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Investigations into common farm management practices and diseases on alpaca farms in New Zealand

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Abstract

Alpacas are New World Camelid reared worldwide for fibre and meat, and since the 1980's, when they were reclassified from zoo animals to livestock, have become an increasingly popular farm animal in New Zealand. However, there is limited research performed on alpacas farmed under New Zealand conditions. Therefore the aims of this thesis were to determine common farming and health care practices among New Zealand alpaca farmers, and to determine the prevalence of certain diseases known to affect alpacas including *Candidatus Mycoplasma haemolamae*, bovine viral diarrhoea virus (BVDV) and parasitism in New Zealand.

In the first part of this study, a survey was administered to 18 alpaca owners from 9 regions of New Zealand, encompassing 1065 farmed alpacas.

Faecal egg counts were used on 75% of farms in their worming regime while on 62.5% worming was a scheduled task. Macrocylic lactones were the most popular class of anthelmintics, with Dectomax© the most commonly used of the 15 products mentioned. Ten of 18 farmers always used the same deworming product on their farm. Hand mating (64.7%) was preferred over paddock mating with females being bred around the

same time on 87.5% of farms. Repeated failure to conceive was the most common way to diagnose reproductive failure, and 12/17 farmers gave up to 3 matings before reporting reproductive failure. Spit off is the most common way to diagnose pregnancy on farms (88.2%). Vaccination for clostridial diseases and vitamin D administration occurred on 94% and 100% of farms respectively. Ten of 17 farms routinely weigh crias and 94% of farmers ensure crias suckled within 24 hours. Between 2012 and 2014 more crias died per farm (3.31) than in other management groups. Congenital defects were the most common case of deaths in crias. The average deaths per 10 alpacas for the same period was 1.94. Voluntary tuberculosis testing was performed on 13/18 farms; facial eczema and zinc supplementation occurred only on farms in the North Island, and ryegrass staggers occurred on both islands.

The second part of the study was to determine the prevalence of *Candidatus Mycoplasma haemolamae* (CMHl), BVDV and gastrointestinal parasitism, as such 206 blood samples and 143 faecal samples were collected from 12 regions.

The prevalence of CMHl in this study as determined by PCR was 0.97%, while antibodies for BVDV were found in 2.05% of alpacas and no animals were positive for BVDV antigen. Anaemia (PCV<25%) was found in 21.76%

of animals sampled and 23.07% of alpacas had a significant gastrointestinal parasite burden (over 200epg). In New Zealand alpacas, anaemia was more likely to be associated with gastrointestinal parasites, rather than infection with CMhl.

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