ALPACAS AUSTRALIA

The official publication of the Australian Alpaca Association Ltd

In this issue:

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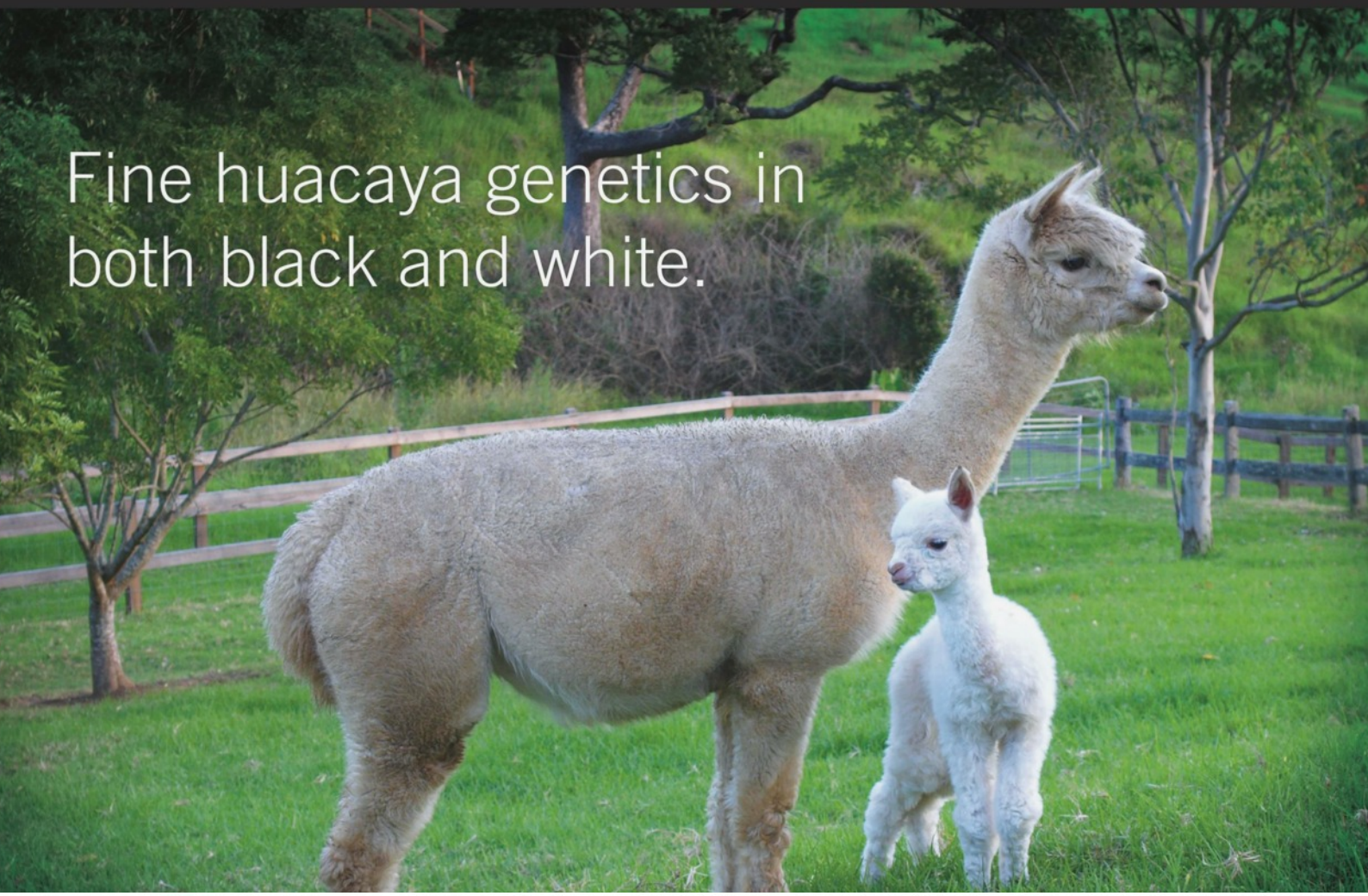
- Winter Manage Your Herd



FEATURED STUD MALES

BANKSIA PARK MYSTIC CHALLENGE ET

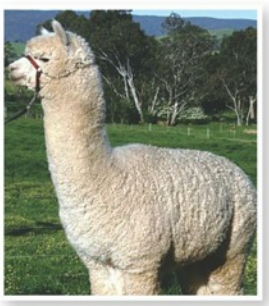
Millpaca Alpaca Stud are proud to own this true to type male. His brilliant show record confirms he has perfect conformation with a beautiful soft, dense fleece with excellent structure.

2012 - Mic 28.9 - SD 5.7 - CV 19.8

KOORANA PARK BLACK KNIGHT

Black Knight was again placed 1st in his class at the national show. He has the fleece characteristics of a seedstock (wool) stud male. Black Knight is a true to type blue/black male with fleece demonstrating fibre diameter uniformity, good density, lustre and soft handle.

2012 - Mic 27.4 - SD 4.8 - CV 17.6



SHANBROOKE ACCOYO INVINCIBLE

Invincible carries an incredible bright lustrous fleece that handles like silk. His fleece character is a bold bundling deep amplitude crimp that peels open into individual staples. He has good width of chest on a large frame with sound bone.
His follicular density is 63.1 with a secondary to primary ratio of 11.

2012 - Mic 24 - SD 4.7 - CV 19.8
Fleece weight 6.1kg

CANCHONES YATAGAN ET

Canchones Yatagan is a blue black male with exceptional substance of bone, luster and handle.
Do to his quality and follicular density he is a SRS recommended male.

2012 - Mic 29.9 - SD 6.5 - CV 21.8

www.millpaca.com

Publisher

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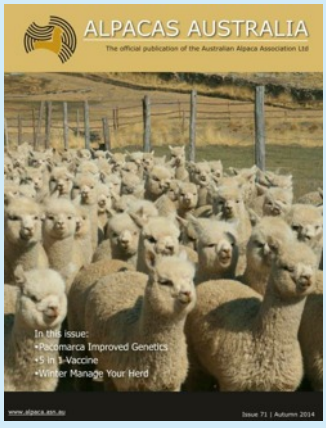

Cover: Pacomarca alpacas, Peru

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President's Message

It gives me great pleasure to welcome our new AAA General Manager, Craig Taberner, who is introduced in our first edition of the Alpacas Australia magazine for 2014.

Craig joined us at the beginning of February and has spent the past few weeks getting to know the staff, our members, and working with the Board to develop the implementation plans for our key projects and activities for the year ahead.

The summer season has provided its usual challenges in weather, with searing and unrelenting heat in many areas, compared to dramatic temperature variations in other locations. Some members have noted that despite flooding rainfall earlier in the season the ground is cracking, and pasture quality has been affected by the sun and drying winds. Hopefully as we move into the cooler temperatures of autumn there will be good rainfall and it will be spread around the country.

As a membership services organisation, the Australian Alpaca Association has the role of representing the industry and its members to government, and promoting the aspects of alpaca farming as a viable agricultural business.

Australian Alpaca Week will be held from 29 March to 6 April this year, and promotion is in full swing, again with the assistance of green, green grass, our communications consultants.

2014 will be a busy year for the AAA, with a major investment in marketing and promotion, enhancements to our IT systems, and our National Conference in Adelaide from 9 – 11 May. I would like to acknowledge the work of our office staff, my fellow Directors, Regional Committee members and the multitudes of volunteers who contribute to the activities of the association. Regardless of the size of our individual herd, as a collective here in Australia we have a strong, quality herd of alpaca that is recognised for its genetic base, and we are on the cusp of great things with developments in fleece harvesting, research, and an environmentally friendly industry. I wish each of you great success in 2014.

Kind regards

Michelle Malt
AAA President

Personal Introduction

Craig Taberner

Following close to nine years service as Chief Executive Officer with Greyhounds Australasia, a peak body that represents the Australasian Greyhound Racing Industry, I look forward to joining the Australian Alpacas Association.

My career history is highlighted by experience in a variety of senior roles including Chief Executive, General Manager, Company Secretary, and Consultant, and is characterised by its diversity in industries served. These include financial services, hospitality, agriculture, racing and golf.

Graduating from Monash University with a Bachelor of Business, Majoring in Management and Accounting, with further academic qualifications of a Diploma of Hospitality and a Graduate Diploma of Applied Corporate Governance, I hold the professional status of Chartered Secretary.

Managing a not-for-profit association involves balancing commercial reality versus meeting the needs and expectations of members, through a management style of engagement, consultation, working collaboratively and negotiation, I will aim to get this balance right.

Having grown-up in a rural environment, I am aware of the challenges and opportunities facing the association and look forward to engaging with all stakeholders to strategically drive the industry forward.

News & Views

drumMUSTER celebrates National Recycling Week

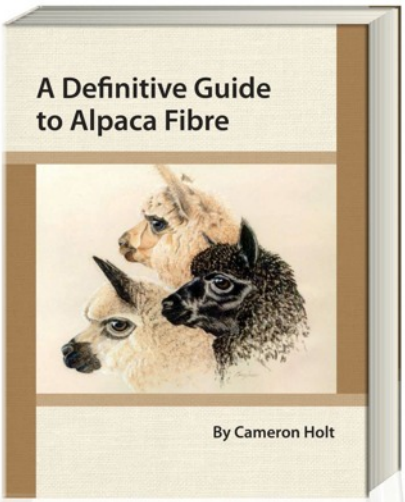
The national program for the recycling of agvet chemical containers used by farmers and chemical users around Australia celebrated a new milestone during National Recycling Week 2013. Earlier in 2013, drumMUSTER collected its 22 millionth drum after successfully collecting more than 2 million containers over the past year.

Australia's only agricultural and veterinary chemical container recycling scheme has helped prevent more than 27,000 tonnes of waste ending up in landfill during the last 14 years.

Once the material is collected it is either crushed or shredded and transformed into things like plastic cable covers, wheelie bins and pipes.

To find your local drumMUSTER site log on to www.drummuster.com.au, find your local council and arrange a time to drop your drums off.

Remember to make sure drums are residue free with the lids removed before being delivered. Metal drums should be pierced to allow better airflow for drying. There's no need to pierce plastic containers.



Book Review - A Definitive Guide To Alpaca Fibre
By Cameron Holt

To my knowledge, this is the first publication to combine scientific subjects such as alpaca fibre histology and modern testing techniques with invaluable information on skirting and classing protocols for alpaca fleece production. While also incorporating advice on practical topics like shearing methods and shearing shed design, it includes a chapter on alpaca fleece judging principles which will satisfy even the most devoted show ring fanatic. The subject matter concludes with an overview of the varied procedures surrounding alpaca fleece processing. It is the culmination of approximately fifty years of Cameron Holt's work in natural fibre industries throughout the world.

His interest and research into alpacas and alpaca fleece has taken him around the world educating, training and advising the various alpaca breed organizations and processors across four continents on the properties and attributes of alpaca justifiably earning him a reputation as an "alpaca fibre expert."

The extensive knowledge and information contained in this one book is a must for growers, teachers and classers alike. I am sure it will also be a platform to assist organizations and companies to initiate systems for qualified classers that will aid in the standardisation of alpaca fleece lines that can be recognised worldwide.

I believe that Cameron Holt's book will be referred to as the alpaca fleece growers' and classers' "bible" for many years to come.

Graeme Dickson

Shortly available from the AAA online store

Deadline for articles & advertising Issue 72
8th April 2014
Magazine Due - June 2014

All editorial contributions should be typed and preferably submitted electronically as a Word document.
Photographs should be digital, high resolution, sent as attachments, to ensure good reproduction.

Advertising should match specs provided by the AAA office.

Pacomarca

Improved genetics for peruvian breeders

For many years Alpaca breeding in Perú was a thing mostly of the poor highland peasants. Not much in terms of selection or fibre improvement or simply better fertility rates and lower mortality figures. Alpacas were raised pretty much the same way the Spaniards left them after the conquest. Few people and a couple of companies did make isolated efforts to improve things, even if this meant only a resemblance of what alpaca breeding must have been during the times of the great Inca empire.

But things have changed. First, because the export market opened up the eyes of many people who realized that fine, well balanced animals were worth good money, and second because the industrial textile companies started paying better prices for fine fibre instead of buying it by weight.

The Inca Group, leader in the manufacturing of alpaca textiles worldwide and the main buyer of fine Alpaca fibre, understood the change before others and started its own experimental alpaca ranch some ten years ago. Pacomarca, "The Land of Alpacas", was born with the aim of breeding a very select group of the best Peruvian alpacas, studying them, carrying out experiments and sharing the findings and the products obtained with the poorest and smallest of the Andean breeders.

In 1990 when the Sabancaya volcano decided to erupt the Sallalli Alpaca farm located at its side had to be moved on a hurry. The Inca Group's initial eight years of work with alpacas had come to an abrupt end. Every animal of the 800 that were raised at the farm was either lost, stolen or got sick. Only eight of the 23 initial Accoyo males were saved.

It took ten years to get another farm up and going. But this time the location had to be other than at the foothill of Peru´s most active volcano. During those years alpaca breeding had started to pick up outside Peru and the Australians and Americans were coming up with methods and systems unknown to Peruvians. The decision was made to have the new farm, Pacomarca, run in a modern way, with all the technological gadgets available and with a genetic program laid out from the beginning. The plan was to create the first state of the art specifically designed and professionally run alpaca ranch in 6,000 years of domestic alpaca history in Peru.

After 50 years of buying alpaca fibre everywhere in the country the Inca Group people knew where the finest fibre came from. That is exactly where they went to look for the initial stock. Old females were bought to the amusement of local peasants. Nobody in their right mind would ever buy an adult alpaca female high up in the Andes. That would mean at least three or four years less production! But not if you were looking for those fine ladies that had kept their low micron up until 6 or 7 years of age. The same with the males. Nice grown up boys were recruited from the most renowned farms: Alianza, Accoyo, Sollocota.

The initial 400 animals were transported to their new home. This was no common Peruvian Alpaca territory with hundreds of hectares of natural grass and no fences. In fact, this was a much lower location with flat territory where crops and grasses could be harvested, well aligned and delineated. The needed infrastructure was carefully considered until the final blue prints came out and the buildings were constructed. That's how the first ever Peruvian one to one mating pen for alpacas saw the light.

Another 300 alpacas were added the year after and with them the need to keep as many records as possible, well ordered, easily accessible and, most important, completely interrelated. That is how Alfredo, a young Peruvian systems engineer started working full time on the PACO PRO system. Eight years later, the system contains close to two million pieces of data from the Pacomarca animals: the world's largest alpaca database.

With this kind of data at hand Pacomarca contacted Dr. Juan Pablo Gutierrez a well-known European geneticist from the Universidad Complutense de Madrid - Spain in order to carry on a BLUP analysis from which EPD´s and heritable traits could be drawn. After seven years of running the EPD analysis, Pacomarca uses now the genetic valuation information in order to run its Embryo Transfer program. The 2013 ET program at Pacomarca is scheduled to produce 100 babies from the highest valued animals on the farm, always seeking those alpacas with better fibre characteristics.

In the mean time, Pacomarca runs a unique training program for alpaca breeders from all over the country. Over 1,000 Andean breeders benefit from courses, field days and demonstrations organized by the company throughout the year. For most of the small time alpaca herders a visit to the Pacomarca ranch is something out of this world, with the ultrasound pregnancy test being the very highlight of the day. However, even though the Pacomarca general operation seems strange and foreign for most herders, some practices like the one to one mating have already been copied by many in the high Andes. Furthermore, many of them after learning the new shearing technique developed by Pacomarca, accept to use it in their next shearing and sell the fiber to Inca Tops, gaining not only the best market price but also a bonus which can be exchanged by any of the products or services that Pacomarca provides: studs, stud services, pregnant females, technical courses, etc. The program has worked out beautifully for both sides.

The Pacomarca experimental ranch is now considered to be the leading genetic improvement center in Peru and its influence in the alpaca breeding and scientific world is proving to be essential for the future of this precious resource in its native country.

