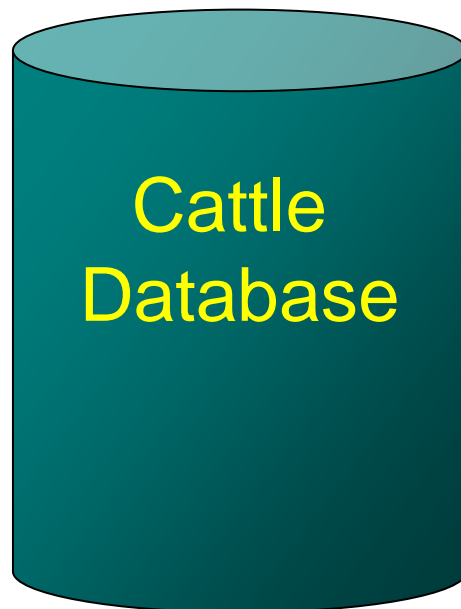


Data in the Danish Cattle Database?

From the farm and the farmer:

- Animal registration
- Milking
- Feed intake
- Disease and medicine per cow

Automatic or manual



Automatic

From the advisers and vets.:

- Breeding information
- Diseases and medicine consumption
- Milk quality and quantity
- Claw registration
- Etc.

- Dairy factories
- Slaughter houses
- Rendering firms
- Laboratories

Data in the Danish Cattle Database?

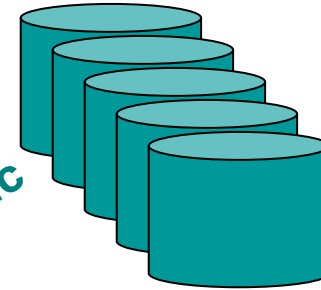
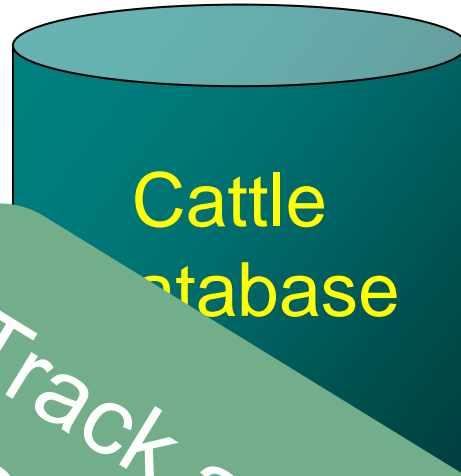
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Automatic

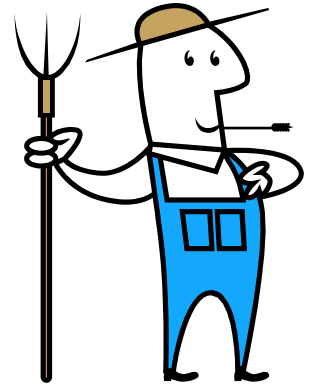
- Dairy factories
- Slaughter houses
- Rendering firms
- Laboratories

Track and trace on the animal from birth to slaughtered

The farmer is the owner of the data in the Danish Cattle Database

By signature, the farmer legalizes veterinarians, livestock and breeding consultants, hoof trimmers, dairy factories etc. to see or use data of his herd

The benefit for these are that they only deliver data for their own area, but have access to all data in their daily work



Other control programmes in Danish cattle farms

”Operation Paratuberculosis” (Johnes Disease)

Voluntary herd control program since 2005

- 435 dairy herds – 113,000 cows participating

Certification program since 2011

Quality control and certification programmes

- "Self monitoring control" (EU-regulations)
- Dairy companies: "Arlagården" and "Gården"
- Danish Crown, slaughterhouse: "Code of Practice"