



The Economic Impact of BVD in a Herd

Slides available on website mid February

www.shropshirefarmvets.com

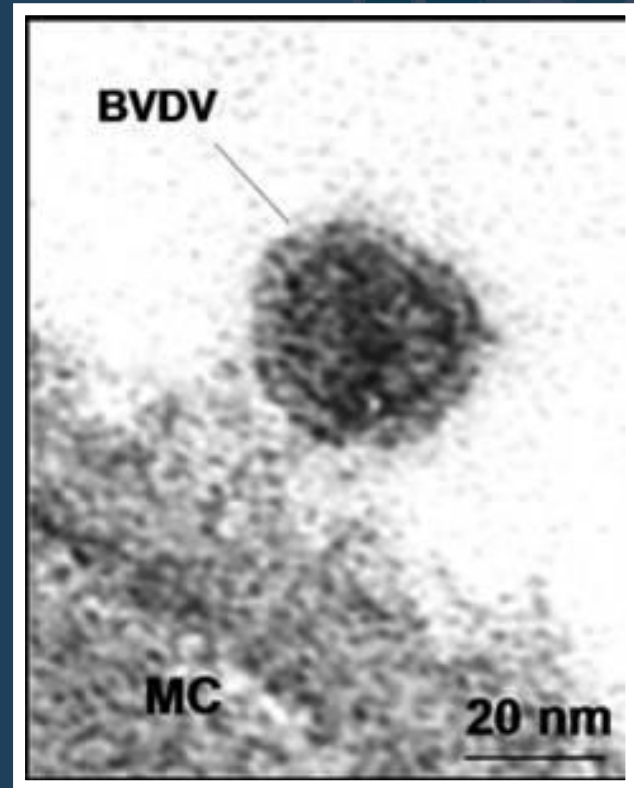
The Economic Impact of BVD in a Herd



- What is BVD?
- How does BVD cause disease?
- What is the cost of BVD associated losses?
- What can be done to prevent these losses?

What is BVD?

- Bovine Viral Diarrhoea virus
- “Pestivirus”
- 2 serotypes in the UK
- Present in 72% of dairies and 47% of beef herds tested in 2008



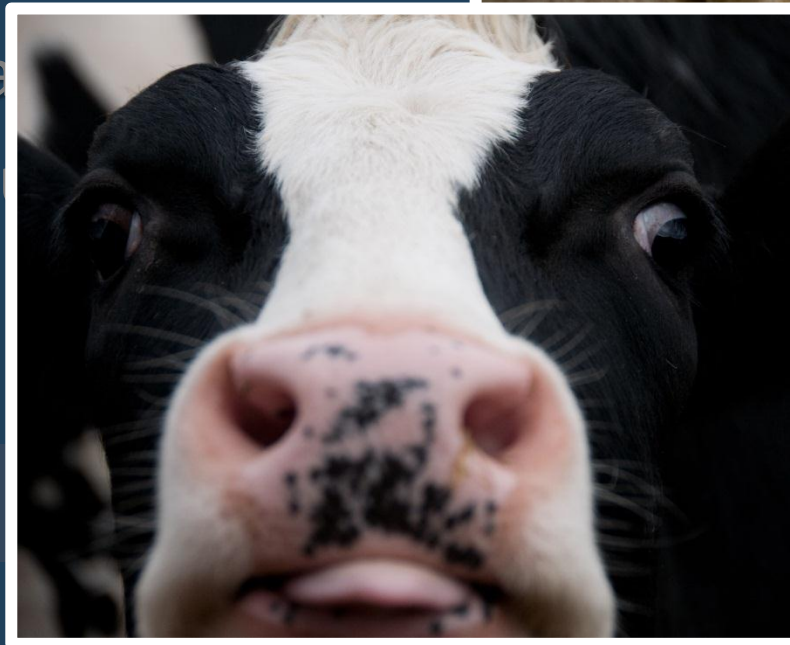
How does BVD cause disease?

- Naïve animals infected
- Abortions
- Persistently infected animals
- Diarrhoea
- Immunosuppression



How does BVD cause disease?

- Naïve animals infected
- Abortions
- Persistently infected animals
- Diarrhoea
- Immunosuppression



How does BVD cause disease?