More Information www.pacomarca.com

MillDuck Genetics Consistently Competitive in "Best Colour in Show"

2013: (Major Shows)

• **MillDuck Oregon**	**Best Brown**	**AAA National**
• **MillDuck Preston**	**Best Black**	**AAA National**
• MillDuck Oregon	Best Brown	Sydney Royal
• MillDuck Pittsburgh	Best Brown	Melbourne Royal
• **MillDuck Oregon**	**Supreme Brown**	**Colourbration**

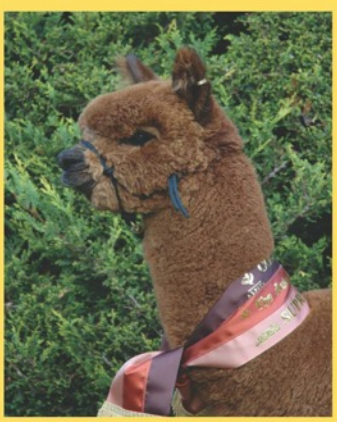
2012: (Major Shows)

• **MillDuck Oregon**	**Best Brown**	**AAA National**
• MillDuck Namatjira	Best Brown	Sydney Royal
• MillDuck Oregon	Supreme Brown	Colourama
• MillDuck Namatjira	Premier Brown	AlpacaFest
• **MillDuck Oxford**	**Supreme Med/Dark Fawn**	**Colourbration**
• MillDuck Oregon	Best Brown	Melbourne Royal

2011: (Major Shows)

• MillDuck Manhattan	Best Med/Dark Fawn	Sydney Royal
• MillDuck Nikki-Louise	Best Brown	Sydney Royal
• MillDuck Manhattan	Premier Med/Dark Fawn	AlpacaFest
• MillDuck Nikki -Louise	Premier Brown	AlpacaFest
• MillDuck Mandela	Premier Black	AlpacaFest
• MillDuck Maddox	Supreme Brown	Colour Classic
• MillDuck Manhattan	Supreme Med/Dark Fawn	Colour Classic
• MillDuck Namatjira	Best Brown	Melbourne Royal

...Colour Your World!



MillDuck Oregon
Best Brown in Show
2012 & 2013 AAA National

Prue Walduck & Ada Milley - 03 5439 6451

www.millduck.com.au

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Australian Alpaca Fleece Limited is the complete solution for growers, wholesalers and retailers.

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Charity Fashion Show

Sandra Jordan and Margrit Mondavi Sponsor an Event to Aid Alpaca Herders and Showcase the Ancient Art of Peru's Luxury Textile Tradition.

The fashion show took place on October 19th at the Robert Mondavi Winery in Oakville, California USA. KUNA soft launched in the U.S. two years ago and this is the brand's first-ever fashion show. In addition to showcasing the luxury fashions of the KUNA brand, the private event will also benefit Peruvian alpaca herders and their families through VIDA, a non-profit organization providing medical relief and assistance to impoverished communities in Latin America

Event sponsor and organizer Sandra Jordan is a native of Peru. She grew up hearing stories of the ancient fleece, which was once lavished on Incan nobility. In 2007, Sandra was inspired to found the Sandra Jordan Collection, which offers Prima AlpacaTM, the world's only luxury residential alpaca textile line for the home. Like KUNA, Sandra's mission has been to educate consumers about the magnificent heritage of raising alpacas, an age-old practice that is a source of pride for Andean people. In addition, the process leaves a light footprint on the land. The cycle of herding, shearing, and refining the fleece is sustainable and gives careful consideration to the environment.

Through the work and support of companies such as KUNA, the Sandra Jordan Collection, VIDA and the Robert Mondavi Winery, rural and sustainable ways of living are being preserved and the public is once again gaining access to the splendour and softness of the fibre the Incas once called "Clouds on Earth".

VIDA is a non-profit organization providing medical relief and assistance to health institutions serving impoverished communities in Latin America. Proceeds from this event will deliver containers of critical medical supplies to the Alti Plano region of Peru, home of the alpaca herdsmen and their families. For every dollar donated, VIDA ships $150 in medical relief. Since 1992, VIDA has delivered 400 shipping containers carrying over $500 million in donated medical aid and services.
www.vidausa.org

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VISTA DEL SUD ALPACAS

Decorating with Alpaca

The Sandra Jordan collection

For Sandra Jordan an appreciation for exquisite old world craftsmanship developed during years of exposure and observation, research and study, travel, and teaching. As a child in Peru, Sandra was exposed to many artisan crafts traditional in that part of the world. She remembers going with her aunts to select the cotton from which her dresses were made and then, with great care and deliberation, choosing the design and colours of the hand embroidery for each dress. That was the beginning of Sandra's lifelong passion for time-honoured art forms from around the world, and for the incredible diversity of products born out of these standing traditions.

From 1993 until 2007 Sandra Jordan served as Creative Director at Jordan Winery. In that capacity, she revamped the hospitality facilities and public areas. Her designs in packaging J Sparkling Wine and Jordan Olive Oil and the publications: *Pictures at Jordan* and *Estate Tales* won her national awards. In the fall of 2006, Chronicle Books published her first book, *The Art of Decanting.* It is now in its fifth printing.

It was while remodelling the Jordan Winery dining room, library and guest suites that Sandra was inspired to create the Sandra Jordan Collection. She noticed that guests not only wanted to purchase wines as a remembrance of their visit, but they asked how to capture a piece of the wine country lifestyle. From these questions Sandra saw an opportunity to simultaneously accomplish dual goals: to design luxury products as well as to create jobs in her native Peru. Crafting heirloom masterpieces reflecting the wine country lifestyle and traditions led to the development of the Sandra Jordan brand. The collection evolved from the design and manufacturing of sterling silver wine accessories to a line of baby alpaca fabrics.

In 2006, Sandra added a luxurious line of Prima AlpacaTM textiles for the design trade. Originally inspired by the colours of the harvest in the California wine country, the Prima Alpaca collection is now represented in showrooms across the US, Canada, Mexico, Australia, New Zealand, Russia and Europe.

Fleece Collection

A New Zealand Perspective - Part 2

Jenny Durno - Thorburn Alpaca NZ (November 2012)

The Collectors:

The phone only rang once before it was answered brightly, 'NZ Alpaca Fibre, can I help you?'

'Yes, please, I have just shorn my 10 alpacas and I would like to sell the fleece. I haven't done it before so I am not sure how to go about it.'

'Certainly, that's not a problem. Have you classed it?'

'Yes, we have bags of white and bags of mid-fawn. Well, it's sort of nearly brown, really…'

'Have you sorted out the microns, the lengths?'

'Um, microns. No. But the shearer told us not to put the short bits off the floor in the bags.'

'That's cool. We will class it for you and let you know what you have. The payments will vary between $5 and $40 per kg depending on quality, okay? We have a big order of 60 tonnes which is nearly complete. We will pop most of yours in there and give you a report.'

'Oh, and my wife would like to knit some of the brown. Can we have the yarn back from our fleece?'

'Sure, we will take the processing cost into account and ship that back to you as soon as possible. Where can we pick up?'

Then the alarm clock went off and the lovely dream floated away.

The Reality

You are probably reading this magazine because you have alpacas. Whatever the reason for getting into alpacas, you now have fleece animals, and therefore you have fleece. I wanted to bring you an up to date explanation of what is happening with the fleece in New Zealand and to contribute to the on-going conversation about our progress towards a true New Zealand alpaca fleece industry.

I identified four parties in the New Zealand alpaca fleece story:

1. The Growers. There are between 700 and 1200 owners of alpacas in New Zealand, depending on whether you go by the number of registered members or the estimates which include pet owners who have not registered. There are 15000 to 20000 animals, so the average number per owner is 15 - 20 animals. If each animal produces 2.5 - 3.0 kg of fleece that's about 45 - 50 tonnes per year. Suris comprise a maximum of 100 of these owners with 2500 animals. Averages don't tell the full story as we know, but suffice to say that not one Grower in New Zealand has enough animals to supply a viable fleece market on their own.

2. The Collectors. These are the people who have seen a need for someone to get the fleece to the processors who need minimum quantities for commercial runs, including overseas customers. Some people are Growers AND Collectors; these are the people who have reduced their processing costs by collecting fleece from others to make up the minimum quantities.

3. The Processors. The larger mills will process fleece presented to them by the Collectors. The smaller mills provide a service for the Growers who do not participate in the collection and processing of the larger quantities. The supply of services is inadequate for the demand for processing, so there is very little pressure on prices charged. To allow the prices to escalate as they should with our small and difficult quantities, we need end users who are prepared to pay a premium. We find we need to use all our charm just to be allowed to get the stuff through the mills.

4. The Consumers. As with any industry, the Consumers should be at the top of this list and a priority in our discussions. There are two categories of customer:

    a. Retail: those who will pay extra for an alpaca product. We normally think of luxury garments but this includes blankets, carpets and duvets.

    b. The Collectors: What are they collecting and why? Most of us can differentiate between 'The Insulation Guys' and the high fashion houses of Italy, but who else are the Collectors working for and what do they want?

In the last issue of *New Zealand Alpaca* I reported on my discussions with a number of Growers. We heard how some enterprising people were getting their fleeces through the system from animal to retail sales. We heard what we expected – that we have about 1000 people doing about 100 different things. They are having fun and making some money, but they only represent a part of the potential New Zealand Alpaca Fibre Industry.

This time I want to talk about the Collectors. Next issue I will talk about the Processors, and any input is greedily welcomed. Ideally we should also talk about the Consumers too. (In fact, ideally we should never stop talking *to* the Consumers.)

Grower/Collectors

It makes sense for growers faced with a minimum requirement for economical processing to bring in the fleece from other growers to make up the bigger bale. The more people involved, the more complicated it all becomes, so once there is enough fleece to make a bale, the focus turns to getting the yarn back, turned into something and sold on.

I have talked to a number of breeders, mainly at shows, about what they doing with their fleece. Most shrug; it's in the shed – we gave the last lot to 'the insulation people' and we eventually got a small cheque that was nothing to get excited about. Did you sort it first? Oh yes, we kept out the show fleeces. But have you done anything with the better blanket parts of the rest of the shearing? Nah, too expensive to process. Did you know that there are people paying good money for sub 20 micron fleeces, sorted? Another shrug. Means sorting it and we just don't have time.

Nic Cooper of Southern Alpacas has long been a passionate advocate for turning fleece into a commercial viability and to this end he is happy to talk - again. Much of our conversation included sad shaking of the head; we have been here so many times…

Southern Alpacas is an example of a Grower/Collector; they are out there buying in fine micron, sorted fleece (they pay $30 per kg) and adding it to their own clip, which they process into yarn to sell online or at shows and markets, and into clothing items, also sold retail. Nic knows there is more fleece available and he despairs at the apathy shown by breeders in the face of falling animal prices.

Collectors

I have used this term deliberately and we should pause here to consider the difference between working with a cooperative, using a 'broker' and selling to a 'buyer.'

Previous attempts at bringing together larger quantities of fleece have ended in disappointment. Alpaca owners invited to participate in pooling fleece to bring down the cost of processing lost money and/or felt let down by the quality of the yarn that came back. 'Other people's fleece' let down the batch.

Australia has had trouble with the cooperative model, which has now been bought by someone outside Australia, complete with their Quality Mark. Not many believe that we have something that would enable us to do a better job than our respected cousins in Australia.

At present the alternative to anything that looks like a cooperative or a pooling initiative is a broker, although **Jonathan Heap, Wadsworth Heap** says that he is now buying some batches outright, sensitive to the wariness of his customers if they have to wait too long for a pay-out while he 'finds a home' for fleece he has collected from them. In the main his customers are looking for 26 – 30 micron white fleece at 3 – 5 inches (75 – 125 mm) although he is collecting anything people want to share.

Because the competition is not for the best we can breed. The ready market for alpaca fleece at the moment is for what the wool people call 'shorts.' Not the best and finest, but the most consistent seconds. 'Uniformity' as the judges say in the ring, is a commercial reality. Taking into account the cost of sorting, rates for these seconds settle at about $10 for the best cuts and $2 for the rubbish, although everyone is vaguely promising more money when possible. It pays to sort out your own rubbish, if not actually classing the whole clip, because it is you who will lose out if it all gets tipped into the $2 'fadge' (small bale).

John Carr of Pacific Alpacas is in the market for any Huacaya fleece and has proudly accumulated over 20000 kg in the past three years. He sells most of it to New Zealand mills and some overseas. This year he reports that his biggest demand was for white fleece 22 - 26 micron, 3.5 –– 4.0 inches (90 - 100 mm) and he is frustrated to hear that people are holding back finer fleeces for higher prices. 'We are told a lot is sold at $35 - 55 per kg but I have never seen any proof!' John tells me that scalability is the biggest problem for the industry, with his buyers for example only interested in 200+ kg bales. With so many smaller breeders, collection, scouring, sorting and freight is a problem with added cost. The cost of scouring is predictable, if high, but the main challenges with this part of the process is accumulating the scourers' minimum runs of 400 kg and waiting for their timetable as anything other than white needs essentially a total clean out after processing. They will only run what they regard as 'hairy alpaca' just before they clean the machines. A tonne goes through in about 20 minutes – hardly worth gearing up for from their perspective with a plant that runs 24/7.

Andy Nailard, Flagstaff Alpacas, wants 35 - 75 mm white and light fawn for his joint venture partners making duvets, and the micron doesn't matter; in fact cria fleeces too tender to process are ideal. 55 - 75 mm blends well with nylon to make carpets. Andy is noting some competition in the market for the fleece he is after. He has to work at keeping his key suppliers but until he can persuade the duvet people to put the prices up he can't pay more. 'It's a supply chain thing. My partner can sell as many duvets as they can make. But they won't promote them until they know the fleece is available to fill the orders. Until they sell more, they won't put the price up and I can't source more fleece. Once they do, I will be back with a higher offer.' He will visit and do the sorting as long as his clients have at least 50 animals in one place.

Andy is a shareholder with Bruce Woollen Mills and some of his fleece goes there for processing. He told me that it was too early to report an annual tonnage through the mill but they were making progress. The <20 micron fleece presents issues as it is too fine for New Zealand processors, although he too agrees that it is too good to waste and is storing fine fleece 'until a solution is found.'

Lindsay Riddle, Sherlin Alpaca, set out to make supplying fleece as easy as he could for alpaca people – initially as a non-profitable service which he says has provided a 'floor' for the fleece market. He takes everything, unsorted, and pays $3.00 per kg for it – 26,000 tonnes in four years - and maintains he is still the only Collector in New Zealand to guarantee payment. (Although 'Collector' is a misnomer – Lindsay's suppliers need to drop off their fleeces. It is just not cost effective to be collecting it.) When he has 1.5 – 2 tonne he sells it all to Wool Technologies (WT) and pays his suppliers, six weekly in the summer and every few months in winter. He reminds us that in a container of 90 bales of wool overseas, one bale might be alpaca rovings. And while individuals get $100 here and there, he points out that WT has put $60,000 into the alpaca industry, in spite of it being a minority fibre.

Philippa Wright is the North Island agent for WT and while she is passionate about wool she admits that her alpaca experience is limited. 'It's a new industry for everybody.' However she is aware of the importance to suppliers of a guaranteed payment – she *buys* the fleece. She takes the fleece as is - 'people bring it in bags with the alpaca's *name* on it!' and repacks it according to colour and length. Micron doesn't matter at this point – WT looks after that. She finds that alpaca people can get emotional about their product, proclaiming it to be better than their neighbours.' (It's not, it's all the same.) Her advice is to get in behind the industry personally and make things happen – don't wait for someone up the food chain, and realise how small New Zealand is. Even the mighty wool industry concentrates its education and promotion on the other side of the world where the big populations are.

What does WT do with it? Duvets, carpet, upholstery. What about fabric? Lindsay: 'Frankly some alpaca people need to get off their high horse. You get 20 tonnes of sub 20 micron white fibre and someone to drive it and you might have a start.'

Andy Nailard agrees: 'We are the problem. There are 1000 owners and all of us want someone else to stand up and create the market and the infrastructure to get the fleece through the supply chain. S*omeone* needs to step up and own the whole vertical supply chain. We have some clever business people in the Alpaca Association, but clever with what skills?' According to Andy we need someone with 'a clean book and deep pockets.' They then need to buy in the appropriate skills, many of which are being lost as mill after mill closes.

