Camelid Connections

MAGAZINE

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Issue 21 - September 2022

CAMELID CONNECTIONS

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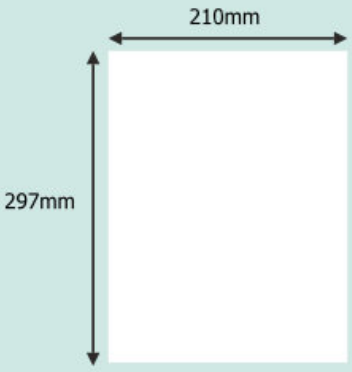

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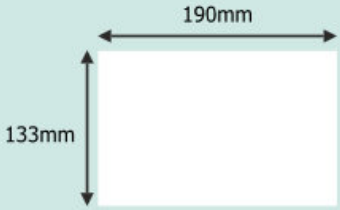

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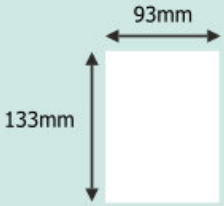

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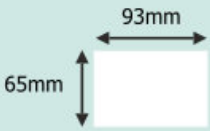

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- Esmė Graham - Editor Ph: 0457 304 868
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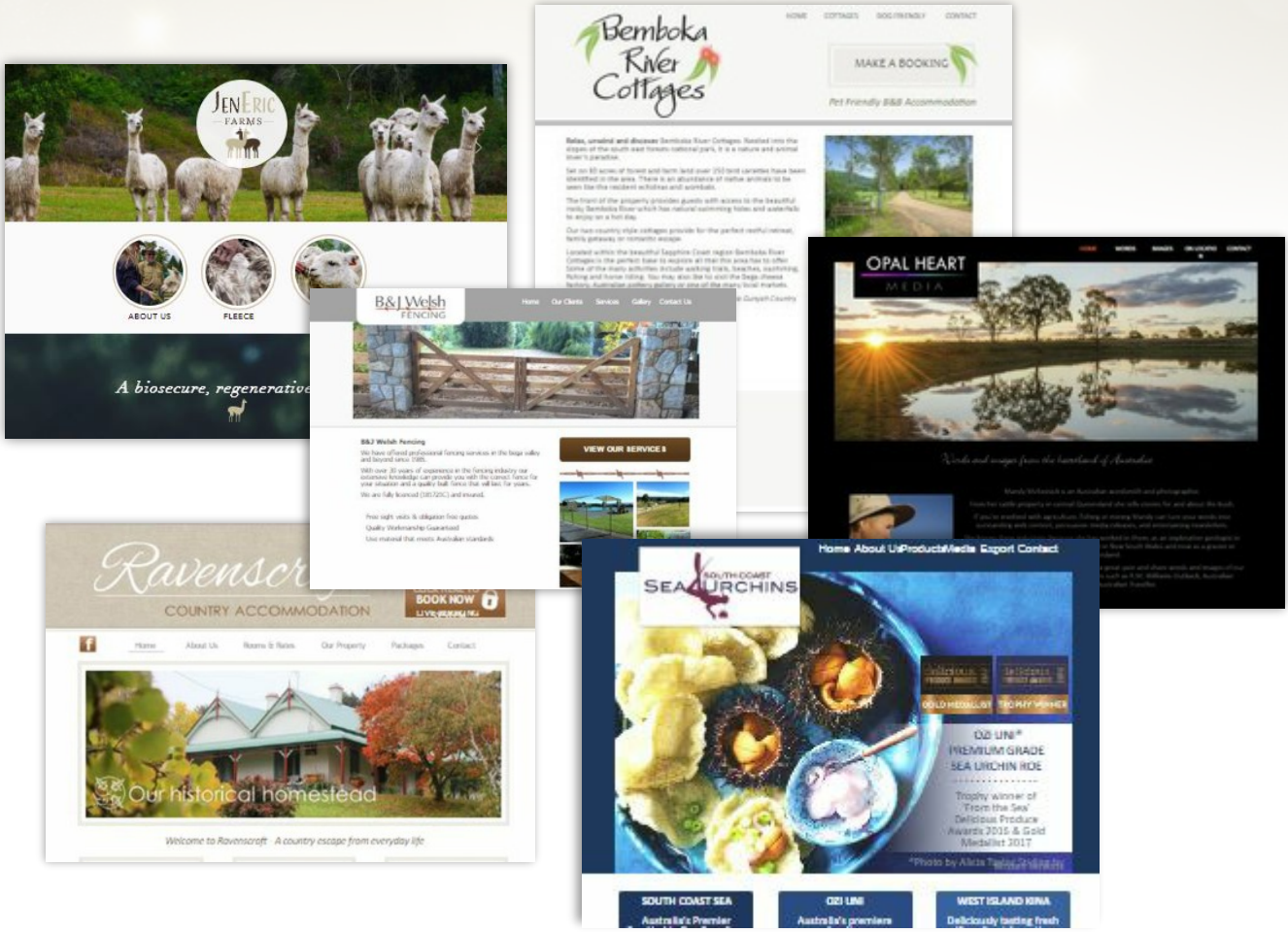

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www.oakgrovegraphics.com.au

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

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Welcome to Camelid Connections

Lately the most popular topic of conversation seems to be the weather. There is nothing settled about our climate and it is very difficult to plan as the usual “norms” don’t seem to apply. With another La Nina forecast for Spring/Summer fingers crossed for not too much rain when you have shearing coming up! In this issue we covers some of the aspects of shearing to make sure you get the best value from your fleece and another article shows how to prepare your fleece for spinning yourself or sending to the mill.

We also have an interesting article from Stephen Mulholland about “Dealing with a Dummy” or more correctly “Hypoxic Ischemic Encephalopathy” an interesting read. The AAA tells us about their “Farm Finder” initiative and congratulations to the South Qld Northern NSW Region on a successful conference - you can read all about it on page 37.

Of interest to our “crafty” readers we have reprinted an article from the USA on the use of small knitting machines to speed up the supply of the knitted products you may be selling which makes them more cost effective, and I believe that most States have associations where you can learn to use these machines and swap patterns.

Looking for a few days away with a camelid theme? How about a visit to Mt Macedon, going on a llama walk at Hanging Rock, staying at an attractive B&B, visits to wineries and National Parks - see what we hope will be the first in a series of getaways around the countryside all showcasing our camelid family.

If you are a casual reader of this magazine why don’t you subscribe? There is no charge, we don’t hassle you with emails and sales pitches, you just receive an email when the latest edition goes online so you know it is available.

Subscribing helps us show our advertisers we have an audience worth advertsiing to, and advertising in turn helps us keep the magazine free for you to enjoy.

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Meet The Team

Esme Graham - Editor

My husband and I have 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 20 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

THE Shag & Sheila STORY

By Keith Payne - Big Ears Llama Ranch

Just a few months ago, a Trade Me notice appeared about the need of a new home for two llamas, from a farm outside of Riverdale, near Gore in the South Island. There was an 18 (or so) year old entire male (no name but referred to as Banana Ears) and his daughter of 8 years (or so), without a name.

The bush block they had lived on all their lives was sold and the new owner said to shift them or shoot them. They were very wild, the daughter had never been handled and was known to disappear into the bush for years at a time. The male had been purchased at a young age from a breeder near Dunedin, had been put in with a couple of guanaco type girls, which did result after a number of years in the birth of his daughter. They had not been concerned about having an entire male running loose with females because any offspring will be hybrids and “as we all know, they are sterile”.

It took a couple of weeks to organise transport and attract this wild pair to an area where they could be loaded. But this was achieved, they were transported to Gore, the next morning loaded into a cattle truck and driven to Christchurch, where I met them. Quickly they were coaxed into my llama float, arriving home on a dark, wet, cold night. I didn’t get my first good look at them until after sun up the next morning

Talk about a couple of wild ones !

Of course, this was almost what I had expected. If you take a llama that had been running wild all its life, surviving on its instincts alone, without human contact, you really would not expect too much. But I was not prepared for the absolute fear that the young lady had of humans. To the point where she would aggressively seek to get out of sight, even if that meant trying to bash through fences and gates. The potential for harming herself with these antics became too real and I quickly decided I would just back away from her and concentrate my attention to the male.

I decided to name them Shag and Sheila.

Now Shag was different than his daughter. He had a nervous look about him and would follow her lead at all times, running around after her, but he lacked the look of desperation that accompanies the wild ones. At times he seemed to be intently studying me, like he was trying to figure if I was a threat or not. For two weeks I walked up to and around him, brought feed, getting closer but not attempting contact. Third week I could pursuade him into the yards and walk around him. Fourth week I eased him into a very small pen and after a couple days slowly reached out and stroked his neck. He stiffened but I slowly kept it up and in a few moments felt the tension ease out, he turned his head, looked at me – no sign of aggression.

After that it became easy as long as I didn’t rush things. Within a week he accepted a halter and the next day began his leading lessons – the first day we managed about three metres in half an hour. A week later we were covering three 3 km’s a session.

He doesn’t like to be brushed but has reluctantly and somewhat grudgingly permitted me to begin to cut his mighty fibre off. For about 2 minutes each session - it is a slow process. But as I worked my way from front to back his agitation increased. After a while I was able to remove enough dags in his back end to obtain my first glimpse of his genitals. SHOCK! Shag has no testicles, just a couple of wrinkled prunes! After a second inspection the realization struck me, this fellow has not been gelded correctly, he has had the connection of blood vessels etc to his testicles crushed. The name for this procedure is “burdizzo”, I have never heard of it being performed on llamas, and I suspect there would not be a camelid vet in the world who would approve of its use.

And all of a sudden I was engulfed in a wave of pity for this poor fellow, what pain and discomfort he must have endured, and here he is putting his trust in me.

But the story ends well. Sheila is now in with my girl herd of 22 and getting more settled each day. Shag has relocated to the stud paddock where he has his own area and boys on either side for company. For both of these llamas this is the first time in their lives they are able to be safe and have an ample supply of feed and care plus the company of their own kind.

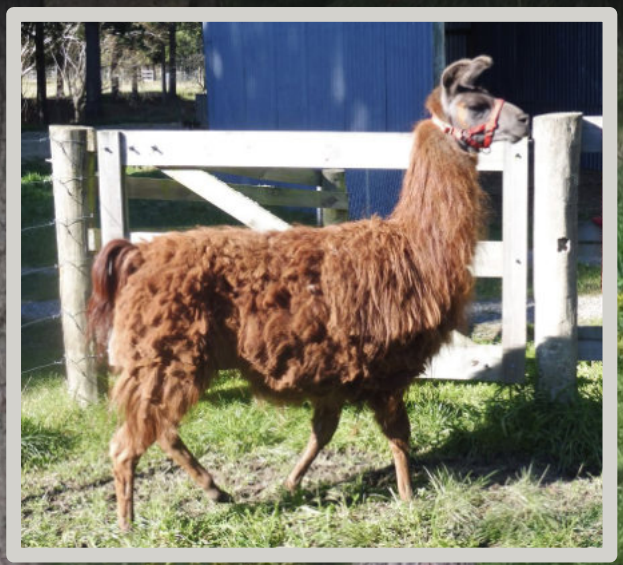
Sheila will always be a wild one and it is best she stays with me where there is lots of room plus other females with whom she can take comfort. I will wait until November to give Shag a full haircut and after that he will be ready for a quiet forever home somewhere in NZ.

