



Australian Alpaca
ASSOCIATION

IN THIS ISSUE

- Camelid Antibodies - Hendra
- Fashion Show - Peru
- Camels as pets
- Breeding for density
- Alpacas in Australia - Part 2

CAMELID CONNECTIONS

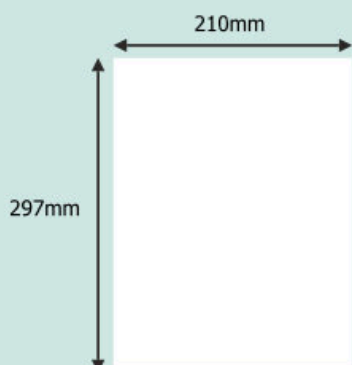
ADVERTISING RATES

Camelid Connections magazine offers you affordable advertising for your camelid related business, event or stud. Contact us to secure your advertising space in future publications.

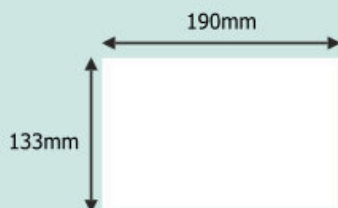
- The affordable alternative for all your camelid related advertising
 - All adverts have a hyperlink directly to your website or email - one click & potential customers can connect with you
 - Camelid Connections magazine is a **FREE** online publication available as a subscription or download from our website
 - Back issues will always be available online so your advert has a long 'shelf life'
 - Camelid Connections offers readers a wide variety of quality articles of interest to attract a broad audience
-

Advertising Rates*

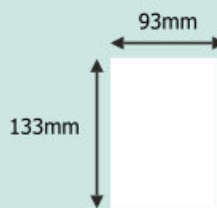
Full A4 Page \$360
(210mm x 297mm)
No bleed required)



Half Page \$185
(190mm x 133mm)



Quarter Page \$95
(93mm x 133mm)



Business Card \$55
(93mm x 65mm)



Classified Listing \$36
Max - 50 words + contact details

- Package rates for prepaid advertisements in 3 issues of Camelid Connections receive a 10% discount.
- Double page spread receives a 25% discount (no additional discounts apply)
- Inside front cover and opposite page attract a 10% loading.
- Camelid Connections magazine will be a quarterly publication commencing in September 2017*
- Advertising needs to be provided as a PDF or JPG to specifications listed above.
- Other advert configurations considered - ask us for a quote

To book advertising or for further details contact either:

- Julie McClen - Graphic Designer Ph: 02 6493 2036
Email: julie@camelidconnections.com.au
- Esmé Graham - Editor Ph: 0457 304 868
Email: esme@camelidconnections.com.au

www.camelidconnections.com.au

* We reserve the right to alter advertising specifications and publications rates and dates at any time.

Websites for Farmers

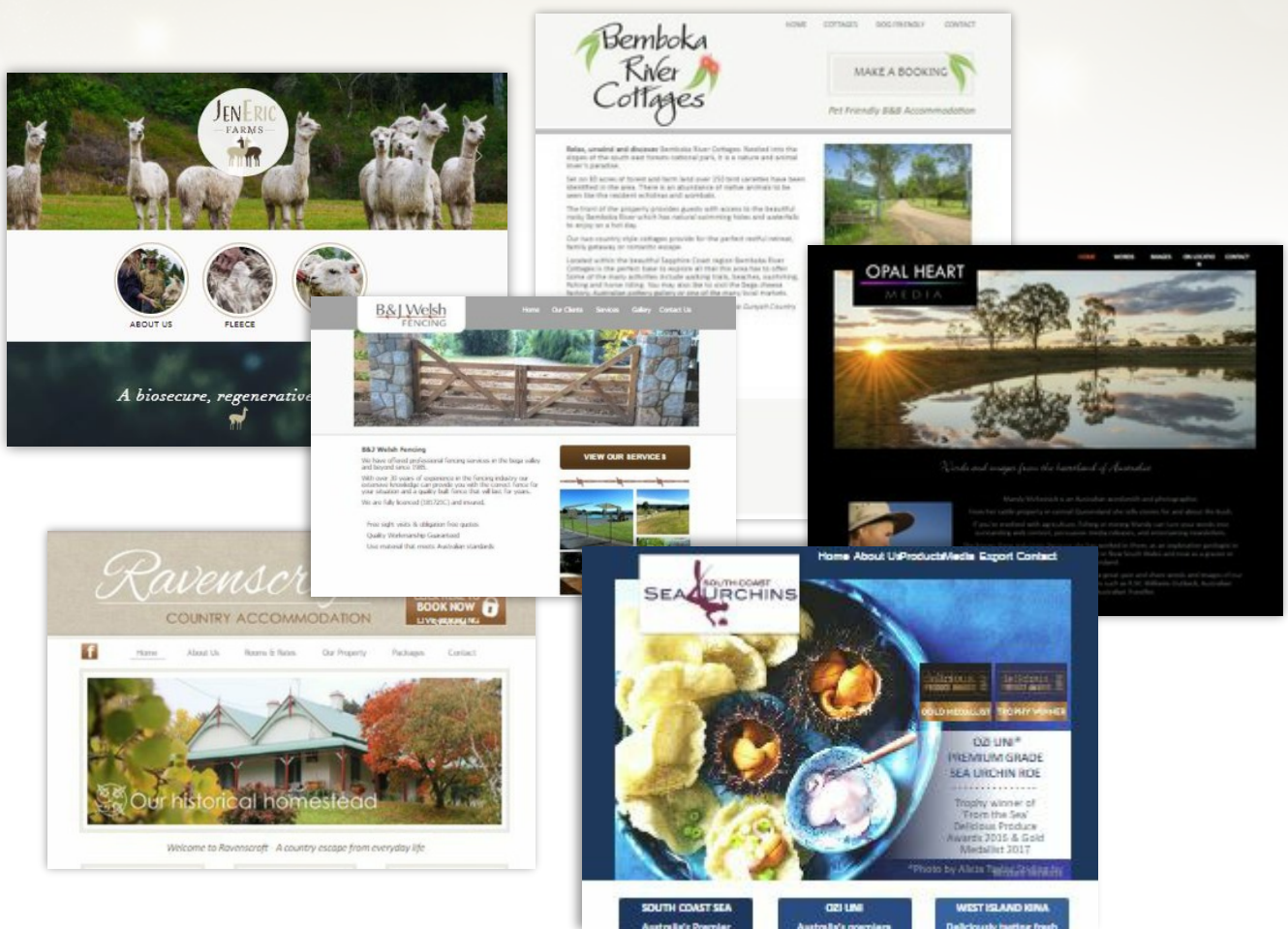
A website today is the basis of most business marketing - a website helps you sell your livestock, your produce or services to the widest audience possible.

WE KNOW & UNDERSTAND RURAL BUSINESSES

Here at Oak Grove Graphics we understand what it takes to make a great website for farmers, because we are also farmers as well as web designers! We offer you web site options to suit you, from easy self maintained sites to we do it all for you options, we design sites that are attractive, functional and individual like your business. From the land to the sea, if your business is rural we can help you promote your business locally or Australia wide.

AFFORDABLE PRICES

Our country prices are some of the best you will find anywhere. Contact us for a free no obligation quote and down to earth conversation, about how we can help your business grow through marketing your business on the internet.



WEBSITES | LOGOS | ADVERTISING

www.oakgrovegraphics.com.au

EMAIL: julie@oakgrovegraphics.com.au | PHONE: 02 6493 2036

Publisher
Camelid Connections is published by Oak Grove Graphics ABN
84 171 413 342

PO Box 4059, Candelo NSW 2550 Telephone
+61 (0)2 6493 2036
Email: info@camelidconnections.com.au Web:
www.camelidconnections.com.au

Editor
Esme Graham Telephone: 0457 304 868 Email:
esme@camelidconnections.com.au

Designer/Editor
Julie McClen telephone 02 6493 2036 Email:
julie@camelidconnections.com.au

Designed and Produced
By Oak Grove Graphics
PO Box 4059, Candelo NSW 2550
Telephone +61 (0)2 6493 2036
info@oakgrovegraphics.com.au
www.oakgrovegraphics.com.au

Copyright
All material appearing in Camelid Connections is subject to copyright.
Reproduction in whole or part is not permitted without the written
permission of the publisher and the author.

Liability
Views expressed by the contributors to this publication, and the
advertisements appearing in this publication, are not necessarily endorsed by
the publisher.

Every care is taken in compiling the contents of this publication, but the the
publisher or editor assumes no responsibility for the accuracy of information
contained in the text or advertisements.

Contributions are accepted at the sole discretion of the publisher and the
publisher reserves the right to edit contributions for style or content. No
correspondence will be entered into as to why a contribution may have been
rejected or edited. In submitting articles for publication contributors accept,
acknowledge and agree with these terms.



Cover Image:Llama with cria - Judy Webby

Contents

Meet The Team.....	5
Is Breeding For Density The Right Goal?.....	6
Do Camels Make Good Pets.....	11
Practical Advice For Achieving Pregnancies In Alpacas.....	13
Tiny Antibody - Big Impact.....	16
Have You Thought About.....	19
Camel Parturition.....	21
Alpaca Fashion Show Peru.....	25
Contrary Llama Mums.....	28
35 Years - Looking Back.....	31
AAA Regions News.....	38
Vale - Adrienne Clarke.....	40

Advertisers

Oak Grove Graphics.....	3
Alpaca Dynamics.....	24
Maylands Alpacas.....	24
Quentin Park Alpacas.....	30
Australian Alpaca Association.....	37
Australian Alpaca Association Sthn QLD - Nthn NSW Rg.....	38

Would you pay for Camelid Connections?