Fine Alpaca Fabric

Some Suri people have put their hands up to spearhead a drive towards commercial production of fabric. Having proved you could produce wonderful 100% Suri fabric with the Surrissimo project, (also known as the Lincoln University Project) they are now focusing on the **Rumplestiltskin Project. Hermione Richards, Surico,** they are working with 22 - 24 micron, 80 - 140 mm long fleece. 'Uniformity' - there is that word again - is recognised as being vital and to that end educating the Growers is key. In the short term, classing sessions and lessons in identifying different qualities of fibre is allowing the team to accumulate 60 kg of appropriate fleece in New Zealand, supplemented with 110 kg from Australia so far. But it goes back not just to breeding the right animals but to farm management. Knowing when to shear, who not to shear, how to shear, how to sort, class, store all of these activities affect the outcome of the final combined product.

Hermione told me that the whole supply chain matters. The mills don't like trying something new and because we have small quantities the costs will be higher, so the end price has to be there. That means the quality has to be there from the start. 'And alpaca people have a reluctance to bring in experts. Are we farmers, processors, marketers? We can't be good at everything.'

Have we got the knowledge available in New Zealand? We have been told that the bigger processors can't even process anything less than 20 microns. So why persevere in trying to breed for the finer fleeces? Won't we end up selling it overseas with the result that the Chinese can calibrate their machines in time to process the fleece they will get off the animals we are hoping to sell to them?

Jonathan Heap is still sad about the closure of the family spinning mill 10 years ago. But the textile knowledge is still there, and so are the relationships with the overseas processors who can make this finer fabric. He makes an offer: 'You bring me a 500 kg of sub 20 kg fleece – donate it to the cause – and I will put in the knowledge, the time and the miles to bring it together.' He warns that we may well get a retailer to requisition cloth for a line of top quality garments to a narrow specification in one year, then find that the requirement changes in the following year. But once a market is aware of say, fine knitted alpaca in natural colours, they will be back, even if it is for a variation of style. And finding that market is not our job – his contacts will do that. All we have to do is keep the supply of fine fleeces coming.

Jonathan has noticed that the proportion of seconds to better fibre he is collecting is much higher than that experienced in Peru. Do we have inferior fleece, or are we holding back the blankets? Certainly the New Zealand herd is getting older as people hold back from breeding, so the micron average is increasing, but we agreed that we knew of a number of examples of people holding back their best fleeces 'for something better.'

Lindsay Riddle: 'Unusually, I had an order for a specific (low) micron range. Of the stock of nearly 600 kg I had at the time, only 80 kg was suitable.' Luckily for Lindsay and other Collectors the existing market is for the higher micron fleeces and luckily for the Growers, the Collectors are now competing on price and service. But there is more work to do if we want a market for the finer micron fleeces we are so keen to breed for.

New Zealand Alpaca Brand

John Carr admits that rather than working towards a quality New Zealand Alpaca brand our national clip is more likely to come back as part of 'Great Wall of China Alpaca.' Jonathan Heap agrees, but points out that 'Country of Origin' is becoming less important and perhaps we should be aspiring to being recognised as a reliable supplier of uniform bands of fleece whose quality is increasing each year. Of course if we make an overseas market for ourselves and Peru notices, we will be undercut immediately.

Most of the Collectors and many Growers I spoke to agreed that as an industry we need to find a commercial way to cull the older animals to keep improving the quality of the national clip, especially if we can't individually afford to carry more total numbers on our properties.

Collectors were noticeably more prepared to talk about the fate of these animals in commercial terms than the Growers. Indeed as an exercise in seeing ourselves as others see us, this enquiry revealed that we are seen as pet owners obsessed with showing, with an over inflated impression of our ability to manage ourselves into a viable fleece industry based on disparate experiences in other unrelated business environments. Whoa!

But if we want to realise the dream of creating metres of soft creamy fabric to be made into highly sought after and expensive garments, we needed to be clear about our ability to meet any demand we eventually create. A critique of our national clip needs to read like a champion in a fleece show: 'Showing consistency of micron and length across the fleece, with soft handle and a lack of guard hair or colour contamination. Well skirted and presented.'

If you have strong opinions about anything we have produced here, or you think we have missed something, please step forward.

We are a small Association and we invite everyone to be part of this conversation.

Write to editor@alpaca.org.nz or
Editor Alpacas Australia – alpacas@paltarrapark.com.au

Our thanks to the New Zealand Alpaca Assoc. for allowing us to reprint this article. Unfortunately, the author, Jenny Durno, passed away recently and we should like to offer our sympathy to her family and friends. It is obvious that the AANZ has lost a passionate supporter who will be sorely missed.

5-in-1 Vaccine

Vaccinating alpacas against clostridial diseases

By Jane Vaughan BVSc PhD MACVSc

Background

5-in-1 vaccine protects against 5 different but related bacteria known collectively as clostridial diseases. These bacteria can cause sudden death in your alpacas. They are identified individually as:

1. Tetanus (*Clostridium tetani*) – animals often found dead soon after shearing/castration/dog bite wounds/where inadequate disinfection of castration equipment used or castration performed in unhygienic conditions (dirty yards, wet weather).

2. Pulpy kidney/enterotoxaemia (*Clostridium perfringens* Type D) – sudden death in multiple livestock being fed large quantities of highly digestible carbohydrate (think lush pastures, cereal grain and cereal grain-based pellets). Often affects the largest weaners in a mob.

3. Black leg (*Clostridium chauvoei*) – caused by infection of wounds from shearing cuts/rough handling in yards/females following difficult birth/navel infection soon after birth/castration. Infection causes local inflammation (red and swollen tissue), gas under the skin, blood poisoning and rapid death.

4. Black's disease/infectious necrotic hepatitis (*Clostridium novyi* Type B) – spores lie dormant in the liver and can be activated by migrating liver fluke, leading to toxin production and sudden death.

5. Malignant oedema (*Clostridium novyi* Type A, *Clostridium sordelli*, *Clostridium septicum, Clostridium chauvoei*) – often associated with fighting/infected wounds from shearing/castration/difficult birth/dog bites, leading to blood poisoning and death.

The bacteria are often concentrated around yards and in and around dung piles, and spores can survive in soil for many years.

How does the vaccine work?

Efficacy of 5-in-1 vaccination relies on the administration of 2 doses of vaccine, injected under the skin 4-6 weeks apart to produce active immunity. The *first dose* is known as the *priming dose* and it stimulates the immune system of your alpaca to produce antibodies against the diseases in the vaccine. The *second dose* is known as the *booster dose* because after this second dose is given, the immune system recognises the recently given vaccine and produces more antibodies for a more prolonged time, as depicted in Figure 1.

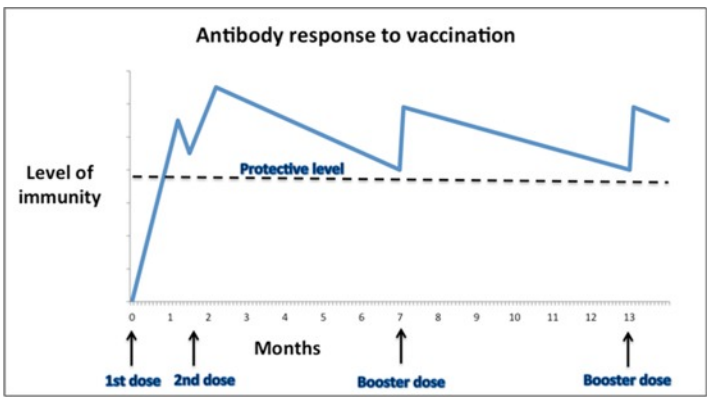


Figure 1. Antibody response to vaccination.

A booster dose every 6 months thereafter is required to maintain a protective level of antibodies in your alpacas. Timing of injection of this twice yearly booster in your females should include a booster 4-6 weeks prior to parturition, so that antibodies produced by the female enter the first milk or colostrum, and are drunk by the neonate in the first 12 hours of life. The antibodies are absorbed across the gut wall, enter the blood stream and circulate around the body, thus providing protection to the cria against clostridial diseases for approximately 8-12 weeks. This is known as passive immunity because the neonate did not make the antibodies itself.

How to use the vaccine?

Read the instructions that come with the 5-in-1 vaccine and look after the vaccine so it maintains its efficacy. Take an esky and cold brick with you when you buy the vaccine so you can keep it cool and out of direct sunlight after purchase *en route* to placing it in the fridge when you get home. On the day/s of use, carry the vaccine in an esky containing a cold brick to the yards and place the vaccine back in the esky during breaks such as lunch to maximise life and efficacy of the vaccine. At the end of the day, remember to put the vaccine back in the fridge and not leave the pack/s hooked on a nail in the woolshed or rattling around in the back of your vehicle. Write the date you opened the vaccine on the plastic container. Vaccine should ideally be discarded 30 days after opening. Vaccine that was opened last season should not be used this season!

Shake vaccine container well before use. If you are only injecting a few livestock, you can use a needle and syringe to draw up the vaccine. Swab the rubber bung with alcohol before inserting the needle. Remove air bubbles from the syringeful so each animal gets the correct dose. If you leave the needle in the top of the

vaccine container for filling multiple syringes, place plastic vaccine pack upright (so it does not leak!) in the esky between uses to keep dust out of the needle hub. Do not leave container with needle in it sitting up on a fence post in the sun.

Otherwise, use a clean vaccinator gun with a new needle at the start of each day. Replace the needle when it gets blunt. Avoid getting air bubbles in the line/syringe so all livestock get the appropriate dose. The appropriate volume of vaccine to administer varies according to manufacturer so read the label carefully. Alpacas should be given a sheep dose if not specified on the label. Alpaca owners need to be aware that few vaccines are registered for use in alpacas. Consult your local veterinarian for advice on vaccine use in alpacas on your farm.

Vaccine should be injected under the skin (subcutaneously), NOT into the muscle (intramuscularly). To facilitate this, use short needles. Insert the needle at a shallow angle at the base of the neck in front of the shoulder blade where there is loose skin on the side of the neck (Figure 2). Do not inject too close to the dorsal mid-line to avoid the large ligament that supports the neck. Do not inject too close to the ventral midline to avoid the trachea and major nerves and blood vessels in that area. Do not pick up the skin with your other hand to avoid self-injection!

If administering other medications at the same time, make sure you use different sides of the neck so there is no accidental mixing of the different treatments under the skin, which could lead to inactivation of the different products, and therefore waste the dollars you have just invested.

Figure 2. Site of subcutaneous injection in alpacas in front of the shoulder blade

When to vaccinate?

1. Crias should be vaccinated at 8 weeks to provide a priming dose, when the protection from mother's milk is starting to decline.
2. Crias should be vaccinated again 4-6 weeks later to provide a booster dose thus ensuring maximal effect of vaccine.
3. Pregnant females should be vaccinated 4-6 weeks pre-parturition to ensure high concentrations of clostridial antibodies in the colostrum.
4. Twice yearly vaccination of all stock prior to high-risk periods (e.g. start of grain feeding).
5. ANY new stock onto the property: Vaccinate twice, 4-6 weeks apart to ensure they have been boostered properly, then as per home-grown livestock.

What's in 6-in-1 and 7-in-1 vaccines?

6-in-1 vaccine is designed for use in sheep, goats and alpacas and protects against the 5 clostridial diseases discussed above, and another bacterial disease known as cheesy gland/CLA/caseous lymphadenitis (*Corynebacterium ovis*). The organism is picked up by animals that have not been vaccinated, through shearing cuts/infected combs and cutters/dipping after shearing/close yarding. Infection leads to abscess formation in lymph nodes around the body and carcass condemnation at the meat works. Vaccinate according to manufacturers directions and avoid dipping for lice until shearing wounds have healed.

7-in-1 vaccine protects against the 5 clostridial diseases discussed above, and 2 types of leptospirosis. The latter 2 organisms can affect cattle, sheep, goats and alpacas and is spread by urine from infected animals contaminating pastures, water and feed. Humans can also be infected. Clinical signs of leptospirosis include abortions, reduced milk output, red urine, ill-thrift and may cause death.

Speak to your veterinarian about using 6-in-1 and 7-in-1 vaccines in your alpaca herd.

Summary

Vaccinating your stock correctly against clostridial diseases is a cheap and effective way to prevent many of the causes of sudden death in all ages of stock in your herd. It is imperative that livestock receive a booster dose 4-6 weeks after the priming injection, followed up by an annual booster timed appropriately (females 4-6 weeks before giving birth, other stock prior to going onto grain/pellet supplements).

Websites with more information on clostridial diseases include:

http://www.mla.com.au/Livestock-production/Animal-health-welfare-and-biosecurity/Diseases/Infectious/Clostridial-diseases

http://www.mla.com.au/Livestock-production/Animal-health-welfare-and-biosecurity/Husbandry/Vaccinating

http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0004/179860/sheep-vaccination-programs.pdf

http://www.dpi.nsw.gov.au/__data/assets/pdf_file/0010/111250/beef-cattle-vaccines.pdf

Sending Articles or Photos to AAA

A guide to what is required

Quite often much time is wasted when editing & creating this magazine because articles or photos are not submitted in a format we can use.

Articles

All articles should be submitted as a Microsoft Word document, not as a PDF.

Do not format articles with fancy text or colours, or arrange the article other than to bold titles & use bullet points when needed. Do not use CAPITAL letters for titles.

We have to break the article up into different sections to best fit the magazine page layout & also fit in with any photos or images, so the less formatting in the original document the easier it is for us.

All photos to go with articles should be supplied as separate image files not embedded in a word doc or PDF.

Adverts

Adverts must be submitted as a high resolution jpg of 300dpi or as a PDF, not as a Word document or a Publisher file.

The finished advert must be the correct dimensions as provided by the AAA, not sitting on a larger page.

If your advert is a full page advert then you also need to add 5mm bleed lines to the outside of the advert.

Adverts should be in CMYK colour format to better ensure colour consistency when printing.

If you don't know how to produce an advert in the correct format then you will need to employ a graphic designer to make the advert for you. They will supply you with the finished design for use in future advertising.

Photographs

Photos that are to be included in the magazine or any other print media must be of a very good quality commonly referred to as high resolution.

We measure this in a format called DPI or 'dots' per square inch, and the DPI we required for printing is 300dpi or higher.

If we drop below this amount the photo when printed may appear blocky or fuzzy to some degree.

Left - high resolution photo at 300dpi is crisp and clear
Right - Low resolution photo at 96dpi is fuzzy and grainy

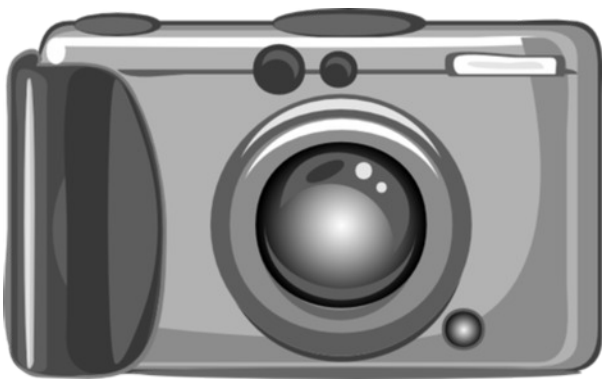
Camera Settings

Digital cameras have a setting that you can change to take different resolution photos.

Many will give dimensions in pixels, others may use simpler descriptions such as low, medium or high quality.

When taking photos if you first set this photo quality setting to the highest your camera offers, you will take photographs that will reproduce well in print.

These photos do take up more space on your camera's memory card, but you can purchase memory cards that can hold hundreds of high resolution photos in most supermarkets for just a few dollars.



If you wish to also use your photos on your web site they will need to be reduced in quality as web site use the opposite sort of photo - low resolution, normally only 72 - 96dpi so they load fast and don't slow down your web pages.

You can easily create copies of your high resolution photos then use the software supplied with your camera or other photo manipulation software installed on your computer to reduce the resolution of your images to suit your web site.

You should always save the original high resolution images.

Australian Alpaca

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"...Whether you're a smallholding alpaca producer, a larger scale operator, an associated industry partner, or you're just thinking of entering our expanding industry, the Australian Alpaca Excellence Conference 2014 is for you."