Whoever takes Shag will be pleasantly surprised at his handling and companionship. I am impressed with him. A lovely boy.

UPDATE

Poor Shag's story did not end well after all. He suffered a suspected sudden stroke or heart attack and passed quickly. I had been fencing just over from his area, one minute he was fine and next look over he was gone. So I can only take comfort in knowing his last few months would have been the best time of his difficult life.

Sheila on the other hand goes from strength to strength. Haven't been able to handle her yet but she runs up with the rest of herd for food or rotation through the paddocks. She has taken a keen interest in a couple of neighbouring gentlemen and I've resolved to mate her in the spring. She has latched onto Chico, the gelding in charge of the girls and is never far from him. Now known as Chico's wife. Here he stands guard while she has her morning roll.



Not just a Funny Haircut

By Esme Graham & Penny Pittard

Gone are the days when shearing was a necessary chore just to get the fleece off the animal. The end market will pay the best price for the cleanest, best prepared fleeces available with the specifications the end user requires.

Several years ago our very experienced vet came to do some ultrasounds. She hopped out of her vehicle and dissolved into peals of laughter when she saw a whole paddock of newly shorn alpaca. Apparently she had never seen shorn alpacas en masse and the sight continued to amuse her for her whole visit.

However as Cameron Holt points out in the Australian Alpaca Fleece Industry Shearing Shed and Pre-Classing Code of Practice - "The preparation of the alpaca clip for sale is the culmination of the year's work". Often, shearing is the culmination of many years of careful breeding and while we all smile to see our very bare looking animals, and have trouble recognizing individuals, we know that shearing is a serious business and requires some thought to ensure the best possible outcome.

Pre-shearing

Preferably graze your alpacas on clean grassy paddocks free from burrs and other contaminents in the months/weeks before shearing and if you can find the time, trim tips off animals that have burrs, vegetable matter or the brown tips on black animals – easier while the fleece is on the animal than trying to remove it later.

Remember that your shearer is a professional and deserves to be treated as such. You expect a good shearing job so make sure you are well prepared and organized with sufficient people to help. It is not your shearers job to run around paddocks collecting animals. Communicate with your shearer about his and your requirements before shearing commences.

Is he shearing on a table or on the floor? What equipment are you required to supply? What jobs will the shearer or his helper do and what labour do you have to supply?

Veterinary Maintenance

Most shearers will trim toenails and teeth at the time of shearing - check your shearer will do this. Is it included in his price or an extra? If you wish to do it yourself is he happy you will not be holding him up? The same applies to routine vaccinations. Doing these jobs at shearing time saves valuable time but be aware of the importance of not contaminating fleece with toenail cuttings.

Penny Pittard used to run Currabungla Alpacas and Alpaca Ultimate has a wealth of experience when it comes to evaluating fleece. Penny sees the end results of breeders shearing and has the following advice to help you improve your returns:

Since skirting and testing fleeces for Alpaca Ultimate, I have realised that a number of breeders lose value in their fleeces by poor preparation and not skirting fleeces properly.

I have put together the following procedure to help breeders get better value for their fleece.

- Take midside fleece samples at least 3 weeks before shearing to have the results at hand on the day - take the samples midway down the side to make sure you are getting a realistic test. Too high and it can be finer than the bulk of the saddle. By knowing your fleeces midside test results at shearing it makes it very easy to put aside fleeces that may be suitable for special purposes e.g. showing or selling to fleece purchasers requiring certain microns.

- Buy fleece bags ahead of time to make sure you have the right sizes for necks, legs, saddle (only buy biodegradable bags if you intend sending your fleece for processing immediately otherwise they can break down and ruin the fleece).

- Bags with holes punched in them press down better than bags without.

- Don't tie the tops of the bags so tightly it is hard to undo them. We have had bags that have been impossible to undo and they have to be cut.

- Clean shed of all contaminates - feathers, baling twine, toe nails, etc and vacuum thoroughly.
- Have a covering on the floor that can be swept and vacuumed easily- no dirt or rough concrete.
- Have plenty of old towels to mop up any accidents, puddles or spitting. Do not bag up wet fleece.
- A washing basket on digital scales set on a table makes for easy weighing of fleeces.
- Set up equipment for smooth operation, saddle fleece to skirting table, a wool pack for skirtings next to the table so pieces are put straight into it, weighing table with work sheet to write weights, etc
- Have storage areas designated for fleeces of certain micron - superfine, fine, medium, strong and also into colour groups. Otherwise write mid side test results on bags so they are easy to identify later. This makes for easy sorting later when bagging up for processing. If a fleece is obviously too short for processing put it straight in the pieces bag.

The night before shearing have all animals that will be shorn the next day under cover.

No water or feed to be available to them during the night – reduces puddles, spitting etc. Ruminates have plenty to carry them through and will "not starve to death" as many think.

On shearing days, skirting, weighing and sorting as you go means when shearing is finished, most of the work is finished – if it is not done at the time, many find it extremely hard to get back to it and consequently fleece gets left in sheds forever. Organise enough people to help on the day.

People required for shearing – the shearer, an alpaca handler, a person to organise the fleece as it comes off the animal (experienced in separating the hairy leg and belly pieces away from the saddle as I know this is where a huge amount of contamination occurs) to pick up the saddle and put it on the skirting table, an experienced skirter at the table, a person to get bags labelled and to weigh the fleeces and record details. An efficient team is more productive than heaps of inexperienced friends and relations.

Shear in colour groups, all white together etc and from fine micron to coarse micron if possible.

Sweep mat clean between every animal to avoid guard hair contamination etc and always vacuum between colours groups to eliminate colour contamination.

Skirting immediately before bagging saves so much contamination of the saddle – if stronger micron fibres get into the main saddle it will downgrade the saddle – grid testing shows this and can mean a lot less dollars for your fleece. This cannot be stressed enough as we come across it time and time again.

Hairy fleeces, in other words fleeces with primary fibres longer than the secondary fibres through the main saddle are not suitable for making good quality products – this is something that needs to be watched in breeding alpacas.

If there is not quite enough time to skirt properly put a sheet of paper over the whole fleece and roll it with the paper in the middle, this way the edge pieces do not contaminate the saddle.

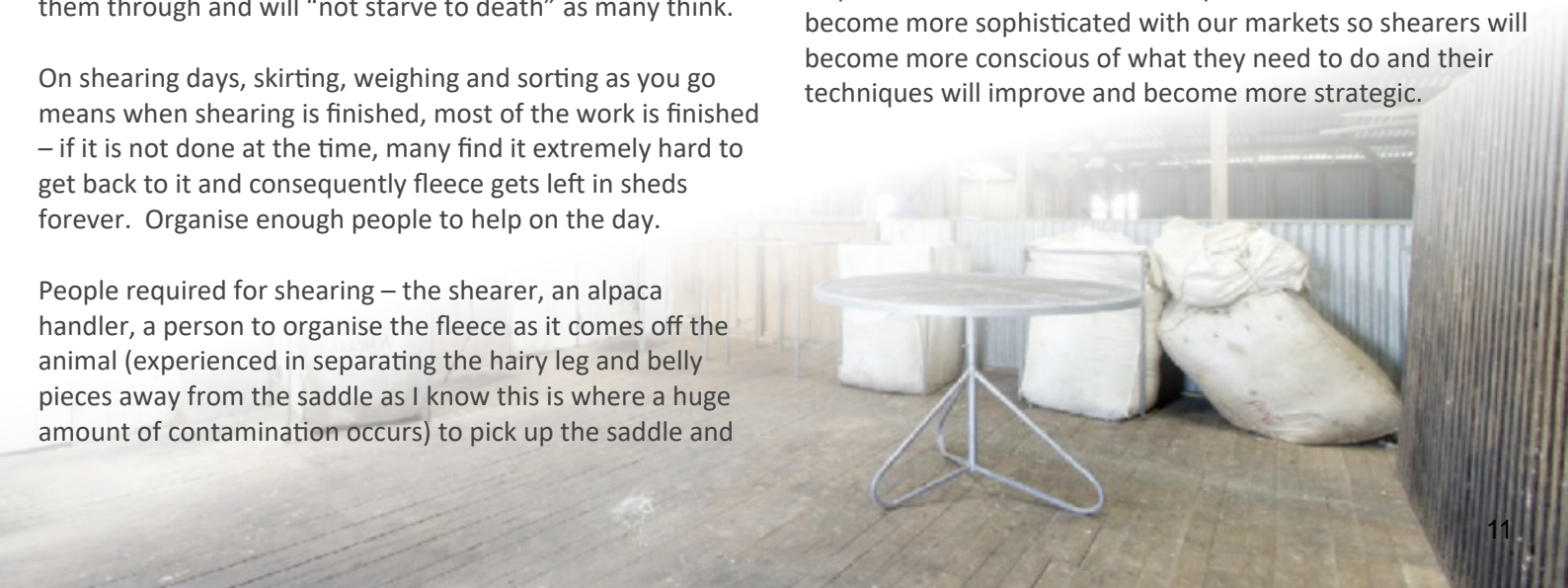
Careful treatment of your fleece at shearing time can make a huge difference in dollar value.

Record Keeping

Do you note the fleece weights and results from the testing laboratory for each animal? This is important so you can see from year to year which animals are holding their micron and which are blowing out. All part of your breeding decisions!

Smart Shearing

Remember that we are shearing to obtain a particular outcome. Textile manufacturers all have particular requirements and we need to keep this in mind. As we become more sophisticated with our markets so shearers will become more conscious of what they need to do and their techniques will improve and become more strategic.



TREATING CRIA WITH

Hypoxic Ischemic Encephalopathy

By Stephen Mulholland, Ph.D.

Some time back we had a cria that got very sick. We were lucky that our veterinarian recognized what we were dealing with, a dummy, and put us on the path to saving her.

The term "dummy" comes from the horse world, the so-called "dummy foal." The condition is also known as Neonatal Maladjustment Syndrome, or more technically as Hypoxic Ischemic Encephalopathy.

Practically this means that the cria did not get enough oxygen to its brain (and possibly other organ systems in the case of severe oxygen deprivation). This lack of oxygen could have come from a wide variety of sources and may have happened before birth (inadequate placenta, anaemia in the dam, early placental separation), during birth (early rupture of the umbilical cord, various constrictive dystocias) or even after birth (intact membrane preventing the cria from breathing).

