Alpacas

AUSTRALIA

ISSUE No. 29 1999

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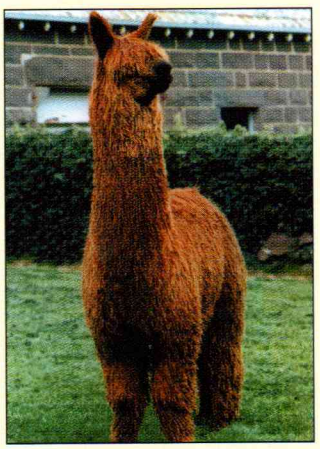

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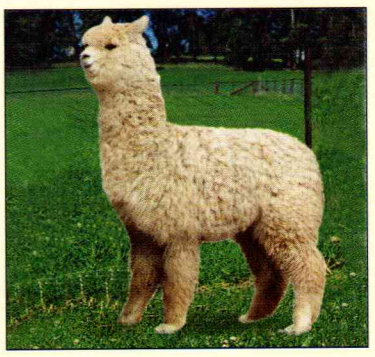

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Alpacas AUSTRALIA

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A message from the President

I must admit to a personal quandary: do I celebrate the turn of the century like most other people on December 31 this year or do I wait until the same day next year when it really is the end of the 20th century? Never being one to let any opportunity slip by, I think I'll do both New Years' Eves and so cover all bases!

There is one thing of which I am absolutely certain – 2000 will be a great year for our industry.

The enthusiasm of the members whom I am lucky enough to meet at AAA functions and shows, and those who take the time to contact me by phone, fax or email have a strong underlying faith in these marvellous animals and the future of the industry. I doubt that anyone left the National Show and Sale in Tamworth without a heightened sense of enthusiasm and confidence for the future and, I am sure, drew inspiration from it, as I did. While convenor Keith Hollingworth and his superb team of supporters can take well earned credit for a magnificent spectacle, it was the the grass roots support of the exhibitors (and non-exhibiting visitors) that made this an outstandingly successful and memorable weekend.

The effect of this goodwill and the infectious confidence percolating through to our broader membership means we really will be set for a great opening to the new century!

On the home front, your new National Committee has met for the first time and adopted a very professional and positive approach to the management and leadership of both the Association and the industry.

You can be assured that the National Committee will be building on the very solid base already in place.

We do need, however, a greater input from individual members who have skills and talents that will complement our goals and ambitions for the future. We have decided to experiment with some task-defined projects that will be outsourced on a contract basis this financial year.

While we recognise and appreciate the huge effort put in by volunteers who give freely and generously of their talents and time, we also recognise the need for some technical and professional expertise from outside our membership base.

The National Committee is acutely aware of the need for us to get the best available advice on a range of matters that members of a professional organisation should be able to reasonably expect from its association.

The defining of suitable tasks and the management of the contract specialists will present a challenge that will return real value to the stakeholders in the Australian alpaca industry. It would be particularly useful if members could contact National Committee members with ideas for these projects in the year 2000 as we set about lifting the profile and possibilities of alpaca for Australia's primary producers.

On behalf of all the members of the National Committee, I sincerely trust that each and every one of our members has a truly rewarding and satisfying new year.

Just as I have an unshakeable faith and belief in this industry, I am sure that all of you can look forward to a year of change, innovation and growth. If enough of us want it badly enough, it will happen. If each of us nurtures the faith, promotes the benefits and practises the belief, we will succeed – and isn't that what we all set out to do when we first came under the spell of these wonderful animals?

Ian Watt

MERRY CHRISTMAS TO ALL OUR MEMBERS
FROM EVERYONE AT NATIONAL OFFICE

Remember, we will close at 5 pm on Wednesday 22 December 1999 and re-open at 8.30 am on Thursday 13 January 2000.

Work experience USA style

BY KYLIE HOLLINGWORTH

On 30 March this year, I embarked on the working holiday of which any young alpaca enthusiast would be envious. I was fortunate that Mike and Julie Safley of Northwest Alpacas and Greg Mecklam and Diana Yates of Pacific Crest Alpacas welcomed me with open arms to help them with the day to day running of their ranches and also help prepare their large show teams and travel over the USA with them to show the alpacas.