Michelle Malt
President - Australian Alpaca Association

To register go to: www.alpaca.asn.au - or - call (03) 9873 7700

Australian Alpaca Excellence Conference 2014 | 9-11 May 2014

CONFERENCE HIGHLIGHTS

An action-packed conference agenda is booked, with essential new information on every aspect of Australian alpaca ownership. Highlights include:

Introducing our Key Note Speaker:

- **Dr Chris Cebra**

  Topics:
  (1) Rickets
  (2) Coccidiosis
  (3) Exploding the myths about gastric ulcers: causes, diagnosis, treatment, prevention
  (4) Other gastrointestinal calamities
  (5) Skin conditions
  (6) Practical tips to keep your alpacas healthy

Lectures

Speaker Update: These expert speakers join our previously announced exciting conference agenda. And there are yet MORE to come! Check the website for latest updates...

Kerryn Caulfields/Luis Chaves	Delivering the Fibre of the Gods to Global Consumers
Ian Frith & Melanie Smith	Alpaca Meat
Dr Ian Carmichael	Parasites
Cameron Holt	Shed sorting and Classing of Huacaya Fleece
Dr Belinda Appleton	Genetics
Dr Stephen Mulholland	The importance of science and statistics in the Alpaca Industry

Workshops

Cria Birthing

Adrienne Clarke of Ambersun Alpacas births 400 to 500 cria each year at her Fleurieu Peninsula stud. Adrienne will take you through how to assist at a birth, and share her expert practical knowledge.

Understanding Suri Genetics... or, How to Win at Cards

This session is aimed at those who feel overwhelmed with the terminology and concepts surrounding suri genetics. It is an interactive, hands-on session which will demystify terms like "homozygous", "heterozygous", "dominant" and "recessive" – to name but a few. Fiona devised this very visual representation of what happens genetically when we mate suris or huacayas, or cross the two together, to explain some complex concepts in a way that is unforgettable – a previous participant once described it as "a light bulb moment".

Fodder Selection & Quality

Dr Jane Vaughan is one of Australia's few expert alpaca veterinary specialists with many years at the technology forefront. Dr Vaughan invites you to bring along samples of the hay, chaff and grain you feed your herd for analysis and advice on this major input into the health of your animals.

Who should attend?

- Alpaca owners and non-owners considering Alpaca industry investment.
- Alpaca industry channel partners – fleece, meat & hide distributors, marketers, buyers & sellers.
- Alpaca handlers & judges.
- Primary producers considering converting to or adding alpaca to their land management strategies.
- Rural media, consultants, and advisors.
- Rural & large animal veterinary science specialists and students.
- All others interested in the Australian Alpaca Industry.

FARM TOURS: 12 May 2014

TOUR 1

{MORNING} **LIFESTYLE ALPACA BREEDING | Haylilla Alpacas**

- 100 Coloured Huacayas in stunning McLaren Vale Wine Region
- Co-owned stud sires for carefully selected genetics
- Farm Walk, morning tea & local wines

{AFTERNOON} **BROAD SCALE ALPACA BUSINESS | Ambersun Alpacas**

- 20 years breeding champions
- 1000 stud animals on prime rural land
- Australia's largest Leopard Appaloosa herd
- Lunch & tastings from Fleurieu Prime Alpaca

OR

TOUR 2

{MORNING} **GREEN ALPACA PRACTICES | Softfoot Alpaca Stud**

- 300 acres with sustainability focus
- Environmental husbandry and shearing innovation
- Commercially relevant stud with purpose-built handling facilities
- Gourmet Bush Food served

{AFTERNOON} **CHAMPION GENETICS & FOCUSED ANIMAL MANAGEMENT | Yaringa Alpacas**

- Specialising in coloured Huacayas with champion bloodlines
- Large herd managed with small enterprise ideals
- Winning fleece and on-site yarn project

How do your primaries & secondaries compare?

Bob Kingwell (BSc), Monga Alpacas

Alpacas have a two coated fleece made up of primary and secondary fibres. These fibres are arranged in clusters, each of which contains one primary fibre and about ten secondary fibres. This ratio is referred to as the SP ratio and has been found to vary from about 6 to 13 and occasionally up to 16. For merino sheep, the ratio averages about 20 but can be twice this. As an alpaca ages, the diameters of the primary fibres increase at a faster rate than the secondaries and may eventually become fully medullated. These fibres are then referred to as the guard hairs of a fleece.

There is also a strong positive correlation between the density of fibres in a fleece and the number of clusters per square millimetre of skin[1]. The number of clusters or rather the extent of the space between the clusters has a far greater impact on the density than the number of fibres in each cluster (SP ratio+1). This means that the denser the fleece the more primaries there are, however the average percentage of primaries to secondaries remains similar at about 10% for any one alpaca. There is therefore a definite advantage in reducing the diameter of these primary fibres if one is breeding for density and reduced guard hair.

The Combined Histogram

Separate histograms can be produced for the secondary and primary fibres in a fleece sample and the overall fleece sample histogram is essentially the summation of these two (Figure 1). Although the secondary fibre histogram is reasonably symmetrical, this is not the case for the fleece histogram. This is because the majority of primary fibres are coarser than the majority of secondary fibres and when the two histograms are summated to form the combined fleece histogram it will skew towards the coarse edge. The extent of the difference between the averages of these two fibre types determines the amount of skew in the combined histogram. The shape of the fleece histogram therefore gives a strong indication of how fine the primaries are relative to the secondaries.

If the average primary fibre diameter (FDp) is less than the average secondary fibre diameter (FDs) then the combined fleece histogram will skew towards the fine edge rather than the coarse edge however if the two averages are about the same, the fleece histogram will be relatively symmetrical but will still have some skew towards the coarse edge. In extreme cases where there is a large difference between the two averages, the fleece histogram will be bi-modal and the two peaks will define the two averages.

Estimating the FDp and FDs

It is possible to estimate the average secondary and primary fibre diameters from most fleece histograms that skew towards the coarse edge (Figure 1). To do this it is necessary to assume that all the fibres in the coarse edge tail are primaries and that the SP ratio is 9 (i.e. 10% are primaries). These are reasonable

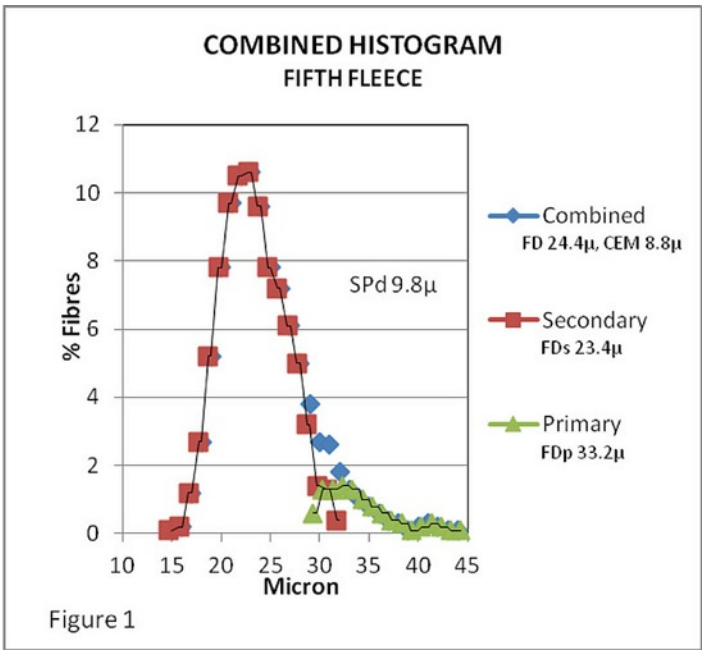

Figure 1

assumptions for the majority of alpacas and for the few exceptions the outcome will not be greatly affected. The average fibre diameter of a sample (FD) obtained from the fleece test results can then also be calculated from the formula, FD=(9FDs+FDp)/10.

When the SP ratio is greater than this assumed value of 9, the average fibre diameter is unlikely to vary by more than about 1.5%. This error is less than the combined sampling and testing errors associated with the FD obtained from the test results[2]. If the FD and coarse edge micron (CEM) are known from the test results then an estimate of the FDp can be calculated. This is because the coarse edge micron (CEM) of a fleece histogram is the number of microns separating the average fibre diameter of the sample from the coarsest 5% of fibres in the sample. If these coarse fibres contain only primary fibres and 10% of all the fibres in the sample are primaries then the CEM will define the average fibre diameter of the primaries. It will be the average fibre diameter of the sample plus the coarse edge micron, (FDp=FD+CEM).

This formula indicates that the average primary fibre diameter can be decreased by reducing the FD or the CEM or, better still, both. It also indicates that the CEM is a reasonable indication of the extent of skew in a histogram.

Once the FD and FDp are known, the average diameter of the secondaries can also be calculated by rearranging the above formula for FD, so that FDs=(10FD–FDp)/9.

The secondary to primary difference

Having calculated the approximate FDs and FDp, the difference between the two can then be estimated. These calculations need to be carried out at least twice, on say the second and fifth fleece, to determine to what extent the primaries are blowing out relative to the secondaries. An alpaca's fleece will have only limited commercial value if the secondary to primary difference (SPd) blows out excessively after its second fleece. Ideally, the primaries should have a similar diameter to the secondaries and remain that way as the alpaca ages. This would then produce a fleece histogram that remained relatively symmetrical. But how realistic is this ideal? A histogram is assumed to be symmetrical when the range of fibre diameters finer than the FD equals the range coarser than the FD or in other words when its base length each side of the FD is the same (Figure 2).

First fleece histograms are sometimes relatively symmetrical but this is not because the primaries are similar in diameter to the secondaries. It is because the very fine secondary derived fibres that are the last to develop after birth produce a fine edge tail with enough fine fibres to compensate for the primary fibres in the coarse tail. This compensating effect disappears in the second fleece, since all the secondary fibres are then of a similar age (Figure 3). If the primaries were of a similar diameter to the original secondaries then these first fleece histograms would skew towards the fine edge.

When a first fleece histogram is relatively symmetrical, it is probable that these alpacas are close to achieving their genetic potential for follicle development. It is however unlikely that the primaries will ever be as fine as the secondaries and therefore second fleece histograms will always skew towards the coarse edge and subsequent histograms will increasingly skew as the primaries blow out (Figure 1).

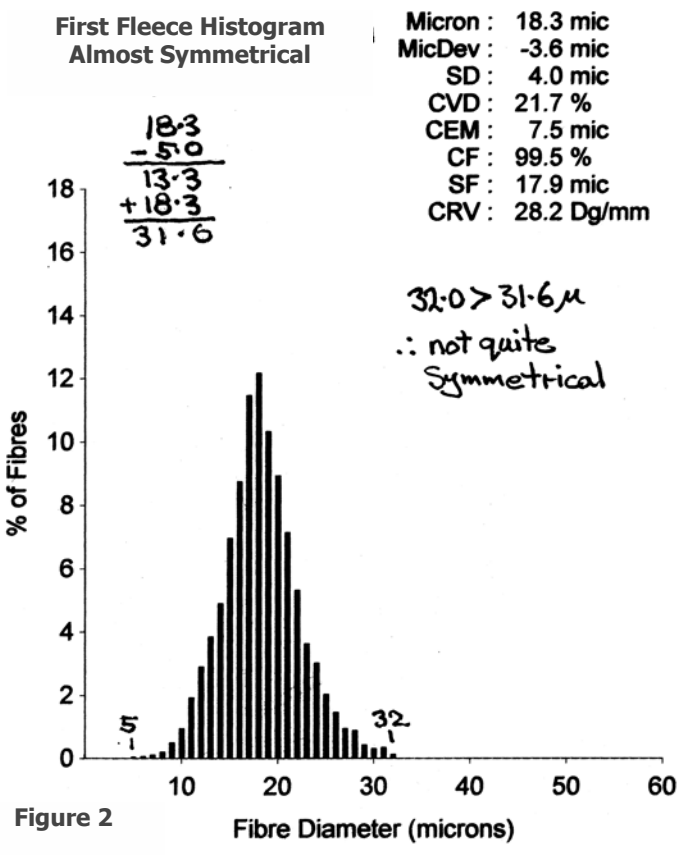

Figure 2

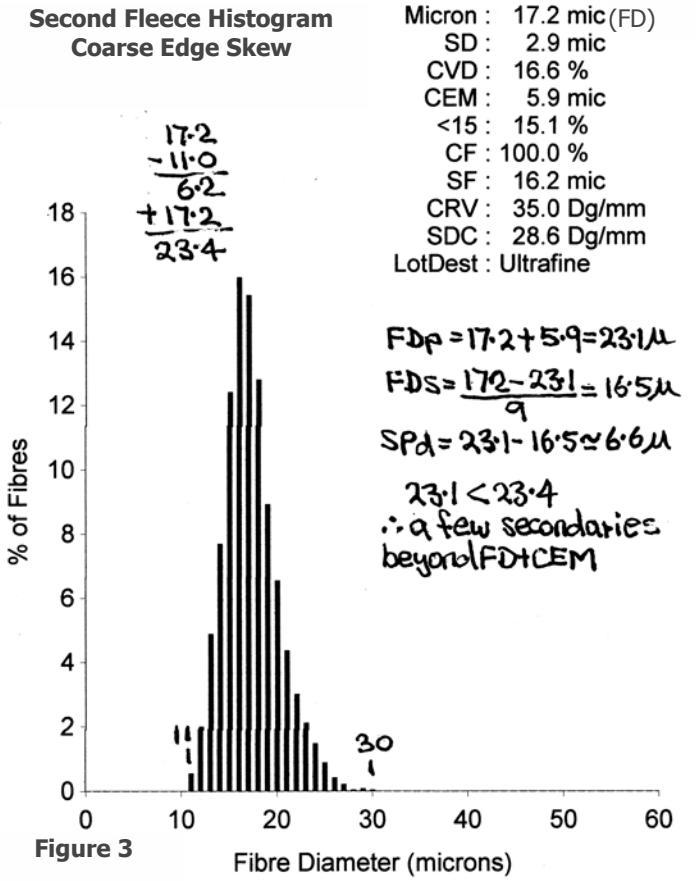

Figure 3

Limitations of these estimates

As the fleece histogram for different alpacas becomes more symmetrical it will start to include secondaries along with the primaries in the coarse edge beyond the CEM and the CEM will increasingly over estimate the average primary fibre diameter. When this occurs the actual FDp will then be less than FD+CEM. Based on the assumption that the secondary histogram is relatively symmetrical, anecdotal evidence suggests that this will often start as the CEM falls below about 8 microns. For some alpacas however it appears not to occur until about 6 microns or even lower (Figure 3). These are the alpacas that usually have a fine fleece with a low standard deviation. The coarse edge tail will be shorter and its fibres will be finer.

The average primary and secondary fibre diameters obtained from the above formulas will not necessarily be similar to values obtained from skin test results. This is partly because the annually tested fleece sample is rarely collected at the same time of the year as the skin sample and will not have been taken from the same location. More importantly however, the fleece sample results are obtained from thousands of individual measurements taken between and along the fibres, whereas the skin test results are obtained from around 100 secondary fibre measurements and maybe 50 primary measurements. It is therefore inevitable that, with such a large difference in sample size, the results are not going to be the same.

References

1. *Kingwell, R., 2010. Can Guard Hair Be Bred Out Of Alpaca Fleece? Alpacas Australia Issue 60: Winter 2010.*
2. *Victorian Department of Primary Industries, 2006. Variation in and Sampling of Alpaca Fleeces, Note Number AG0022: Updated January 2007.*

Fleece and Genetics alone will not support a commercially viable Alpaca Industry.

The Australian Alpaca Industry has come a long way in only a few decades and is now recognised worldwide as a leader in genetics.

But the annual fleece clip is still low and it will take many more years of breeding before a high yield, low micron fleece industry is internationally competitive.

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In even the best managed herds, more than half the alpacas are just costing money to keep.

Genetics is part science, part numbers game. Throughout the process you will produce animals that will shine and be your next round of stud animals, but what of the ones that don't make the grade?

