

BLACKWATER VETERINARY CLINIC

Newsletter

Mallow, Co. Cork.



REPRODUCTION AND FERTILITY

Prime Health Vets recently hosted a Fertility seminar at Corrin Mart – attendees heard topical presentations from two speakers: Dr. Doreen Corridan MVB MRCVS PhD from Munster Cattle Breeding Group addressed issues to improve fertility and Paul Redmond MVB MRCVS Cert DHH from Duntahane Veterinary Clinic gave a presentation on *Neospora caninum*.

In this issue of our newsletter, Pat Noonan MVB MRCVS Cert DHH highlights important issues raised by both speakers and gives a synopsis of the presentations given on the night.

"Fertility 2014 - The Race is on"

Doreen Corridan MVB MRCVS PhD

Milk quotas will be abolished in April 2015 and for farmers to take advantage of this significant opportunity Dr. Doreen Corridan stated that **COMPACT CALVING** is a necessity. Compact calving will facilitate more milk production from grass but will require;

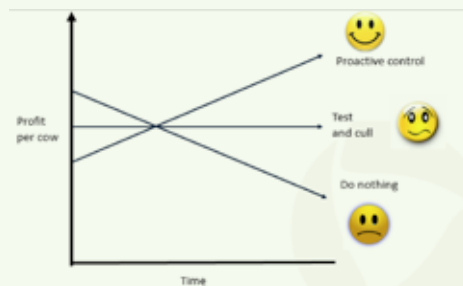
- More cows cycling before start of breeding season (MSD)
- More effective synchrony treatments
- Improved 3 week submission rate
- Improved 1st service conception rate
- Less groups of cattle
- Workload organised

In essence, put EFFICIENCY BEFORE EXPANSION as expansion must be profitable

Fertile cows of high health status, increased emphasis on calf and heifer rearing, attention to grassland management, and improved genetic merit of replacement stock will help farmers to achieve these goals.

Fertility Targets

- 70% of cows calved in 6 weeks
- 90% of maiden heifers calved in 4 weeks
- 365 day calving pattern
- 18% replacement rate
- >90% submission rate
- CR to 1st service of 55 - 60%



The "Fertility 4"

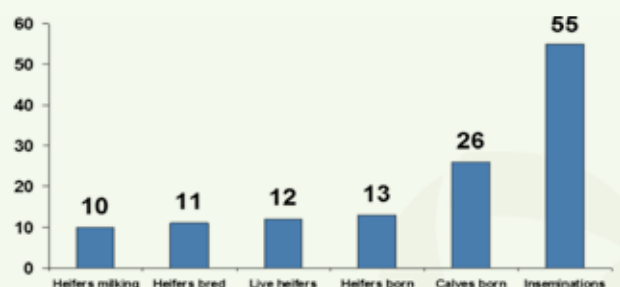
Disease control, Nutrition, Genetics and Mating Management

1. Disease control

- Some causes of infectious infertility include;
- Leptospirosis, BVD, IBR, Salmonellosis, Neospora, John's
- Monitor antibody levels in bulk milk samples (3 - 4 times/ year).
- Blood sample a group of young animals to monitor the effectiveness of control strategies
- Endometritis and metritis should be diagnosed and treated quickly to avoid increased calving interval losses and continuous reproductive failure.
- Treat cows for internal (gutworm, lungworm, and fluke) and external (flies, lice) parasites - consult your vet to choose an appropriate product.
- Pay attention to lame cows and the condition of farm roadways.

2. Nutrition

- Pay careful attention to detail when managing cows' condition scores from late lactation to drying-off through the transition period and after calving.
- Formulate the diet plan in conjunction with your vet to accommodate poor silage
- Correct vitamin and trace element deficiencies before MSD - blood profiles may be a useful way to assess the situation.
- Pay particular attention to maiden heifers - the future of the herd! Research has shown that you can expect to use 55 inseminations to get 10 heifers milking
- Cow BCS at calving 3.0 - 3.25
- Cow BCS at breeding 2.75
- Heifer weight at breeding 50 - 55% of mature BW



3. Genetics

- Breed your own replacements – use A.I. in maiden heifers for 30-60 days
- Fertility drives production
- Genetic merit for survival from one lactation to the other
- Genetic merit for calving interval
- Focus on “type” and breed replacements which are best suited to your farm/ production system
- Start milk recording
- Keep accurate records of cow ancestry