As you may be aware - we advised in our last issue that Camelid Connections has been providing a free online magazine to owners of alpacas, llamas and camels ever since the Australian Alpaca Association stopped producing it's member magazine back in 2017.

But despite having received many emails over these years thanking us for the quality of the articles we provide through the magazine, the diversity of interests we cover, and the often invaluable husbandry information we provide from breeders and vets, we had just a few readers respond to our last issue request regards taking advertising to prevent the potential end of Camelid Connections.

We have to conclude that nobody apart from a few staunch supporters, out of our 800+ free subscribers and the many thousands of casual readers of this publication, wants to advertise to support the continuing production of this magazine.

One of our readers did say she would be happy to pay for a subscription and this is something we have considered many times, but always felt we could get by justifying the time it takes to research, design and publish this magazine each month with even a small regular uptake of advertising. But that hasn't happened, so our only recourse before shutting down completely would be using paid subscription.

So lets discuss this - would you as a current free subscriber or a casual reader be willing to pay an annual subscription of \$49.95 to retain access to past issues, and receive access to future quarterly issues of Camelid Connections? This price is calculated based on only a quarter of subscribers being willing to subscribe to a paid subscription. If we had a larger number of paid subscribers we could of course make the price lower.

Reply to our poll

Just click the blue email link below & add YES to the email subject line to confirm yes you would be willing to join a paid subscription (or copy paste your reply to julie@camelidconnections.com.au into your email program)

Don't reply if your answer is no. *This way we don't have to sort through emails to collate the answers.*

Meet The Team



Esme Graham - Editor

My husband and I bred suri alpacas for over 20 years, I was heavily involved with both regional committees and the national board of the Australian Alpaca Association for a number of years, and had the honour of being selected as a life member of the Association.

My major interest has been in marketing and education and to this end I was editor of Alpacas Australia magazine for six years and I hope that the experience I gained editing that publication can be extended to educate and inform a wider range of alpaca and llama breeders who are not necessarily association members but have a love of all things camelid.



Julie McClen - Designer/Editor

A breeder of ultrafine Huacaya alpacas for over 23 years at Oak Grove Alpacas, I have a passion for fine fibre and the genetic connection to the most diminutive and finest of the camelids - the wild Vicuna.

I strongly believe that education in any industry is the key to success, so with Camelid Connections we hope to provide interesting and informative articles to assist all camelid owners in getting the most out of their animals and businesses.

I also own Oak Grove Graphics a web and graphic design agency which is producing this magazine, and also allows me to connect with many different people in the camelid related world through my design and web work.

www.oakgrovegraphics.com.au

Is Breeding For Density The Right Goal?

By Snowmass Alpacas USA

No commercial buyer of bales of wool ever asks about the density of the animals that produced it. This is because density itself has no intrinsic value. Fleece weight has intrinsic value, of course, and it is understandable that alpaca breeders have taken that to mean that density has value as well. But this is not strictly true.

The number of individual fibres an animal produces contributes directly to fleece weight (as do their length and to a lesser extent their degree of fineness) and it is common for breeders, us included, to use our evaluations of animals' density as a proxy for the number of fibres the animals are producing. It is a poor one. One reason is that density is not solely a function of the number of individual fibres an animal is producing. The second is that it is much less readily and accurately measured than more relevant measures.

Using an imperfectly related and difficult to measure proxy to inform breeding decisions to improve an important, easily measurable trait sounds like a bad idea. Why then do we use our assessments of density to breed for more fleece? We think there are several reasons. One, is that it has been

assigned that proxy value in the halter and walking fleece show rings, where it is not possible for judges to measure fleece weight. A second is probably because breeders, and again we include ourselves here, think we are good at comparing the densities of different animals. In fact, the evidence suggests that we are probably not great at it. A final reason could be that breeders perceive that their impressions of density correlate with other positive traits—in other words, that it is not only about fleece weight.

The goal of this article is not to talk you out of using density assessments for breeding decision-making, but to help you make the best use of your information. We still use our density assessments, but somewhat differently than the way we once did.

What Density Is Not

Assume for a few paragraphs that we are all quite capable of accurately distinguishing differences in fleece density among full-fleeced animals, and moreover decide to use this information to breed to improve it. There is a strong case to be made that this breeding focus would lead us to produce animals with genotypes for smaller adult size over time.

We might even indirectly select for genotypes that produce animals with less parasite resistance or other chronic health conditions that slow growth.

The reason for this is that the follicular density exhibited by an animal is a function of two things. One is the number of follicles present in the animal's skin at birth, and the second is the area of skin within which those follicles are spread. Skin area is a function of body size.

Hair follicles are tiny organs formed during the embryonic and foetal stages of mammalian development. At birth mammals have all the hair follicles they will ever have. Those follicles may initiate hair growth at different times in animals' development. Some mammals are born hairless or nearly so and develop their coats after birth. Others, like alpacas, are born with something closer to a full coat, though follicles may continue to initiate new hair growth in the first months of life. For instance, it is not until lambs are several months old that the initiation of their secondary and tertiary follicles is complete, and alpaca follicular initiation may follow a similar pattern. Individual hair follicle activity may cease at some point in the animals' lives, at which point those follicles stop producing hair and atrophy. Sometimes, hair follicle activity changes in other ways as well. Think your grandpa's eyebrows. Or who are we kidding - maybe your own.

As an animal grows, the hair follicles it possesses at birth are spread out over a wider area of skin. It becomes less dense as it grows. Even as perfect observers of (active follicle) density we might not catch this at first in our alpacas, because of incremental secondary follicle initiation, but eventually we would recognize that density is decreasing, predictably and significantly, as the animals grow. At this point we would hopefully stop saying things like "This animal is small because he is putting all his energy into his fleece!" We would recognise that a small animal appears to have a lot of fleece because he is small, not that he is small because he has a lot of fleece.

One useful thing about acknowledging the link between size and density is that it provides another way to manage an animal's phenotype, with husbandry. As we suggested in the previous article, if you want your show animals to appear denser in the ring you can feed them in a way that grows them out a bit more slowly. This will help maintain marginally higher levels of density for longer and will have the additional advantage of producing slower fleece growth, which also adds to the density perceived (inaccurately, in this case) by some observers.

But if you want to breed for animals that produce more fleece you will do better by breeding to improve fleece weight or direct contributors to it, not density. Because fleece weight is mostly a function of the number of fibres and the amount of fibre growth, to manage those traits separately you can adjust your shorn fleece weights to a constant stretched staple length and use that adjusted

weight along with staple lengths to help separately improve those traits or make trade-offs when selecting for one versus the other. We show you how to adjust fleece weights to a constant staple length in the sidebar on page 9.

We use the same logic — that fleece weight is a function of the number of hairs in the fleece, their length, and their fineness — to calculate an implied EPD for number of follicles, which we refer to as NF. This has proven to be a powerful tool for breeding selection. Occasionally in our enthusiasm we still inaccurately refer to it as an EPD for density, and if you overhear us saying that please correct us. That would only be true if all animals being compared were identical with respect to size and proportions.

Nonetheless, using a selection tool that helps us produce animals with more follicles should lead to denser animals on average, and do so without introducing a bias towards selecting for smaller animals over time. Recently a breeder contacted us with excitement about a male we sold her who was the densest of his colour ever measured by one researcher who provides skin biopsy analysis. She said she imagined we would not be totally surprised by the result, and she was right. Her animal's sire has the highest NF of any male working in our herd and we expect him to produce dense offspring. Another time recently —and we had to laugh at this — we noticed that a young sire we had started using primarily because of his colour genotype was producing surprisingly dense- seeming crias. It would not have been surprising at all had we bothered to look at his implied EPD for NF before we put him to work —he too has a very high NF among our sires. We should refer to our own numbers more consistently. Not all surprises are positive.

Another potential challenge to using density to inform selective breeding decisions involves its measurement. How good are we at accurately assessing density?

We're Pretty Terrible

It is quite difficult to distinguish small to moderate differences in the density of fully-fleeced animals with fleeces of different lengths. Density is a skin surface level measure so you have to wade to the base of the fleece to assess it and ignore the impression you get from the outside, which is hard to do. The density of an animal's fleece at its outer edges is always less than at the base because the fibre has spread out to fill the larger area of space that lies three, or four, or five inches away from the animal's skin. Consider two animals with equal density at skin level, one of which has three inches of fleece growth and the other five. The one with three inches of growth will appear considerably denser from the outside, because the outer edge of its fleece is denser —it is not filling nearly as much area as the one whose fleece has grown five inches. But, obviously, breeding for animals that have fleeces that look dense from the outside would favour the selection of animals with slow fiber growth, all else constant. That is not a good look for a fibre industry.

We find it really hard to evaluate the density of animals as they approach shearing because of this challenge. The cut side of a fleece is more revealing to us, however, as is the recently shorn animal.

Significant differences in fineness can also affect hands-on assessments of density, of course, and staple density can be a seductive distraction as well. We encourage you to let your fleece weights and staple lengths inform your thoughts instead.