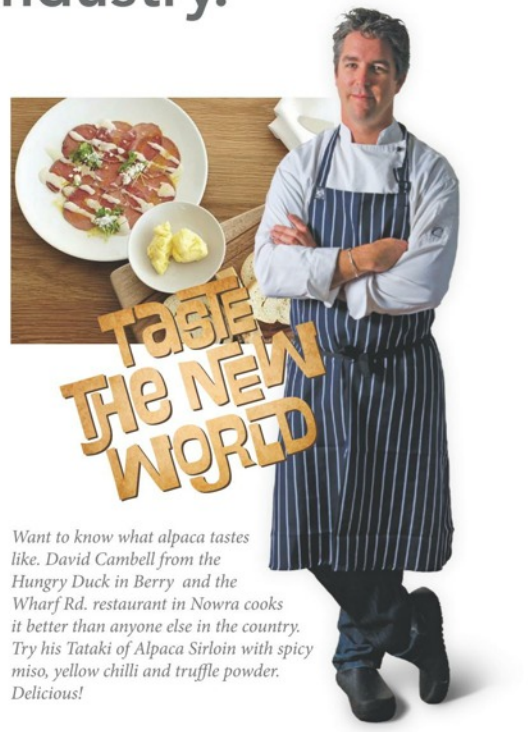
"Growth of the alpaca meat industry means being able to acquire animals more often for market, which frees up some of the breeders' paddocks to then spend that money to buy better genetics and better stud animals to increase their herds"

Ian Frith, CEO Illawarra Prime Alpaca

Imagine the sheep industry trying to thrive on just fleece and genetics alone.

Building the third pillar of the Alpaca Industry is still a long way from complete but with careful planning and our philosophy of introduction to the public through the restaurant trade, IPA is making significant headway. We have been selling Alpaca meat into restaurants for the past 18 months. It has been well received and new state-of-the-art production facilities are under construction. We even have a PHD study being produced on Alpaca meat at Sydney University.

We are committed to not only introducing the Australian public to a new meat that it both nutritious and delicious, but putting the alpaca industry on a firm and viable footing for the future.



Want to know what alpaca tastes like. David Cambell from the Hungry Duck in Berry and the Wharf Rd. restaurant in Nowra cooks it better than anyone else in the country. Try his Tataki of Alpaca Sirloin with spicy miso, yellow chilli and truffle powder. Delicious!

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FINE ALPACA
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Jenny McKenry - Dandura Alpacas

Is my alpaca a hermaphrodite?

It was shearing day. Our shearer, Mike Snow, had just finished with one of our girls when he asked casually, "had any cria from this one?" I replied that we had been trying to get a cria out of her for 3 years. She had difficulty getting pregnant and if she did conceive she would slip within a few months. "Not surprising," he replied. "She's a hermaphrodite. " As he said this he leaned over and squeezed a white substance from her vulva.

I stared at her genitalia. It certainly looked a lot different from the last time she had been examined in late autumn that year, when I had made a decision to leave trying to re-mate her until after the shearing. Now her clitoris, at the age of four and a half years, was quite pronounced.

"Any family history?" asked one of our city helpers. The answer was "no." All her female relatives had been very fertile and her sire and males we had used had good fertility records.

We had tried to mate GL over the years however she would not get pregnant. Not even a variety of males would do it. She would happily sit to mate but would not conceive. The vet examination didn't pick up anything unusual.

The vet recommended a round of hormone treatment. So we started the eleven day estrumate, oxytocin, estrumate, receptol regime. After the first cycle she appeared to conceive. She spat off, ultra sounded pregnant and then at about three months slipped. We repeated the hormone treatment with the same result.

I was determined to have one more go after the shearing. When I made this decision she was 4 years old and her genitalia looked normal. In the last 6 months that had changed. She clearly looked like a hermaphrodite. Also other things changed. Back in the paddock, she became pack guard and leader and began mounting receptive females thereby upsetting our mating program. It was time to reassign her.

GL is now a happy, watchful and protective sheep guard on our property – one of our best and a role which she adopted easily.

Pasture Establishment & Management

Part 1

By Charlie Bell

Introduction

Pasture management is an area of Australian farm management where there is tremendous potential for improvement. If we can develop our expertise in this area we can go a long way towards both improving productivity and halting and reversing some of the severe environmental problems we are facing on our farms. To do this, we all need to learn and develop a greater understanding of the Australian environment and the way plants perform in it. Various researchers and, more importantly, practical farm managers are constantly observing and refining how they manage the production of pastures. Alpaca producers must be part of this and pay special attention to meeting the specific needs of their animals.

After 200 years on this continent, the European is starting to realise that Australia is different to Europe or North America. Our climate is harsh and unreliable; our soils are generally poor; and our native vegetation and, in particular, many of our pasture species, are not adapted to the management approaches that have been adopted. We only need to look at the scale of the various problems evident today to see we need to improve our management. We have soil erosion, salinity, acidification, nutrient pollution of waterways, loss of perennial species and tree decline to name but a few of the major degradation issues facing our farmlands.

The situation we are facing is serious but Australia is, perhaps, one of the few nations in the world that still has choices about the future of its environment. We have a relatively small population overall and our rural areas are sparsely peopled.

Unlike other, more densely populated nations we do not have to place demands on our environment to support a huge human population. The demands we are placing on our environment today are mainly to support export based agriculture, forestry and mining. As a nation we can still choose not to use our land beyond its capacity and to generate our nation's wealth through different means. I recommend everyone responsible for making decisions about managing land read Tim Flannery's excellent book *The Future Eaters*, which puts our current situation into true perspective.

If we are responsible and intelligent, we can make choices today that will result in a more sustainable future for our children and our environment. The consequences of those choices will be visible in hundreds of years' time just as the choices made by the early European settlers of Australia are so evident in the appearance of our landscapes today. Let's *plan* to get it right!

Despite having been a farmer most of my life and now being an agricultural educator, I believe agriculture must take its share of the blame for the current state of our environment.

Farmers and graziers are responsible for the management of most of the very limited amount of higher rainfall, more productive land in Australia. Farmers, big and small, have a great responsibility to manage this precious resource in a sustainable manner. It is unrealistic to expect the government to come to the rescue. Landholders must take responsibility for the long term sustainability of their farms and develop production systems which are both economically and environmentally sustainable. I consider the economic aspect to be vitally important because we can't have sustainably managed farms if all our farmers are going broke doing the right thing by the environment!

I believe vigorous pastures and effective pasture management are our most effective tools to maintain and restore many of our farm environments. Trees are great and I am enthusiastic about planting as many as possible. However, in many of our farming areas, trees take many years and a lot of expense to establish and grow. In the mean time we need to re-establish our grassland communities, ensure these are healthy and vigorous and use these as the first building block of a sustainable and profitable future.

What is the current situation on your farm?

To develop a pasture plan, the first step is to make a realistic assessment of the current situation on your farm. You have to understand what you have to start with before starting to plan what you are going to do. If you are new to agriculture and pasture management you may need some assistance, even at this early stage. This is best sought from someone who is familiar with local soils and vegetation as these can vary dramatically from area to area – sometimes even over very short distances.

Useful assessments

The soil

The soil is the basis of all agricultural production and soil conditions along with climate will generally dictate what can be done in an area. All managers should aim at improving the soil as the basis for production. A healthy fertile soil will grow healthy pastures and result in healthy livestock grazing those pastures.

Check the soil's physical properties

To assess the soil's physical properties, dig holes with a small auger in all the different soil types on the farm and examine their properties. Note the following:

- Is there much organic matter in the soil? (This is usually indicated by a darker colour in the top few centimetres of the soil.)
- How deep is the top layer of soil? Is it sandy, clayey, silty or a combination?
- What is the subsoil like?
- What is the drainage like? Does it appear waterlogged?
- What colour is the topsoil and subsoil? (Yellows and greys indicate poor drainage, red colours indicate good drainage).
- It is well structured or compacted by livestock or machinery.
- Is the soil dispersible? Does the structure totally collapse when wet and set hard when dry?

These attributes of the soil will give some indication of its potential for pasture production.

Soil pH

pH is the measure of acidity in the soil. It is measured in a scale of 1 to 14 and most plants grow best in the range of pH5.5 to pH7. Soils which fall outside this range present some problems which will require different management strategies. pH can be tested easily using a cheap and simple kit available from rural suppliers or even garden centres. These kits use Universal Indicator and barium sulphate powder and are reasonably accurate.

Soil Fertility

Have soil samples taken and tested for all distinctly different areas of the farms on which you are planning to carry out work. Don't waste money having soil tested if you are not planning to fertilise or do pasture improvement. Spend your money where it will give you some return.

The soil should be tested for major nutrients such as nitrogen, phosphorous, potassium, sulphur etc and the micronutrients. The test results will need to be interpreted by an agronomist who is familiar with local conditions. A competent professional should be able to give you specific recommendations about inputs of fertiliser and soil ameliorants. Be careful with advice given by fertiliser company representatives and agronomists. Remember their objective is to sell more of their own products rather than what may be best for the soil.

Biological activity

Is there evidence of activity of worm, beetles, bugs, fungus and bacteria? Is the dead plant material on or below the soil surface breaking down quickly or just sitting on the surface? A good healthy soil will have plenty of activity.

It is beyond the scope of this paper to go into too much detail on soil management. I encourage all farm managers to become familiar with the basics of soil management and seek as much information as possible. There are many good practical references available on soils.

The Vegetation

Trees and shrubs

It's not just the pasture plants present on the farm that are important for a healthy, sustainable environment. The healthy farm should have a good cover of trees and shrubs in areas of bushland and shelterbelts. Various studies have demonstrated that at least 20% of the area of any farm could be reserved as bushland or shelterbelts. Without suffering any penalty in production – in fact, there are benefits.

- Shelterbelts reduce wind velocity across the farm and thus reduce the rate of evapotranspiration. This means water usage is reduced and rainfall or irrigation water is used more effectively.

- Animals protected from heat in summer by shade and cold winds in winter are more productive.
- Trees and the understorey of shrubs provide a habitat for birds and predatory insects that can help control pests and diseases in crops and pastures.
- Steeper land and creek or riverbanks protected by trees helps to prevent erosion.
- Trees in the landscape look nice!

The tree species present on any farm will give clear indications of soil type and the potential productivity of the land. It is still common to describe farmland simply by referring to the tree type present. To those familiar with the plant communities and the soils associated with them, the tree type adequately describes the land. For example referring to the Brigalow country of Queensland; the Mallee country of Victoria; Salmon Gum country in West Australia; or the Pine or Kurrajong country of central NSW describes these environments and their agricultural potential.

Seek out local advice on what to look for and what the different trees indicate. This traditional local wisdom is very valuable and is in danger of being lost in many areas of Australia.

Pastures

An assessment of pastures is best carried out on a seasonal basis as the species present will vary from season to season. It is also very difficult, even for experts, to identify some native grass species except when they are carrying a seed head!

If you are not familiar with identifying plants you have a few choices.

- There are many field days and seminars presented by professionals on plant identification. Go along to one of these and take plenty of notes and photos. Field days are often organised by Landcare groups, Agriculture Department officers or even commercial suppliers.
- There are many good texts available to assist with plant identification. I recommend 'Weeds', by Ald & Medd; 'Plants of Western NSW', by Cunningham et al; and 'Grasses - native and naturalised NSW', by Lodge, Robertson and Simpson, Agriculture AGFACT. There are many other excellent texts available – these are more useful for NSW.
- Find a local who knows how to identify the plant species in the area and follow him or her around for a while!
- Join or start a pastures discussion group in your area. You will find there are many people who, like you, are interested in improving their knowledge of pastures.

There are various techniques available for objectively assessing pastures. It is necessary to use some sort of rigorous method and avoid making broad observations that may give you a misleading picture of the state of your pastures. Here is a simple technique.

1) Make up a frame out of wire or metal rod 500mm by 500mm in size. This is called a quadrant.
2) Take your quadrant and walk across your pasture paddocks in a zig zag pattern.
3) Every 10 paces place the quadrant on the ground and record the following:
    - How much bare soil is visible. (Less than 70% ground cover exposes the soil to the risk of erosion.);
    - What plant species are present;
    - What weeds you can see;
    - What are their stages of growth;
    - What is the proportion of grasses and legumes (clovers, etc)
4) Do this at least 10 times for each distinctly different area of the farm to give you an objective picture of the pasture situation.

As part of a long term program, it may be useful to set up some monitoring points on the farm so that you can assess from year to year whether your pasture are improving. This is easily done by using the techniques outlined above and retracing your steps each year or season. It may also be useful to take photos of the same area from the same point on a regular basis and compare these photos. This is best done by placing the camera on a fixed point such as a fence post and sighting the same point such as a tree in the centre of the view finder.

What percentage of your feed requirements are being met by pasture?

A pasture plan is like any other plan – it must be designed to achieve some objective. At the outset you need to decide what level of feed production you need to achieve on the farm and how you will meet these feed requirements. Many alpaca growers have small area farms and are dependant to some extent on purchased feed for a proportion of their nutritional needs. I believe most alpaca growers have the potential to meet a significant proportion of their feed requirements from home grown pasture, which will result in considerable cost saving.

There is a simple technique for working out approximately how much pasture can be produced on a farm and how many animals can be fed. This technique is widely used by sheep and cattle producers to set stocking rates. In most districts, experience has shown farmers how many animals they can graze on their properties from season to season. This will usually be expressed as either sheep to the acre/hectare or beast areas (for cattle).

It is a simple matter to use these typical district figures and extrapolate a figure for alpacas to the acre or hectare. Accurate conversion factors to compare sheep and cattle with alpacas are not really available. However, we can use 'ballpark figures', based on the assumption that alpacas have a more efficient digestion than sheep and cattle and require about 25% less feed as a proportion of bodyweight. We also need to take into account the stage of growth of the animal and lactation for females.

I suggest the following conversions:

- 1 adult, non-milking alpaca = 1.5 - 1.7 non-milking merino sheep (45kg)
- 1 adult, non-milking alpaca = 0.2 - 0.3 yearling steers

These figures should be multiplied by 1.5 - 1.75 for lactating female alpacas.

This will give you an indication of how many animals you should be able to satisfactorily feed on your farm. If you have more animals than can be catered for you will need to budget on buying in feed. It may also be necessary to purchase in feed to ensure the animals are getting the quality of diet they require.

Evaluation of the potential for improving pasture production

The best way to evaluate the potential for improvement on your farm is to look at what others in the district are doing with similar country. There is nothing like experience as a teacher. Talk to other local graziers about their pasture improvement strategies and the results achieved. As I've mentioned previously, seek out any local discussion groups or field days, join in and share in the body of knowledge which exists.

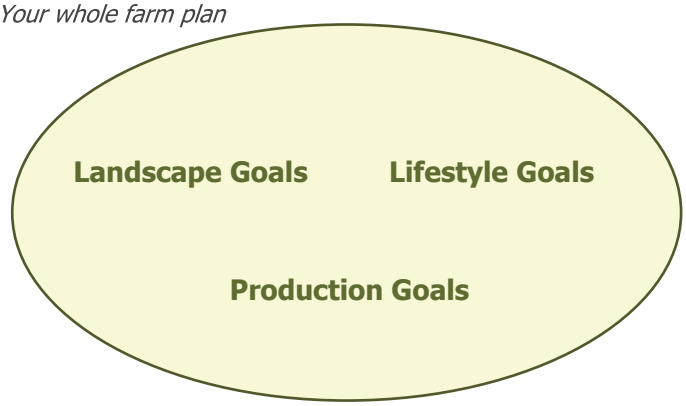
The assessment process outlined earlier in this paper will give you a good idea of the potential for improving pasture production from your farm. In many areas it is quite easy to double production from pastures with appropriate improvement and management strategies.

What factors are important in deciding on pasture strategies and selection of species?

The pasture strategy you adopt will be driven by your goals for your life, your farm and animals. There is no 'right' strategy for any farm and different owners may choose to adopt totally different approaches.

Your pasture strategy should be a component of your 'Whole Farm Plan', something that, I believe, should be developed by any landholders serious about effectively managing their land. The following diagram demonstrates the role of a Whole Farm Plan in management.

Your whole farm plan



When setting goals you need to ensure they are:

- Agreed to by all the stakeholders;
- Realistic and achievable; and
- Sympathetic to the environment and the local community.

