



The surveillance programme for infectious bovine rhinotracheitis (IBR) and infectious pustular vulvovaginitis (IPV) in Norway 2025

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The surveillance programme for infectious bovine rhinotracheitis (IBR) and infectious pustular vulvovaginitis (IPV) in Norway 2025

Authors

Siv Meling, Lise Marie Ånestad, Johan Åkerstedt, Jørgen Dalaker, and Siv Klevar

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Summary

All bulk milk and blood samples tested in 2025 were negative for antibodies against bovine herpes virus (BHV-1).

Introduction

Infectious bovine rhinotracheitis and infectious pustular vulvovaginitis (IBR/IPV) are diseases caused by bovine herpesvirus 1 (BHV-1). The virus primarily affects the upper respiratory tract of cattle, resulting in purulent nasal discharge, hyperaemia of the muzzle, and conjunctivitis. General clinical signs include fever, depression, reduced appetite, abortions, and decreased milk production. BHV-1 may also infect the genital tract, causing pustular vulvovaginitis in females and balanoposthitis in males. In Norway, IBR/IPV is classified as a List 2 disease and is also listed by the World Organisation for Animal Health (WOAH). Within the European Union (EU), IBR/IPV is categorised under disease categories C, D, and E.

Norway has not experienced any clinical outbreaks of infectious pustular vulvovaginitis since the early 1960s, when two outbreaks were reported in cattle. In 1993, seropositive animals were detected in a single dairy herd following initial screening of bulk milk samples. No clinical signs of IBR/IPV were observed, and all animals in the herd were subsequently slaughtered. Attempts to isolate the virus from organ samples were unsuccessful. Contact herds and dairy herds in the same region tested seronegative (1). In addition, red deer harvested in the same area during the corresponding hunting season were also seronegative. Since then, no further cases of BHV-1 infection have been identified in Norway.

Norway has been officially recognised as free from IBR/IPV by the EFTA Surveillance Authority (ESA) since 1994. Additional guarantees relating to IBR/IPV for cattle entering Norway are set out in ESA Decision 032/21/COL. To maintain ESA recognition of Norway's IBR/IPV-free status, submission of annual surveillance reports is required.

The Norwegian Food Safety Authority (NFSA) is responsible for implementing the surveillance programme for IBR/IPV. The Norwegian Veterinary Institute is responsible for planning the programme, collecting the bulk milk samples from the dairies, performing the analyses, and reporting the results. Blood samples from beef herds are collected at slaughterhouses by NFSA inspectors.

Aim

The aim of the surveillance programme for IBR/IPV was to document freedom from the infection in Norway according to the demands in Regulation (EU) 2020/689, and to contribute to the maintenance of this favourable situation.

Materials and methods

Herds and sampling

The surveillance programme included both dairy and beef herds. The target population for dairy herds comprised all Norwegian cattle herds delivering milk to dairies during the sampling period. The target population for beef herds comprised all Norwegian herds delivering cattle for slaughter in 2025.

A total of 25.5 % of dairy herds were randomly selected for sampling. For beef herds, individual blood samples were collected from animals older than 24 months at 17 slaughterhouses, with a maximum of five animals sampled per herd per sampling day. However, five herds were sampled with between six and ten samples on a single sampling day.

In total, 1,320 bulk milk samples from 1,201 dairy herds were submitted by the dairies. Additionally, 4,228 individual blood samples were collected from 1,363 beef herds. The blood samples were analysed in pools comprising one to five animals, resulting in 1,712 pooled samples. Overall, the sampled herds represented approximately 21.7 % of all Norwegian cattle herds (Table 1).

Table 1. Numbers of dairy herds and beef herds sampled in the Norwegian surveillance programme for IBR/IPV in 2025.

Herd category	Cattle herds (total no. ¹)	Sampled herds (no. ²)	Sampled herds (%)
Dairy herds ³	6 095	1 201	19.7
Beef herds ⁴	5 731	1 363	23.8
Total	11 826	2 564	21.7

¹Based on data from the Register of production subsidies as of 1 March 2025.

²Combined beef and dairy farms could be sampled under both herd categories. The number of unique farms is given in the total number of sampled herds.