Spotting a Dummy

What does a dummy look like? It varies depending on how severe the lack of oxygen was. In the most extreme cases the newborn goes into immediate seizures, and obviously prompt veterinary assistance would be required in those circumstances.

Most dummies have more subtle symptoms and are more difficult to spot. Symptoms can take days to develop and start with minor problems that escalate. It may be nothing more than an intuitive feeling that something is not quite right, perhaps first presenting as a mild depression which can be overlooked. Dummies might appear blind, have difficulty swallowing, be very un-coordinated (unable to stand/walk), may suck on anything indiscriminately, and may display twitches (eyes, lips) that are indicative of minor seizures.

Also, watch out for cria that hold their breath (apnea), breathe irregularly or don't urinate, as that is a sign of more severe organ damage.

Dangers

Be on watch for very deep and long sleeping cria that are difficult to rouse, as that can be a sign of a dummy. Premature cria will sleep for very long periods, but if you have a full-term, well-developed cria and it wants to sleep all the time, have a second look. Many of these symptoms lead to the cria not feeding properly, or at all. Consistent quality nutrition is vital for a newborn, and its absence quickly leads to many other problems. The cria may forget it needs to eat, or how to eat, or may simply lose focus and fall off the teat before getting a proper feed. This can be hard to notice when it is all taking place underneath the female.

Infections are very likely in dummys. This may be because the cria is weak from a lack of food, or because it is eating or sucking on dirty, messy, or otherwise wrong things. You need to regularly check an at-risk cria's temperature, and promptly treat any infection that takes hold.

If the cria has been a dummy since birth, they might not have recieved sufficient colostrum from their mother in the first 24 hours after birth. If this is the case, the cria will have to be given plasma to provide the life-saving antibodies it needs to fight off infection during the first few months.

Treatment

Treat the symptoms. The cria will need to be supported until it recovers. There is no single fix; it is about good supportive nursing and care. Symptoms tend to disappear in the reverse order in which they appeared (last in, first out). As the cria improves it shouldn't relapse once a symptom is gone, it's gone for good.

Cria that are not eating properly need to be fed. Remember that a very young cria needs many small feeds throughout the day. A cria consumes about 10% of its body weight in milk per day and splitting this across six or more feeds is ideal. Their little stomach can only handle so much milk at once! And since you are dealing with a dummy you can't rely on them refusing the bottle once they feel full.

If a cria can't feed from its mother, it would be good idea to milk the mother both to keep the udder stimulated and producing, and to take pressure off due to an excess of milk. I know this can be a challenge if the mother is not keen! But most dummys will recover sufficiently within a few days or weeks to start feeding normally again, and it is easier to milk the dam a few times than to bottle- raise her cria.

Keep a close eye on body temperature since infection is likely. Since camelids don't have a fixed body temperature (they are cooler in the morning and will be quite warm after a long afternoon in the sun) it can be a bit challenging to determine when you are seeing a fever. I find it very useful (where possible) to compare temperatures in equivalent animals. Take the temperature of another cria of the same size and colour, if you can, and look for a difference. A cria that is 39C first thing in the morning has a fever.

Watch out for obsessive behaviour that can get a cria killed. They may drink water, either out of hunger or just as an odd behaviour, until they kill themselves. They may try and eat all sorts of odd objects which a camelid would normally ignore. You may need to build yourself a "cria proof" pen in which mother and cria can live while the cria is being treated.

In foals, good care saves about 80% of all dummies.

Our Dummy, the tale of Svalinn and Suleluri

Day 0 - Svalinn, a maiden female, gave birth. It was not an easy birth. She started with a normal presentation, but then the cria got stuck with one and a half legs out. One of the legs was only partly out, and we eventually determined it was bent in the womb and jammed against the entrance of the birth canal. In retrospect we should have intervened and helped earlier, but we waited too long hoping that the mother would sort it out. It was 90 minutes from the head first appearing to getting the cria out and on the ground. She was 8.9 kg, which is at the top end of the normal range for alpaca (6-9 kg).

From the moment of birth we knew there were problems. Suleluri's (the cute female cria) eyes were cloudy, and there were indications of blindness (no menace reflex). Even though she was full term (by birth date), there were a few slight signs of dysmaturity (loose leg tendons).

As an "at risk" cria, especially one from a maiden female, I started feeding her colostrum, and put mother and cria in the shed overnight. Checking later that evening showed that Suleluri was reactive to light and had regained at least some vision.

Day 1 - The next morning Suleluri was up and feeding. I did give her a bit more supplemental colostrum, such that in her first 24 hours I'd provided about 30% of her colostrum needs (as an insurance policy after some tragedies in the past). I did note in my journal "head bobbing up and down?" At the time we rationalised this as being related to her vision problems. I also procured and began administering eye-drops from the vet. At the end of day one she was down 400g from her birth weight. (now 8.5 kg) The weight loss was not a surprise- we've seen some alpaca cria lose 500g the first day, then come roaring back in the days that followed.

Day 2 - Her weight dropped by another 300g to 8.2 kg, so I started supplemental bottle feeding that evening. At this point we were not sure if this was a problem with the cria, or if the maiden mother had insufficient milk.

Day 3 - I provided about 50% of her milk requirements (total of 400 ml over 4 feeds), Sule's weight was up 100g at the end of the day (8.3 kg), so I put the two of them back into the paddock with the rest of the girls.

Day 4 - Still providing 50% of feed. Weight up another 100g to 8.4 kg. But now the cria was running a slight temperature (39C in late afternoon). I talked to our vet on the phone, letting her know of the situation. She gave the first indication that we might have a dummy. I also noted in my farm journal that she was a very sleepy cria.

Day 5 - Sule was 37.5 C at 6AM, which is a bit warm for so early in the morning after a cool, clear night. Her weight had dropped though, down 300g to 8.1 kg! I increased my supplemental feeds to 700 ml over 5 feeds, which was about 85% of her daily needs. She still looked like she was feeding off her mum as well.

Day 6 - Down to 8kg. Still feeding her 700ml a day. When I went out into the paddock to feed her she was often sitting in mud puddles. Later that day there was mud around her mouth, she'd been eating the mud! And this was nasty, dirty mud due to the geese also making use of the puddles. (Afterwards we figured out that she might have been sitting in the mud puddles to try and cool herself down.) I noted in the journal that she now had a stiff gait. With a high temperature, falling weight, and strange behaviour, it was time to get to the vet! Based on the symptoms I'd described,

our vet immediately diagnosed that we were indeed dealing with a "dummy". It was a Saturday afternoon, of course, so we had to take Sule to the vet's home.

By the time we got there her temp was up to 41.6C, which is well into the danger zone for "febrile seizures." We started her on antibiotics (a 5 day course), and used a cooling coat to get her temperature down. The cooling coat was a special fibre coat for the vets' Bernese mountain dogs, which really feel the summer heat. When we got home we improvised a cooling coat of our own, cutting up a camping microfiber towel and safety-pinning on some straps. You soak the coat, wring it drip dry, and put it on the cria. The cria stays dry, but the evaporating water carries away excess heat. By nightfall she was down to 39.5C- still quite warm, but out of the immediate danger zone.

That evening we milked 275 ml out of the mother (using a shearing table to immobilize her) and fed some to the cria. Svalinn eventually got used to the periodic milking- I think she was happy to have the pressure taken off her udder. We put mother and cria in a pen, and the cria immediately tried to drink itself to death in the water bucket! Thankfully we had been warned about such obsessive behaviour, and moved the bucket to where Sule could not reach (but her mother could) and did our best to "cria-proof" their pen.

Day 7 - This was the low point of the whole process, and it was a struggle to keep little Sule going. She was 39C at 6AM, still quite feverish. She had lost her suck reflex and was very lethargic. Cria must suck down the milk, otherwise it can end up in the rumen where it curdles and adds to the problems. It was taking me 20 to 30 minutes to get her to drink 100ml of milk, as I had to stimulate her suck and swallow reflexes by massaging her cheeks and throat. In between milk feeds I was giving her electrolytes with dissolved Berocca tablets. (Cria don't need to suck down electrolytes, so you can syringe it in. A little throat massage would stimulate a swallow reflex.) It was a long, hard day, with alternating hourly feeds, milk then electrolytes.

Sule was 7.9 kg first thing in the morning, and 8.6 kg by evening. Most of that weight gain was just rehydration.

Day 8 - From the first feed of the morning I could tell Sule was improving- most noticeably she now had a good suck reflex and could drink milk again. I fed her 900 ml of milk (100% of her needs) plus some electrolytes over the course of the day. I saw her nosing under her mother on occasion, but she didn't appear to be feeding from her much, if at all. We milked the mother out again. By the end of the day Sule was up to 9.1 kg (another 500g gain).

Day 9 - I was still providing most of Sule's milk needs (90%). Her evening temp was 38.5C, which was pretty normal for a warm summer's day, and her weight was up another 400g to 9.5 kg. Mother and cria were spending the days in the fenced yards outside the shed, and nights back in the pen.

We waited until we were sure Sule was no longer compulsively drinking water before putting her in the yards with access to a water trough.

Day 10 - Weight up another 400g (9.9 kg), as Sule readily devoured all the milk I provided her.

Day 11 - While I was still feeding Sule 750 ml of milk per day, she had started rocketing around the pen. Her behaviour now appeared quite normal for a cria her age. Temperature of 38.5C in the evening.

Over the next 5 days I tapered off the amount of milk I was offering Sule until on the last two days she started refusing the bottles offered- clearly, she was now getting plenty of milk from mum. Perhaps I could have eased off on the supplemental milk a bit earlier, as she was gaining weight very quickly, but I wanted to make sure she was going to be okay and didn't want her to relapse.

Now, seventeen months later, Suleluri is a happy and friendly young girl. Her behaviour is completely normal. In fact, she's the biggest of the cria from last year.

Looking back, what I got right and wrong

My early decision to provide colostrum (and later pre-vet-trip supplemental milk) probably averted an even worse disaster. Since we have a small herd, and only get 10-20 cria per year, it is easy to give a bit of supplemental colostrum to newborns. I don't feed colostrum to all the cria, just the ones I am suspicious about. This “suspicious-list” is comprised of any cria from an assisted or difficult birth, and almost all first-time mothers. I will also feed the cria of a more experienced mother if I know she is not the best milk producer in the world. Better a bit of effort now, than a tragedy later on. By feeding ~50% of their colostrum needs over the first 24 hours you make sure they remain hungry enough to go after the natural source, while at the same time providing minimally adequate antibody protection if for some reason mum's colostrum is not available or of a good standard.

My biggest mistake was not intervening sooner. We kept waiting for Sule to "come right", when each day she was clearly getting slightly worse in small steps. If I'd stepped in at day 3 and started providing 100% of her food needs and started watching more closely for infection we would have probably have fixed her before she hit rock-bottom and nearly died.