4. Mating management

- After calving cows will begin to cycle after 20-30 days; this may be extended in high yielding cows or those with uterine infections in the post-partum period.
- The cow has a 21 day oestrus cycle – it can vary between 18 and 24 days. The average duration of oestrus is 8 hours but it can range from 2 – 30 hours.
- Detection of oestrus involves being able to observe and record behaviour;

Oestrus signs include:

- **Standing when mounted (key sign)**
- Rub marks over the tail head
- Increased restlessness and activity
- Mounting other cows, particularly mounting the cow from head on
- Clear vulval mucous
- Decreased feed intake & milk yield
- Slight increase in body temperature



Pre-breeding Season

- **Vasectomise** a bull in January and purchase/ prepare the chinball
- Acquire and **fertility test** a sweeper bull
- **Record heats** in the pre-breeding period
- **Complete all vaccinations**
- Get your **vet to scan entire herd or suspect animals** at the very minimum [cows that have not been seen bulling, “dirty” cows, short/ prolonged cycles]
- **Check last year’s CR**

Heat detection may be improved by:

- Tail paint twice weekly
- Heat mount detectors e.g. Scratch cards (Estroprotect), Kamars
- Crayons (indoors)
- Pedometers
- Synchronisation protocols



Breeding Season

- **Cows tail painted twice weekly** (weather dependent) & scratch cards on heifers
- Expect to have 1/3 of cows submitted during the first week
- **Synchronise heifers** with Pg (discuss protocol with vet)
- **As season progresses INCREASED heat detection** as the number of mounts is decreasing – vasectomised bull very useful now
- **Book vet visits in advance** – 3, 6, and 9 weeks into breeding season and 40 days after end of season
- **Synchronisation of cows** calved 35 days not bred and “late calvers” (various protocols using CIDR/ PRID, Pg, and GnRH – vet will tailor a programme to suit farm and results of scanning)
- **Fertility tested sweeper bull** towards the end of the breeding season (max. 15 – 20 cows for young bull)

"Neospora caninum"

Paul Redmond MVB MRCVS Cert DHH

Neospora caninum facts:

- A protozoan organism
- Important cause of abortion all over the world
- 8.2% cause of all abortions in 2012

Neospora caninum transmission:

Both horizontal and vertical transmission occur;

Vertical transmission:

- Most important route of transmission
- From cow to calf during pregnancy
- Infected family lines

Horizontal transmission:

- Dog eats infected placenta, *Neospora* undergoes maturation, passes in faeces
- Contamination of cattle food/ water via infective dog (or fox) faeces

Neospora caninum clinical signs:

- Abortion (between 3 – 8 months of gestation)
- Mummified foetus
- Early embryonic death
- Premature calves which show ill-thrift
- Occasionally, brain disease at birth
- Repeat abortion possible in the same cow

Neospora caninum diagnosis:

- Clinical signs of little help
- Characteristic heart & brain damage in aborted calf; identification of parasite in calf tissue
- Antibodies in the mother's blood
- Eliminate other causes of abortion

There is no treatment of any proven benefit

The definitive host for *Neospora* is the dog (in which the parasite becomes sexually mature & reproduces) and probably foxes.

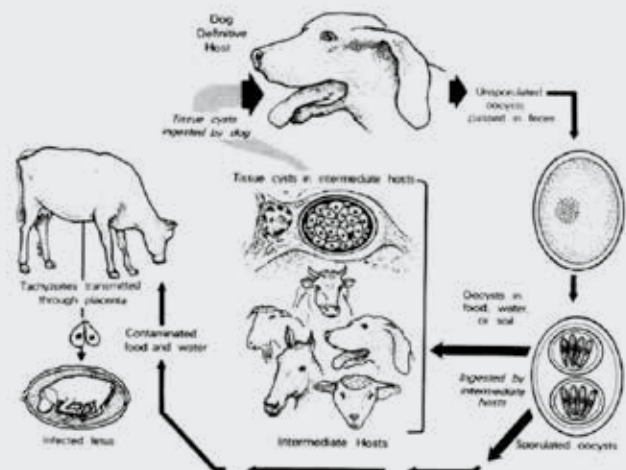


FIG. 1. Life cycle of *Neospora caninum*. (Reprinted from reference 128.)

Neospora caninum – what can we do?

Bioexclusion

- Keep cattle, food and water away from dogs and foxes
- High hygiene standards at calving
- Don't purchase infected breeding stock

Biocontainment

- Identify & cull infected cattle
- Use only seronegative cattle for breeding
- Breed seropositive animals to beef breeds if necessary
- Don't feed pooled colostrum to calves
- Screen herd, follow family lines, use bulk tank screening, lab test abortions, & cull.