Herd Health – Minimising the Risks in Dairy Herds

Dr. John Mee
Teagasc
Moorepark Dairy Production Research Centre

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What I’m going to say...

- Infectious diseases
- Herd health plan
- Human health risks
Infectious diseases –
Non statutory

- Blackleg
- BVD
- Diarrhoea
- IBR
- Johne’s
- Leptospirosis
- Mycoplasmosis
- Neosporosis
- Parasites
- Pneumonia
- Salmonellosis
How widespread are these ‘diseases’?
Disease exposure & Vaccination

Herds (%)

Johne's
Neo
Salm
IBR
BVD
Lepto

Disease

Vaccination Antibodies

0 10 20 30 40 50 60 70 80 90 100

0 10 20 30 40 50 60 70 80 90 100

0 10 20 30 40 50 60 70 80 90 100

0 10 20 30 40 50 60 70 80 90 100

0 10 20 30 40 50 60 70 80 90 100

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Risk factors for disease exposure

- Herd depopulation
- Herd expansion
- Fragmented holdings
- Access to waterways
- Lack of pre-movement testing
- Lack of post-movement quarantine
- Use of natural service bulls
Management of infectious diseases

- Herd Health Management Plan
- Local vet

Have a game plan
- Investigate your herd
- Stop disease coming in
- Stop disease spreading
- Monitor on an ongoing basis
Step-by-Step Guide to Disease Control

Plan your herd health program

1. Investigate your herd health status

2. Prevent introduction of disease
3. Prevent spread of disease

4. Monitor your herd health program
Step 1. Investigate your herd health status

- Herd your stock
- Use your local vet and Regional Vet Lab.
- Screen your herd
  - Bulk tank milk screen
  - Blood screen - BVD PI in 25% of sampled pools
- Sample individual animals
  - Blood
  - Milk
  - Ear-notch

- Antibodies ≠ Virus = Positive
Step 2. Prevent disease introduction

- **Don’t buy-in**
  Closed herd – 25% of herds

- **Test & quarantine if you have to buy-in**
  Pre- and post-movement

- **Protect your boundaries**
  Fragmented land
  Fencing
  Co-grazing
What should a commercial dairy farmer do before buying in cattle?

Pre-movement

- Collect a herd health history
  - Vendor, Vendor’s PVP, DVO
- Test incoming cattle
  - e.g. Brucellosis, TB, BVDv, Johne’s, Neospora, Pregnancy (pregnant = 2 animals bought)
What should a commercial dairy farmer do after buying in cattle?

Post-movement

- Quarantine
  Until tests results clear, 30 days, 3m isolation, in batches, till calved.
- Test cattle
  e.g. Brucellosis, BVDv, Neospora, - calves from purchases
- Medicate purchases
  Vaccines, anthelmintics,…
Step 3.
Prevent disease spread

- Manage immunity - Vaccination
- Costs €5 to €20 plus/cow
- 87% of farmers use at least one vaccine
- Top 3 cow vaccines- Lepto, BVD & Salmonella
- Use of vaccines in cattle is increasing each year and use of antimicrobials is decreasing
- Vaccination ≠ disease control
- ‘we need to think beyond the shots…’
Vaccine use on Dairy Farms

![Bar chart showing the percentage of herds using vaccines for various diseases. The diseases include:
- Lepto (70%)
- Blackleg (60%)
- BVD (50%)
- Salmonella (30%)
- Diarrhoea (20%)
- Pneumonia (10%)
- IBR (5%)
- Ringworm (2%)]

Herds (%)

- Lepto
- Blackleg
- BVD
- Salmonella
- Diarrhoea
- Pneumonia
- IBR
- Ringworm
Specific cattle vaccines sales growth (2008 to 2009)
Vaccination protocols

- General guidelines
- Need farm-specific vaccination programme as part of your herd health plan
- Discuss product details (choice, cost, schedule, etc..) with your local vet
- ‘Vaccination calendar’; memorable days
- Top 3: Lepto, BVD, Salmonella
- Vaccination ≠ disease control
Vaccination against Leptospirosis

Why vaccinate?

- Prevent disease spread before the peak period of transmission at pasture
- To provide protection before, not during, the breeding season
- To prevent early infection in heifers
- To prevent infection in humans
Lepto. vaccination protocols

Heifers
- Primary course (2 doses) after 6 months of age

Cows
- Annual booster (1 dose) in early spring to all cows at least a month before mating start date

Bought-in heifers/cows/bulls
- Primary course (2 doses) or annual booster (1 dose) while in quarantine
Vaccination against BVD

Why vaccinate?

- To provide maximum protection before mating
- To provide foetal protection

‘You can’t vaccinate your way out of BVD’

(Prof. Joe Brownlie)
BVD vaccination protocols

Heifers
● Primary course (2 doses) approx. a month pre-breeding

Cows
● Annual booster (1 dose) at least a month pre mating start date to all cows

Bought-in heifers/cows/bulls
● Primary course (2 doses) or annual booster (1 dose) while in quarantine
Vaccination against Salmonellosis

Why vaccinate?

- To provide protection prior to the peak period of risk of abortion after drying off (unlicensed)
- To boost colostral antibody quantity and quality
Seasonality of S. Dublin Abortions

Salmonella vaccination protocols

Heifers
- Primary course (2 doses) prior to the seventh month of pregnancy

Cows
- Annual booster (1 dose) at least a month prior to the start of drying off to both spring and to autumn cows

Bought-in heifers/cows
- Primary course (2 doses) or annual booster (1 dose) while in quarantine
Concurrent use of vaccines

- ‘Don’t administer another vaccine two weeks either side of the date of vaccination’
- Where products have been tested for interactions
  
  Vaccinate on the same day
  Don’t mix in the same syringe
  Inject on opposite sides of the animal
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Step 4. Monitor your control programme

- Herd your stock
- Use your local vet and Regional Vet Lab.
- Monitor records to detect changes in performance
- Use screening tests to detect changes in herd health status
- Monitor implementation of the control programme itself
Human health risks

- Leptospirosis
- Salmonellosis
- E. coli O157
- Campylobacter
- Cryptosporidiosis
- Ringworm
- ....
What I’ve said…take home messages

- Herd Health Management Plan
- Local vet

Step-by-step guide
- Investigate your herd
- Stop disease coming in
- Stop disease spreading
- Monitor on an ongoing basis
Thank you for your attention