I'd also like to share with you the "Milk Mix" I use for feeding cria. (Note- this is not the colostrum this is the milk I use for longer-term feeding of cria. For colostrum I've had good success with the "Jump Start" brand from Fonterra.) The formula is a mix of 470 ml blue top milk, 30 ml cream, and 3 tablespoons of non- fat milk powder (with an optional extra

of 1-3 teaspoons of yoghurt) . I have found that our cria do very well on it, and very much prefer the taste over Anlamb.

We used to use Anlamb (NZ lamb milk replacer), and I found the cria would only drink when they were very hungry, and even then it was a chore to get them to drink enough to gain weight. The other big advantage of the "Milk Mix" is that blue-top milk and cream (NZ full fat milk) can be purchased from any dairy or petrol station, meaning you can create the milk mix late at night or on a holiday when all the farm-supply stores are closed, since Murphy's-law dictates that's the time when an animal will be in need!

If you are curious, Suleluri means "Silliness" in Georgian. It seemed an appropriate name for our first ever dummy.

One year later Suleluri is bright, friendly, and completely normal. You'd never guess she had such a tough start.

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MADE TO ORDER, WITH ALPACA:

KNITTING MACHINES IN THE FARM STORE

By Lynn Edens USA

We're seeing a trend in our yarn sales at Imperial Yarn, with an increasing number of our retail and farm store customers purchasing yarn on cones for use producing custom, often made-to-order products, on their own knitting machines.

It's our sense that these businesses are in the vanguard of our industry's adoption of the growing retail category of made-to-order fashion. Made-to-order clothing and accessories offer advantages to consumers and smaller retail businesses alike and may be a particularly good fit for those in vertically integrated alpaca businesses. We took a closer look at this trend to learn more.

Being able to produce a garment or accessory for a customer at the time of sale is efficient for many product sellers. For one, inventory costs are lower: Brands and stores hold production yarns in inventory rather than more expensive finished product, and there is no need to front funding for the manufacturing of product that will be delivered many months later. Costs associated with a mismatch between inventory and demand are also reduced or eliminated, with no products of unwanted sizes or colors left on the shelf.

There are also branding advantages available, and these reflect the value that custom production can add from the consumer's perspective. For example, part of the fashion industry's large environmental footprint is driven by factors like the typically long, geographically dispersed manufacturing supply chains as well as by the tremendous amount of fabric that is wasted in the process itself. By contrast, making accessories and garments to order can significantly reduce these negative environmental impacts and appeal to consumers' desire for sustainability.

Making sized garments to order also benefits consumers, particularly those who are less likely to find clothes matching their own body type and size on a shelf. Made to order "fits" everyone and conveys an inclusive brand message that can expand its appeal. It also expands the array of products from which anyone coming through the store door can choose.

But perhaps the biggest advantage of made-to-order fashion for many small and/or farm-based alpaca retailers and their customers alike in particular is the opportunity to increase customer engagement with and commitment to, their business. The typical customer has already demonstrated their real interest in both by choosing to come to the farm or a small store rather than heading to the nearest big box store to make a purchase. The store owner who can offer their customers the opportunity to be involved in the making of accessories and garments gives them a chance to feel like a part of the farm family and alpaca community in a way that engenders real loyalty and broadens regional connections to the farm.

Making Custom Knit Products

There are a number of ways to add made-to-order knitted products and related services to an alpaca retail business, with a great deal of range with respect to the investment required as well as the scope and options that are produced by that investment. That said, most alpaca businesses are small, and need low-cost, scalable ways to introduce custom products and services, and there are circular and flat panel knitting machines that offer excellent options in this regard.

Circular knitting machines come in sizes ranging from large industrial models to the hand-operated table-top machines that are used by home-based fibre artists as well as in smaller scale production efforts. These machines make tubes of knitted fabric, and before some of you wonder out loud why anyone would want a tube of fabric, consider the shape of your socks or the knit hats on the shelf in your closet: Circular knitting machines can make the type of alpaca products that are top sellers in many stores. A tube of fabric can also be used as double cloth (two- layered) fabric in a variety of applications.

Small circular knitting machines are already familiar to many in the alpaca retail business, and we are seeing more of our customers add these inexpensive, easy-to-use machines to their own businesses. Experienced hands can use one to turn out a hat using a customer's choice of yarns in half an hour. A small machine can also be used to produce tubes of fabric for socks, again based on customers' choices of yarns, with sock finishing another service a store could offer to those interested. There are creative ways to expand from here also. For instance, a store owner could consider offering sock tube knitting services using a customer's own yarn, a service that has proven popular on websites like Etsy. As yarn sellers know, nature abhors an empty yarn stash, and the customer who brings her own yarn in for machine knitting is probably not going to leave the store empty-handed.

At a typical cost of a couple hundred dollars for a high quality, sturdy hand operated machine, store owners might want to purchase several and teach classes on how to use them, and even consider offering the machines for in-store purchase. This is an indirect way to build a customer base for

"These one-of-a-kind hats are a quick knit on a table-top circular knitting machine and even quicker to sell for Imperial Yarn."

store yarns as well. Alpaca business owners could also consider collaborating with an artisanal dyer in their area to create one-of-a-kind dyed yarns for use with the machines, or work with an artisan who will knit hats or socks in their own inspired patterns and colours for the store to sell. Both can help build community connections and support regional textile activity.

Stacie Chavez of Imperial Yarn chose to work with a local fibre artist to develop a concept for one-of-a-kind beanies that could be produced on a hand-operated circular knitting machine. The beanies have been so popular she has trouble keeping them in stock. Stacie says, “People want to buy high quality sustainably-made products at a reasonable price. The beanies we sell are individually made by the artist with our own American-grown alpaca/wool blend yarn. Each hat showcases colours in unique ways, which is an important part of the appeal and not something we could achieve with larger scale manufacturing.”

Flat panel knitting machines are another interesting and affordable option for alpaca stores. As their name implies, flat panel knitting machines produce a single layer of knit fabric that can then be seamed to produced not just accessories like hats and scarves but also fitted products like sweaters and gloves. Unlike the simple circular knitting machine, a flat panel machine can produce stitch patterns and also do more complex colour work, creating a wealth of product design options.

Used, small-sized flat panel knitting machines suitable for farm store applications can readily be sourced on sites like Ebay and Craigslist for a few hundred dollars. For new machines with state-of-the-art capabilities like PC-based design software and knitting machine interface, potential buyers may find the Silver Reed brand machines of interest. One example, the Silver Reed SK840, is priced at around $1,500,and has a generous 43.7” bed width. With a modest investment in training in their use, machines like this offer incredible product design flexibility. There are libraries of knitting machine patterns for business owners to work with as well. As an additional source of revenue, owners can sell time on their machine to customers who want to design their own garments or other knitted items with the software, or to fellow regional business owners or designers who want to create custom products of their own. This, too, could help build volume in the store’s yarn business.

Rolling Oak Alpaca Ranch in Illinois has been using vintage flat panel knitting machines in their alpaca product business for three years. “Currently we are using vintage machines to make hats, cowls, scarves and fingerless gloves for our customers, and we hope to make sweaters and capes in the future,” said business co-owner Morgan Stevenson.“Using the vintage machines has really sped up the production process for us and we sell more now that we have more product in stock.”

The machines have also allowed Rolling Oak to respond quickly to customer requests. “Recently someone asked us to make baby hats from a couple of the yarns we had available in the shop,” said co-owner Judy Hoepker. “Another saw a pair of our fingerless mitts and asked us to make six more pairs as Christmas gifts.” Judy notes an important link with another trend also. “Over the last few years some people have requested to buy only items that we made ourselves. This year, almost everyone wants items made here.” Knitting machines have helped Rolling Oak keep up with increasing demand for local products.

Another type of customization tool that can improve inventory flexibility and increase a store’s offerings is a cone winder that can wind skeined or balled yarn onto to cones for use with the store’s or customers’ knitting machines or looms.

This conversion option can allow a customer to pick any suitable yarn in the store for the production of larger made-to-order knit products and are also useful if the store wishes to offer custom knitting with the customers’ own yarns.

There are hand-held yarn splicing tools available for those who anticipate a steady demand for larger-sized cones and anticipate the need to join skeins, or whose made-to-order business leaves them with leftover yarn on cones. These typically use pressured air from a compressor to splice the yarn, and small hand- held splicers suitable for the irregular demand likely from most retail yarn sellers can be sourced for as little as $100.

Technological advances may ultimately create new opportunities for smaller scale retail made to order businesses. One of the more interesting advancements in recent years has been the development of 3D knitting machines, also known as a whole garment knitting machines. These machines knit a seamless garment in a single step, eliminating the need for seaming or other assembly and reducing yarn waste to almost zero.

With purchase prices ranging into the low six figures and significant technical training and expertise required to program and operate them, 3D knitting machines are not attractive direct investments for most smaller scale alpaca retail businesses. However, as they become more common, alpaca retail businesses may benefit from the technology via the smaller minimums, shortened production timelines, and regional production options that manufacturing businesses that own these machines will likely offer.

It’s well worth making the effort to stay up to date with the development of the 3D knitting industry and learning about the options that manufacturers in your area who are using this equipment may be able to offer you.

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GARDEN GOLD

By Esme Graham

You know that pile of alpaca poo that you vacuum or rake from your paddocks and that keeps getting bigger and bigger! Well, your garden would love it.

Having spent many years in the nursery industry I am well aware of the benefits of composts and manures. Alpaca poo is a great option to fertilize your plants. Like all fertilizers it can bring a host of benefits. It will improve the quality of the soil, especially its ability to hold water as well as add valuable nutrients such as nitrogen, potassium (potash) and phosphorus. Alpaca poo has the highest N-P-K of any natural fertiliser.

There are six primary nutrients that plants require in fairly large quantities.

1. Carbon from CO2 in the air

2. Hydrogen from water

3. Oxygen from water and air

4. Nitrogen helps plants make the proteins they need to produce new tissues. In nature, nitrogen is often in short supply so plants have evolved to take up as much nitrogen as possible, even if it means not taking up other necessary elements. If too much nitrogen is available, the plant may grow abundant foliage but not produce fruit or flowers. . Growth may be stunted because the plant isn't absorbing enough of the other elements it needs.

5. Phosphorus stimulates root growth, helps the plant set buds and flowers, improves vitality and increases seed size. It does this by helping transfer energy from one part of the plant to another. To absorb phosphorus, most plants require a soil pH of 6.5 to 6.8. Organic matter and the activity of soil organisms also increase the availability of phosphorus.

6. Potassium improves overall vigour of the plant. It helps the plants make carbohydrates and provides disease resistance. It also helps regulate metabolic activities.

Although all types of manure have a much lower N-P-K ratio than synthetic fertilizers, alpaca/llama manures compare very favourably with that of other livestock.