What about skin biopsies? It's important to remember that these are phenotypic measures, influenced by both genotype and the environment present during foetal development. For instance, follicle density and the primary to secondary fibre ratio in sheep has been shown to be significantly affected by the nutrition received by pregnant ewes between days 85 and 135 of gestation, which is when foetal lambs developed their primary, secondary, and derived secondary follicles. We don't yet have a way to control for environment when trying to assess how much of an animal's density is due to genotype, and therefore heritable, and how much was due to the environment they experienced in their mothers' wombs. That said, it's cool to see under the skin with a biopsy, and quite informative at times. If you use follicle densities from biopsies for breeding decisions we believe it is important to try to adjust follicle counts by animal size at the time of biopsy to see if that affects any conclusions you draw, especially with respect to animals that were not full grown when they were biopsied. (We would suggest using weight as a rough way to scale for skin area.)

But I Still Love It!

Don't worry: we still love density too. Our internal research shows low but favourable correlations between our NF estimates and micron-adjusted EPD measures of uniformity among the animals in our herd. In other words, animals with the genotypes for more individual follicles are also likely to have the genotypes for greater micron uniformity, all else constant (that is the "micron-adjusted" part.) There is an indirect signal that this is the result of having more secondary fibres relative to primaries, or having finer primaries relative to secondaries, or both: Differences in NF "explain" more of the variation in micron-adjusted EPDs for %>30 than they do variation in micron-adjusted EPDs for SD. A favourable relationship between follicular density and both fibre diameter and uniformity has also been found in sheep.

We also hoped that we might find a statistical relationship between the genotypes for NF and those for curvature after adjusting the latter for fineness and staple length, a measure we think relates to independent genetics for crimp style, but we did not. In sheep crimp style has been shown to be partly a function of asymmetry in follicles, with more asymmetric follicles producing higher crimp frequency fleeces, again holding other factors constant. ii It has also been speculated that increasing follicle density contributes to greater asymmetry. We wondered if by comparing our indirect



measures of genotypes for number of follicles (NF) and micron and staple length adjusted curvature (SMAC) we might find some hint of this, but there was no apparent linkage in the applied genotypes within our herd. It's possible that variation in animal sizes affect this (that is, that the correlation between NF and density is low) or it could be that the typical alpaca in our herd is not yet dense enough for follicle symmetry to be affected. We'll keep monitoring this over time until we understand it better.

Perceived density contributes directly to an important source of value for some breeders, which is show winnings. Staple density (which we assume is positively correlated, though probably not perfectly, with overall density) is also important to show ring results. It's even possible that fleece density helps prevent some forms of environmental damage to the fleece. We're going to keep breeding for density —we'll just do it by breeding for the number of follicles so we don't inadvertently select for smaller animals as we grow our shear weights over time.

i Lv X, Chen L, He S, Liu C, Han B, Liu Z, Yusupu M, Blair H, Kenyon P, Morris S, Li W, Liu M. *Effect of Nutritional Restriction on the Hair Follicles Development and Skin Transcription of Chinese Merino Sheep*. *Animals (Basel)*. 2020 Jun 19;10(6):1058. doi:10.3390/ani10061058. PMID:32575477; PMCID:PMC7341508.

ii PI Hynd, NM Edwards, M Hebart, M McDowall and S Clark. *Wool fibre crimp is determined by mitotic asymmetry and position of final keratinization and not ortho- and para-cortical cell segmentation*. *Animal* (2009), 3:6, pp 838-843.

Adjusting Fleece Weights To A Constant Staple Length

Adjusting shorn fleece weights for differences in stretched staple length can help you discover which animals in your herd are producing heavier fleeces because they have more fibres. This can be helpful to know if you wish to breed for animals with more follicles. It's simple to do in a spreadsheet for a bigger herd or even with pencil and paper for a small one.

In the example below we have chosen to adjust the shorn fleece weights of the animals to a four- inch stretched mid-side staple length (it could be any number). We create adjustment factors for each fleece by dividing our chosen standard length by the actual stretched length of each fleece. We then multiply the actual fleece weight times the adjustment factor to come up with the adjusted weight. We assume that the higher the adjusted weight, the more fibres are present, and the more active follicles an animal has.

You can see in this example that while the animal George had the highest shorn fleece weight, after adjusting for his slightly longer than-average staple he has a length-adjusted fleece weight that is less than Ringo's. John looked like an underperformer based on shorn weight alone, but after accounting for his short staple his adjusted fleece weight suggests that his fleece has a comparable number of hairs to the heavy-shearing George. And so on. Using length-adjusted weights as a guide may help you breed for denser animals by favouring the selection of those producing more hairs.

As staple length varies across the frames of animals, make sure you measure actual stretched staple length using a sample from the same location on each animal. This analysis does not take into account differences in degrees of fineness, but we have found that these differences explain less of the variation in fleece weights than do the length and number of fibres. This simple adjustment provides a supplementary perspective to use in conjunction with your other observations about the animals you are breeding.

Animal	Shorn Fleece Wt (lbs) "FW"	Stretched Staple Length (in) "SSL"	Adjustment Length (in) "NL"	Adjustment Factor "NF" (NL/SSL)	Adjusted Fleece Wt in lbs. (FW/NF)
John	6.0	3.0	4.0	1.3	8.0
Paul	7.0	5.5	4.0	0.7	5.1
George	9.0	4.5	4.0	0.9	8.0
Ringo	8.0	3.5	4.0	1.1	9.1



DO CAMELS MAKE GOOD PETS?

Training, Care & What to Expect

By Tara Lea - Camel Behaviour & Wellness Expert



If you've ever wondered whether camels make good pets, here's my short answer: "Yes, they can make great pets & companions—but only when their behaviour, care, and natural instincts are truly understood."

I've been working with camels for over a decade, and I've seen firsthand how affectionate and curious camels can be. In many ways, they're just like giant dogs—especially if they've had positive human interactions from the start.

Many of my pet camels were once wild camels from the arid zones of the Australian outback. With patience, understanding, and the right kind of training, they've bonded with me in ways that will last a lifetime. That's the magic of camels: once they choose to connect with you, the bond runs deep and true — they really can become mates for life."

CAMELS ARE HERD ANIMALS - TWO IS BETTER THAN ONE

Camels are herd animals to their core. Their sense of safety, comfort, and even happiness is tied to being with their own kind. When they live alongside other camels, something special happens: they settle, they thrive, and surprisingly, they're far easier to train.

I've seen the opposite, too. People sometimes think, "Oh, I'll just keep my camel with a donkey or a horse." But here's the catch — a camel might start thinking it's a donkey! And while that sounds a little funny, it actually makes training much

harder, because the way a camel's mind works is completely different.

In the wild, camels naturally form close-knit groups with their chosen companions. They stick together through thick and thin, and that instinct carries over into domestic life. Bringing two camels into a new home together gives them the comfort of each other, and from that safe foundation, they build trust with you as well.

Of course, people often ask me: "But what if they don't get along?" The good news is, camels are remarkably adaptable. Pairing camels of a similar age can help, but I've also seen older camels take younger ones under their wing. The little ones watch, learn, and copy, while the elders seem to relish the role of wise teachers.

That's the beauty of camels — they're social, intelligent, and instinctively wired to be part of something bigger than themselves. And when you give them that, they give you their trust in return.

EVEN PET CAMELS NEED TRAINING

Here's the thing: even if you think of your camel as a pet, they still need training. Without it, you don't have a truly connected camel—you just have one that happens to tolerate you.

For me, training doesn't start with commands or halters; it begins with building trust. Camels are deeply social animals,

wired to seek connection as part of their herd instinct. When they feel safe with you, everything else—leading, handling, working together—falls into place naturally.

And that's when the magic happens. Once a camel trusts you, they're not just "your animal," they're your companion. Honestly, if my front door were big enough, I'm convinced my camels would stroll straight inside, flop on the couch, and make themselves at home in the lounge room. That's the level of bond they're capable of when training is rooted in connection.

CAMEL CARE: IT'S NOT LIKE LOOKING AFTER OTHER LARGE ANIMALS

Here's something every potential camel owner needs to know: caring for camels is not the same as looking after horses, cows, or other livestock. Their needs are unique, and if you try to manage them like you would any other large animal, you'll quickly run into problems.

For example, camels are ruminants—but unlike cattle, they have three stomach compartments instead of four. That means their diet needs to be carefully managed so their digestion stays healthy. The length and type of forage they eat is just as important as the amount.

Then there's parasite control. Many animals have developed a natural resistance to worms over generations. Camels haven't. Without a proper parasite prevention program, their health can decline quickly.



Nutrition and environmental factors also play a big role in overall wellbeing. Get it right, and you can prevent everything from digestive issues to skin conditions. Get it wrong, and you may find yourself with preventable health issues.

The truth is, camels thrive when their care is tailored to them—and that comes with learning. If you're unsure what a proper camel diet looks like, or how to set up a health plan, it's worth investing the time to get educated. That's exactly why I created the Camel Channel Academy (<https://camelchannel.com/membership>) and wrote Introduction to Camel Husbandry (<https://tinyurl.com/camel-husbandry-book>

book) —because when camels are cared for correctly, they live healthier, happier lives, and you enjoy a far stronger bond with them.

"ONCE A CAMEL TRUSTS YOU, THEY'RE NOT JUST 'YOUR ANIMAL', THEY'RE YOUR COMPANION."

FINAL THOUGHTS: SHOULD YOU GET A PET CAMEL?

The answer is yes—camels can make extraordinary pets. But only if you're truly prepared.

Owning camels isn't just about the romance of having these majestic animals in your paddock. It means understanding their unique husbandry needs, committing to proper training and handling, and—most importantly—never keeping just one. Camels are herd animals to their core, and they thrive when they have the company of their own kind.

