



ALPACAS AS HERD PROTECTORS

Introduction

Alpacas are one of four members of the South American camelid species. Like all camelids they are hardy, intelligent and gregarious animals that have evolved with strong herd social instincts. Both females and males are very protective of each other and especially of their young. The alpaca is generally very alert to any animal or person approaching its paddock, and has excellent eyesight over kilometre distances. While normally almost soundless, the alpaca can emit a piercing alarm scream when aroused to potential danger, alerting their herd and property owners.

Alpacas are normally gentle toward humans and other animals that are not seen as threatening but they have an innate dislike for canines and foxes. Their defence against such predators is to chase them away or pursue them and if necessary stamp at or on the predator with their front feet, rising off the ground onto their back legs if necessary before bringing their front legs down with considerable speed and force. Alpacas, when provoked in such a fashion, are very fast and will catch the predator in a short distance. There is also evidence that alpacas may deter attacks from eagles.

The instinct for one or two alpacas to bond with other grazing animal herds, and especially their proven ability to protect sheep and goats, has resulted in the growing use of wethered adult male alpacas as sheep flock guardians – especially during and after lambing and kidding. Cases have been recorded in Australia of wethers bravely standing in front of females and progeny in the corner of a paddock fending off multiple animal attacks. In some cases a guardian has been killed by dogs while at least some of his flock survived.

Alpacas and the Australian Environment

Alpacas are undoubtedly the most environmentally friendly of all domesticated animals in Australia. Like all camelids they do not have hooves but soft-padded feet, each with two fairly soft toenails. Their ground foot pressure of 39kPA is much less than sheep (82kPA), cattle (185kPA) and humans (95kPA). Even the kangaroo at 46kPA exerts more pressure on our thin topsoils than the alpaca.

Alpacas differ slightly from true ruminants such as cattle and sheep because of the structure of their three-compartment stomachs. The alpaca's digestion is adapted to high fibre diets and their dietary efficiency is superior to goats and sheep on a similar high fibre diet. Although their adult weight of 60-90 kg is greater than sheep, their DSE is between parity and 10% above the merino.

Alpacas place their dung and urine in specific spots and do not graze close to these, thus avoiding ingesting internal parasites – to which they also have high resistance. (If grazed with sheep, cattle or goats alpacas will pick up the same parasites, and a similar drenching regime will be needed).

Alpacas grow fibre that is valued for its luxurious handle and lustre, and in a wide range of natural colours that is unique among commercial fibre producing animals. However, unlike many other animals, alpacas do not shed their fibre. Also, even when 'bonded' with an accompanying sheep flock and sleeping close by, alpacas will not come into physical contact with them unless forced to do so during yarding. Even then, the risk of fibre cross-contamination is much less likely than from sheep dogs during yard work.



The alpaca does not grow fibre underneath its short tail or in the breech area, and avoids any contact with its urine or dung pellets due to the crouching nature of the alpaca during urination and defecation. Together with almost no grease in its fibre, this means that no mulesing or crutching is required, and fly strike does not occur.



Guardian Alpaca Husbandry

The Australian Alpaca Association strongly recommends that alpacas used as guardians for lambing ewe and breeding goat flocks should be fully grown adult males at least 18 months to two years old, and that castrated males [wethers] are used. (Although entire males are equally capable as guardians, it is not recommended to use them).

The number of alpaca wethers you use will depend on several factors, including the individual alpaca (two or three alpacas are often used together, as is one alpaca – all will bond well with the host flock), size of the paddock, number of animals to be guarded and the layout and terrain of the farm. If several alpacas are kept together they may spend more time in each other's company, however, some farmers report success in running up to six guardian alpacas with very large lambing ewe flocks for added protection against eagle and crow attacks, as well as wild dogs and foxes.

The alpaca ideally should be introduced to the pregnant ewe flock about 4-6 weeks before lambing to allow time for bonding. However it is never too late to introduce a guardian alpaca to a flock - even after lambing or kidding has begun. After initially patrolling the paddock boundary, the guardians will soon remain fairly close to the flock for companionship, and will normally protect them from predators. A single guardian has sometimes been seen 'minding' a group of young lambs while the mothers spread out to feed.

Guardian alpacas can be readily moved around the property with their accompanying flocks, using dogs as required. Normal care, however, is needed to control dogs in their vicinity, especially in yards.

To avoid undue stress, an alpaca should not be kept alone in a paddock. When not needed as guardians it is preferable to keep at least two alpacas in a paddock near the homestead where they can become accustomed to farm dogs, and with occasional hand feeding they will be easy to handle. They will thrive on normal sheep feed and will tend to be overweight when run with breeding ewes, so they should be kept separately or with dry sheep outside the lambing season.

With normal husbandry, guardian alpacas should remain active and useful for at least 15 years, aided by lower teeth that grow to replace wear. Alpacas need to be shorn annually, and this is best done after all sheep have been shorn. To avoid any risk of contamination from close contact, alpacas should be separated from sheep flocks before they are yarded, and preferably 8 weeks before shearing. AWEX (Australian Wool Exchange) quality control staff are comfortable with alpacas being run with sheep, and accept them being shorn in shearing sheds, preferably last after a normal cleanup.

Because of their long legs and neck, it is best to restrain the alpaca on its side, using the recommended leg restraints as detailed in the *Managing Alpacas in Australia* booklet, page 22. The animal should be reasonably firmly stretched to the front and rear by these ropes, preferably with each pair of legs separated by a 30cm spreader board. The alpaca is quite comfortable in this form of restraint. The shearer can then take off the belly, leg and tail fibre, and then the main fleece on one side, turning the alpaca over to shear the remaining fleece. Members of the Australian Alpaca Association Ltd will normally be happy to advise about shearing, methods of restraint and what to do with the shorn fleece.

As with all other livestock annual procedures include teeth being checked (males can develop very sharp 'fighting' canine teeth, however castration before 2 years old normally prevents these from forming) and their toenails being trimmed, unless they are kept on stony ground that will wear them down naturally.

Alpacas also need bi-annual 5 in 1 clostridial disease vaccinations. A cattle dosing rate is recommended. When run with sheep or goats the alpacas should be given the same drenches and dosing rates for internal parasites. Alpaca external parasites are rare, and generally unique to their host species. Therefore products used externally on sheep or goats should not be used. Alpaca guards will maintain condition very adequately on sheep/goat feed however as they do not have the ability to lick, mineral/feed supplementation via a lick is not effective, so a loose mix supplementation is therefore preferable if a supplement is required.

While alpacas are highly resistant, they can contract bovine Johne's disease (BJD). They do not contract ovine Johne's disease (OJD), which is a different strain of *Mycobacterium paratuberculosis*. As at January 2008 there have been no reported cases of JD infection in Australian alpacas since 1995.

Conclusion

Many sheep breeders have reported their best-ever lambing percentages following the introduction of guardian alpacas. Alpaca wethers are readily available at very low cost in comparison to their benefits and feeding and husbandry costs are also very low. These quiet and friendly animals are rapidly becoming accepted as essential complements to all sheep and goat breeding enterprises where predators cause lambing and kidding losses.

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Disclaimer: The management practices detailed in this overview do not constitute veterinary advice. Any alpaca appearing to have an adverse condition should be assessed by a veterinarian.