For comparison, alpaca manure has an N-P-K of 1.7 - 0.69 - 1.2, whereas cow manure is closer to 0.6 - 0.2 - 0.5 and horse manure is 0.7 - 0.3 - 0.6 (these are approximate as they can vary according to feed regime and conditions)

One of the main drawbacks of natural manures is that they can get very hot, even enough to burn your plants and therefore need to be composted for a length of time before applying. However, the efficiency of the alpacas' three stomachs means that alpaca manure has very little organic content and, as it is this organic contact that is the main factor in whether a manure is considered hot, the lack of this organic matter is what makes the alpaca poo safe for you to use without composting.

You can simply apply the pellets directly to the soil if you wish. However, if it is possible to work the pellets into the soil you will get faster soil structure improvement as the pellets will break down faster. You may have noticed if you leave your poo pile for any length of time that the manure crumbles to a very fine tilth and this is really "garden gold" to use anywhere in your garden and will improve soil structure very quickly as well as fertilizing your plants. I have found that using a mulcher to break down dry pellets into "alpaca fines" improves soil faster and makes a fine fertilizer that you can use as a lawn fertilizer to green up your lawn. As well as to use in the garden.

One option popular with those looking to fertilize indoor plants, seedlings or even ordinary garden plants is alpaca poo tea. This is a water based solution that can be poured onto plants to give nutritional benefits. To make this, mix the pellets with water in a ratio of approximately 1:2 and let steep overnight. On a larger scale this can be used with a spray unit to spray paddocks.

If you have excess manure and the time to bag it you will find a ready market for the product!

Reproductive Physiology In Alpacas

Jane Vaughan BVSc PhD MACVSc

MALES

Puberty

Alpacas are born with adhesions between penis and prepuce (sheath) and cannot exteriorise their penis for mating until they approach puberty and secrete higher levels of testosterone. Adhesions breakdown and sperm production begins in:

- 10% of 1 year-old males
- 60-80% of 2 year-old males
- All males should be fertile by 3 years of age

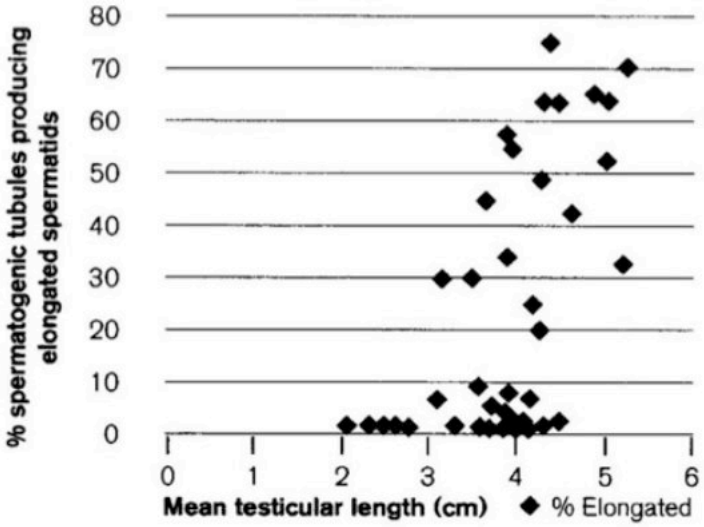
Puberty is influenced by genetics and body weight.

Anatomy

Male alpacas have a fibro-elastic penis that is 1-2 cm in diameter and 35-40 cm long. There is a pre- scrotal sigmoid flexure to retract the penis into the prepuce in the non-erect state. The tapering tip of the penis ends in a curved, fibro-cartilagenous projection (see below). The urethra is at the base of the process.

Above: Fibrocartilagenous tip of the penis, used to penetrate the cervix during copulation.

Testes are small and non-pendulous. They are present in the scrotum from birth. Testicular size is measured as mean testicular length (average of length of left and right testes, in cm). Males with a mean testicular length < 4 cm are unlikely to be producing any/many sperm and if over 3 years of age should be culled from the breeding herd due to in/sub-fertility (see below).



Percentage of spermatogenic tubules producing elongated spermatids (the final stage prior to mature spermatozoa) with increasing testicular size (Galloway [2000]).

- Small testes result in low sperm concentration ([30-300] sperm/mL).
- Lack of seminal vesicles results in low ejaculate volume (av. [1] mL).
- The bulbo-urethral glands add mucin to seminal plasma making semen very viscous, and currently precludes successful preservation for AI.
- An ovulation-inducing factor (OIF, β-nerve growth factor) in seminal plasma is absorbed across the uterine lining of the female after copulation to induce ovulation.

FEMALES

Puberty

Nutrition is recognised as a major environmental factor that influences the onset of ovarian activity in young females. Females need to attain approximately 65% of their mature weight in order to ensure a high likelihood of conception, whilst avoiding stunting and birthing difficulties. In Australia, this weight should be easily achievable by 12 months. Good nutrition after weaning together with monitoring of live weight and body condition score are essential for continued reproductive success.

Anatomy

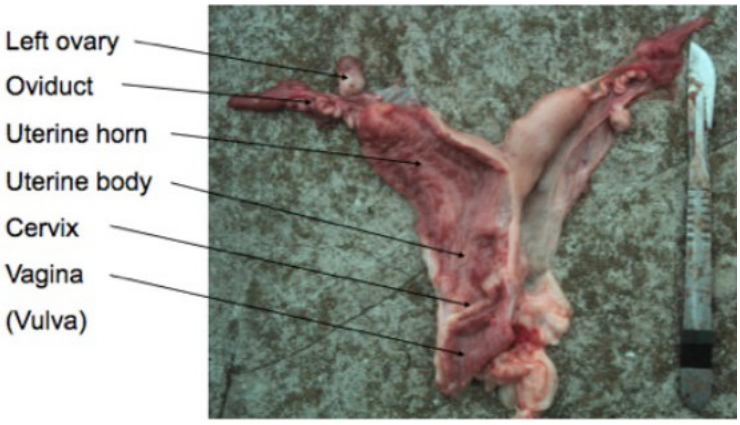


Figure 1. The reproductive tract of an alpaca, with the left uterine horn opened up to show the endometrial surface. Note the presence of a dominant follicle on the left ovary.

Ovarian activity in unmated females

- Ovarian follicular waves involve synchronous emergence of groups of follicles (fluid-filled structure containing the oocyte/egg) on both ovaries.
- One follicle becomes dominant:
- Growth phase 4-6 days (4-6 mm diam)
- Mature phase 4-8 days (7-12 mm diam)
- Regression phase 4-5 days
- Interval between emergence of each new group of follicles ranges from 12 to 20 days.
- Ovarian follicular activity alternates between ovaries randomly.
- Follicle activity is non-seasonal.
- Variation in new wave emergence within and between animals (Figure 2).

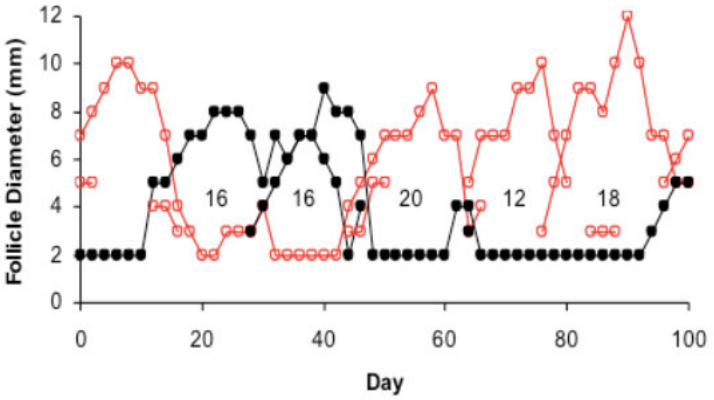


Figure 2. Ovarian follicular dynamics in a female alpaca observed over 100 days. Red lines refer to activity on the left ovary, black lines refer to activity on the right ovary, numbers indicate interwave interval for the wave with which they are associated (Vaughan 2001).

- Females that have not been exposed to a male are sexually receptive most of the time, regardless of follicular diameter.

Mating and ovulation

- Alpacas are known as induced-ovulators because females require coital stimulation for the egg to be released from the dominant follicle on the ovary.
- Copulation takes place in a sitting position and usually lasts for 15-20 minutes. During copulation, the male penetrates the cervix with his penis, and deposits semen into both uterine horns. Matings that occur in the absence of a dominant pre-ovulatory follicle do not induce ovulation and conceptions do not occur.
- Matings that occur in the presence of a growing or mature follicle (≥ 6mm diameter) result in ovulation. An ovulation-inducing factor (OIF, β- nerve growth factor) in the semen and neural stimuli from the mating process (orgling noise, cervical penetration) are transmitted to the brain of the female to stimulate a hormone cascade and ovulation.
- Ovulation occurs 26 hours after mating. A corpus luteum (CL) develops at the site of ovulation 2-3 days after ovulation and secretes
- progesterone. This is the hormone of pregnancy and induces spitting behaviour in females.
- If conception does not occur, prostaglandin (PG) is released from the uterus and induces regression of the CL 9-11 days after mating. Females return to sexual receptivity approximately 12-14 days after mating.
- Follicular activity continues during the luteal phase so if a female ovulates, but fails to conceive, the will be an ovulatable-sized follicle on one ovary as soon as she becomes receptive again (Figure 3).

Figure 3. Ultrasonograph showing an alpaca ovary (O) with a corpus luteum (CL) and a developing follicle (F). reproductive tract of an alpaca, with the left uterine horn opened up to show the endometrial surface. Note the presence of a dominant follicle on the left ovary.

Pregnancy

- The embryonic signal for maternal recognition of pregnancy is unknown, but must be transmitted as early as Day 8-9 after mating in order to 'rescue' the CL of pregnancy. The CL is the major source of progesterone throughout pregnancy and its presence is required to maintain pregnancy.
- 98% of pregnancies occur in the left uterine horn, even though the CL of pregnancy is found equally on the left or right ovary. Therefore, embryos derived from ovulation of the right ovary migrate into the left uterine horn.
- Embryonic death is common in alpacas: 5-10% of embryos may be lost in the first 60 days of pregnancy, possibly due to nutritional constraints, hormonal imbalance or chromosomal aberrations.
- There are approximately 5% foetal losses from Day 60 to full term.
- Gestation length averages 342 days, usually varies from 330 to 350 days but may range from 300-380 days. Gestation tends to be longer in spring than autumn.
- Cria sex distribution is 50% females, 50% males throughout the year.
- Twin ovulations occur approx. 5% of the time, but twins are rare, so there is likely a mechanism of foetal reduction to singleton.
- Epitheliochorial, diffuse placentation.

