



**Isle of Man
Government**

Reiltys Ellan Vannin



Control and eradication of Bovine Viral Diarrhoea Virus

January 2013

BVD

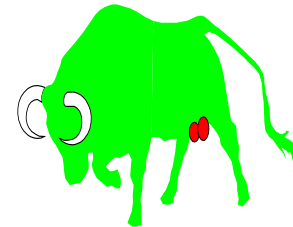
- ❑ Calves infected before 120 days of pregnancy born persistently infected (PI)
- ❑ Shed high levels of virus throughout life
- ❑ Many die of Mucosal disease 6-24 months
- ❑ **PIs are the main source of infection**
- ❑ **PI Removal / prevention is key to control**
- ❑ **Risks:**
 - **Purchase of PI cattle**
 - **Cattle carrying PI foetus**
 - **Purchase of Infected animal**

Swedish SLB calves born on the same day, left PI



BVD

- ❑ Outcomes of infection in non-PI cattle
 - Weakening of immune system
 - More susceptible to other infections (diarrhoea, pneumonia)
 - Reduced milk yield, increased somatic cell count
 - Pregnant cattle
 - Failure to conceive/return to service
 - Abortion/mummification
 - Birth defects (wobbly, eye defects)
 - **Birth of PI calves**
 - Bulls – infertility : virus transfer in semen
bulls can be PI



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BVDV
In early
pregnancy



PI Dam

Cow and calf
infected

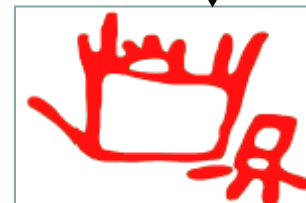
Only dam
becomes
immune



Calf born
persistently
infected (PI)



Virus mutates to lethal effect
= mucosal disease



~80%



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Routes of Introduction

- ❑ Livestock trade
 - PI Bought in
 - Dam: carrying a PI foetus
 - Animal infected during trade (mart)
- ❑ Pasture/fence contact with other stock
- ❑ Shows and sales
- ❑ Breeding bulls can be PI
- ❑ Visitors and workforce
- ❑ Vehicles, machinery and borrowed “kit”



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Financial Impact

- ❑ Direct cost in the Isle of Man estimated £750,000 annually
- ❑ £61 minimum per dairy cow in one year
- ❑ 100 cow herds
 - Beef: £4,600 annually
 - Dairy: £13,500 annually
 - (9-19% of farm income)



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(SAC)

BVD and Abortion

- ❑ NI study
- ❑ 142 aborted/stillborn fetuses submitted to Lab
- ❑ Tested for BVD virus
- ❑ 19 (13%) positive
- ❑ SAC: Single Abortion
 - £650 dairy
 - £200 to £300 beef



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Options for Control

- Do nothing : live with it – self clearance?
- Inactivated vaccine - on cost
- Eradication and vaccination
- Eradication and good biosecurity especially

Imports

BVD

- ❑ Sweden, Norway, Finland, Denmark and parts of Austria, Scotland and England
 - Successful eradication programs **without vaccine**
- ❑ France, Germany – schemes underway
 - With vaccine
- ❑ BVD-free countries likely to seek protection during trade (OIE List B)
- ❑ British Isles – high level of infection the result of no systematic controls