- Naïve animals infected
- **Abortions**
- Persistently infected animals
- Diarrhoea
- Immunosuppression
- Up to 6 weeks of gestation
- Later: beyond 4 months



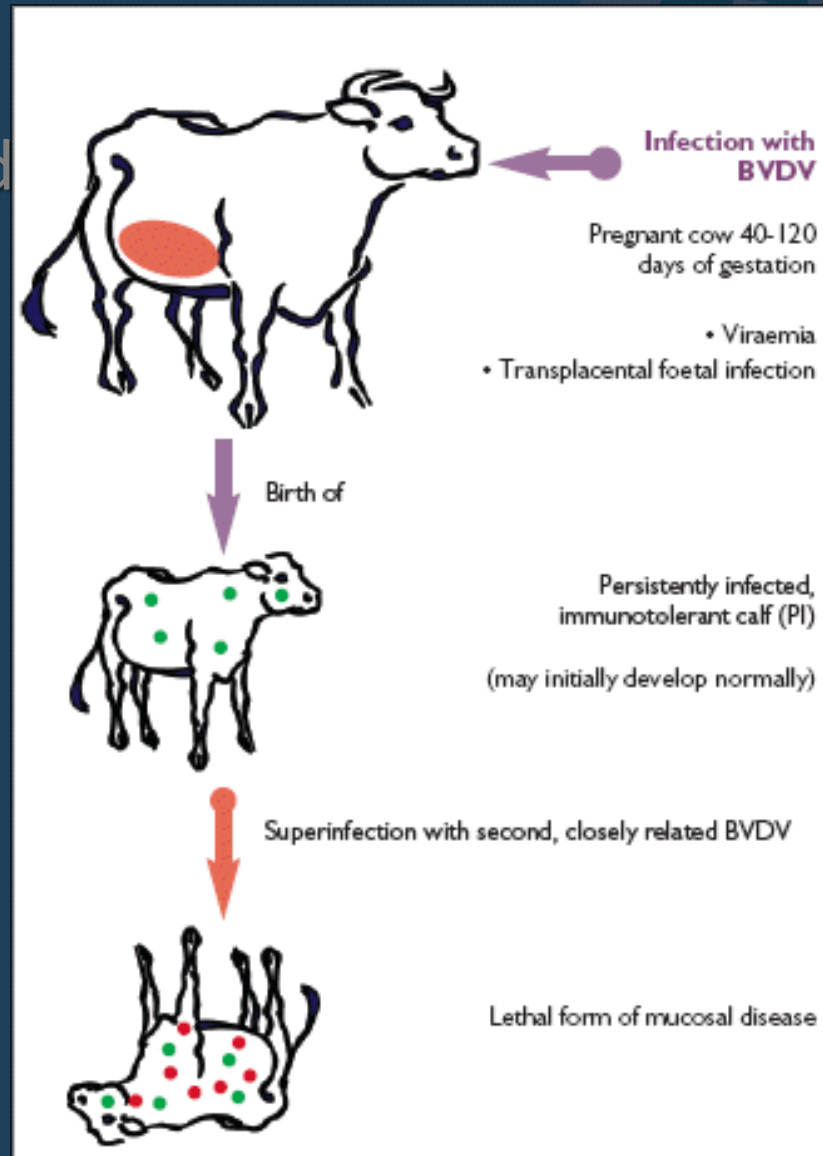
How does BVD cause disease?

- Naïve animals infected
- Abortions
- **Persistently infected animals (PI's)**
- Diarrhoea
- Immunosuppression



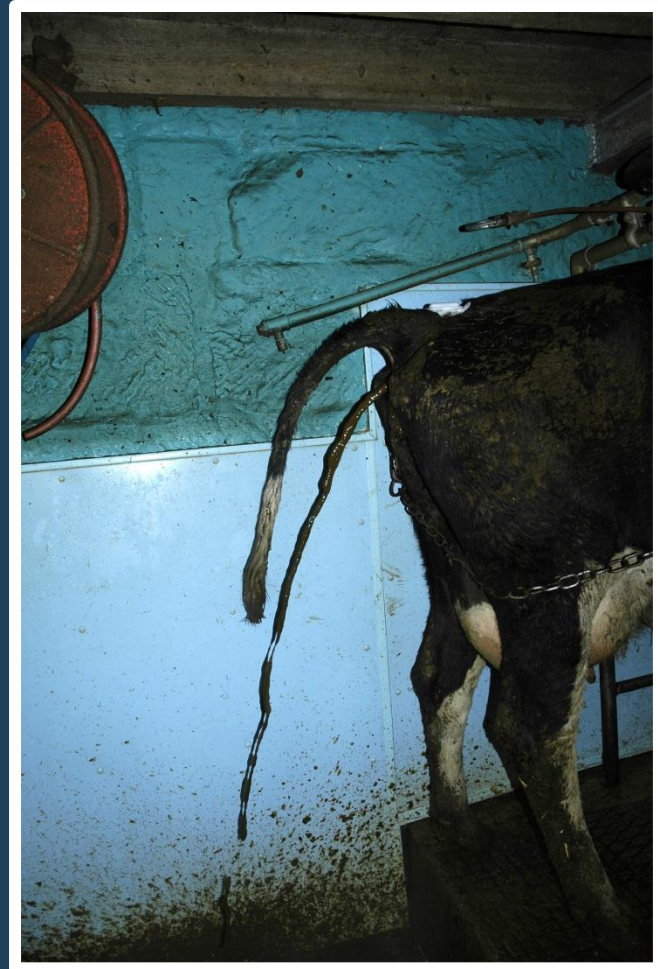
How does BVD cause disease?

