Gateway Gazette
Beef, Sheep and Deer.

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Hopefully you all had a great Christmas break and weaning has gone well, there have been some strong prices coming through the lamb sales so far which is promising. Fawns had a fairly rough start in life this this year so hopefully they're playing a good game of catch up now. Filming is in full swing for Nina's Country Calendar appearance so we'll look forward to that being aired in the coming year!

Lepto Vaccination in Deer – Cost or Investment?

Raechel Parker BVSc

Leptospirosis has to be seen as a disease of production, with subclinical infections silently spreading through the herd. Animals develop a **carrier status** and shed lepto for as long as 10 months following infection – this circulating lepto has a costly and sometimes devastating impact on **fertility** and **growth rates** and results in more carrier animals.

Sub-Clinical Disease: Animals are infected but don't show signs of illness. Usually affects production.

Clinical Disease: Animals are infected and show signs of illness.

Mortality from **clinical disease** is usually approx. 2%, but can be as high as **20%** in disease outbreaks in young deer since they are most at risk in their first year of life.

A 2014 survey showed an **82% prevalence in our national deer herd** and yet **only 10% of farms were vaccinating** – hopefully this figure has crept up a bit now.

Lepto is carried by wildlife and most farmed animals. It is spread via urine and loves water with wet environmental conditions, especially flooding, being a big risk factor.

85% of NZ deer farms also run sheep or cattle, and with high prevalence in these species the risk is high.

Production data and vaccination – what the studies show us

- **Vaccination** of **infected herds** resulted in **44% decrease in shedding**
- **Vaccination of fawns before exposure** resulted in **no** development of **carrier status**

Growth

- **Lepto positive weaners** averaged **3.4kg lower liveweight at 12 months.** LW difference in the highest prevalence herd averaged 6.4kg at 12m which worked out at $30/deer @ a $7.50 schedule
- Lepto positive farms which were **vaccinating fawns** saw a **49g/d higher spring LW gain**

Reproduction

- **10% higher weaning rate** in vaccinated adults in infected herds

Herd Prevalence Determines Vaccine Return on Investment (ROI)

Based on the information below it's estimated that 2/3 farmers could expect ROI

Mortality

- ✓ 0.7% weaner mortality and 0.3% hind mortality = break even on vaccination cost

Growth Rates

- ✓ 20% Herd Prevalence = break even on vaccination cost
- ✓ 50% Herd Prevalence = 260% ROI
- ✓ 100% Herd Prevalence = 520% ROI

Fertility – Measured by Weaning % on infected farms

- ✓ 1.3% increase in weaning % = break even on vaccination cost
- ✓ 5.6% increase in weaning % = 400% ROI
- ✓ 10% increase in weaning % = 715% ROI

Should I vaccinate and will it be economical?

Herd A: Your herd has been **lepto positive** for a while and you don't vaccinate: the likelihood is you are down on production as a result of rumbling effects on growth and fertility.

Herd B: Your herd is **lepto free**: you're at risk of your immunologically naïve herd coming into contact with lepto and suffering high mortality. Surviving animals will then become carriers and you too will be affected by the damaging effects of lepto on growth and fertility.

Individual herd prevalence needs determining before concrete conclusions can be made on ROI, however it should improve production in Herd A and can be viewed as an insurance policy in Herd B.

Herd prevalence can be determined by taking 20 blood samples from R2s, as these give the most reliable results.

Risk evaluation will vary between farms and of course animals too, depending on the intrinsic vs commercial value of your stock.

Human Health – our industry responsibilities

Lepto causes serious disease in humans and is a severe risk to everyone working in the deer supply chain, the whole industry needs to pull together to reduce this risk as much as possible.

When should I vaccinate?

If you vaccinate a fawn before they become infected you stop them from becoming a carrier, if you vaccinate them once they are a carrier they shed less lepto but they will always be a carrier.