My biggest piece of advice? Don't wing it. I've seen what happens when people jump in without the right knowledge, and the consequences can be heartbreaking for both owner and camel. The good news is, with the right preparation, you can set yourself (and your camels) up for success—and enjoy one of the most rewarding bonds you'll ever experience.

If you're ready to take the next step, I invite you to get a copy of my book Introduction to Camel Husbandry (<https://tinyurl.com/camel-husbandry-book>) and explore the Camel Channel Academy (<https://camelchannel.com/membership>) - online learning .

Together, we can create More Camels in More People's Lives!

Practical Advice for: ACHIEVING PREGNANCIES IN ALPACAS

By the late Jane Wray - Classic Alpacas. © Jane Wray 2010.

The following is intended to provide some practical advice on how to achieve pregnancies. It is not written with veterinary expertise, rather as a result of 16 years of alpaca farming experience, including thousands of joinings and resultant pregnancies.

We recommend you always consult your local veterinarian to obtain specific advice, as the following is intended as a guide only.

A few brief reminders before we start. Female alpacas are induced ovulators, requiring specific stimulation for egg release from the follicle on the ovary to occur. Generally that stimulation will be the joining or mating. Very occasionally spontaneous ovulation will occur, usually due to presence around another mating or matings.

Research has shown that at any one time the majority of females have a follicle of sufficient maturity to erupt and release an egg in response to mating. If the male's sperm fertilizes the egg the pregnancy begins.

Receptivity, Behaviour and Maidens

It is vital to remember the age-old adage that there is no such thing as people with animal problems, only animals with people problems! Alpacas are, reproductively speaking, extremely forgiving animals.

The majority of females breed well, despite being forced into our methods and timetable. Unfortunately, those that do not quite fit in with our grand plan are often termed difficult or problem breeders.

The good news is that in the vast majority of cases all that is required to fix the "problem" is a different approach.



There is little point in mating a female that is not receptive. They will be highly unlikely to fall pregnant, as receptivity is related to the presence (or not, as the case may be) of a mature follicle. Levels of receptivity vary, but ideally, the female should sit with little encouragement from the male or us.

In lots of cases matings are scheduled with either the male or female travelling. In many others the stud master on the farm schedules them. So in most scenarios little thought is given to the alpaca's "timetable".

If a female is repeatedly not receptive, and provided she does not have a false pregnancy (see later), simple techniques can be used to gauge when she is most receptive.

Vary the times and days at which the male is introduced. An excellent way to do this is to use a combination between hand and paddock mating to simulate as far as possible natural herd breeding.

The female is put into a mob of females that are ready for or are in the process of being mated. That mob is put in a small yard and the male is introduced under supervision. The most receptive females will sit first. If this is done on a regular basis, preferably daily, you will be able to monitor the receptivity of your females and mate them at the optimum time.

This technique works particularly well with maidens, who may panic when put with a male for the first time. If they are put in with the mating mob at, say, 11 months of age they will be able to become accustomed to the process without pressure and will invariably sit when ready. There is no specific age or weight guide as to when a maiden is ready for mating. Rather, she should be mated when physically and psychologically ready. Physically she should be at least 2/3 of her adult size and weight, taking into account the size of her sire and dam. Psychologically, she should be sitting readily.

Some maidens may not be reproductively mature until two years of age. With alpacas slower may be quicker in the long run. A female forced into early production may abort or develop other problems. It is also worth mentioning the hymen. It may not be broken with a maiden and it may be quite persistent and difficult for the male to break. If the male is having difficulty with full penetration you can check the hymen by inserting your small finger (gloved and lubricated) in the vulva. If you feel the hymen (1- 2cm in) you can very gently probe to break it.

Maidens are best bred with proven working males, and similarly, young unproven males are best tried with proven breeding females, so that if there is a problem the cause is clearer.

Matings

It is said females should be mated 2-3 weeks post partum. Most will be receptive within this time frame. Some will not. Again, let the female's behaviour be your guide and take into account factors such as a problem birth, which may require a longer recuperation period.

The duration of matings can vary between 1 minute and 1 hour. Duration has little effect on the possibility of pregnancy. In fact, long matings are not particularly good for the uterus, 15-20 minutes is plenty.

Also it is important to check that the male has in fact fully penetrated the female.



Ovulation and Pregnancies

After the mating check the female with a male at 7 days to see if her behaviour has changed. A change of behaviour at 7 days indicates ovulation and if that change continues to 14 days that indicates a pregnancy.

A change in behaviour may be the traditional “spit off” where the female spits at the male or it may be running away or even just planting the feet firmly and flattening the ears. Also look out for the “escape sit”. Some females respond to the male’s pressure by beginning to sit and then lunging forward and upward at the last moment. They are simply trying to avoid the male’s attentions, albeit in a less traditional way. It is therefore important not to remove the male at the first sign of sitting. Wait until you are sure of the outcome. It also pays to be aware of the escape sit, as it can be dangerous for the handler.

In summary, what you are looking for is a change from the female’s receptive behaviour as an indication of ovulation and pregnancy.

Some females will “spit off” after a matter of hours; others will take up to 7 or possibly even 8 days to know if they have ovulated. If the female has ovulated and is not pregnant, she will be receptive again some time after 7 days from the mating date, but time frames do vary. If the female has not ovulated she will continue to be receptive at and after 7 days. However, she should not be mated until at least 7 days since her last mating. Repeated mating can make the uterus too disturbed and unhealthy to hold a pregnancy due to factors such as infection or damage.

If a female continues to fail to ovulate she may need an ovulation-inducing drug to assist her. If a female continues to ovulate but fails to fall pregnant often a course of penicillin can help as she may have a uterine infection that may or may not be detectable on ultrasound. Your vet can advise on the specific drugs, dosages and management plan of such females.

It is important not to rely solely on the female’s behaviour as an indication of pregnancy. Once she is “spitting off” have the pregnancy checked by ultrasound or some method whereby you can confirm that her behaviour is consistent with a pregnancy.

‘False Pregnancies’

Occasionally a female that has ovulated but is not pregnant will have a retained corpus luteum (“CL”), resulting in a “false pregnancy”. The CL has failed to regress, despite the egg not being fertilized. She thinks she is pregnant and behaves accordingly, but is in fact empty.

Such a female may require prostaglandin to facilitate regression of the CL and she should be receptive again anywhere between 24-72 hours afterwards. If she is not, then she may have a persistent CL that may require a course of prostaglandin. These are often the result of a retained CL not being detected and being left for some time. This is one reason why it is important to confirm pregnancies to ensure the change in behaviour is consistent with an actual pregnancy and not a false one. Your vet can advise on the specific drugs, dosages and management plan of such females.

Summary

Get to know the behaviour of your females and listen to and monitor it. They will “tell” you all you need to know!

Keep good records and don’t rely on your memory. Records will help you and they will assist your vet to assist you. Most females follow consistent behavioural patterns year after year. Similarly, reproductive behavioural traits appear to be quite heritable, so familial traits emerge.

Health, nutrition and stress can have an effect on whether or not a female is ovulating and falling pregnant, so bear these factors in mind. Similarly there are anatomical and hormonal problems that may arise that your vet can assist with.

The techniques mentioned above are simple yet effective. The main ingredient required is observation and patience. Enlist the help of your vet where necessary, and beware of following a regime involving drugs unless your vet has formulated it for a specific alpaca of yours.

Happy breeding!



All photos courtesy of Oak Grove Alpacas NSW

Tiny antibody has **big impact** on deadly Hendra and Nipah viruses

By University Of Queensland



Dr Ariel Isaacs with a model showing yellow DS90 nanobodies fixed on a Nipah virus fusion protein. (Photo credit: The University of Queensland)

KEY POINTS

- UQ research shows a tiny antibody, called a nanobody, from an alpaca can bind into and neutralise the Hendra and Nipah viruses.
- The discovery offers a unique strategy to combat the potentially deadly viruses.
- When combined with a developmental antibody therapy, the nanobody prevented Nipah virus from mutating into new variants.

Researchers have discovered a strategy to neutralise two highly lethal viruses for which there is currently no approved vaccine or cure.

A team led by **Professor Daniel Watterson** and **Dr Ariel Isaacs** at The University of Queensland has identified the first ever nanobody to work against Nipah and Hendra, henipaviruses which have jumped from animals to people in Asia and Australia.

“A nanobody is one-tenth the size of an antibody and being that small it can access hard-to-reach areas of a virus to block infection,” Dr Isaacs said.

“Nanobodies are easier to produce and more stable at higher temperatures than traditional antibodies, so we are very excited about the potential of our discovery to lead to new treatments.”

The nanobody, called DS90, was among a series isolated by research partners at Universidad Austral de Chile from the immune cells of an alpaca called Pedro.

Camelids, including alpacas, are the only land animals which produce nanobodies.

DS90 was identified via a platform developed by Professor Alejandro Rojas-Fernandez which can isolate nanobodies against viruses of concern.

“UQ research shows a tiny antibody, called a nanobody, from an alpaca can bind into and neutralise the Hendra and Nipah viruses.”





Photo credit: Pancho - Universidad Austral de Chile

“Together with UQ, we aimed to construct a broad barrier against future pandemic viruses based on scalable antiviral nanobodies - this fantastic work is just the beginning,” Professor Rojas-Fernandez said.

Tests at Professor Watterson’s laboratory at UQ’s [School of Chemistry and Molecular Biosciences](#) confirmed DS90 could bind successfully to proteins in Nipah and Hendra viruses and block their ability to enter cells.