I like to spend quite a bit of time developing a good statement of goals when helping clients with a Whole Farm Plan.
When setting goals for pasture production, I consider the following to be important:

- What is your soil and the climate like? What is its sustainable potential for production?
- Do you want or need to spend a lot of money improving the soil with fertilisers or soil ameliorants such as lime or gypsum. In some cases this may not be worth the effort.
- What level of pasture production do you want to achieve? Do you want to put a lot of effort into managing your pasture rigorously for maximum production or would you be happier to simply ensure you had good ground cover to prevent erosion and purchase some extra feed?
- Do you have irrigation and are you prepared for the extra work and commitment to use it?
- Are you prepared to utilise the high productivity of Ryegrass based pastures and monitor and manage potential health problems such as Ryegrass Staggers or Facial Eczema?
- What time of the year will you require most feed? Feed production must be synchronised with breeding cycles.
- Are you planning to increase stock numbers in the future? How much feed will you need then?
- Do you plan to subdivide your property and develop a system of rotational grazing? This requires more work but has the potential to increase production and more effectively utilise the feed produced.
- In some areas the preferred pasture species for alpacas simply do not perform. It may be better to work with a species which is not ideal but which will grow rather than to persist with trying to grow species which are unsuited. (Utilising kikuyu on the coastal strip of NSW is an example of this. It's not an ideal species for alpaca but it grows well and can be used if managed appropriately.)
- What do you want your farm to look like? Do you want a park like appearance or are you happy to allow the pastures to appear untidy?

The answers to all these questions will be dictated by either the physical environment of your farm or by your personal and family goals. So you can see why it is important to clearly establish goals at the outset before commencing a farm development program.

It is beyond the scope of this paper to give specific details about pastures species for different areas of Australia. I believe the best advice on pasture species is always local advice. We can, however, discuss the broad categories of pasture types and their usefulness for alpacas.

Below are the pasture options available to most alpaca breeders. (I have not considered tropical pastures to any great extent as most alpacas are in temperate areas).

1. Unimproved native pasture with a mixture of cool and warm season species and few legumes

This class of pasture is probably the most common. Native grass pastures are generally of poorer quality with average protein levels of 8% or less and fairly poor total production. These pastures are suitable for dry stock but will not be adequate for lactating females and young stock. Supplementation with quality hay will be needed to meet the nutritional needs of these animals.

Unimproved native pastures do have some advantages. On better country they can be of fairly good quality, particularly if species such as White Top (Danthonia racemosa), Wallaby Grass (Danthonia Linkiu) and Weeping Grass (Microlaena stipoides) are present. Other desirable species are Bothriochloa, Chloris, Eragrotis, Dichantbium and Sporobolus. Native pastures are 'easy care'- you don't have to do any fertilising and reseeding. They are drought tolerant and will produce something even in poor conditions. They also respond well to fire as this has been part of the Australian environment for thousands of years.

Most native pastures will contain some annual grasses and some 'naturalised' species, ie, introduced species which have 'gone wild'. Perhaps the most common of these naturalised perennial species are couch grass (Cynodon dactylon) and Paspalum (Paspalum dilitatum). Common annuals include Prairie Grass (Bromus unidoides), Winter Grass (Poa annua), Barley Grass (Hordeium Icporinum) and Wimmera Ryegrass (Lolium rigidum. The composition of native pasture can be manipulated by careful grazing management. Some species increase with grazing and others decrease. Set stocking will have a different impact to rotational grazing. Burning can also be used as a tool to manage native pastures. All of the species listed above are suitable for alpacas and will produce feed or adequate quality for dry stock. Fleeces will tend to be finer when the animals are on a lower plane of nutrition such as that provided by these native and naturalised pastures.

Supplementation will usually be needed for nursing mothers and young stock. These pastures usually have potential for dramatic improvement with the addition of fertiliser and legumes. However, many native pastures are growing on poor quality marginal land and may be best left as they are and managed carefully.

Paspalum

Clover

2. Improved native pastures with year-long green grass species and some clovers.

Unimproved pastures such as those discussed above can be improved by the addition of legumes such as sub-clover or white clover and fertiliser in some form. This is usually superphosphate and sometimes trace elements which may be lacking. For example the addition of molybdenum to deficient acid soils can lead to dramatic improvements for a very small cost.

The big improvement in pasture production and quality under this system is mainly due to the increase in nitrogen level resulting from nitrogen fixation by the legumes. Protein levels in pasture are directly related to the availability of nitrogen.

An exciting new development over the last few years is the selection of cultivated lines of the native grass species Danthonia and Microlaena. Seed is available commercially for these species which will allow these excellent pasture grasses to be utilised in pasture improvement programs. It is still expensive, but the prices will fall as supplies increase. These native species respond well to increased fertility and can produce good quality and quantity of feed. They are also very well adapted to the Australian environment, being tolerant to acidic soil conditions and drought.

Improved native pasture is perhaps ideal for alpacas. With correct management it will produce adequate quality for nursing mothers and young stock and provide the diversity which is desirable in the diet. It will also do well on poorer soils and acidic soils with an appropriate fertility management program.

There is one significant drawback with the classic 'super and sub-clover' method of pasture improvement – the potential for soil acidification. This results from excess nitrogen fixation by legumes where they dominate the pasture. Care should be taken to maintain at least 50% grass, especially in the spring when clovers are most vigorous just before they go to seed.

3. Introduced warm season perennial pasture

This type of pasture is more common in the northern half of NSW, particularly on the coastal strip where there is good summer rainfall. Grass species commonly used for this type of pasture are Kikuyu (*Penniretum clandestinum),* Rhodes Grass (*Chloris Gayana*), Setaria (*Setaria app)* and Paspalum (*Paspalum dilitatium).* The legumes White and Red Clover and Lotus (*Lotus app)* are also included in a pasture mix.

Kikuyu and Paspalum respond well to increased fertility and will produce large amounts of good quality feed under the right conditions. Kikuyu can be low in calcium which can be a problem with alpacas and other livestock. Lush Paspalum can get an ergot on the seedhead with is toxic to stock. Both perform well where irrigation is available.

Setaria and Rhodes Grass will grow on poorer country and produce fair quality feed. Setaria is better than Rhodes grass as it produces better quality, more digestible feed. Setaria continues to grow from the base even when it has set seed. This can be an advantage if grazing cannot be controlled.

This type of pasture is a good option in areas with hot, moist summers where the cool season species tend to get choked out by the prolific summer growth. It produces feed of adequate quality for alpacas most of the year but supplementation may be needed in winter.

Lucerne could also be placed into this class of warm season perennial pastures. Lucerne is regarded as the 'king of fodders' and produces very high quality and quantity of feed. Lucerne grows well in a wide geographical area and adapts well to different climates. Lucerne is mainly summer growing but there are many good 'winter active' varieties which will produce some feed in the winter months in many areas.

Lucerne will only grow on deep, well drained, fertile soil. If you have good soil and irrigation or reliable rainfall, Lucerne is an excellent option. Producing well under irrigated conditions Lucerne is also drought tolerant and will remain green and growing well into dry spells due to its deep root system.

4. Introduced cool season perennial pasture

This is the type of pasture most likely to be grown on better, more fertile country in the southern half of New South Wales and Victoria. Typical species used in this type of pasture are the grasses Perennial Ryegrass (Lolium perenne), Phalaris (Phalaris aquatica), Cocksfoot (Dactyli glomerata), Tall Fescue (Festuca arundinacea) and the legumes Subterranean Clover, White Clover, Lucerne, Red Clover and Medic species.

All these species produce high quality feed through the cooler months of the year and some of the Ryegrasses and clovers can be kept productive in all but the hottest months with irrigation and fertiliser applications. All these highly productive pastures need high fertility conditions. These will be more than adequate for the nutritional needs of alpaca and care should be taken to avoid over-feeding of animals which will result in health problems and broader micron fleeces.

An important issue to consider when using Perennial Ryegrass is the incidence of Ryegrass Staggers. This is caused by a fungus, Acremonium lolii, which grows in the leaves and stems of the plant. This fungus is known as an 'endophyte'. Ryegrass Staggers is a problem in late spring and summer when the plant is in the reproductive phase.

Another use of particular concern with Perennial Ryegrass is that it is closely associated with facial eczema. This disease most commonly occurs with animals grazing Ryegrass pastures but it has been recorded as associated with many others as well. The thing to remember is to be alert and take remedial action when the danger of facial eczema is high.

5. Introduced cool season annual pasture

This type of pasture usually consists of Annual Ryegrass (Lolium rigidum) or Italian Ryegrass (Lolium multiflorum) and a locally suitable annual clover (Trifolium app). These species produce very high quality feed and are very suitable for haymaking. Annual pastures such as these can be useful to fill a seasonal feed gap but are more expensive than perennial pastures.

Farm visits that say...

By Heather Candler - Oak Hill Alpacas, Canada

My family have been alpaca farmers for a short two years. There are days it seems that we have been enjoying the antics of the herd in our backyard much longer. But we have never forgotten what it felt like to see these animals for the first time as we visited farms. One of the many things we enjoy about alpaca farming is welcoming guests to the farm and introducing them to these beautiful animals.

We enjoy explaining how this unique livestock can fit into their lives and meet their business aspirations, large or small scale. And regardless if we make a sale or not, we have done our part to grow the industry and promote its product: fleece. It was not that long ago that we were satisfying our curiosity, doing our preliminary research, as we visited farms across Ontario (see Camelid Quarterly, March 2010, "The Great Alpaca Tour").

During that tour we experienced every sort of visit one could imagine. The warmth of the greetings, the happiness of the families who raised alpacas, and the knowledge that each alpaca farmer imparted was inspiring. These experiences, and several farm visits since, solidified our resolve to raise alpacas.

These are the moments that cultivate the growth of our industry. At the very least, if you have not inspired a new farmer by the end of a visit, you should have created a new convert to the use of alpaca fibre in their art or craft. Consider how you might make every farm visit comfortable for your guests and successful for you.

We have learned many lessons in these first two years of farming. During that time we have tried never to forget what it felt like to be a newcomer - to be approaching the farm gate with great curiosity but little sense of entitlement to be there wasting that busy farmer's time. I remember feeling sure that each farm we approached dealt only with seasoned alpaca ranchers buying quantities of animals at top price. Then we arrive with only a modest start up budget and pages of tedious questions. Let's face it. We all have our strengths. And if dealing with those tedious questions or unexpected visits is not your strength, make it clear at the point of initial contact - which is usually your web site marketing materials.

Advertise farm visits by appointment only and greet unexpected guests in your driveway with a smile and a card, along with an explanation that you are in the middle of an important task but invite them to book a visit. Glaring frustration may be more honest, but could be enough to terminate not just the visit, or the sale, but possibly even the guest's interest in a farming lifestyle that has clearly taken its toll on the good humour of their host.

Once the guest is pulling up your driveway there are some key things you should remember to make their experience comfortable and positive. Offer a smile and welcoming wave

when guests arrive. Don't assume you are sending an "open for business" message by simply having animals in the pasture. Farms are private spaces. Roll out the welcome mat by hanging a sign. Do all you can to ensure that the approach to your farm is friendly and welcoming.

Don't start in the barn. Have a chat and get to know the customer and their goals. Don't waste their time or confuse them by showing them a group of animals that don't meet their needs. Any discussion should start by identifying where the guest is at in the process of research, which could range from selecting a particular genetic trait or quality in one animal to kicking the tires on the whole farming experience. Remember, your role today may not be selling animals, but selling a lifestyle instead.

Many times when we visited a farm our hosts would ask us what our goals and objectives were in starting an alpaca farm. That was a very difficult question for us to answer so early in the game. We could certainly identify the financial and lifestyle objectives we hoped to meet, but we were ill-equipped to identify our herd development goals.

Remember, it can take years to understand what your strengths are and how you want to focus the development of your farm and herd.

In a recent Alpaca Education Seminar presented by Alpaca Ontario, a group of alpaca farmers, ranging from newcomers to veterans, listened to Dr. Brett Kaysen of Colorado State University explain the "Livestock Model". You could see light bulbs going off above the heads of both veterans and newcomers alike who were hearing this message for the first time.

My husband and I spent hours discussing the concept that night and began to refine our goals. This is a topic warranting an enlightening article from a knowledgeable and experienced livestock management expert.

As guests arrive at your farm gate, remember they may not yet be in a position to articulate their goals and objectives. Be prepared to identify their needs yourself through friendly discussion. Then, focus their tour of your herd on animals that will get them off to a good start. Don't overwhelm newcomers with animals. Remember, your guest may not have experience with livestock. Although alpacas are very quiet, gentle creatures, a herd of forty, running towards you believing it is feeding time, can be overwhelming to someone who has never set foot in a stall with an animal before. Guide your guests to an area where their approach to the herd can be staged and their movement amongst them paced to their comfort level. Don't assume others are comfortable handling or catching your animals. I remember countless occasions when our hosts told us in a friendly manner, "just get in there and grab them." But these were not our animals, so it was not comfortable to catch them in front of their owners. Hands on is important, so make sure you catch the first few animals and take them through a nose to tail inspection, pointing out what to feel and look for. When you see their comfort level rising, invite them to catch the next animal and be there to support and steady the animal.

If guests have travelled any distance to see your animals you won't see them again unless they saw and felt something they liked in an animal. Make that easy for them. Too many options can be overwhelming too. Your guest may know what they are looking for in an animal (or not), but it is difficult to recognize these attributes in a large herd of animals on the move and in full fleece.

Save everyone's time by identifying the animals you feel best meet the needs of your guest. Segregate those animals into a confined area so they can be individually inspected and assessed. Then there's price. During a recent farm visit a guest asked very frankly, what is the difference between a $500 and a $5,000 animal?

A neat and tidy appearance draws guests in and gives them confidence in your animal care practices

We spent time showing him an animal that was boarding on our farm as part of a herd liquidation and was classified as hobby farm stock. And then we took him to one of our show animals considered to be top quality and demonstrated the difference, primarily in fleece characteristics, but also in other body characteristics. It is important to be prepared to explain the assets and liabilities of each animal to garner the confidence of the guest and help them to identify which animals meet their needs.

This will also help you to justify your pricing and help your guests evaluate their options. Explain the rationale for each value and, in the process, help your guests determine how to best apply their budget to their purchase. The result may be that their purchase will not take place on your farm, but the next one might! Most importantly, set a price for each animal, and be ready to share it when asked. Though some are not comfortable with the numbers side of business, nothing makes a discussion more uncomfortable than a customer ready to buy, with a budget in mind, and a seller who won't put a number on the table. Establish your pricing, be confident in your asking price, and be comfortable discussing that at any time. You will make a sale. If you find it difficult to transition to business, remember, make each visit a teaching experience first, and a sales experience second. The guest will indicate when they are ready to talk price. I leave a sales list hanging in the barn and refer to it while we review the animals, offering it to guests to see photos of sires and dams, review fibre stats, etc. And right there, alongside that information, is pricing. This often starts the conversation. While you teach, pace yourself. There is nothing worse than information overload. In your enthusiasm for your hobby or profession you may be a veritable fountain of information. Offer this knowledge up slowly and systematically, pausing to allow your guest to ask questions. Stay focussed on their needs. We keep a clipboard in the barn for guests who like to take notes as we wander. Some guests have even arrived with their own! And we consider the first visit to be the first of many, so we don't cram too much information into a limited visit. We're always available to answer questions later by telephone or email.

One way to manage the information overload dilemma is to have take-away information prepared (see sidebar). I recall countless hours spent pouring over some of the terrific kits we were given on farm visits. Your kit can range from a single page fact sheet to a portfolio filled with herd profiles, fibre samples, marketing material and magazines. These resources are lasting reminders of your farm and useful resources to newcomers. Make sure your advertising reflects the product.

A recent guest shared a story of their visit to a farm that involved a six-hour drive. When they arrived to look at an animal it was clear that the cria photo used to advertise the six-year old alpaca was not a fair depiction of the animal they were considering buying. They felt deflated and misled. They even pointed out a discrepancy in our materials that represented a change of only a few weeks on our farm. In this information age we have to be diligent in updating our materials. And what do they say? You never get a second chance to make a first impression. So keep the barn clean and tidy. It's a reflection of your animal care and business practices. Always make it a good impression.

You will notice that throughout this article I have identified your farm visitor as a "guest", not a customer. The lasting impressions made on us during our farm visits were made at those farms who treated us like welcome guests, and not prospective customers.

