

THE DEER FARM & PARK DEMONSTRATION PROJECT



Day 2 – 10 June 2014

On-farm health in spring and summer

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The funding is being made available through the SRDP Skills Development Scheme which is jointly funded by the Scottish Government and the European Union



Treatment at turn out.

Rising one year old calves can conveniently be treated with persistent **anthelmintic**.

If there is **fluke** on the farm or if stock has been brought in, treat with triclabendazole (Fasinex) – ideally this should be carried out two weeks after housing in the autumn.

Where **copper** status is poor, treat calves with copper oxide boluses; pregnant hinds should be treated in the first half of pregnancy, if not treat now.

Remember...

Gestation length is 231 days +/- 3days (so an October 1st mating is May 20th calving) – prepare hinds accordingly.

Overgrown hooves should be trimmed at turn out .





Lameness is uncommon but injuries during transport or handling should be attended to before they become chronic.

Death of wild stags in velvet is extremely rare and disease in adults at grass on farms is also very unusual.



April to end of June - calving.

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(so an October 1st mating is May 20th calving) –
prepare hinds accordingly.

Hinds must be in **good condition but not fat.**

Dystocia is rare.

Behavioural problems in first calvers are quite common, mismothering - cross suckling, and occasional aggressive hinds – all these can be minimised by keeping groups of hinds as units, providing plenty of cover, avoiding moving too close to parturition.

Infectious disease:

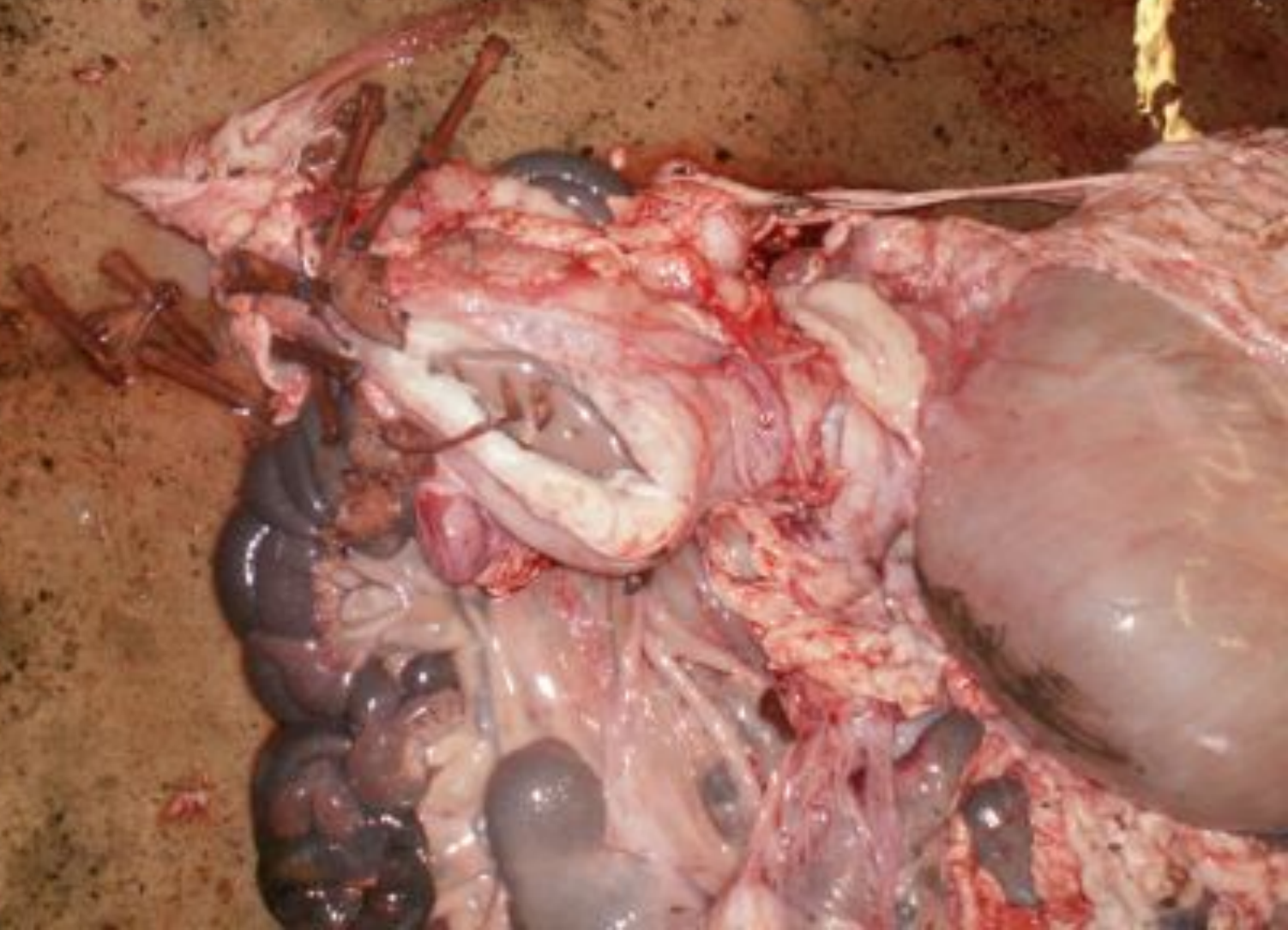
Cryptosporidia the most common, rarely E.coli, Salmonella, Rotavirus and Coronavirus.