- Naïve animals infected
- Abortions
- **Persistently infected animals**
- Diarrhoea
- Immunosuppression



How does BVD cause disease?

- Naïve animals infected
- Abortions
- Persistently infected animals
- **Diarrhoea**
- Immunosuppression



How does BVD cause disease?

- Naïve animals infected
- Abortions
- Persistently infected animals
- Diarrhoea
- **Immunosuppression**



What is the cost of BVD associated losses?

- Naïve animals infected
- Abortions
- Persistently infected animals
- Diarrhoea
- Immunosuppression



What is the cost of BVD associated losses?

- **Naïve animals infected**
- Abortions
- Persistently infected animals
- Diarrhoea
- Immunosuppression
- Mostly mild symptoms
- Risk of severe disease
 - Losses up to 10% poss.
 - Heifers £1980 - £2260
 - Cows av. £1700
- Milk drop
- Abortions
- BVD ENTERS HERD
- Majority recover & seroconvert

What is the cost of BVD associated losses?

- Naïve animals infected
- **Abortions**
- Persistently infected animals
- Diarrhoea
- Immunosuppression
- 8% of UK abortion (VLA 2006)
- £630/case (Cabell 2007)
- Prolonged calving interval, passing 420d:
 - £7.21/day if 6,000L cow
 - £9.28/day if 10,000L cow

(Esselmont 2002, DairyCo 2012)

What is the cost of BVD associated losses?

- Naïve animals infected
- Abortions
- **Persistently infected animals**
- Diarrhoea
- Immunosuppression
- Spread virus to herd
- Die any time
- Calf prices up to £400
- Rearing costs?
- Replacements costs?



What is the cost of BVD associated losses?

- Naïve animals infected
- Abortions
- Persistently infected animals
- **Diarrhoea**
- Immunosuppression
- “Mucosal Disease” vs transient scour
- Weight loss
- Rearing time extended
- VetMed cost
 - Total averages £30 – 40 per calf (SAC, 2006)
- Kingshay: 1 month delay to calving = £40 (2008)

What is the cost of BVD associated losses?

- Naïve animals infected
- Abortions
- Persistently infected animals
- Diarrhoea
- **Immunosuppression**
- Increased risk of all other diseases in the herd
 - Pneumonia
 - Scour
 - Mastitis
 - TB

What is the cost of BVD associated losses?

- **TOTAL**



- Naïve animals infected
- Abortions
- Persistently infected animals
- Diarrhoea
- Immunosuppression

Estimates Vary

Total per 100 cows

- **£13,330** UK 1998 (Wright)
- **£9,000** UK 2003 (Novartis: 280,000 cows)
- **£10,820** Scotland 2011 (Scottish government)
- **£27,300** with another disease 2003 (Houe)

Protecting your herd from BVD

- Determine BVD status
- Vaccination
- Identifying and removing PI's
- Biosecurity



Protecting your herd from BVD

- **Determine BVD status**
- Vaccination
- Identifying and removing PI's
- Biosecurity
- Quarterly bulk milk
 - Antibody
 - Antigen
- Blood sampling
 - Calves
 - Dry cows
- Accreditation?



Protecting your herd from BVD

- Determine BVD status
- **Vaccination**
- Identifying and removing PI's
- Biosecurity
- Effective vs both strains
- Foetal protection
- Highly cost effective
 - £2/dose: so including replacements costs
 - £450/100 cows 1st year
 - £150/100 cows thereafter

Protecting your herd from BVD

- Determine BVD status
- Vaccination
- **Identifying and removing PI's**
- Biosecurity
- Bulk Milk (£30 for PCR +ELISA)
 - Milking cows only
 - Up to 300
- Blood (£27/pool of 10 on PCR and £6 individual ELISA)
 - Animals over 6 weeks
- Tissue sampling tags
 - Virus isolation from day old (£5/sample)
 - Isolate and retest after 3 to 6 weeks

Protecting your herd from BVD

- Determine BVD status
- Vaccination
- Identifying and removing PI's
- **Biosecurity**
- Closed herd ideally
- Know what you are buying
- Quarantine; test; vaccinate
- Disinfection
- Double fence 3m gap minimum, 5m ideal



The Economic Impact of BVD in a Herd

Slides available on website mid February

www.shropshirefarmvets.com

With thanks to; VLA, SAC, Biobest, RVC, MSD Animal Health, Novartis, Richard Murray