The tone is unmistakably set when they arrive and you begin your tour. Lasting professional relationships and friendships have been made with those who made us welcome and at ease. Sale or not, these relationships pay off in a growing industry. We now find ourselves referring customers to these friends when we cannot meet a guest's needs. It's great to return a favour.

CQ About the Author

Heather Candler, co-owner of Oak Hills Alpacas (OH Alpacas) with husband Michael and daughters Samantha and Ruby, lives in Stirling, Ontario, Canada.

Their sustainable farm is home to ten alpacas, a livestock guardian dog and the family dog. Heather works as general manager of a development corporation by day and Michael is a monument craftsmen. Their alpaca farm is their commitment to slower living to balance their busy careers and full family life. All members of the Candler family play an active role in farm life.

Visit www.ohalpacas.com or contact the Candlers at farm@ohalpacas.com.

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Things your guests may be interested in during their visit:

- Tack
- Quality Feed and Hay
- Equipment
- Fencing & Livestock Protection
- Contents of Medical Kit
- Catching & Holding an Animal
- How to Inspect Teeth
- How to Body Score
- How to Evaluate Fleece Characteristics
- Components of Conformation
- Shorn Fleece & Fleece Products

Information resources to recommend to your guests:

- Web sites
- Breed and Farming Magazines
- Reference Books
- Other Mentor Farms Nearby
- Experienced Veterinarian
- Shearer
- Local Fibre Mills
- Associations
- Events
- Shows

Berry Hotel's Alpaca Mystery

By Alex Arnold - Illawarra Mercury
Dec. 3, 2013, 10 p.m.

Berry Hotel co-owner and chef Matt Watson get plenty of questions about the pub's alpaca burger. He smiles when he says the question he gets asked most is "what meat is in the alpaca burger?"

He answers and then the second most common question usually follows: "No really, what is in the alpaca burger?"

The Berry Hotel's alpaca burger was last month rated by Keith Austin, the editor of the Sydney Morning Herald's Pub Food Guide, as one of the six best burgers in NSW. The alpaca burger has been a common sight on the pub's specials menu for almost two years now, and thanks to the publicity generated by the SMH will have a permanent presence for at least the next 12 months.

The burger had its origin two years ago, at a sold-out alpaca degustation hosted by chef David Campbell at his Berry restaurant, The Hungry Duck.

Ian Frith of Illawarra Prime Alpaca was speaking on the night. "Ian said he would love to get his product into our restaurant and gave us a few different samples, but the burger was the one that stood out and fitted what we do here," Mr Watson said.

"Our whole principle with food is to have good, fresh produce done right and not overly complicated."

Mr Watson said the burger includes fresh rocket for a nice peppery bite, slow-roasted tomatoes that are sweet and add a roasted flavour, and caramelised onion.

"Those three flavours work well together and the alpaca meat sets it off," he said.

"The burger has cheese - all burgers should have cheese - and we use fresh Turkish bread from the bakery two doors down. The Turkish bread is a bit nicer and presents a bit better."

The alpaca patty itself, which has a hint of black pepper and red wine, is supplied by Illawarra Prime Alpaca, which owns the alpaca filled paddock about 2km north of Berry.

Mr Watson said alpaca meat has an interesting, but mild flavour. "Quite often a meat becomes the hero of the dish and overtakes the flavour, but where alpaca meat stands out is it helps all the other ingredients come together . . . it works really well with other fresh ingredients."

Mr Watson said the burger has its regulars among locals, but is also popular with tourists who see the burger as a novelty and something unique.

"People like the story," Mr Watson said.

"A lot of people visit here from Sydney or Wollongong and we tell them to keep an eye out on the way back for the farm where the alpaca meat comes from. When we say it is a local burger, it doesn't get more local than that."

Pub owner Matthew Watson and Ian Frith from Illawarra Prime Alpaca. Picture: Sylvia Liber

Castration - Yes or No?

By Karen Baum

There are always questions surrounding the issue of castration. What age is "best"? What time of year?

How long can we keep the male with females? How long should the male be separated from the females after castration? Can it be harmful to castrate too young? Should young males be housed together? Will they always get along if they are raised together? At what age do they become fertile? Is the animal too old to castrate? What technique should be used? Will the castration change their personality? Will he become more docile or less? Is he good enough to use for stud?

Sometimes we need to start at the end to get to the beginning. The first question should be, "Is he stud quality and does he have a personality that will fit into my operation?" Often we make excuses about keeping an animal a stud when the final decision should be based on objective criteria rather than subjective opinions.

The next consideration is management. Some operations can handle numerous adult, intact males while others are set-up with no desire for a stud on the premises. You have to consider your goals and objectives. If you want to be able to have unlimited choice in studs and want to use outside breedings then you may not want your own stud. If you do not want to send your females off the farm, and want to have crias, then you would want to own, lease or borrow a stud, or studs. When you need to have fertile males available may determine if you will raise your own, or purchase a proven sire. The number of females and the diversity of bloodlines will help you decide how many studs you need. The goals and objectives of your program can help you decide the kind of stud you want. As your operation matures you may decide to change the kind of stud you want and choose to castrate an older male. Not all males who are taken out of the breeding program, or not used for breeding, have to be castrated. Once again you need to look at what you want and how well you can handle "X" number of studs. Some people are well set-up and comfortable with many males, or only males. Bringing a female into an all male environment can change the situation. Castration can have an effect on the male's personality. Often it will take the edge off a "rowdy" animal, especially if they have reached puberty.

The simulation of breeding is a behavior seen in very young animals and even females. This can be a display of dominance rather than a hormonal drive. The male often will not be as aggressive with other males and less territorial than before. However, even though castration has been performed, certain behaviors may continue. A lot depends on the individual, the environment, the upbringing, the age, and the management.

The older the male the more set in his ways he may become. Many males that have been used for stud, that are castrated later in life, remain somewhat territorial but lose the feisty edge. It can also improve handling and performance as it allows the animal to be more focused on the task at hand.

The actual surgical and anaesthetic techniques used will depend on what your veterinarian is comfortable with. The llama or alpaca is usually anaesthetized since they are very sensitive animals with excellent memories. Some of our tranquillisers are good enough analgesics (pain relievers) to allow standing castration. Having the incisions between the rear legs is less visible than having the incisions to the rear, more under the tail. Since the llama and alpaca have relatively small testicles there is usually minimal swelling afterwards. I usually suture everything closed. This can be done by suturing the underside of the skin with absorbable sutures. I make it a habit to tie off the cords/blood supply very securely. With the excellent chemical restraint we have and non-irritating absorbable sutures, most animals do well. Hygienic conditions are of utmost importance. While the older male can be safely castrated, as with any species there can be more potential for risk in the mature adult. The use of anaesthesia or heavy sedation and analgesics usually enables the animal to handle the procedure just fine.

When anticipating using a stud for your breeding program you should allow the male to be at least a year and a half or even two years before trying. With alpacas we say three years of age but most are fertile before this age, if they are of good fertility and have had proper nutrition. Genetics is important in most species with regard to fertility so we should pay attention to the age when first fertile when dealing with South American camelids. Reports of males impregnating females at nine months of age are rare. Separating them from females at weaning is a safe measure, assuming you are weaning around six months of age. I have not heard of any pregnancies attributed to a male this young. Please inform me if you know of a confirmed case! If you have fewer animals or like to keep the young males with females then you may be safe up to a year of age. After that you are gambling. To be absolutely safe you should separate the young males at six months so there is no risk of them impregnating females.

To prevent excessive long bone growth it is better to wait until the males are at least one and a half to two years of age. On a practical basis, it is probably safe to castrate after a year of age, when management dictates. However, if it is possible to wait until after two years of age, this will allow for more closure of growth plates which will prevent excessive long bone growth. Castrating very young males can lead to tall, straight-legged geldings. It works well to keep the young males together. Even though they often tussle, this is simply part of growing up. However, watch for overly dominant or overly submissive individuals. Occasionally individuals may need to be separated.

Once the male has been castrated he could still be fertile so to be safe, wait six weeks before introducing him into a group of females. Six weeks should allow the system to be rid of fertile spermatozoa and the hormonal behavioral effects to wear off. Again riding and chesting can be a dominance behavior which may not change with castration. Bachelor herds can do well all their life. This is especially true when there are no females around and/or none of the males in the group are used for breeding.

Change this situation and disputes could become more aggressive. Intact alpaca males are less likely to fight than are groups of intact male llamas. Putting a castrated male in with an intact male or males can lead to problems, depending on the personalities involved and the situation. Introducing an intact male into a group of castrated males can also lead to territorial disputes. Be careful and observant with any change. The younger the animals involved in the grouping, the easier they adapt. Females usually get along fine at any age (of course)! Introducing a gelding into a group of females usually goes okay, especially with mature females who will usually put the male in his place.

It is not recommended to castrate before weaning. The industry actually recommended waiting until the males were fully mature before castrating. Waiting until four years of age was recommended. This may have its benefits when the situation allows for adequate control of intact males. As the industry matured and more small farms cropped up with llamas and alpacas we dropped the age gradually.

Try to avoid hot weather and those times when flies are prevalent. Your facilities will dictate how significant a role cold weather has on the decision. Usually spring and fall are the better times of the year to castrate. Since this is an elective (i.e. not life saving) procedure pick your time to minimize complications. While I do castrations year round I try to pick nice days, when the ground is not too slippery, wet or icy. During the summer we do the procedure very early in the day in an attempt to avoid the hot and humid periods. Sometimes males become very aggressive and risk heat stress. This would be an indication to castrate during warmer weather if the males cannot be kept separate.

Be sure there is no scrotal swelling when the surgery is to be performed. You may need to separate the males temporarily before and after surgery if this is the case. A couple days of quiet healing time following surgery would be the safer route, especially in a mature male. Although good planning can often prevent hasty decisions the animals do not always cooperate. Each farm/ranch is different. Each day brings new events. The age to castrate depends on your situation. Use as much logic as possible but be practical. Nothing is set in stone. Weigh the positive against the negative. Think things through and discuss it with your veterinarian. Not every situation is black and white. What your neighbouring breeder does may not be appropriate for your situation.

CQ About the Author Dr. Baum graduated from Iowa State University, College of Veterinary Medicine, completed an ambulatory internship at the Ohio State University, a large animal medicine residency at Cornell University and worked at a racetrack practice before accepting a faculty position at the College of Veterinary Medicine, Virginia Tech. She is the owner of Little Doc's Veterinary Care, a private large animal practice, emphasizing llamas and alpacas. Her special interests are newborns, problem breeders, intensive care, heat stress, nutrition, neurologic problems and physical therapy.

She is very enthusiastic about the llama and alpaca industries and stays actively involved by raising, showing and doing PR with her llamas and alpacas. Dr. Baum has served on the ILR (International Lama Registry) for twelve years, and is both Past President and Past Vice-President.

Currently she is President of the ILF (International Llama Foundation). She is Past-President and Past Vice-President of the Lama Association of Mid-Atlantic States (L.A.M.A.S.). Karen is on the Alpaca Research Foundation board of directors, having filled the roles of President and Vice-President as well as Secretary. She has also written over one hundred articles and handouts and given in excess of one hundred talks which have taken her throughout the United States, Canada, England and Australia.

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HUMAN HYDATID DISEASE

A Forgotten Health Issue?

By Margaret Dorsch
AAA Director for Animal Health, Husbandry and Welfare

Hydatid disease (Echinococcosis) is one of a number of serious diseases that humans may acquire from an animal source - the so-called zoonoses. Other zoonoses of public health significance include Q Fever, brucellosis, leptospirosis and Hendra.

Hydatid disease is caused by infection with a parasitic tapeworm *Echinococcus granulosus,* which is believed to have been introduced into Australia during the period of early settlement (presumably in sheep and other domestic stock).

The occurrence of hydatid disease in humans is believed to be substantially under-reported (< 50% of cases) even in jurisdictions where notification is mandatory.[1, 2, 3] It has not been a nationally notifiable disease since 1999,[3] but is still notifiable in Queensland, South Australia and particularly Tasmania where a systematic eradication program was implemented in 1965. Notification ceased in WA in 2007 and in Victoria in 2001. A perception that human hydatid disease is no longer a disease of public health importance and a lack of awareness of the requirement to notify cases where required probably contribute to the low rate of reporting. However, the conditions for transmission to humans still exist and cases of the disease are still occurring. Areas of extensive sheep grazing pose a significant risk, as do some less common occupational exposures (eg feral pig and wild dog hunters/trappers).

E. granulosus requires at least two species of vertebrates as **definitive** and **intermediate** hosts (see illustration). Dogs and other canids such as dingoes and foxes are definitive hosts in which the parasitic tapeworm grows to maturity. For them infection occurs following ingestion of cysts in mammalian organs (through the eating of offal or uncooked meat). Infected canids in turn shed infective eggs - containing the tapeworm larvae - in their faeces. Intermediate hosts are infected following ingestion of infective eggs. A wide range of grazing and foraging mammals may act as intermediate hosts or reservoirs for the disease including domestic and feral ungulates (sheep, goats, pigs, horses, camels and buffaloes), and marsupials such as kangaroos, wallabies and wombats.[1, 4, 5] Alpacas have also been reported with hydatids.[6]

Humans are infected as intermediate hosts following egg ingestion. This can easily occur when handling or kissing infected dogs or when touching contaminated surfaces. The larval form of the worm is absorbed through the intestinal wall and then deposited by the circulatory system in various organs where cysts may subsequently form. The most common sites of human infection are the liver and lungs. Infection may persist without symptoms for many years. In humans, hydatid disease is usually diagnosed in older adults and often incidentally as part of investigations for other health problems. If left untreated hydatid disease can be fatal.

Before 1965, Tasmania had one of the highest rates of human hydatid disease in the world, with 28 fatal human cases recorded between 1957 and 1967.[1] In 1963, surveys of slaughtered sheep in Tasmania revealed a hydatid prevalence of 35-73% and surveys of rural dogs reported a prevalence of 12.7%. In 1965 a systematic eradication campaign was commenced in Tasmania involving testing and treatment of domestic dogs, inspection of slaughtered sheep, community education programs regarding safe slaughtering practices and farm hygiene as well as hand washing after handling dogs, and prohibition of feeding offal to dogs. This resulted in a marked reduction in hydatid disease, as borne out by a recent Tasmanian study.[1] Tasmania was declared provisionally hydatid-free in 1996 and strict provisions continue to apply to maintain this status.

E.granulosus infection continues to occur commonly in mainland Australia, predominantly in cooler regions with high rainfall. In 1999, a total of 29 cases were notified Australia wide[3] but this is an under-estimate of the true prevalence given the known under-reporting and lack of a requirement for notification in NSW. One estimate suggests 80-100 people are diagnosed with hydatid infection per year.[1]

A survey in NSW and the ACT from 1987 to 1992[2] found the highest prevalence in the populations of north-eastern and south-eastern NSW (including the ACT), with a mean annual prevalence of up to 23.5 cases per 100,000 population, a rate comparable to rural Tasmania before the eradication program.[1]

The reservoir of infection in native and feral animals is a significant obstacle to eradication in mainland Australia. Surveys have shown that kangaroos and feral pigs have been involved in passing hydatid disease to hunting dogs.[4]

The recent Tasmanian study highlighted the risk of recurrence of hydatid disease in that state, despite the eradication program and ongoing quarantine measures.[1] New infections were identified in 1988 and 1997 with the latter being traced back to a dog introduced from the mainland.

This Tasmanian study provides a timely reminder that hydatid disease is not gone from our midst and for the need of good hygiene around dogs and farm animals. Offal should never be fed to dogs (and is illegal in most jurisdictions), and farm or hunting dogs should receive regular worm treatments. Those handling farm dogs should ensure they wash their hands properly to minimise the risk of inadvertent ingestion of faecal matter and exposure to *E. Granulosus* eggs.

I was prompted to write this article after receiving a December 2013 article in the Medical Journal of Australia (Med J Aust) relating outcomes of a study of human hydatid disease in Tasmania.

1. O'Hern Jennifer, Cooley Louise. A description of human hydatid disease in Tasmania in the post-eradication era. *Med J Aust* 2013: 199(2); 117-120.

2. Jenkins DA, Power K. Human hydatosis in New South Wales and the Australian Capital Territory, 1987-1992. *Med J Aust* 1996: 164; 14-17.