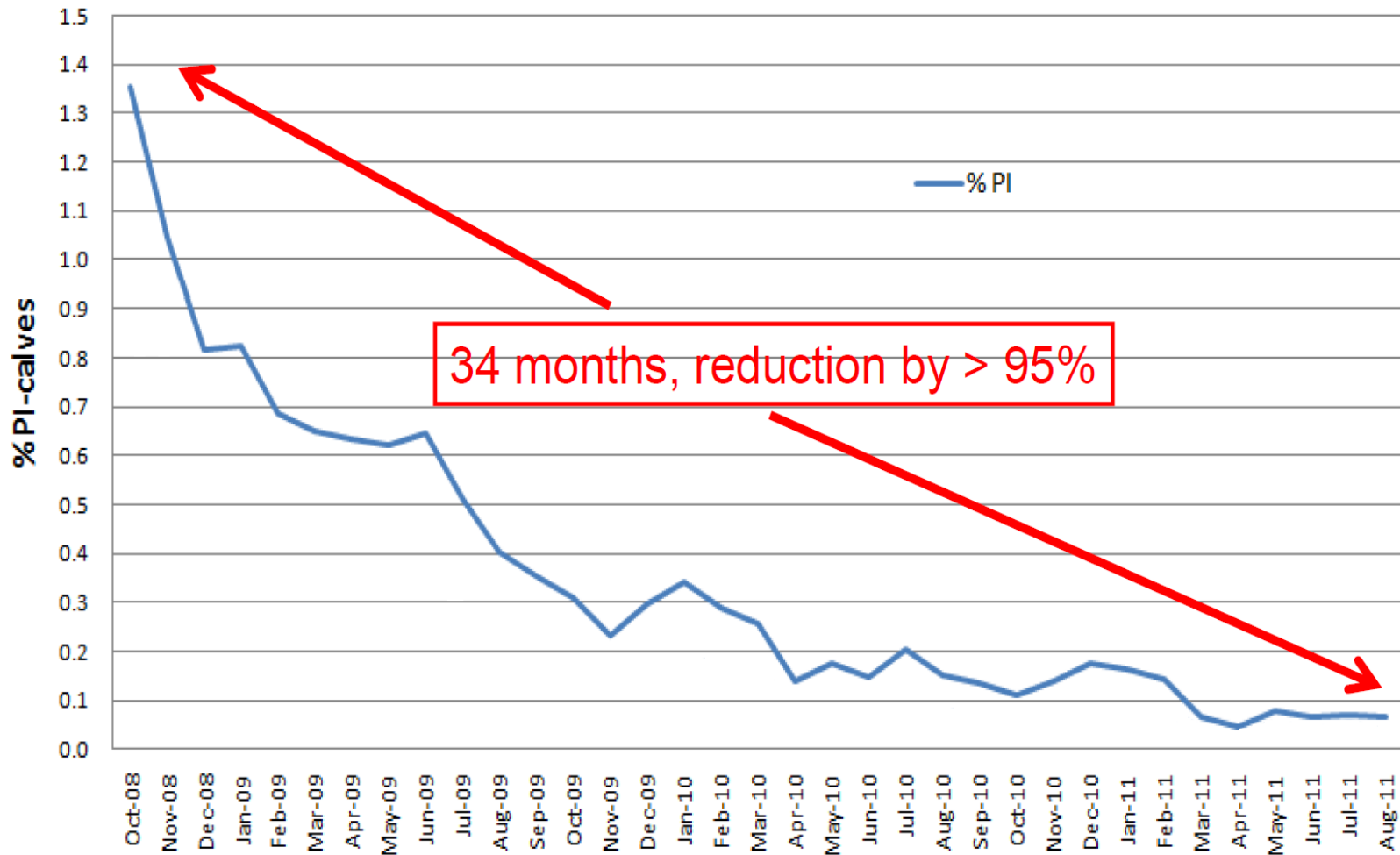


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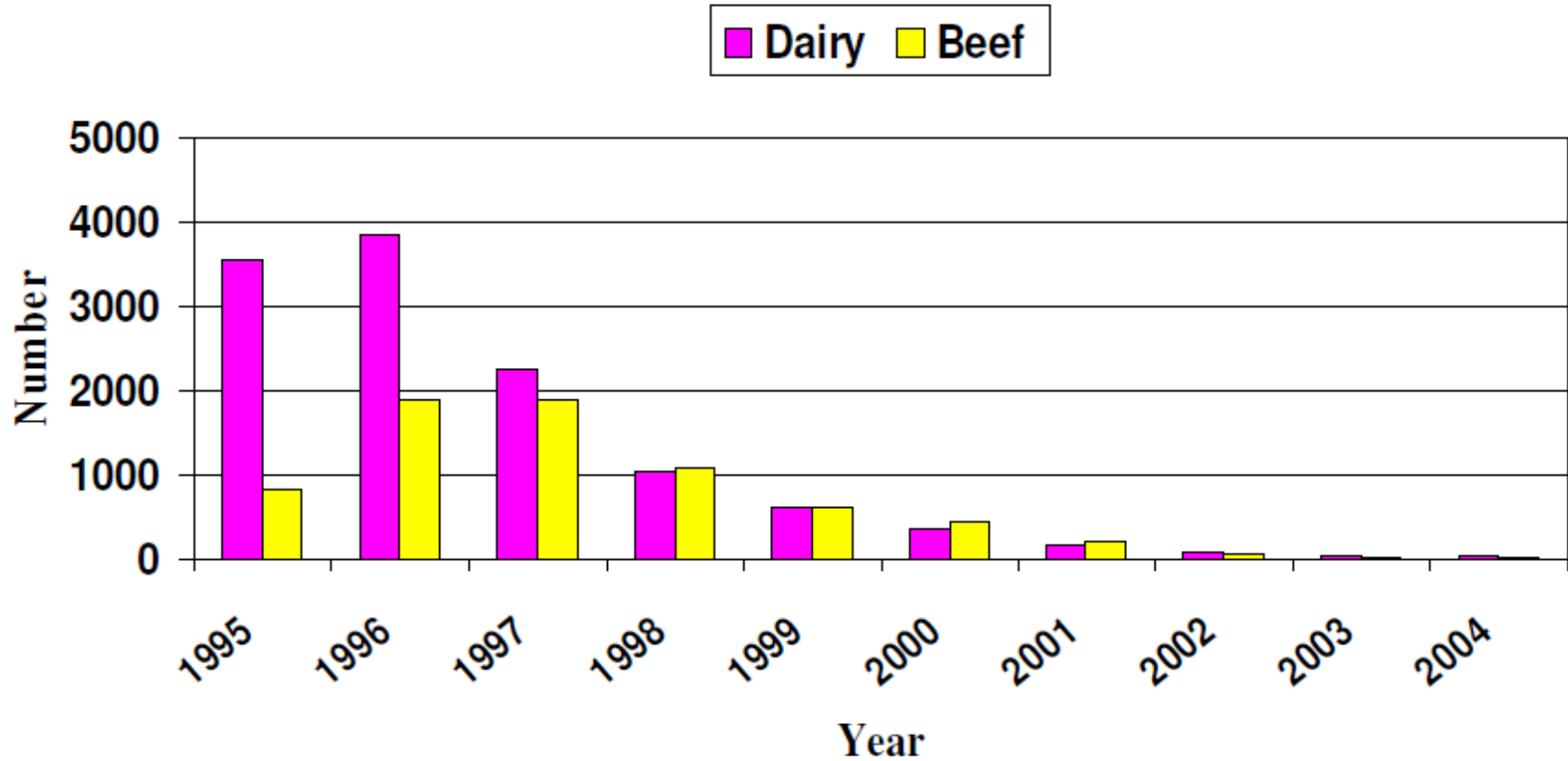
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The Swiss BVD-eradication program

Percentage of PI Calves among newborn calves



BVD infected Herds in Denmark



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IOM BVD Control Scheme Format

- ❑ Voluntary
- ❑ Costs:
 - Testing partially funded. TST tags supplied.
 - Veterinary fees in personal additional controls
 - Additional e.g. fencing
- ❑ PARTNERSHIP
- ❑ December 2012
 - 66% producers joined
 - 77% of projected calves born
- ❑ January 2013
 - TSTs released
 - first samples taken