The team used cryogenic electron microscopy at UQ’s [Centre for Microscopy and Microanalysis](#) to examine the process.

“We could see exactly how the nanobody bound to the virus reaching right into deep pockets, whereas antibodies typically just bind to exposed surfaces of viruses,” Professor Watterson said.

“This new information is a crucial step towards using a nanobody to combat Hendra and Nipah, which cause outbreaks in people and can often lead to fatal respiratory and neurological disease.”

The team also combined the DS90 nanobody with a developmental antibody therapy that is used as a last resort treatment for people infected with Hendra and Nipah.

“Excitingly, we demonstrated that the combination of DS90 with the m102.4 antibody – which is made at UQ – prevents Nipah virus from mutating and evolving,” Dr Isaacs said..

“This is a powerful technique to prevent new deadly variants emerging.

“Other nanobodies have been approved for use as cancer treatments and it is now exciting to see that nanobodies can also be used to neutralise viruses.

“The next step will be to translate our findings into a therapeutic to be clinically ready in case of an outbreak of Hendra in Australia or Nipah in Asia.”

First identified in Brisbane in 1994, Hendra virus has infected people via horses and flying foxes in eastern Australia. Nipah virus outbreaks in people occur almost annually in Bangladesh and occasionally in other Asian countries where it is carried by bats.

The [research](#) has been published in Nature Structural and Molecular Biology.

Collaboration and acknowledgements

The UQ research project was supported by the work of Professor Alejandro Rojas-Fernandez and Dr Guillermo Valenzuela Nieto at Universidad Austral de Chile, along with scientists at CSIRO’s Australian Centre for Disease Preparedness and the University of Science and Technology of China.

HAVE YOU THOUGHT ABOUT THE FOLLOWING?

ARE THEY ON YOUR TO DO LIST?

Over the last 8 years that we have been producing this magazine we have published many articles that may help you resolve or think about particular issues.

All our magazines are available to read at any time in the library on our website –

www.camelidconnections.com.au

IT'S SHEARING TIME!

Have you booked your shearer?

You probably should have thought about it earlier in the year but better late than never! Are you taking fleece samples before shearing or are you asking the shearer to take them? Some vaccinations such as 5 in 1 can be done at shearing time to save you time at a later date. Will your shearer cut toenails or are you going to do it yourself.

Have you worked out how you are running your shearing process – Having alpacas in holding pens to keep them dry the night before, shearing light colours before dark.

Do you have enough helpers to weigh, skirt, sort and bag fleeces?

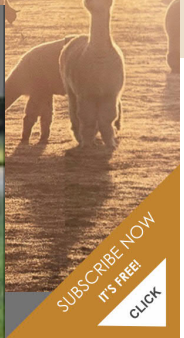
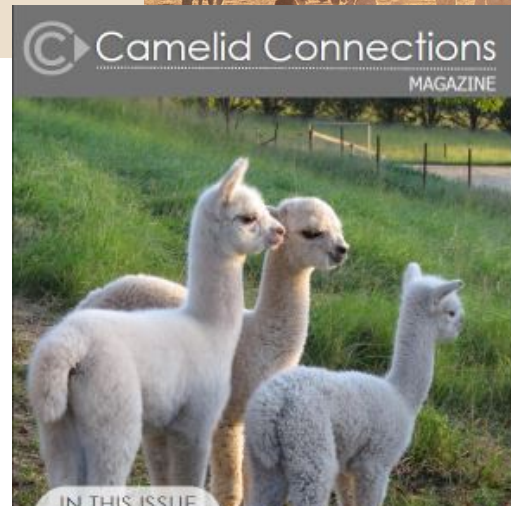
The following may help with some practical ideas:-

Why is Regular Shearing Important – Issue 20 Page 16

Not Just A Funny Haircut – Issue 21 Page 10

How to Trim Alpaca Toenails – Issue 26 Page 6

Preparing Your Fleece for Processing – Issue 25 Page 28



SPRING IS BIRTHING TIME

Spring and Autumn are the major birthing times in Australia – are you prepared for the new arrivals? Do you have a cria kit prepared? Have you read up on the signs of imminent birth and what to expect? Are you ready in case the cria needs supplementary feeding?

Refresh your memory with the following articles:-

Spring is in the Air – Are You Ready for Spring Cria to Drop – Issue 25 Page 32

Do You Have a Cria Kit? – Issue 18 Page 36

Cria's on the Way? – Issue 4 Page 40

The Miracle of Birth – Issue 13 Page 30

Managing Births for the New Alpaca Breeder – Issue 22 Page 20

“Mums The Word” - Issue 13 Page 34

Supplementing Cria with Milk – Issue 3 Page 8

MATINGS & PREGNANCY

Cria are on the ground, thoughts turn to your females next matings. When are you going to mate them?

Are you happy with your last cria drop, would you repeat that mating? Which males do you think may make improvements?

Time to do some research?

The following may help with your decisions:-

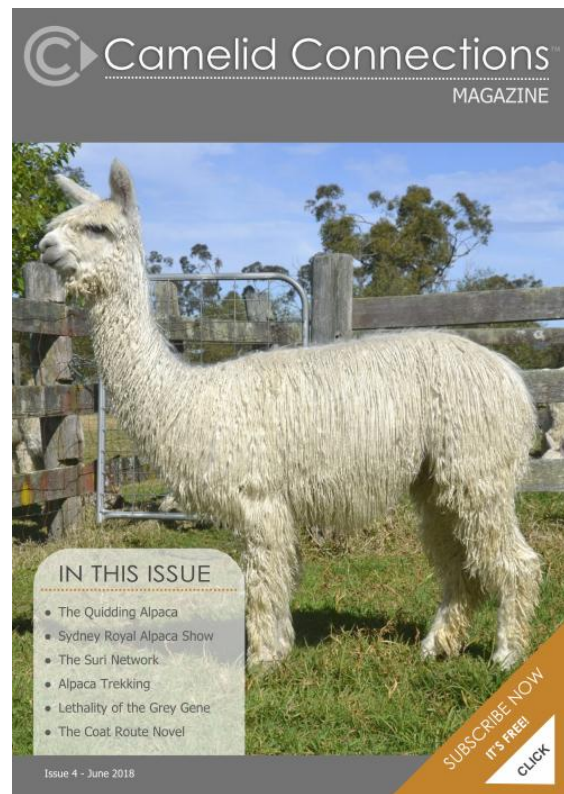
Practical Advice for Achieving Pregnancies in Alpacas:

Breeding a Royal Line - Issue 22 Page 34

Alpaca Gestation - Issue 20 Page 13

Reproductive Physiology in Alpacas - Issue 21 Page 23

ET Is It Right For You? - Issue 14 Page 20



MEDICAL ISSUES: FOR WARMER WEATHER

Unfortunately as the weather warms we need to be sure we are on top of worming problems, and ticks if you are in a tick area. A problem rearing it's head this year with all the rain and flooding that has been around is Meliodosis. Usually only a problem in the far north of the country this year has seen outbreaks and deaths, in humans as well as animals, much further south due to the warming climate.

The following articles may give you some assistance:-

What is Meliodosis? - Issue 2 Page 16

Science Worms & Poo – Issue 5 Page 10

Barbers Pole Worms - Issue 30 Page 41

Ick Season is Here - Issue 30 Page 6

CAMEL PARTURITION: NORMAL BIRTHING PROCESS IN A CAMEL

Dr Margaret Bale, Camelid Veterinarian , QLD Australia

With acknowledgment to Dr Tibary and Dr Anouassi for some images used in this article. Thankyou.



Dr Bale 2020 Live calf 24 hours old

The Camel is often given the misnomer of a “Horse designed by a committee”. This could NOT be further from the truth.

I believe camels are the purest lesson in adaptation in the mammalian world. Every aspect of their behaviour, physiology and indeed reproduction is a response to an evolutionary adaptation to their natural arid environment.

This article will focus on the aspects of normal camel parturition or the birthing process.

Camels are in the Camelidae family but are considered OLD WORLD CAMELS in that nomenclature.

Whilst there are definite similarities between Camels and their New world camel cousins (Llamas, Alpacas, Vicuna, Guanaco), we will focus on the specifics of the birthing process of the Dromedary camel.

For reference in nomenclature, the female pregnant camel is called the DAM, the male camel is called the SIRE and a camel calf is NOT in fact a CRIA, but indeed called a calf.

I believe camels are the purest lesson in adaptation in the mammalian world. Every aspect of their behaviour, physiology and indeed reproduction is a response to an evolutionary adaptation to their natural arid environment.

This article will focus on the aspects of normal camel parturition ...or the birthing process.

Camels are in the Camelidae family but are considered OLD WORLD CAMELS in that nomenclature.

Whilst there are definite similarities between Camels and their New world camel cousins (Llamas, Alpacas, Vicuna, Guanaco), we will focus on the specifics of the birthing process of the Dromedary camel.

For reference in nomenclature, the female pregnant camel is called the DAM, the male camel is called the SIRE and a camel calf is NOT in fact a CRIA, but indeed called a calf.

IMPORTANT DEFINITIONS: GESTATION PERIOD:

Due to the need to adapt to its harsh desert environment the camels gestation period can indeed be quite variable .Records state between 315-400 Days.

The length of gestation is actually influenced by many factors – from the season, the month of conception, and the circadian rhythm of the foetus, yes the foetus can actually play a role in when the calf is to be born. This incredible adaptation allows these animals to take advantage of the season to allow the newborn calf the best chance at life.