Copper deficiency:

Associated osteo-chondrosis leading to arthritis normally only seen pre-weaning as swollen hocks



Foetal loss between Nov/Dec and Feb/March of 7 -10% (Wilson et al., 2012)
Probably Toxoplasmosis is a significant factor.
Red deer are highly robust in retaining pregnancy during physical stress such as handling or transport even in late pregnancy.





Post-natal losses In NZ 5-15%..but based on early work in 1980's – now perhaps hinds more adjusted to farm conditions and farmers better at enriching the environment.



Handling calves at birth for weighing and tagging requires planning and care.



Twinning - twin ovulations in New Zealand estimated at only 0.5%. Higher in UK?
High heritability?




As in other livestock early suckling of colostrum is vital. The mother's absorption of the calf's faeces permits her to produce tailor made globulins.



Cryptosporidiosis


- Causes rapid death in calves only a few days old
- Rarely diarrhoea
- Can cause losses of over 20%
- Caused by single celled protozoon, *Cryptosporidium parvum*
- Not host specific – often link with cattle
- Can infect humans
- No effective treatment
- Manage to synchronise calving & reduce pasture contamination
- Seems to recur for a few years then spontaneously resolve



Liver fluke in red deer is well tolerated – classic calcified, 'pipe stem' bile ducts do not occur.

Even this very heavily fluke Infested deer was in reasonable condition when killed.





Lungworm, (*Dictyocaulus eckerti*) remains the biggest cause of death in farmed and park deer.



Control of worm parasites – grazing management & anthelmintics.

Clean pasture Make use of silage aftermaths, new pastures, pasture grazed by sheep, Avoid high stocking densities and don't graze too tight, use forage crops. Frost kills lungworm larvae and cold and drought reduce pasture burdens. Dose and quarantine new arrivals. Some strains of deer are more resistant to helminths than others. Immunity to lungworm is good in deer but requires time to develop - anthelmintics are needed initially to protect against high challenge.

Anthelmintics Increasing resistance: consider reverting to oral and injectable to achieve higher blood levels but less persistent than 'pour-ons'. Observe withholding times ().

Dose rates ?

Frequency determined by level of pasture contamination, route and efficacy of drug.

Gastro-intestinal worms. Generally less important than lungworm but seem to be becoming more important.

Dosing deer..

If using **pour-ons** make sure nozzle is touching the deer from tail to withers to ensure delivery onto skin. When skin is thick (winter) or dirty use injectables or oral.

For all dosing base dose rates on the heaviest in the group.

Monitoring parasites. Faecal egg and larval counts are complex – for lungworm need very fresh samples (rectal), only monitoring adults so in rapid build up sampling not helpful.

To be sure of effective control dose every five weeks using moxidectin or more frequently with less persistent drugs. Benzimidazoles eg Panacur are not persistent but will kill adult worms and may be worth using in combination with moxidectin.

Lungworm – chief period of challenge is between August and first frosts. Deer develop good immunity at low challenge so may not need to dose adults. Most effective to least in order, probably: moxidectin (Cydectin)> abamectin (Startect)> doramectin (Dectomax)> ivermectin (eg Ivomec)> eprinomectin (Eprinex) . (Macintosh, 2012) . Levamisole ineffective in deer (eg Combinex – good for fluke)















Chronic scouring and emaciation is almost certainly due to Johne's disease.

Johne's Disease/ Paratuberculosis – *Mycobacterium avium paratuberculosis*.

Up to 60% of New Zealand herds infected and up to 34% of herds showing clinical disease. Between 0.4 and 1.2 % of deer in New Zealand have clinical signs (Deer Industry News 2009)

Resistance highly heritable

Can be carried by many species

Management: feed clean pasture, cull immediately if chronic diarrhoea seen, consider Eventually a test/cull strategy.





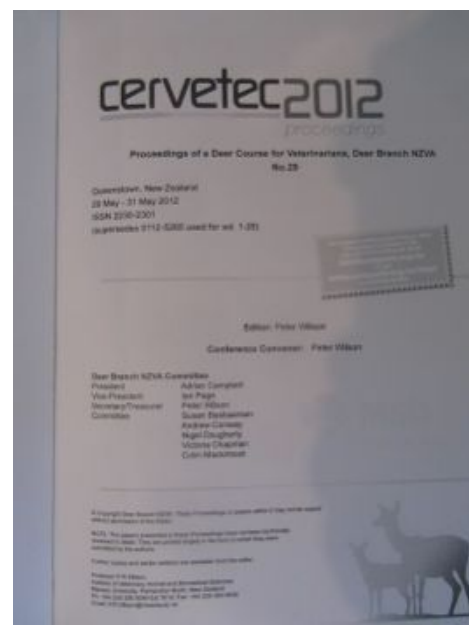
Proceedings of Deer Courses for Veterinarians.

Best source of information on deer disease – annual publications from New Zealand Veterinary Association Deer Branch.
Also a valuable source of information on the New Zealand deer industry.

29 volumes from 1984.

Available on-line or on CD:

www.sciquest.org.nz/deer or e-mail info@sciquest.org.nz



Deer Health Scheme

Existing scheme established in 1989 in response to TB outbreaks– farmer funded, due to false positives and risk to farmer of subsequent movement restrictions, fell into disuse.

Concern that new deer herds now have little security in purchasing stock.

New Scheme being formulated using New Zealand testing regime. Success will depend on DEFRA's willingness to take a pragmatic approach to this.







The objective is a healthy hind and a calf born in good time to reach good weaning weight.