Parturition

- Watch normal births to learn what is normal.
- Do not use the same paddock as a maternity paddock long-term as parasites, protozoa, bacteria and viruses build up and put crias at higher risk of infection.
- Alpacas do not often show external signs of impending delivery so be observant.
- Most birth occur between 7am and 2pm so never let the sun set on an alpaca trying to give birth.
- Stage 1: Preparation for birth 1-4 hours
- Stage 2: Passage of foetus 30-45 minutes
- Stage 3: Passage of placenta 1-4 hours
- Foetus covered in epidermal membrane.
- Dams do not lick newborn or eat placenta.

Receptivity after unpacking

The interval from parturition to resumption of ovarian follicular activity is 5-7 days in alpacas and females can be ready to ovulate by 10 days post-partum. The uterus only takes about 20 days to involute, probably because of the diffuse nature of placentation.

Difficulties getting females pregnant during lactation?

Some lactating females struggle to conceive if mated > 3-4 weeks post-partum. Females generally conceive easily once their cria has been weaned because:

Certain hormones produced during lactation may reduce/ inhibit ovarian function. Peak lactation occurs approximately 3-4 weeks post-partum. This is the most metabolically demanding time for alpacas, and nutrients are diverted preferentially to the udder, possibly to the detriment of ovarian function.

Camelid Tourism
Macedon Ranges VIC

If you are travelling to the Macedon Ranges and wish to participate in something a little different, then why not walk a llama around the iconic Hanging Rock Reserve with Hanging Rock Llama Treks. It's a 5km walk taking approximately 3 hours. Llamas have two speeds, stopped and llama pace so it's a very relaxing walk. On the llama trek you will hike both the Base and Creek walks within the Hanging Rock Reserve and experience the Reserve in a unique way. The walk includes either a morning or afternoon tea in the Reserve with one of the well trained llamas carrying it for you.

Upon your arrival you will receive a short introduction to your llama and your guide will cover the do's and don'ts of llama handling. People of all ages love llamas but there is always the question will they spit at me? Most llamas won't spit on you, but you may get caught in the crossfire. Llamas don't like to share food so they may spit at another llama who gets to close. Llamas will also spit when another llama encroaches into their 'llama personal space'.

So, you need to make sure to keep them happy by knowing what they like and what they don't. While it may be tempting to want to scratch their face or rub their ears; llamas are not like horses and would prefer if you did not do that. What they do like is scratches on their neck, snacks and more snacks, but not too many!

Llamas make great hiking companions, and in fact the relationship goes far beyond them simply transporting your supplies. Llamas are naturally curious and very aware of their surroundings, often the first to spot wildlife along the trail. They enjoy new sights and become very much a partner in your adventure.

We hope you'll come out and experience first-hand the joy of hiking these incredible landscapes with llamas as your companions. We also offer unique Llama Meet and Greet experiences that are one hour in duration. These are ideal for families with small children or those just wanting to get up close and personal with the llamas.

Courtesy of Macedon Ranges Shire Council & Chloe Smith Photography

Why not make a weekend of it as there are many B&Bs in the Macedon Ranges and other things to do in the area. Flophouse Accommodation has a wide variety of places to stay within the Macedon ranges and the Hepburn Shire. There's also the Braeside Mt Macedon Country Retreat, the Spud Diggers Hut at Hesket Estate Winery and Mt Macedon Country Retreat. The Macedon Ranges also has a wide variety of other things to see and do. Wineries, distilleries, the Memorial Cross & the Mt Macedon walking trails. Travel a little further and you can visit Trentham Falls.

The Macedon Ranges Tourism website is also a great place to find accommodation and things to do in the area.

Visit https://www.visitmacedonranges.com for more information

Unless indicated photos at right courtesy of Macedon Ranges Shire Council & Chloe Smith Photography

Places to Stay & Things To Do

Braeside Mt Macedon Country Retreat
47 Taylors Road, Mt Macedon VIC 3441
Ph: 03 5426 1762 | www.braesidemtmacedon.com.au

Enjoy National Parks

The Memorial Cross

Cellar Door at Mount Towrong Vineyard

Event Marker Training Your Camelid

by Marty McGee Bennett

This article is a basic introduction to **Event MarkerTraining** along with some of the specific considerations for using the method with camelids.

The process of pairing a specific marker with a behavior and then offering some sort of reinforcer is essentially the same, whether you are training a dog, a giraffe, a parrot, or a camelid. In this article I am presenting the basics of the process and some specific information about how to create a good physical set up that will help when working with camelids. There are many fine books on the subject of event marker training and workshops in almost every town for dogs. Learning with dogs is a great way to learn the process. If you are really keen, you can go to a chicken camp. These are 2-6 day trainings with chickens where you learn the mechanics of event marker training and the science behind it. I have attended a chicken camp and found it to be a lot of fun and very helpful. It gives you a LOT of respect for the learning ability of chickens!

What it is…

Event Marker training is sometimes called mark training. The clicker is only one of many choices for marking a behavior. The key concept is that you are marking a behavior that you will reinforce (usually with food) within a few second of delivering the mark.

A reinforcer is something that is meaningful for the ANIMAL and that the animal will work for. There are many options depending on the animal and it is up to you, the trainer, to figure out what is sufficiently important for the animal to stay in the training game and work. Food is the most logical choice but there are other things that camelids find reinforcing. An escape route if they are concerned, TTouch bodywork if they have learned to appreciate that, or in the case of males access to a female.

More information about food options later in this article.

Think of the mark like the shutter of a camera. The mark is delivered as precisely as possible at the moment the desired behavior occurs and the reinforcer is then offered as soon as is practically possible-usually within 1-3 seconds. Markers can be a sound such as a clicker, whistle or a sound you create with your voice. Marks can also be a visual signal. Whatever your mark is, the more consistent it is the better it works. The most important thing is that the animal understands that the mark is going to result in the offer of a desired outcome, again usually food. From this point forward for simplicity's sake I am going to use the mark for event marker and food as the reinforcer and she, or alpaca to refer to the animal.

Charging the Event Marker

You can teach your alpaca to make the connection between the mark and the food by doing what is called "charging the mark" or helping the animal student become "clicker-wise." This process is quite simple - click and then treat (C/T) enough times in a row, usually 5-8 repetitions, that the alpaca begins to expect that the food follows the mark. Observe your animal closely looking for indications after the mark, that your animal is expecting the food. Indications might be a pricking of the ears forward, turning the head moving or in the direction of the handler. The location of the food as it is delivered is important. The animal should get access to the food in neutral territory - as in not in your personal space. Animals must learn to be polite as they eat the food and wait for it to be offered in a space that is between the handler and the animal.

Teaching a Behavior - The Basics

Once your animal understands the significance of the mark or at least you are seeing some indications that the mark has some relevance, you can begin to pair the delivery of the mark with a specific behavior. Once the alpaca begins to figure out that the mark and behavior and reinforcer are all related she will begin to deliberately offer the behavior you have marked, to get the reinforcer. When it becomes very obvious and consistent that the animal is offering a specific behavior to get the reinforcer it is then time to put the behavior on cue. Putting a behavior on cue means teaching the animal a very specific indicator/cue that is paired with a particular behavior. The cue differs from the mark in two key ways:

1. the cue is specific to a particular behavior the mark is general

2. the mark comes after the behavior the cue is given before

The verbal cue "sit" means something very specific - it means to a dog that he must arrange his body so that his butt is on the ground and the front legs are still straight. Dog trainers might want even more specificity from the dog - sitting perfectly straight without rolling over to one side on a hip for Example - more on changing/shaping a behavior in a bit. Like the mark that you choose cues can be visual or auditory. Remember a cue differs from the mark in that the mark is a general indicator that the behavior the animal was performing at the time of the click will be reinforced. Depending on the training agenda the click is used for many different behaviors. A cue is a request for a specific behavior and unless that specific behavior is performed there is no reinforcer offered.

Capturing and Shaping

There are two basic ways to get behavior, you can capture it or shape it. Capturing behavior is when you wait until the exact behavior that you want occurs and then click and reinforce that behavior. This is most useful when you can predict that the desired behavior will happen. Otherwise waiting around for a particular behavior can take a long time! I am hard pressed to come up with an example of capturing a behavior in camelids but one example might be when you enter the barn and an animal naturally gets up to come over and see what you are doing. You can choose a specific animal and when you walk through the barn door, mark the getting up behavior, when that specific animal gets up. It would be a good idea to choose in advance which part of the getting up sequence you want to capture and then click when that happens. The mark could be delivered when the animal is fully standing or at any time along the way. Once the connection between the specific behavior and the click occurs you can put the behavior on cue. In this case the cue might be "stand up." The behavior is said to be on cue when the animal stands when you deliver the cue in this case by saying, "stand up."

Shaping behavior is when you change a behavior with a series of small approximations from a simple behavior to a more complex one. A good example of shaping is teaching an animal to put a body part on an object. This is called "targeting." Examples of targeting are putting a nose on a flat surface like a frisbee for example or putting a foot on a platform. If you want to capture this behavior it might take a long time for an alpaca to spontaneously put his foot on a small platform. Shaping offers a way to get from here to there - from simple to more complex or from general to more specific. Before you can train any behavior it is really important to have a very specific vision of what the finished behavior (the one you will put on cue) looks like. Animals offer a wide variety of nuance and variation in their behavior. This natural variation is in part what makes the process of shaping work, but it can also mean that without a specific plan you may get caught on a side road that will take you away from the behavior you want. These side roads can lead to getting stuck. It is easier to have as clear a path and plan and even then your animal student will throw you some curves. The good news is that event marker training can never be coercive because the choice to participate is always the animal's.

Targeting… an Example of Shaping a Behavior

Since it is the easiest thing to teach, lets look first at targeting with the nose. You will begin with an animal who is "clicker wise." My vision for the finished behavior is to have the animal place his nose ON the target (a plastic frisbee) for a moment with the nose in the center of the frisbee. You can begin the process by bringing the frisbee from behind your back to a place out to the side of your body and then clicking when the animal simply looks in the direction of the frisbee. Click and treat and put the frisbee behind your back again to restart the process. Once you are sure (you would bet someone a hundred dollar bill) that the animal will do the behavior when you provide the opportunity, it is time to change the criteria for reinforcement. Decide what the next level of approximation will be. It is always good to have a game plan in mind ahead of time.

Training on the fly particularly when you are inexperienced can create strange behaviors you don't intend to teach. In the case of targeting, I would suggest holding out for the animal to move his nose closer to the frisbee. Now, when you present the frisbee and the animal does what he was doing before - simply looking in the direction of the frisbee - you don't click or treat but continue to hold the frisbee out to the side. The animal will be momentarily confused and will try to figure out what to do to get the treat. This is where the magic happens. Animals will inevitably and naturally offer variations of the behavior and you will click and treat the variation that moves you towards the ultimate finished behavior. This is why it is important to have some kind of a general plan in mind - so you can be ready to click what you want next.