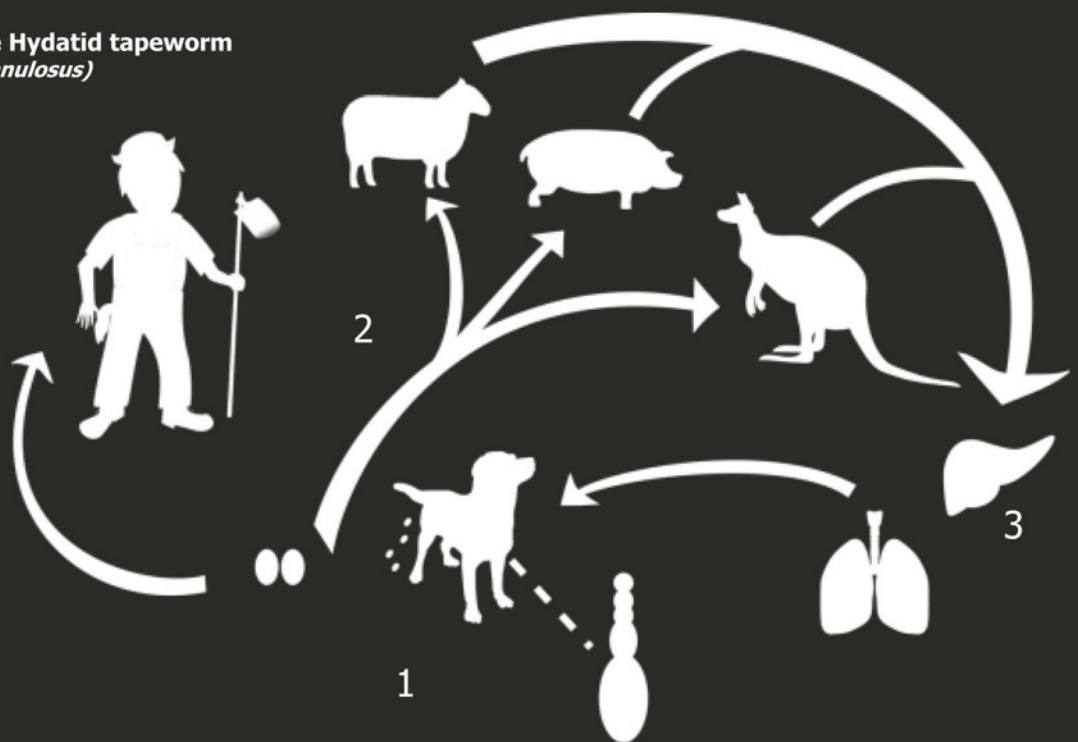
3. *Communicable Diseases Intelligence* 2001*:* Vol 25 (4). Department of Health, Australia.

4. *Diseases acquired from animals.* 1989. National Occupational Health and Safety Commission. AGPS, Canberra.

5. King S, Hutchinson G. 2007. Hydatids - you, too, can be affected. NSW DPI PrimeFact 475. (see www.dpi.nsw.gov.au)

6. Sanchez E *et al*. *Echinococcus granulosus* genotypes circulating in alpacas (*Lama pacos)* and pigs (*Sus scrofa)* from an endemic region in Peru. *Memorias do Instituto Oswaldo Cruz* 2012: 107 (2).

Life cycle of the Hydatid tapeworm
(Echinococcus granulosus)



Source: Diseases acquired from animals. National Occupational Health & Safety Com,ission. AGPS, December 1989

Winter Manage Your Herd

Animal Health & Welfare Article compiled by Irene Garner

Low temperatures aren't necessarily the problem; it's when heavy rain and especially wind are added to the equation that a breeder could have a sizeable problem on their hands.

Pre-Winter Planning

Autumn is the ideal opportunity to identify that the animals that will need extra TLC during the winter months and you can plan your groups accordingly. Logically, special groups will include new mums and cria, late term girls and weaners but also consider the elderly and infirm and those just coming out of ill health.

Fleece Length

Fleece length is crucial to how well an alpaca can handle the rigours of winter. Time your shearing to ensure that your alpacas arrive in the depth of winter with a minimum of 7cm fleece length. However, a huacaya that is overfleeced could still be at risk. Heavy rain will weigh an excessive fleece down, thus creating an impressive part along the spine that will allow moisture to penetrate the fleece and chill the skin especially with a serious chill factor. If shearing in late summer / early Autumn, ask your shearer to use a snow comb which leaves about 1 cm of fleece on the animal.

Shelter

You don't need to build the Taj Mahal to provide shelter for your animals, as long as it's dry and protects them from the wind. By building a 6x3 metre paddock shelter and installing gates within the shelter, you will be able to confine the animals during a bad weather event.

It is usually the wind chill factor that is the killer in bad weather, as it can chill a wet alpaca to the bone. Windbreaks and access to gullies can provide crucial shelter for animals. Consider planting a X-shaped windbreak, which will allow shelter from any direction, making the arms some 3 or 4 metres long.

Coats

For cria that are exposed to the elements, an oilskin coat with a fleecy lining will provide high assurance that they will stay dry. If you are using coats made from polyester or plain cotton and if the cria is going to be mostly outside in the elements, ensure that you purchase the highest grade coat available and keep watch on the lining for dampness as they may need changing on a regular basis.

For older animals that are not producing the fleece length and those coming out of ill health, foal rugs are excellent for keeping them dry and warm. When rugging an older animal for the first time some may be prone to panic and could injure themselves. Start by placing the rug on the animal when in a small pen, observe closely it's behaviour and be prepared to intervene quickly. If the animal continues to stand in a frozen state it could explode into panic when released from the pen; removing the coat in this circumstance before the explosion is highly advisable. If the animal starts to move around the pen quietly and will accept feed, then moving the animal to a larger area for further behaviour monitoring before release into the paddock is warranted.

Winter Birthing

If you are expecting a winter birth, being well prepared is crucial. Have on hand a straw laden shed for shelter, a hairdryer, plenty of bubble wrap, cria coats and if you or your vet don't have plasma in the freezer, know where you can get some quickly. Newborns do not dry off well in winter and they will be cold, which means they are disinclined to want to rise and feed from mum thereby missing out on vital colostrum. Drying your newborn completely with a hair dryer takes ages but it will warm them up and they will be more interested in feeding. If you suspect they have had insufficient colostrum, go straight for the plasma transfusion. A partial failure of immune transfer can see a cria kicking along okay for a while but they quite easily crash a little further down the track and often by then it is too late to bring them back.

Feeding

Increasing rations as winter deepens is important to ensure the alpacas maintain condition. In addition, when serious weather hits, feeding out liberal amounts of high quality Lucerne hay will positively benefit the chances of the adult alpaca coming through okay.

Vitamins

When the weather becomes regularly overcast many breeders give their animals an oral drench or injection of vitamins. Regular Vitamin D supplementation from mid autumn through to spring is crucial for growing alpacas, particularly cria and it can also positively benefit adults. Commonly used injectable products are Vitamen ADE, Hideject ADE or DBAL D3. ***A note of serious caution:*** DBAL D3 contains 1 million IU/mL of Cholecalciiferol and must only be used under the supervision of your Veterinary Surgeon as the symptoms of vitamin DD toxicity often mimic those of deficiency.

In some circumstances, alpacas can also benefit from phosphorous supplementation in addition to Vitamin D. Your vet can advise the most appropriate Vitamin D supplementation programme for your area. VAM (vitamins and minerals) is a general pick-me-up that is well favoured by alpaca breeders - intra-muscular injection or oral paste of 1 ml per cria, 2ml per adult.

Hypothermia

Normal body temperature is 37.5 degrees C – 38.6 degrees C. Combined cold, wet and windy conditions can lead to hypothermia, particularly in cria. It is important to tackle this immediately. First dry the cria off and get the animal in out of the weather. If problem continues, treatments can include immersion in warm water (like bathing a baby) and use of a hair dryer or spinal massage to help warm the body core. It is inadvisable to rub ears and legs to warm a cria as this takes heat away from the core. Hot water bottles are another option. If a cria is really cold (<32.3 degrees C) there is not enough metabolic heat to maintain warmth and blankets or plastic bubble wrap in addition to heating methods may be required.

Nursing mums need extra energy intake when coping with producing milk and keeping warm. Therefore, if there is any likelihood of cold nights plus rain, feed out Lucerne hay night and morning until the cold/wet snap subsides.

For an individual cria or larger animal warm saline enemas are recommended. Make up 1 teaspoon of salt in 600 ml of water at 40 degrees C, an ordinary clinical thermometer will do for this. For a cria use 50 ml injected slowly using a 50 ml or 100 ml syringe or go to your chemist and get a rubber enema bulb. For an adult use 200 ml. Repeat the warm saline enema each hour.

Bureau of Meteorology –www.bom.gov.au

By routinely checking the Bureau of Meteorology web site you can give yourself valuable time to prepare for a weather event.

Acknowledgements:

- Elizabeth Garner-Paulin. *Winterproof your herd. Alpacas Australia magazine (2007) issue 53*
- Rosemary Eva & Liz Coles. *Hyothermia in Alpacas. Alpacas Australia magazine (2005) issue 46*
- Carolyn Jinks *Is There a Thermometer in your Alpaca Kit? Alpacas Australias magazine (1995) Issue 13*
- *Dr Richard Dixon* Healthy Wintering. *Alpacas Australia magazine (1994) issue 8*

Reprinted from Issue 55 Alpacas Australia

Certificates Of Appreciation

Each Regional Committee can nominate one member from their Region each year for consideration by the Board. The nomination must be in writing and received at the AAA Office by 31st July. The AAA Board may award Certificates annually to any member outside of the Regional nominations.

Criteria to be considered but not limited to:

- Length of service for the member is to be 10 years +.
- Member is to have held an Office or Leadership position over a number of years at a National and/or Regional level.
- Made a significant contribution to a successful AAA project.
- Has been actively involved in shows, regional activities/ workshops.
- Volunteered their services to assist the industry via working parties/ panels/ committees.
- Written documents to support the industry's progress.
- Is committed to the long term viability and sustainability of the industry.
- Is a consistent supporter of AAA events/activities.

It is with great pleasure that the Board announce that the following members have been awarded Certificates of Appreciation for 2013 and the Board would like to thank the members for their contribution to the industry.

John & Julie Lawrie

The Central Western NSW Region would like to nominate John & Julie Lawrie for a certificate of Appreciation. This couple have dedicated themselves to the alpaca industry in Australia from its inception.

They have supported new entrants into the industry by writing a wide range of supporting literature including herd guards and several articles on pastures.

John and Julie have always been big supporters of education helping to run some of the first new breeders seminars and assisting in the running of the first national alpaca auction which was held in Mudgee NSW. Both have held support roles for many years including PR, various showing roles including ring stewarding and convening shows. They have both been active in getting out to promote alpacas to the public at any opportunity and have provided invaluable backup and advice on all things alpaca to anyone in the industry that needed it.

Their long term dedication, support and promotion of the industry as a whole places them front and centre for well-deserved recognition by the industry that has benefited from their efforts.

Robbie Cuthill

The members of the Victorian Western Region would like to nominate Robbie Cuthill for a Certificate of Appreciation for his outstanding commitment to the Region over a long period of time.

Robbie has been involved in the industry since its early days and has worked to help its growth as a National prospect. He served as President of the region for many years and has been fleece liason officer among other committee positions. Currently he holds the position of Treasurer.

Robbie was involved early on as an active member of the AAA Co-op and subsequent incarnations of that organization. He is an enthusiastic advocate of such things as the A.G.E. project and a regular convenor of shows and events in the region. Always ready to support new breeders in the Region and willing to take time to offer advice.

Always quick to volunteer for regional projects he has given RASV shearing demonstrations and taught and encouraged many people to try alpaca shearing. As well as being fleece liason officer and running many fleece workshops over the years he has done a great deal of work in preparation for shows and events behind the scenes, particularly raising the profile of the AAA brand and the links to the local alpaca breeding community. He has attended the World Alpaca Fiesta in Arequipa in 2007 and the World Conference in Sydney and he and Kate are regular providers of hospitality for regional events at cost and inconvenience to themselves.

Wendy Summerell

The South Queensland & Northern NSW Region would like to put forward a nomination for a Certificate of Appreciation for Wendy Summerell of Starwood Stud.

Wendy Summerell was a AAA member at the formation of the Queensland Region and although not on the regional committee herself, supported her husband Ross as Newsletter Editor who initiated the first regional newsletter.

When the South Queensland & Northern NSW Region was formed, Wendy was a foundation member and held the position of Regional Secretary consistently for a period of 12 years from 97/98 to 08/09 and also held the position of Vice President for 2 years for the period 09/10 to 10/11.

Wendy and Ross proudly opened The Cove Alpaca Shop at Sanctuary Cove on the Gold Coast and helped to introduce the general public to alpacas and the beauty of alpaca fibre by selling garments, scarves, hats and other related products. While on their way to their shop one day in September, 1995, Wendy and Ross were involved in a terrible car accident which put them both in hospital resulting in life changing circumstances. When other people would have given up, Wendy did not, and as soon as she was physically mobile again, put great enthusiasm into building up Starwood Stud. Wendy was a very successful exhibitor, supporter and often convenor of local shows and attended the Brisbane Royal Show regularly and has been awarded several Supreme Champions. Wendy was very keen to exhibit alpacas at AAA National Shows and attended as many as she possibly could.

In her role as Regional Secretary, Wendy would travel for many kilometres and hours to attend regional meetings in far reaches of our large region. She did this to be fair to all members wherever they resided and to make everyone in SQNNSW Region feel welcome. She was instrumental in recruiting members to the committee and worked hard to help them contribute positively. Wendy convened the Gold Coast show for many years and was the fleece steward at the Royal Queensland show until recent times. Wendy helped with the planning of the first judging at Grafton Show and her knowledge in convening such events was always sought. Not only did Wendy help with the organisation of such events, she also clocked up several hundreds of kilometres using her (sometimes very new) vehicles to tow the heavy regional trailer laden with gates to Toowoomba, Ipswich and Gold Coast Shows and back again. She also was a willing worker with setting up the pens at these shows. A great feat for such a slightly built lady.

Wendy has always been very skilful in wording interesting articles detailing the history, practical management of alpacas and the future of the industry in different media to promote regional events. She could be counted on to submit reports about events held with entertaining and sometimes humorous accounts of what took place, and never failed to thank others who helped make the event possible. In her role as Secretary, Wendy kept meticulous minutes and correspondence and maybe she should have considered a career in journalism but fortunately for the members of the AAA she has devoted 19 years of her skills to contributing to the Australian Alpaca Association at both a regional and national level.

Ron & Rose Reid

Ron & Rose have been members since the late eighties. Ron is a AAA level one and international judge having attended and passing the international judging school in Peru about eight years ago.

Ron's contribution (with Rose's support) is extensive. He was president of WA Central region for a number of years and a committee member for many more. Ron instigated our Autumn show (Whiteman Park) and convened the first thirteen. He also convened five Perth Royal shows and one winter show (Ascot). Ron has organised numerous seminars and functions along with making presentations at many of these. Ron gives freely of his time and he is always happy to talk to other breeders offering coaching and advice in any area of alpacas. Ron has been a member of the S & J reference panel, and has delivered a number of stewarding courses. He always gives a positive outlook and encourages members to become involved.

Ron & Rose provided use of their "Barn" for meetings and functions for many years. We feel you would be hard pressed to find anyone who has given so much to our association. Although Ron has been at the forefront it would not be possible without Rose's support and involvement in most areas, hence a joint nomination.

PACA PICS

This Issue's Winner

" Tiptoe through the tulips…"
Hans Van Poppel - Joma Alpacas VIC

" Do I have to look after ALL of you?'
Ken & Adrienne Wray, Kenadi Alpacas NSW

" Hey, wake up! I'm talking to you!"
Maureen Foss, Rock View Alpacas WA

"Welcome"
Kelli Pfeiffer - Pfeiffer Park Alpacas QLD

" Are you sure you don't want this leaf as well?"
Penny & John Pittard - Currabungla Alpacas NSW

Send us your Paca Pics. Please send your paca pics as high resolution .jpg images to the AAA office via email, as an email attachment. Email: info@alpaca.asn.au

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