Fawns have protection early on from colostrum and this wains around 12 weeks of age. There are several different vaccines available - which products to use and when to use them depends on your system so give us a call if you'd like further advice in this area.

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Preg Testing Beef Cows
– Are we making the most of it?

Nina Jaine BVSc

Scanning your beef cows is a great test of overall herd health. Traditionally we have only identified pregnant or empty cows when pregnancy testing beef cows. We can now identify late calving cows, or identify the age of the pregnancy.

The advantages offered by identifying late calving cows include:

1. **Immediate culling of empty cows.**
2. **Easing winter feed pressures.**
3. **Preferential feeding of early calvers can be instigated.**
4. **Calving spread can be tightened by culling late calvers if numbers permit**

It is best to scan around **6 weeks after the bull is removed** for identification of late calvers, while straight wet/dry scanning can be done anytime after 6 weeks.

The objectives of any beef breeding herd should be:

- ✓ Pregnancy Target of 95% after mating length of 49-63 days in mixed age cows
- ✓ Rear 93 calves per 100 cows mated each year
- ✓ Wean calves at 6 months of age at 240 kg or better –aim for 50% of cow autumn liveweight. Ideally these calves will grow at over 1.0 kg/head/day
- ✓ 2-3% mortality in cows per year
- ✓ Aim for 70% of R2 heifers to calve in first three weeks, 85% pregnant after 42 day joining period, 90% calf survival and 90% in calf as three year olds
- ✓ Use the breeding cow to maintain and improve pasture quality

The following table shows the value of having a condensed calving. A calf born in the first cycle is worth $252 more than one born in the 5th cycle (if the beef schedule stays positive at $3/kgLW.) Maintaining a compact calving pattern at 49-63 days makes you money.

Birthdate of Calf @ birthweight 35kg (ie. calving spread)	Calf Weaning Weight (At 200 days, growth rate 1.1kg/day)	Value of Weaner (At $3/kgLW)
Day 1-21	255kg	$765
22-42	234kg	$702
43-63	213kg	$639
64-84	192kg	$576
85-105	171kg	$513

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• Charles Burgess MVB • Rachel Mcleod BVMS

Summary of Pregnancy Testing Results		
	Canterbury	Objective
Average MA cow empty rate	7.73%	<5%
Average mating length for cows	79 days	49-63 days
Average heifer empty rate	10.68%	<15% for R2
Average mating length for heifers	71 days	42 days

Points of Interest

- The longer the bull is out doesn't always equate with a high pregnancy rate. Many farmers are achieving good results with a short mating with higher financial returns
- 67% of farmers mate heifers as R2s
- Only 20% of farmers are aware of their BVD status and have a plan in place. The herds that are affected and have vaccinated have improved their reproductive performance.
- Only 48% of farmers supplement with selenium and/or copper in their MA cows, whilst of the farmers that mate their heifers 61% supplement with selenium and/or copper. Where deficiencies have been found trace element supplementation has improved performance.
- Body Condition Score is tightly linked to pregnancy, as well as determining early calvers.

Coccidiosis in Lambs
– Should we be worried?

Raechel Parker BVSc

Coccidia are small parasites which infect the cells of the gut lining, affecting nutrient absorption and therefore growth rates. In more severe cases it results in scour and death.

Coccidiosis has classically been seen as a disease of dairy calves with little significance given to its role in lamb scour and growth rates. Yet with changing weather patterns and more intensive farming systems we should be considering it's role in lamb health, especially its' silent effect on growth rates.

Lambs tend to excrete large numbers of coccidiosis in their first few weeks of life, by 4 months they have a level of immunity. A trial in the '90s showed that treating lambs regularly for coccidiosis had a positive effect on growth rates.

We've found cocci on a number of faecal egg counts in scouring lambs this season, usually in conjunction with a parasite burden. Some of these lambs have continued to be 'poor doers' once the parasites have been treated. So if you have scouring or poor doing lambs despite regular drenching then get in touch, as it could be worth some thought.

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