Nagy and Juhasz 2019 suggest that camels can give birth anytime of the day or night unlike alpacas which are usually within daylight hours.

PARTURITION / BIRTH:

As with most mammalian species we tend to break the birthing process up into stages. Different authors may have slightly different names for the stages, but all must progress through these stages to allow the birth of a camel calf.

PLACENTA AND FOETAL MEMBRANES:

The Foetus in all mammals develop within a complex system of membranes – each with their own important role. Camels have 4 foetal membranes. The membranes support the growth and nutrition of the foetus including waste removal with an extra layer in camels providing some protection of the foetus through the birth canal.

The placenta in a camel is called a diffuse chorioallantoic placenta, which really is the only thing they have in common with horses after all.

There is also a complex relationship between the Foetus in utero and the dam.

Foeto-maternal communication may influence development and timing of the birth – in other words the calf itself can effect the activation of the birth process.

STAGE 1 : THE PREPARATION NESTING PHASE/ SPRINGING UP

The signs can be so variable and rely on excellent observational skills of the owner.

Often characterised by behavioural changes

- Restlessness
- Segregation from the herd
- Swelling of the vulva
- Oedema/ Swelling of the milk vein and the udder (colostrum may be detected 6 days before birth)
- Relaxation of the Sacro sciatic ligaments in preparation for birth (72 hours before birth)
- Appetite may be normal up to an hour before birth
- Highly variable between camels depending on if this is their first time calving
- Restless sitting and standing and flanking – looking at her side
- This stage really finishes when the active contractions begin ..sometimes up to 3 times every 5-6 mins



PIC 1: Showing relaxation of ligaments causing a dip in the muscles either side of the sacrum.

PIC 2 : Showing dam restless lying from side to side

Photo Credit : Tibary and Anouassi

STAGE 2 LABOUR: ACTIVE EXPULSION OF FOETUS

- This stage technically begins with the first sign of the foetus in its sac and/or first rupture of the sac
- This stage is usually fairly quick when everything goes to plan
- My rule of thumb here is this active visible contraction stage should last between 15- 60 mins, with first time mums sometimes taking up to 90 mins
- This stage concludes with the full expulsion of the foetus
- Contractions usually are measured every 1- 2 mins
- Nose appears first – usually the sac will rupture which allows for a more lubricated passage through the canal
- The front feet are next to arrive, one first then the other
- Over the next 20 mins or so the front half of the calf may appear out of the stretched vulva, often times the camel will then stand up which allows gravity to help with the final expulsion of the foetus



First sign of the mouth of calf within sac : Tibary and Anouassi



Expulsion of calf including umbilical cord
 Photo Credit: Tibary, Anouassi

STAGE 3: EXPULSION OF THE PLACENTA

- The calf may be out – but this is a VITAL step in the full birthing process
- The placenta now MUST also be delivered
- This process is also variable upon many factors including the ease of the birth itself and indeed the number of times the cow has birthed before
- The placenta should be expelled within the first 2-4 hours after the foetus has been expelledhowever sometimes this can take longer .
- THIS PROCESS IS EXTREMELY IMPORTANT FOR THE HEALTH OF THE COW/CALF UNIT
- If you DO NOT see the placenta expelled – there will be problems later on
- Also important to examine this large placenta to see that it is intact. If there are sections missing – they may be retained which will cause major problems

DYSTOCHIA:

This word is used when there is a disruption to any of the important Stages of Parturition. There are so many factors that can cause issues along the way and you should absolutely call your veterinarian if you have any concerns about the process .

Remember – the normal presentation is Nose first and then the front legs.

Veterinary intervention is required if there are any disruptions to this process. Please do not attempt to pull a calf yourself unless you have spoken to a veterinarian.

WHEN TO CALL THE VET:

Anything that will cause a disruption to the synchronisation of the uterine contractions, abdominal contractions and the smooth passage of the calf through the birth canal will halt these important timings.

Malpresentation of the foetus – no head, one foot, back foot – will require veterinary attention.

REFERENCES:

Acknowledgement to Dr Tibary and Dr Anouassi for some of the images used in this article.

Specifically form Author(s):In: Recent Advances in Camelid Reproduction by Skidmore L. and Adams G.P.

Updated: MAY 12, 2001

It is important to acknowledge also the work of Dr Nagy , Dr Juhasz, Dr Davide Monaco , Dr Elias and Dr Cohen.

PARTURITION CHEAT SHEET

FIRST STAGE	Up to 2 weeks before birth	
SECOND STAGE	Active Contractions should produce a foetus	15-60 min 90 mins in first timers
THIRD STAGE	Pass Placenta Check placenta is whole	4-6 hours after calf expelled
CALF TO STANDING	Calf should be standing and suckling within 2-5 hours of birth	Call Veterinarian if longer



Healthy Birth Outcome including expulsion of Placenta
 Photo Credit: Bale 2019

For all your camelid supplies

Reference Books, Halters & Leads,
Cria Care, Vitamins, Supplements,
Husbandry Supplies, First Aid Supplies
Needles & Syringes & lots more...

visit us at:

www.alpacadynamics.com.au

e: sales@alpacadynamics.com.au

0415 904 674 or 0417 449 065

alpacadynamics⁺.com.au
for honest, fast & reliable service

Owned & operated by alpaca breeders with over 23yrs experience

GET
5% OFF
your order!
Use code **CONNECT**
at checkout

Not valid with any other offer. Excludes postage



Alpaca Halters and Giftware

Zephyr Alpaca & Llama Halters
Zephyr Leads
Training Aids
Giftware

www.maylandsalpacas.com.au

info@maylandsalpacas.com.au

0408533705



STELLAR ALPACA FASHION SHOW

Peru

By Grace Nesbitt

During my time in Peru with the Coolaroo Foundation study tour, we had the honour of attending the Stellar Alpaca Fashion Show — an incredible opportunity to explore the world of luxury fashion built around alpaca fibre.



The fashion show was so much more than just beanies and scarves! Models showcased full outfits — dresses, jackets, pants, and more — all made from this exquisite alpaca fibre.

My personal pick I needed in my cupboard fluffy alpaca slippers! It was a beautiful, inspiring night that we all enjoyed thoroughly.



Leading up to this amazing event, we got to have behind the scenes tours of the whole processes.

Starting from classing the alpaca fibre through to making yarn, designing items, and then meeting the talented team behind hand crafting every item.



FROM PERÚ TO THE V



ALPACA
DEL PERÚ



Contrary

Llama Mums

By Judy Webby



One morning I went down the paddock to check on Conchita who was due to drop her cria.

She calmly checked my birthing book and kit but did not appear to be interested in giving birth.

I walked away and 10 minutes later got a ring from my neighbour to say a cria was on the ground!!!

The picture of Conchita and Estefan touching noses is one of my favourite photos!





Visit Quentin Park Alpacas and Studio Gallery

Meet the alpacas, get involved in a farm experience and visit the farm shop and gallery. Stay in our beautiful off-grid accommodation or in one of our campsites.

Website: www.quentinparkalpacas.com

Email: contact@quentinparkalpacas.com | Phone: 0447 491 065



DID YOU KNOW?



Every single issue of
Camelid Connections
Is available to read
in our website library.

[Click here to view the library](#)

35 Years - looking back

The first 25 years of Alpacas in Australia

By Tracy Bell - Green, green grass communications on behalf of the Australian Alpaca Association

The development of the Australian Alpaca industry, in many ways, captures what it means to be Australian. The pioneers, the innovators, the risk takers and the farmers who, when they give something a go, work damn hard to be the best.

Twenty-five years ago, the farmers who first brought alpaca into the country were rural pioneers with an appetite for risk. Today, Australian alpaca breeders are world leaders in breeding quality with innovation and luxurious Australian developed alpaca bloodlines which now run deeply through the international alpaca industry.

The Beginning

In the mid-1980s, with Australia already revered for its fleece production skills, the South American alpaca caught the eye of some of the country's most experienced fibre producers.

These farmers, like Geoff Halpin, were looking well beyond the seduction of big eyes and beautiful eyelashes. "We were establishing a new fibre industry and, even before we could import the alpacas, we always talked of it as an industry – we never talked about a hobby."

The first to seek alpaca knew the livestock's reputation for luxury and quality that stretched back to the ancient Inca. So, with a shared admiration for the rare fleece, and great determination, there was change coming to rural Australia.

Journey to a Smart Future

1985

The founding farmers say it was gruelling work just to get the luxurious and barely understood camel cousin to the country, and they entered the challenging world of international animal export, scientific protocols and quarantine negotiations.

The little known alpaca was a prohibited species with the archaic classification of 'zoo animal'. It was up to visionary farmers to prove the alpaca was well-suited to the Australian landscape and not a pest that would threaten existing livestock with disease.

- Geoff Halpin in conversation



Australian Alpaca
ASSOCIATION



Media Day - June 8, 1988 (Image courtesy Nancy & Geoff Halpin)

"If we had not persevered in our quest, the alpaca may have remained an obscure animal that Australians would only experience in some travel documentary of the Andes," is the thinking of one of the instigating breeders - Roger Haldane.

It took several years, and a huge financial investment, before protocols were finally written with Chile and the US. Agreements with Peru, the most traditional home of the alpaca, were to come later.

Alpaca Imports - A Timeline

1988 - Victoria

The first alpaca were delivered on farm in Australia.

Nancy and Geoff Halpin from Seymour in Victoria imported two Chilean stud males and one female from Alaska which was the only route they could secure. There was much newsprint as the beguiling, rarely seen alpaca touched down to the fascination of a nation.