The art inherent in the science of event marker training is this process of moving the process forward -shaping. Hold out for too big a leap and your student will become discouraged and quit the game, not what you want but NOT the end of the world! The beauty of the process is that mistakes are forgiven and it is an easy thing to simply back up to what was working and reinforce that behavior a couple of times and then make the leap to the next approximation easier. In the case of targeting the animals will often get the idea very quickly and skip many steps and put their noses on the target right away and by all means click and treat that! However there will probably be some flashes of brilliance like this followed by some confusion. Because an animal leapt forward doesn't mean you hold out for this big leap from that point forward. You may need to go back to some of the in between steps. There are really no mistakes only opportunities for the animal and for you to get more information. One very important thing… I am going to put this in bold letters… **when you are event marker training if you mark you must always reinforce**. This is the contract that you make with your animal student. There are going to be times when you jump the gun and mis-mark AND you still pay up.

Putting a Behavior on Cue

Once you have taught a finished behavior it is time to put that behavior on cue. This is a pretty simple process. The hardest part is figuring out good cues - ones that are logical, easy to remember and are distinctive. Remember a cue can be verbal or visual. If you choose a verbal cue it should be a word that is easily recognized and is going to be distinct from other verbal cues. For example in targeting I use the body part rather than the word "target" since I may be teaching an animal to target with other parts of the body. So in the case of targeting with the nose I use the cue "nose." To put the behavior on cue, I observe the animal closely and he heads toward the target with his nose and I am sure that he is going to complete the behavior I say NOSE just before his nose touches the target AND as the nose actually touches the target I click and then treat. Now it is a matter of creating more and more time and distance between the delivery of the cue and the target. After several repetitions you begin to say the cue earlier in the process - when the animal is further way from the target. You still click and then treat each time the nose touches the target and reinforce. When you think the animal understands the cue you can begin to test it. Offer the cue when the animal is otherwise distracted if, upon hearing the cue he looks for the target walks some distance to it and touches it with his nose you can assume that he understands the specific behavior that goes with that cue.

Once you have taught a behavior and put it on cue the mark is no longer necessary for that particular behavior. If you need to brush up you can always bring the mark back for a review session. As for offering a reinforcer consistently when you cue a behavior… there are diverging opinions. Some trainers feel that unless you consistently offer some kind of meaningful reinforcer when cueing a behavior you will see a deterioration of the behavior. Others think that offering a reinforcer each time will create an animal that needs a reinforcer for everything! I think the truth is somewhere in between and varies from animal to animal, BUT the answer when a behavior breaks down for some reason is MORE practice with valued reinforcers.

What about teaching an animal to target with the foot? You might think you could start by teaching the animal to look at the target but I think this is a mistake. I think you have to get the animal's attention very quickly on the body part and leave the target to later on. I would click and reinforce taking a step and teach that behavior before adding the target. If you want to teach an animal to put his foot on a platform you can start with something on the ground for example a square piece of carpet. Next put something under that to raise it off the ground just a little bit. Learning how to chunk things down and build one behavior on the one before, is how you shape behavior.

The process can be slow at first but once an animal learns the process it goes much faster. Event marker training teaches creativity and initiative and the animal learns each new behavior more quickly than the one before.

Event Marker Training Set-up or The Antecedent Arrangement for Camelids

When it comes to the set-up or the antecedent arrangement event marker training camelids is different from teaching dogs. In order for an animal to learn and try out new behaviors they must feel safe. Most camelids feel safer in a group. Isolate one animal from the group and the animal can become so distracted that she can't concentrate and learn.

Event marker training requires focus from both the learner and the teacher. This is one of those times too when there are difference between llamas and alpacas and from one animal of the same species to another. It is perfectly fine to try different things and see what works for you and for the animal you are teaching.

Here are some options:

1. Work inside a catch pen with other animals in adjoining areas that are small enough that the animal in the pen doesn't feel all alone. Although working in the typical 9 x 9 foot catch pen that I recommend for haltering and other types of training can be too small. Room to move around is important.

2. Work with the animal inside a pen either alone or with one or two other animals either in the pen or in an adjoining pen, with you on the OUTSIDE of the pen. This keeps your learner close but safe because you are not inside the pen with her.

3. Work in a small paddock with one or two animals with other animals in an adjoining paddock.

4. Work in a large field with a group of animals choosing to work with the animal that is most interested. In this case my experience is that the most assertive animal will usually go first but will often tire and the next one in line steps up. This set up is much less of a problem than you would think. In fact working with a group of animals even a big group can be the easiest way to work.

If you have an animal who is particularly food aggressive you may be pleasantly surprised with how they respond to event marker training with food. In most cases when foodies learn how to work for food they put their energy into figuring out what you want so that they can get the food instead of trying to take it from you.

Food Considerations

You must be in CHARGE of the food.

The worst thing is for the animal to get the food from you by poking her nose in your pocket or pushing into your body. I prefer using a pouch with a closure that I wear around my waist for controlling the food. The pouch allows me to use a small dish to offer the food. I think it is better with camelids to offer food in a dish and to keep the reservoir of food in the pouch. Many animals either don't like to take food from a hand or are afraid to. The small dish I think is a better way to offer food than your naked hand. It has the added benefit of separating the event marker training process from hand feeding which can turn into food oriented inappropriate searching.

Using this system you can be in complete control of the food and it is not visible to the animal. Additionally you can leave the gear in the house and your animals are not always following you around wondering if you are going to offer food. It is a good idea to practice with your dish and pouch so that you get skilled at scooping out a small amount of grain from the pouch and offering it to the animal in a way that avoids dropping the grain on the ground. Grain on the ground is FREE and the animal becomes confused about working for food and getting it for doing nothing. I also selected a clicker to use as my marker. The one that I use makes a loud but not jarring sound that works well outdoors or in a barn.

Train in the winter when animals are more dependent on the food we give them. When the animals live in lush pasture they are less motivated to work for food. This gives you something to do in the winter that you can do bundled up with gloves on that your animals will love.

It is always a good idea to weigh your animals regularly, but it becomes more important if you use concentrated food for training and do a lot of training. Remember that if you give your animals concentrated food on a regular basis you must subtract the amount of food you offer for training from their regular ration.

Visit https://www.camelidynamics.com for more information about Camelidynamics.

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Fibre to Fabric

A Short Yarn by Elizabeth Paul April 2022

Creating yarn from animal fibre is a relatively simple process but labour intensive by hand and expensive by machine intervention.

Over the years I have hand processed or sent for mini mill processing almost my entire alpaca clip to make yarn for craft stall items. I have used all grades of fleece, and I am still surprised at the poor presentation of fleece being utilized, or attempting to be utilized, by both owners and craft workers alike. Often craft workers source or are offered a couple of bags of fleece from somebody's pet wethers. These bags are likely to contain overlong fleece as the boys weren't shorn for a couple of years, with the leggings thrown in on top so they're not wasted, full of VM and often other rubbish such as moths or dead mice due to poor storage. Fleece presented like this has created a very negative image of alpaca fibre within certain craft circles which has proven difficult to overcome. There are a number of preparation processes that can be done to improve fleece presentation, and therefore the yarn quality produced, which will create more positive feelings about alpaca for every fibre user.

Loss and Return

Mini mills cost processing on weight of fibre in, and for a given amount of fibre, there are losses all the way through the process. To achieve maximize return for minimum cost the fleece needs to be properly sorted and skirted to make it as uniform as possible, and as free as possible from artifacts.

Vegetable Matter or VM

The biggest problem for all fibre workers is the amount of dry vegetable matter or VM present in the fibre at the start. VM does not wash out and is almost impossible to remove by processing. Larger pieces can be picked out by hand, but machine processing generally distributes VM evenly throughout the fibre from the start to the finished product. There are also issues for workers handling fleece with possible spines or thorns (or worse) and contamination of machinery for subsequent fleeces. See Pic 1: High VM Cria fleece. This 16u cria fleece was sent for mill processing, but would return very little yarn for the cost involved due to the excessive amount of VM. The best defence against excess VM is organizing early shearing before seed set, and managing paddocks to reduce spiny weeds and blackberry infestation.

Dirt

Alpacas have a dry fleece with little lanolin, and they roll in dust hollows in order to groom it, help make it a bit more waterproof, and also to help keep it free of external parasites. Dirt and dust can be washed or brushed out, and the main problem with heavy dirt is excess weight in.

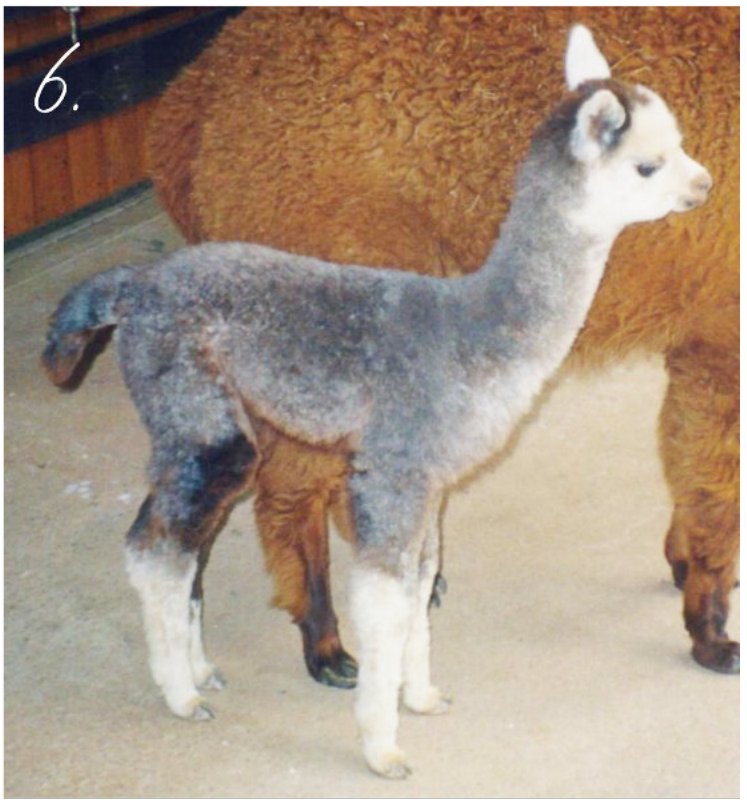
Fleece Sorting and Skirting

Raw fleece needs to be separated at shearing into saddle, neck and leggings bags. Necks usually consist of shorter, finer fibre, and can be processed with other necks but should not be included with saddles. Leggings are both shorter and coarser than either. The saddle then needs to be skirted to remove the "bird's nest", the area at the base of the neck where it joins the shoulders, which becomes full of vegetable matter, and any other bits such as hairy brisket which will be lost in processing. Coarse fibre can be utilized by hand. See Pic 2: Low VM Brisket fibre. This was washed, carded, handspun, and woven into a cushion cover, which was stuffed with the leftover fibre. See Pic 3: Cushion Cover woven from brisket fibre. The point here is if the fibre is free of VM it can be used for something.

