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BRIEF COMMUNICATION

Alpaca management in the Central North Island of New Zealand

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ABSTRACT

The high South American altiplano is not the ideal environment for alpacas but was forced onto them by the introduction of sheep and cattle to the Inca pastures following the Spanish conquest. In New Zealand they are being farmed in a variety of areas and seem to respond dramatically to our normal farming methods. Warm, humid areas can cause problems with eczema and staggers.

Alpacas produce a semi-precious fibre of various colours, which at present is causing processing difficulties in New Zealand due to the small quantities, so we are concentrating on increasing herd numbers.

Alpaca management can be closely allied to sheep farming, with the exception of their mating and breeding. They are induced ovulators and can be mated in either pens or paddocks. Pen mating gives better control but is more work, while paddock mating has the disadvantage of prolonging the breeding season. Alpacas will breed at any time of year, but we have found that the autumn suits them best and they are remated two weeks after birthing. Alpaca twins are extremely rare. They are a hardy, easy care animal that will do well on untopped native pastures and when run in isolation seldom get internal parasites, but can pick up lice or mites.

We are still learning what suits alpacas best, bearing in mind that these are very adaptable animals that do not need alterations to their environment to suit any specific needs.

After a hundred and fifty years of a total ban on exports of live alpacas (*Lama pacos*) from their native countries in South America, Chile agreed in 1986, to release a few small shipments to New Zealand. These alpacas were imported into New Zealand from the high altiplano region situated 4-5000 metres above sea level in Northern Chile.

This harsh environment is not the ideal locality for them, but was forced onto them when European sheep and cattle were introduced onto the lower alpaca pastures after the Spanish conquest of the Inca Empire in the sixteenth century. The alpaca, being a very adaptable animal, was able to cope with the high altiplano conditions where sheep and cattle did not thrive.

Here in New Zealand, they are being successfully farmed right down to sea level, although we have found that they are not suited to warm, humid, lowland conditions, with cases of facial eczema, ryegrass staggers and fleece dermatitis being reported. Cooler, drier areas seem to suit them best.

Alpacas will do well on untopped native pastures, but when farmed in lush New Zealand conditions will do best if they have permanent access to a rack of hay to provide fibre in their diet. If hay is available they can balance their diet themselves. They are not suited to heavily topped "dairy farm" type pastures. Exposed windy hillsides are quite suitable for grazing alpacas, but they will need a sheltered area to rest in, with shade available in summer and a good water supply all year round.

Alpacas respond dramatically to our normal New Zealand farming methods of good nutrition, rotational grazing, selective breeding, avoidance of inbreeding and

early weaning. They are easy care animals that can be farmed behind standard sheep fences and are handled and shorn in conventional woolsheds and yards.

In New Zealand the average reproduction rate seems to be about 75% a year, which is very good when compared with alpaca reproductive rates in other countries.

Alpacas produce a semi-precious fibre that is well known on world markets and they have an annual clip of 1 - 5 kg which gives considerable scope for wool weight selection. Their colours vary from pure white through all the shades to jet black, with a proportion of animals being multicoloured. As the numbers of alpacas are small and there are three grades of wool on each animal, it is difficult to get enough of any one colour and type to put through a commercial spinning machine. Until we can increase the numbers of animals to produce commercial quantities of fibre, we are reliant on hand spinners and weavers for our fibre market.

Alpaca management and carrying capacity, can be closely allied to sheep farming, with one important exception - their mating and breeding habits are vastly different.

Alpacas are induced ovulators. They ovulate in response to mating and may remain receptive to the male for several days following the initial mating. One mating should be adequate to stimulate ovulation and allow conception, but matings can be repeated at 24 hour intervals until the female becomes non-receptive which is usually about the third day.

Mating methods can be either "pen mating" or "paddock mating". Pen mating is when the male is kept in isolation and two or three females are brought in each day and put with him. This of course is time consuming and is

really only suited to small herds, but it is a reliable method of knowing the mating dates. Paddock mating is when the male is put with a mob of females and left to run continuously with them and he does his own selection.

With this continuous association between the sexes, the male's libido will soon become weak and the females will be mated over an extended period which will result in a very drawn out birthing period. To overcome this, the male can be changed each fortnight. Females can be mated when they weigh 45 kg or more, which can easily be achieved in New Zealand at one year of age. However, males are not generally usable as sires until they are close to three years old.

Males will fight and can injure each other quite seriously when more than one is run with a mob of females, so paddock mating mobs need to be small.

Also, birthing females must be kept away from all males as they will attempt to mate a female immediately after she has birthed and can injure her or trample the new – born cria.

After experimenting for several years with different birthing dates, we have found the best time in our Taupo area is the autumn, with the crias being left on the mothers over winter and weaned onto good feed in the spring.

The average gestation period is eleven and a half months with autumn births having a shorter period than spring births. To avoid births occurring in winter, the females are mated two weeks after giving birth. In our experience autumn is the time of year when the male's libido is strongest and the females are most responsive.

Over several hundreds of years the alpaca has adapted to a very harsh environment, so twinning is rare and they only birth during daylight hours, usually early in the day. Cases of dystocia are uncommon and they are good mothers that generally milk well.

They all defaecate in middens (or patches) and will not graze these patches for about a year. Middens provide a heavy dose of humus, so alpacas are potentially good soil improvers on pumice country. I estimate it will take about 15 years for them to cover one of my paddocks with these midden patches.

Due to not grazing their middens, alpacas are less likely to ingest internal parasite larvae or eggs when grazed by themselves, so there may be little need for a regular drenching programme. However they will pick up internal parasites when grazed with other domestic animals that are infecting the pasture.

They can get lice or mites which will spread rapidly through the herd due to their habit of communal dustbathing.

They do not seem to get footrot or scald, but many imported alpacas have a defect of crooked toenails that need trimming. If this defect is genetic we should be able to breed it out.

Even though they are grazing animals, excessive tooth wear is not a problem as their teeth grow all their lives. When grazed on soft feed their teeth do not wear down sufficiently and some might need an occasional trim. To guard against clostridial diseases we vaccinate them each year in mid-pregnancy with a 5 in 1 sheep vaccine.

The alpaca has adapted to very high ultraviolet levels on the altiplano, so during prolonged spells of overcast weather we give them a Vitamin D supplement to guard against calcium and phosphorous deficiencies that can lead to rickets. Dark coloured alpacas seem to be the most susceptible.

A New Zealand Wool Board shearing instructor has developed a method of shearing alpacas. It is a two man job with one holding and the other shearing with a conventional comb and cutter. An assistant sorts the wool into grades as it is shorn, always avoiding colour contamination. In our district we find it best to shear about Christmas before the hottest weather and before the females get too heavy in cria.

They are "scarce" but not "rare" animals and due to an ever increasing demand worldwide, alpacas are expensive. They are ideally suited to small farming blocks and there is a voracious pet market that absorbs all the unwanted multi-coloured and cull animals.

In New Zealand we are still learning and finding out what alpacas respond to best, bearing in mind that these are very adaptable animals that do not need major alterations to the environment to suit their particular needs.