Nancy remembers the excitement. "We had a media day a few days after Romeo, Stonewall and Majorett arrived and reporters from radio, papers and TV all came up. We even did a live cross with George Negus into the Today Show."

Early in the following year, the Halpins brought in the country's second alpaca shipment, with another 19 animals.

- *Correspondence with Nancy Halpin 2015*

As one magazine headlined, "The Halpins are importing alpacas for farming, not for their marvellous looks!"

- *Town and Country Farmer, Summer 1998.*



Geoff Halpin and Romeo

Inset - early imports (image courtesy of Wyona Alpacas)



1989 - NSW

Alpaca began their move further into rural Australian when three animals from the Halpin's first imports were sold into NSW to fifth generation sheep farmers Andrew and Karen Caldwell on 6,000 acres in Young. They were coming out of a fierce drought and Karen's parents Margaret and Frans de Zwart read how well suited alpaca would be to Australian conditions.

"We thought an alternative fibre stock might be able to relieve some of the problem at Wyona," Margaret recalls. "We saw the Halpin's alpaca at the Adelaide Show and fell in love with both animal and fleece - we chose to breed blacks, browns and greys because the whites were not going to fare well in the red dirt of the Central West!"

- *Conversation with Margaret de Zwart 25/03/15*



1991 Tullamarine - Chilean alpaca land from NZ. An import by Carolyn and Alan Jinks



1990 - NSW

The first direct import of alpaca into NSW was another show of confidence in the rare fleece of the alpaca. Judith Pearce who had farmed sheep on almost a million acres in the Pilbara of Western Australia imported six Chilean alpaca to start a breeding program at her Southern Highlands property Coolaroo. The Halpin's Capalba Park alpaca were part of this story too.

"We already had bought animals in the US but before we could fly them here they had to go to Canada for a 12 month quarantine," Judith recalls. "While we waited for them to land we went down to see Geoff and Nancy and together we had such enthusiasm for what was ahead. It was a huge expense, a huge commitment but we wanted to get the whole industry, the fibre industry going."

"And, just six months after our first alpaca arrived, we thought in for a penny, in for a pound and went to Chile to pick up another precious load."

- Conversation with Judy Street



1991 Tullamarine - Chilean alpaca land from NZ. An import by Carolyn Chuckered Alpacas loaded for transport in Chile Alan Jinks

1990 - Victoria

The Australian herd grew boldly when a chartered 747 aircraft carrying a herd of 480 alpaca flew into Melbourne. It had been a longtime coming for Port Lincoln farmers and fishermen, Roger and Clyde Haldane. Their precious cargo left Chile by sea in 1988 but its first stop had to be New Zealand. Roger moved his family there to care for the animals for 18 months before the Australian government finally cleared the alpaca for import.

- Correspondence with Roger Haldane on 02/04/15

"My late brother Clyde, my wife Suzanne and our five children were all key players in what was an adventure of a lifetime," praises Roger.

"Clyde put a lot of time into selecting animals in the South American Altiplano – it would take him months to put together a herd of 300 to 400 quality animals."

"It was his experience from farming sheep and angora goats that put him ahead of most people in the world."

A few months prior to the Haldane import a number of other breeders were bringing in alpacas in smaller numbers. Allan and Carolyn Jinks from Benleigh Alpacas and Cherie Bridges of Coliban Valley Alpaca Stud went on to play a significant role in establishing the alpaca industry.

1991 - Victoria

Following their first shipment, the Haldane brothers joined with sheep and goat farmer Alan Hamilton and the Pet Centre to further grow the national herd. The first of their joint shipments arrived in 1991 with around 300 alpaca onboard and it brought the first Suri alpaca to Australia. Very few countries had yet imported alpaca and the Haldanes soon had the largest herd outside of the animal's native South America.

- After NZ's Agricola herd broke up (correspondence with Roger Haldane 29/03/15)

At the time, and even more so in retrospect, the Australian industry praised the Haldane contribution. "We thank Roger and Clyde Haldane for that early start and for knowing what Australia wanted," said breeder and importer Allan Jinks as a shared reflection.

It's a thought that travels around the world with Clyde and Roger Haldane seen as visionaries who made an impact on three continents. As written by alpaca chronicler Eric Hoffman, "Clyde thrived on the puzzle presented by introducing unique animal species to new settings."

The earliest South American alpaca in Australia had sold for up to \$40,000. But as imports of this size continued and breeding herds were set up around the country prices settled between \$15,000 and \$20,000.

- Margaret de Zwart, *Roger Haldane and The Land*, May 31 1990.

Learning to be the Best

The 1990's

A lot of learning about this ruminant camelid was to come.

Husbandry, breeding, birthing, veterinary care, shearing, fibre handling, fibre processing, judging, industry promotion - everything was new. There was literally no manual - one of the first available references was translated from a found Peruvian text.



Amberdale Alpacas Victoria 1992

The first seminars, first auctions and first shows all followed quickly to the new arena. Educating other farmers and other interested Australians was a task taken up by many of the new breeders.

"We promoted the industry, went into NSW, went all over. We were away almost every weekend for years travelling to all the major agricultural shows," Nancy Halpin said explaining the task that was ahead.

An Industry is Born - Timeline

1990

Eleven breeders gathered on the Halpin's a property in Central Victoria to gauge interest in creating an alpaca industry body. A few months later, the Australian Alpaca Association (AAA) was formed on July 1 at a meeting of nearly sixty breeders in Albury.

-Nancy Halpin and minutes of inaugural meeting

Allan Jinks was one of the founding members. "All farmers were excited and we were dedicated to improving the quality of the stock, it was a great feeling to be a part of it."

Some at the meeting had bought alpacas from photographs and were still awaiting delivery.

Wendy Billington of Cedar House Alpacas was one of them. "Everyone was inspired by the fact that it was a rare fibre animal into Australia and, with a background in sheep, I took the plunge."

By the end of 1990 there were 700 alpacas in Australia

- *Weekly Times* article 14/11/90



Pick of the Chilean Males

The Australian Alpaca is Born

1992

The Australian Alpaca Association established a sophisticated animal registry to record herd details and provided advanced breeding predictors. The Australian International Alpaca Register (IAR) was an early strength for the industry that today continues to enhance the quality and value of the Australian Alpaca on the international market.

One breeder, Jenny Morgan of Amberdale Alpacas, summarises how welcomed it was. "It was the day the Australian Alpaca industry came of age."

Out Of Peru

1993-1994

The most purely bred alpaca were known to be in the high altitudes of Peru and the country was just opening its borders after 150 years to share their most revered livestock and prized genetics - the superb result of breeding for thousands of years.

The first Peruvian alpaca came into Australia in 1994 in a shipment arranged by a small group of individual breeders. Among them, Wendy Billington of Cedar House Alpacas, importer Laurie Harrison, Dianne and Ron Condon of Shanbrooke Alpaca stud, Jenny and Gray Morgan and the Haldanes for Purrumbete. The shipment was only small and comprised mainly suris.

The animals were purchased at a major auction in the US which was the only country then importing directly from Peru after it lifted a 150 year export ban. Australia was still negotiating its own protocols.

Jenny Morgan recalls the moment. "There was a huge crowd and hundreds of animals being herded around for inspection, it was quite stressful really, but we were delighted to obtain two males of our choice."

So valued were these Peruvian alpaca for the genetic gold they would bring to the Australian herd that one of the finest animals in this shipment was purchased for around \$80,000.

-(Amount of \$US105,000 cited online by Maggie DiUlio, Casa de Arboles Fine Fiber Farm) & Jenny Morgan notes from auction day

Sharing The Love

Stud males at the time were still in short supply in Australia and many breeders had taken on 'a life of mobile matings' to help herds without superior males accelerate their growth. Jenny and Gray Morgan added their Peruvian purchases to their mating van that travelled around Victoria.

"Heading out and returning to do spit-offs, the boys became seasoned travellers, and the sight of the van each morning brought a spring to their step," Jenny said with a laugh.

1996 -1997

The first alpaca import to come directly from Peru to Australia was a huge shipment of 900 animals put together by Victorian breeders Pat & Rosa Viceconte of Jolimont Alpacas.

The highly sought alpaca were quarantined in the tropical Cocos Islands for 12 months. The shipment finally arrived in Melbourne on two cargo stretched DC 8s in January, 1997 to bring an inestimable influence to the Australian herd.

"The shipment took time in every way; it wasn't a simple exercise, I can't tell you how many properties we went to, how many tens of thousands of alpaca we saw – a half a million at least," explained Pat who had spent many months in Peru selecting these animals including a rare parcel from the prized Accoyo herd of Don Julio Barreda.

"They were the best animals to leave Peru at the time and they helped create the foundation herd for the high quality animals we have in the country now."



Image courtesy Jane Vaughn

Australian vet Jane Vaughn was one of a team who travelled to the Indian Ocean to manage the animals in quarantine. It had started out as a herd of 600.

"There were hundreds of cria being born and after that year of looking after the herd's health and reproduction I was completely addicted to alpaca," said Jane elaborating on how she came to specialise in alpaca reproduction.

There were more influential shipments to follow from Peru including another of significant size from Alan Hamilton of Suricaya which quarantined for 12 months on the Pacific Island of Nui.