Cria Tips

Cria fleece is often touted as the best fleece an alpaca will ever have, and while this may be true of its micron, it is not necessarily true of the suitability of that fleece for craft work. I find cria fleece too fine and too soft for my use and with too much VM caught up in the baby tips. Cria tips can be combed out by hand using a stiff pet comb, as shown in Pic 4: Combing out cria tips. Crias can also be shorn from about 6 weeks of age, (or clipped even earlier) and in my opinion

doing so will reduce the VM and improve the usefulness of that fleece. Black and grey fleeces benefit especially from having the tips removed. See Pic 5: Grey cria before clipping, and Pic 6: Grey cria clipped to 13mm. This month old cria was then clipped down to 6 mm to improve the evenness of the fibre.



Hand Picker

Picking comes before carding, as a picker breaks up the locks and helps remove rubbish whereas a drum carder straightens and aligns the fibre. I used to card my fleece but now use a hand picker on all my fibre before sending it for processing. If preparing a fleece for handspinning, I would pick first, then card and then wash the batts in net bags, which is much easier than trying to wash and dry lumps of raw fleece at home. (Raw alpaca is not very wettable.)

The picker consists of many long curved needle points in top and bottom within a rocking cradle. Note this is a dangerous instrument and should be locked before moving it, and kept locked and out of the way at all times unless in use. See Pic 7: Rear of picker. Small handfuls of fleece are put in at the back and rocked through, and the broken up fibre comes out in a drift at the front. I found it useful to position a garbage bag under the picker at the front so that the fibre falls into it. See Pic 8: Bag under picker. Fibre caught in the top half of the picker is useful, and can be carefully removed using the locking pin. Rubbish is caught in the bottom. See Pic 9: Picker waste. The picker can be cleaned using the crevice tool head of a vacuum cleaner, being careful not to damage the points. If I have blacks and greys I start with a clean picker and blacks first, darker grey next and finishing with lightest grey. With eg a range of white and fawns, I would do white first, down to darkest fawn colour, ending with rosegrey if I have one to mop up the coloured fibres.

Dehairing

Industrial mills don't use dehairing machines, partly because the machines work very slowly and add to the expense, and partly because the mills are set up to process fine merino wool. Mini mills do use them, which in my opinion has been a game changer in alpaca yarn production. See Pic 10: Grey alpaca yarn. This is an example of an 8 ply alpaca yarn (not mine) spun by my local mini mill. It is VM free, dehaired, beautifully even with a superb twist which gives it a spring almost like a crepe yarn – the ultimate alpaca yarn.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Level 1, 95 Northbourne Ave, Turner ACT, 2612

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ALPACA RECONNECT CONFERENCE

18TH/19TH JUNE 2022

Rosemary Eva and Liz Coles, Conference Convenors

The ripple effect from the Covid pandemic did not spare the alpaca industry – no shows, no workshops and no meetings, so after two long years of being in lockdown, it was decided in November 2021 that it was time to burst the alpaca bubble and "Reconnect".

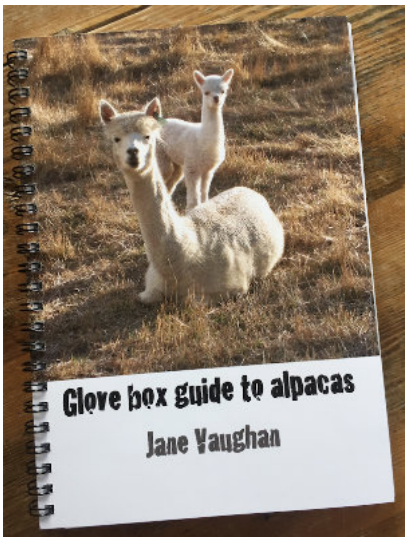
An opportunity for current members to catch up and new members encouraged to enjoy many of the benefits our Region has to offer.

So, this was the genesis for the Alpaca Reconnect Conference and planning started for March 2022 with a committee of willing volunteers taking on the numerous tasks of making this conference a success. The centrally located venue was to be the Murwillumbah Services Club with excellent facilities and the date was set to be 5th/6th March.

Guest presenters were approached, sponsors organised, a silent auction and stud sire auction were set-up, and a variety of alpaca products prepared for sale. Initial invitations were sent out to the Regions and it was not long before responses were received and so we were up and running. However, in March, the northern rivers were once again hit by devastating floods with the town inundated and totally cut off – all planning was put on hold.

Not to be deterred the new date of 18th/19th June was chosen and fortunately all presenters were conducive to the date change. Similarly, undeterred by the change, fifty- five delegates from across our Region, NSW and Queensland Regions came together for the two-day conference.

After a video welcome from our AAA President, our first presenter was Dr Jane Vaughan, well known to all in the alpaca industry. Her first topic covered the perennial problem of parasites, how to recognise the problem, and drenching protocols including pasture management. Over the following two days Jane covered several topics including Reproduction, Nutrition, Dealing with Difficult Deliveries, Skin Conditions.



Each of these topics generated constructive interaction and sometimes, lively debate from the delegates! Dr Vaughan's informative book, "Glove Box Guide To Alpacas" contains best-practice husbandry advice for alpaca farmers and veterinarians to ensure optimal care for alpacas and is highly recommended.

We were very fortunate to have the Alpaca Dentist, Allison Quagliana share her experiences as she took us on a "Trip to the Alpaca Dentist". Her graphic photos demonstrated the anomalies that can occur in the mouth, teeth and jaws of the alpaca and the techniques used to address these problems. Allison's informative book "Alpaca Teeth" should be considered as an addition to the breeders' bookshelf!

Brian Donovan, a member in our region, showed a very informative video of his Pocket Farm Fibre Mill in south east Queensland. Brian's aim is to bring back manufacturing to Australia and process commercial quantities of yarn to supply the local and international market. His knowledge, professionalism and enthusiasm was greatly appreciated by all delegates and now there is no excuse to have fleece stored in members' sheds!

Dr Joan Gibbons from Murwillumbah Veterinary Clinic, with several alpaca clients in the northern rivers, presented a video of two very interesting case studies of surgical intervention for a suri and a huacaya. She also acknowledged the effort involved by all the veterinary team to achieve a successful outcome.

Running in parallel with the educational aspects of the conference, a Stud Sire Auction for services of seven stud males was greatly appreciated by bidders with the opportunity to enhance their herds breeding genetics. Also, through the generosity of numerous sponsors a Silent Auction saw attendees getting some excellent alpaca and farm products at very reasonable prices.

Throughout the two days our merchandise team were kept busy with their impressive display of all things alpaca and with the cooler weather new scarves and beanies were the order of the day.

So, in conclusion, the success of this conference would not have been possible without the untiring team work of the committee over the preceding six months and in particular during that weekend. To all the team, our presenters and all delegates a very special "thank you" for helping us all "Reconnect".

'Til next time!

Farm Finder

Is a new initiative of the Australian Alpaca Association to provide members with the ability to have their businesses on-line and for the public to find Alpaca breeders in their area. The AAA continues to invest in the value proposition for members.

Farm Finder is a great opportunity for AAA members to market your alpaca stud for $20 per year, or $70 per year for your alpaca accommodation business. It's a one stop spot for website link, Facebook link or telephone & email for the public to find your business.

You can find Farm Finder at Alpaca Farm Finder - Australian Alpaca Association

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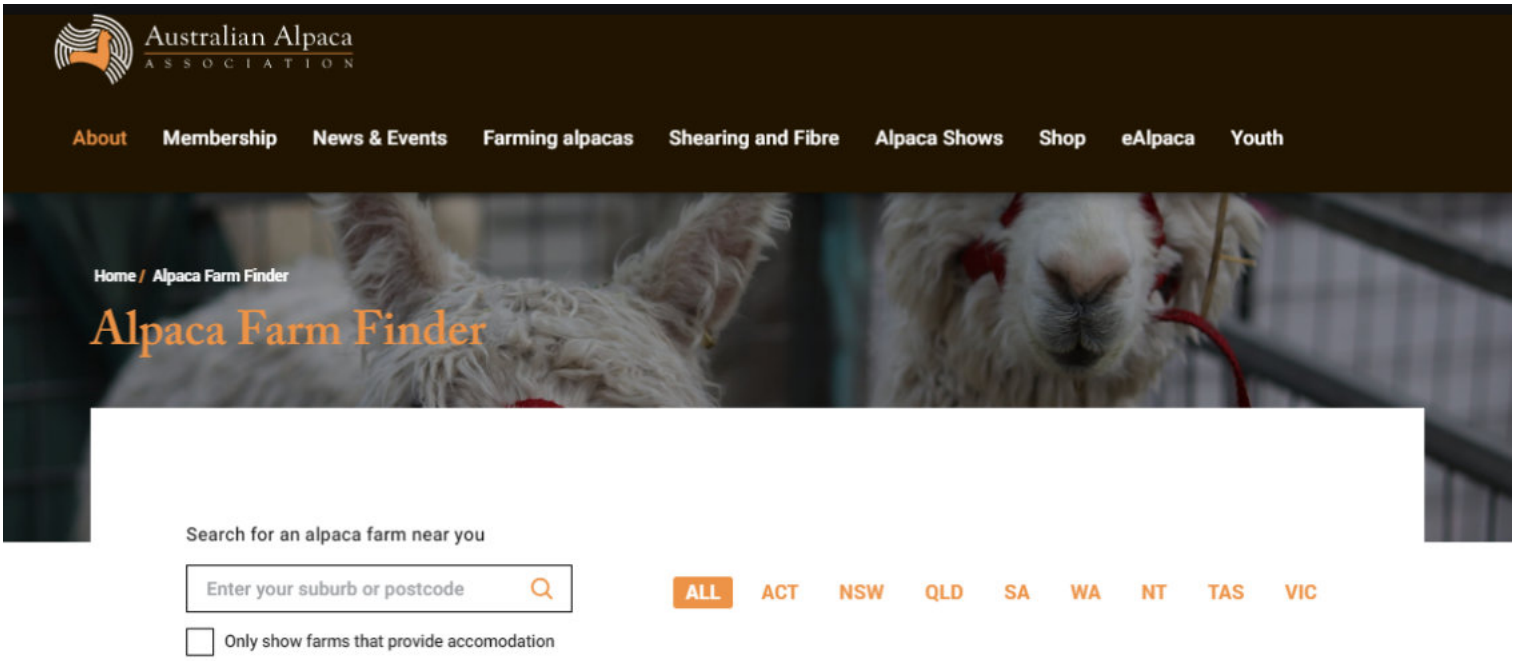

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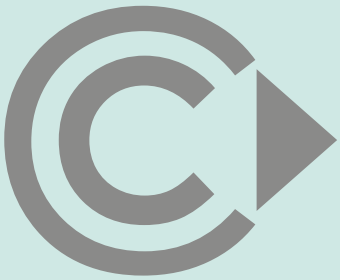

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