³Cattle herds delivering milk to dairies.

⁴Sampling performed at slaughterhouses.

Laboratory analyses

Bulk milk samples were analysed using a commercially available indirect enzyme-linked immunosorbent assay (ELISA), ID Screen® IBR Milk Indirect (IDvet, Grabels, France), in accordance with the manufacturer's instructions. Samples yielding positive or inconclusive results were retested in duplicate using the same method. In cases of positive or doubtful serological findings, follow-up sampling was conducted, including collection and analysis of new bulk milk samples or individual blood samples from the suspected herd.

Blood samples (pooled or individual) were analysed using a commercially available indirect ELISA ID Screen® IBR Mixte Indirect (IDvet, Grabels, France). In the event of positive or inconclusive results in pooled blood samples, the individual samples comprising the pool were retested. Individual samples yielding positive or inconclusive results were retested in duplicate using the same method and/or IDEXX IBR Individual Ab Test (IDEXX Laboratories, Maine, USA). If results remained positive or doubtful after retesting, additional blood samples were collected from the suspected herd and analysed.

Results

Of the 1,320 bulk milk samples from 1,201 dairy herd, 1,319 tested negative, while one sample (0.1%) tested positive following retesting in accordance with the procedure described in Methods section. This finding was followed up by the collection and analysis of a new bulk milk sample from the herd of origin, which yielded a negative result.

Of the 1,712 pooled blood samples from beef herds, 1,710 were seronegative, while ten pools (0.6%) tested positive. Upon retesting in accordance with the protocol described in the Methods section, two individual samples from two different herds remained positive. These findings were followed up by the collection of new blood samples from herds of origin and further testing in accordance with the protocol described in the Method section, and all follow-up samples yielded negative results.

In conclusion, all 1,201 dairy herds and 1,363 beef herds included in the surveillance program for IBR/IPV were negative for antibodies against BHV-1 in 2025. Table 2 shows the results of the surveillance programme from 1993 to 2025.

Table 2. Numbers of samples and positive results of the surveillance programme for IBR/IPV in the Norwegian cattle population during the period 1993-2025

Year	Dairy herds	Beef herds		No. of positive samples
	No. of herds sampled	No. of herds sampled ¹	No. of individuals tested ²	
1993	26 642	0	0	1
1994	24 832	1 430	5 954	0
1995	25 131	1 532	9 354	0
1996	2 863	303	1 523	0
1997	2 654	2 214	16 741	0
1998	2 816	2 191	17 095	0
1999	2 930	2 382	18 274	0
2000	1 590	340	2 892	0
2001	2 564	434	3 453	0
2002	2 308	462	3 693	0
2003	1 845	449	3 901	0
2004	1 573	402	3 364	0
2005	1 919	484	4 766	0
2006	1 673	479	4 624	0
2007	1 575	412	4 241	0
2008	1 422	444	4 616	0
2009	1 315	435	5 048	0
2010	1 265	507	4 020	0
2011	1 226	1 278	4 758	0
2012	1 189	1 178	4 308	0
2013	1 042	1 167	4 079	0
2014	1 489	935	4 132	0
2015	1 176	1 205	3 698	0
2016	1 179	1 330	4 211	0
2017	1 107	1 448	4 282	0
2018	1 131	1 341	4 153	0
2019	1 071	1 328	4 124	0
2020	1 169	1 258	3 709	0
2021	1 212	1 413	3 952	0
2022	1 093	1 432	4 200	0
2023	1 337	1 393	4 219	0
2024	1 525	1 372	4 213	0
2025	1 201	1 363	4 228	0

¹Sampling performed in the herds prior to 2011. ²A small number of blood samples collected at slaughterhouses could originate from dairy herds.

Discussion

All beef and dairy herds tested as part of the 2025 surveillance programme were found to be negative for antibodies against IBR/IPV.

In addition to the active surveillance programme, all breeding bull candidates are serologically tested prior to entry into breeding centres, and breeding bulls are subject to annual testing.

The results of the surveillance programme conducted since 1993 provide strongly evidence that the Norwegian cattle population is free from IBR/IPV infection (2).

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postmottak@vetinst.no

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