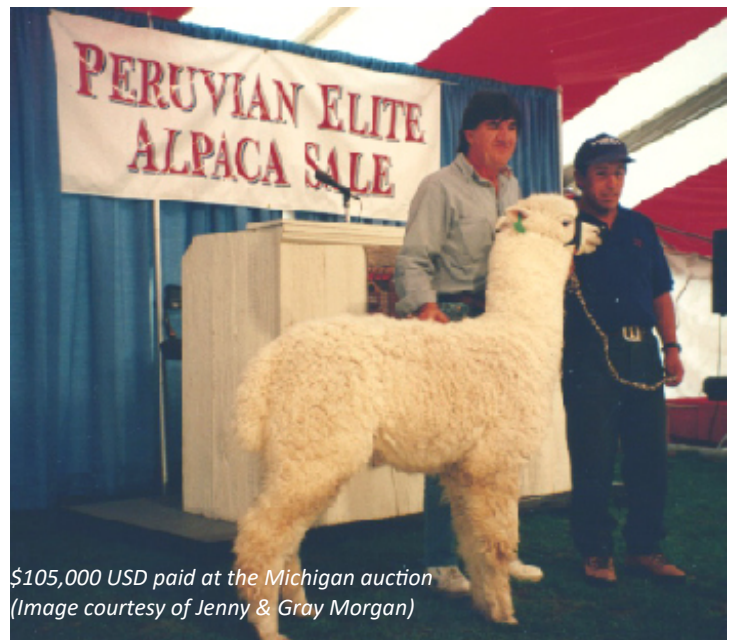
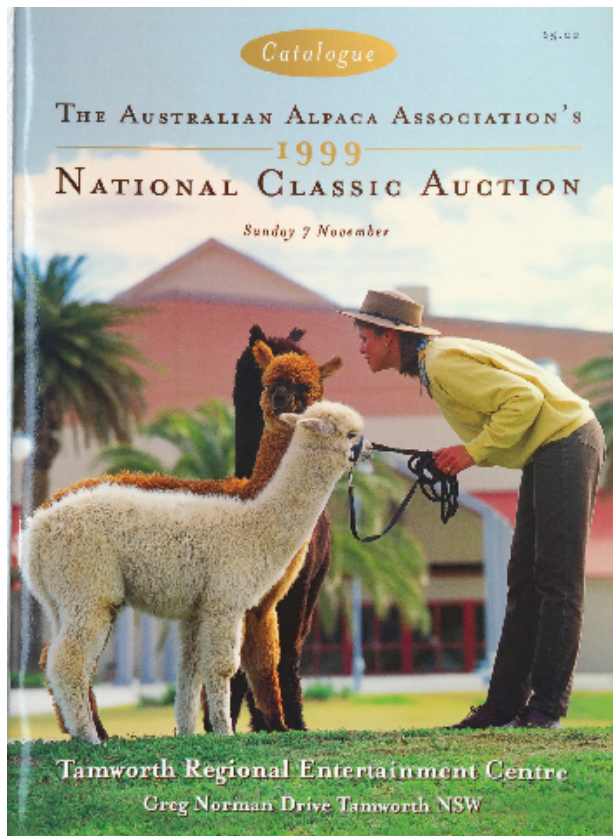
- Pat Visconte and Jane Vaughn in conversations and correspondence.

Now We Are Ten

2000

When the Australian Alpaca industry turned 10 years old there were 35,500 head of alpaca in the country.

- Jane Vaughn paper delivered to RIRDC in 2002



"It was always going to be a fibre industry, it had to be, and to see that it has grown enormously is very satisfying"

Says Geoff Halpin who reminds us that the industry is still young and forever exciting.

Roger Haldane, too, always believed in the alpaca's place in Australian agriculture and also gives a nod to their beauty.

"They can be seen now from the car window in almost every part of the country...and it brings a tear to Suzanne's eye to see them there and remember the journey."

We would like to thank the following breeders for delving into their memories and files to help compile this story of the early days of the Australian Alpaca industry. They include: Nancy and Geoff Halpin, Sue and Roger Haldane, Carolyn and Allan Jinks, Rosa and Pat Viceconte, Judith Street, Jenny and Gray Morgan, Jane Vaughn, Margaret and Frans de Zwart, Karen and Andrew Caldwell, Alan Hamilton, Wendy Billington and Ron Condon. There are many current breeders who have also been sharing their stories, particularly on the first Australian alpaca exports which is the next chapter in the birth of a rural industry that has changed the Australian landscape.



Image courtesy Oak Grove Alpacas NSW

25 Years

2015

After 25 years of creating a new rural industry, there now are more than 160,000 registered alpaca in Australia and over 2,000 breeders.

- AAA - 24/06/15

Growing The Next 25 Years

The alpaca has proven to be very well-suited, indeed, to the Australian rural landscape.

Of course, the industry pioneers always knew that and they are now rewarded to see today's breeders continue to develop the commercial future of the Australian alpaca.

2015

After 25 years of creating a new rural industry, there now are more than 160,000 registered alpaca in Australia and over 2,000 breeders.

- AAA - 24/06/15



Australian Alpaca

A S S O C I A T I O N

Why become a member?

As a member of the AAA you'll have access to the services and information you need to be a part of this growing industry

- Use the eAlpaca database and AAA alpaca-specific tools and resources to develop your herd to its best potential
- Connect with members who share your passion for alpacas at industry events and activities
- Keep up to date on the latest news in biosecurity, husbandry, agribusiness, and research

AAA has a range of memberships available to suit your interests and level of industry activity

Visit www.ealpaca.com.au/join

Australian Alpaca Association

PO Box 594 Gungahlin ACT 2912 Phone: (02) 6151 2073

www.alpaca.asn.au

Follow us!

Stay up-to-date with the latest information on our website and social media at:

www.alpaca.asn.au



@AustralianAlpacaAssociation



@AustAlpacaAssoc



@aus_alpaca

Building a
successful and
sustainable
alpaca industry
in Australia

www.alpaca.asn.au





South Queensland & Northern NSW

October 11-12: Learn to Shear Workshop, Stanthorpe Qld, (fully booked)

October 16-18: Alpaca display and alpaca products for sale at Lismore Show, NNSW

November 2: Fleece Preparation workshop,

November 23: Annual Regional Meeting, Murwillumbah Services Club

For further information contact the Regional Secretary at qldnsw@alpaca.asn.au

or follow our Facebook page - South Queensland and Northern NSW Region

Photo: Qld Yarn Fest Redcliffe Showgrounds

AUSTRALIAN ALPACA

**OUR FLEECE
FROM OUR FARMS!**

Spun into Yarn; knitted, crochet, felted and woven.
Selection Scarves, Beanies, Blankets, Socks and Yarn.

**ARTICLES HANDMADE BY
OUR MEMBERS**

FOR YOU!



**south queensland
northern nsw region**
of the Australian Alpaca Association Ltd

Contact our Merchandise Team for articles and availability:

Email: qldnsw@alpaca.asn.au



Victorian Eastern Region

VER Denim & Diamond Awards Night, Saturday 24th May 2025

A really fabulous night, celebrating all things alpaca in the VER including beautiful craft, fabulous photos, stunning fleeces and a wonderful opportunity to get together with our alpaca community.

A special thanks to Julie and her working group, our AAA board member MC Andy and all the very generous sponsors.

A very successful Korumburra Show was held in June. Chakana Blue Othello was the Supreme Suri and Empyrean Hellfire ET won the Supreme Huacaya, congratulations to all winners and especial thanks to Emmaly Gridley for stepping up as Convenor.

Photos are from these events.





Vale - Adrienne Clarke

Adrienne Clarke OAM AFSM passed away on Wednesday, 13th August 2025 following a hard fought battle with pancreatic cancer.

Many people in the alpaca industry would know Adrienne for her energy and tireless work, and as an esteemed colleague, mentor and friend. Adrienne became involved with alpacas in the early 1990's, and has been part of the SA Regional committee of the AAA, represented the AAA as the ex-officio for the Royal Adelaide Show and has been an active contributor to the AAA Showing and Judging Committee. As a senior and training AAA judge, her comprehensive and descriptive commentary when judging both halter and fleece classes was highly valued.

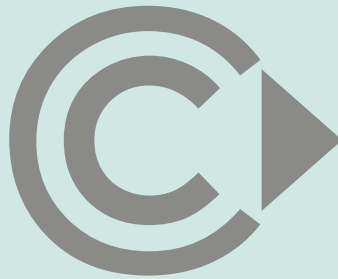
Adrienne's passionate commitment to the learning and teaching process saw her foster the training and development of new and emerging judges, underpinning a foundation of ongoing improvement and sustainable developments in the alpaca industry. For many years Adrienne presented alpaca birthing workshops across Australia and internationally, the most recent being held in Mount Compass in early August, demonstrating the incredible commitment and fortitude for which she was widely recognised.

In addition to her work in the alpaca industry, Adrienne was an OAM and AFSM recipient for her work in the fire service and the greater community. She was a trailblazer for women within the emergency service industry, and specifically the Metropolitan Fire Service. She was the first female fire fighter to join the Metropolitan Fire Service (MFS) in South Australia, meeting multiple challenges on a journey that saw her rise through the ranks to become the first female Commander, and she continued to knock down barriers through her near four decade long career, supporting other women along the way, and advocating for cultural shifts for the benefit of all.

Adrienne enjoyed challenging herself through hikes such as the Kokoda trail and the Tengkoma peak of Kanchenjunga.

Adrienne's presence and influence will be deeply missed by many people across Australia and the world. Vale Adrienne.





www.camelidconnections.com.au

If Camelids are your thing - we have you covered!

Interesting, informative articles & relevant advertising

ALPACAS | LLAMAS | VICUNAS | GUANACOS | CAMELS