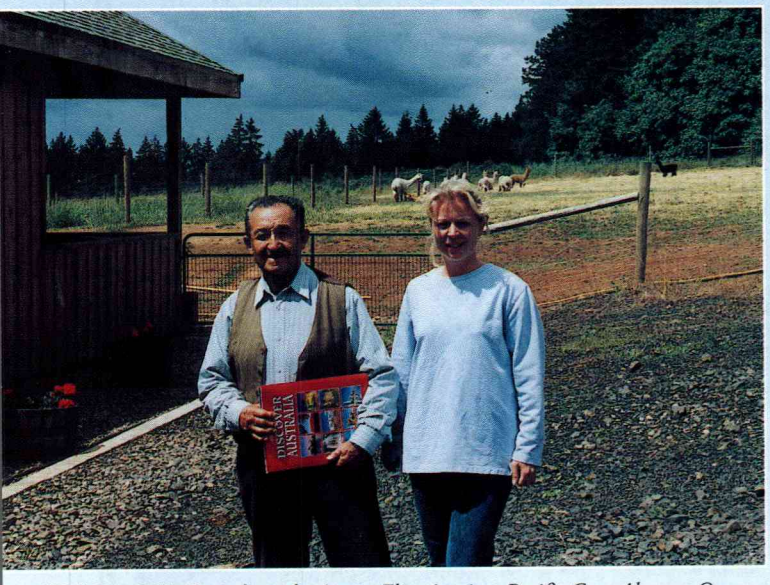
I started my three-and-a-half month journey at Northwest Alpacas just in time for the spring birthing season and shearing. All females are paddock bred and then ultrasounded. The gestation is estimated and cross-checked with the dates the female was exposed to the male(s). Every month, a new group of females is brought up to the maternity paddock, ready for birthing. When they are about one week old, all crias are micro-chipped for permanent and easy identification. No brass registration or plastic herd tags are used. When it is time to register the alpacas, blood is taken and sent in with the registration application to be blood-typed. The blood is matched with the parents' blood and parentage is confirmed.

Shearing alpacas in the U.S. is a little different to what we see over here in Australia. I saw some very interesting and unusual haircuts and methods of shearing during my stay. I spent a few days at different ranches helping to shear the alpacas and saw some shearing done at a few of the shows. Most alpacas are shorn standing up, with only a small number shorn on tables or on the ground, tied out. I was very sceptical about shearing them standing up (having heard some terrible stories of injuries to shearers and alpacas) but it was very easy and done with little fuss. Most of the alpacas, including the older and imported ones, were happy to stand and get shorn. Since I've been home I have shorn a couple standing up without any problems.

The first show I attended was the All American Alpaca Futurity in Oklahoma City, with over $250,000 in prize

Pacific Crest Alpacas main barn.

Northwest Alpacas, my home for 6 weeks.



With Don Julio Barreda at the Accoyo Elite Auction, Pacific Crest Alpacas, Oregon.

money. Only alpacas whose sire had been nominated by the owner were eligible to be entered. We had up to 30 alpacas to prepare for this one show and spent many hours halter training and grooming. On the Monday before the show, the alpacas were loaded onto the fully air-conditioned semi-trailer for their three-and-a-half day journey to Oklahoma City. We all followed by plane on the Wednesday to be there to meet up with the alpacas which arrived Thursday afternoon.

Friday and Saturday were for preliminary judging (judges were Dianne Condon, Maggie Krieger and Jodi Robinson) with finals being judged on the Sunday. There was also an auction held on the Friday night, which gave people the opportunity to buy an alpaca which had been entered in the show on the following days. The auction grossed over $US850,000 with over 40 lots being offered for sale.

The last show I went to with Mike Safley was a local show in Hillsboro. About 250 alpacas were judged over two days by Dr Julio Sumar and Amanda VanderBosch. On the Friday and Saturday nights, Dr Sumar gave short lectures on the suri and new and updated information on breeding and fertility of camelids.

Next stop was Pacific Crest Alpacas for the last six weeks of my trip. As soon as I moved to Greg and Diana's property (a place on the hill with a huge barn you can see from Highway 26 and probably from the moon!), it was full steam ahead. We had to prepare alpacas for our long trip to the AOBA show and conference in Ohio and also the Wool Market show in Estes Park, Colorado on our way back. We also had to get the farm and auction animals ready for the Accoyo Elite Auction that Greg and Mike were hosting and which was going to be held in the big barn on the Fourth of July weekend.

The 2,500 mile journey to Ohio was drawing near and we needed to have enough time to get to Ohio by Friday at noon. We spent the weekend before preparing the truck and trailer with all of the display equipment and enough feed for up to 20 alpacas to last two weeks.

We loaded up the alpacas and left on Monday morning, but only one-and-a-half hours into the trip we had a blow-out on the trailer which set us back about four hours by the time we changed the tyre and had it repaired. We travelled four days and four nights, stopping only for fuel, food and sleep, driving for up to 16 hours on some days. The alpacas, including pregnant females, stayed in the trailer the entire trip with their feed and water being topped up every few hours when we stopped for fuel (which was quite often!) All seemed very content in their mobile home.

We eventually arrived on Friday afternoon in 100° heat and 98% humidity. Fortunately, the venue was air-conditioned but the animals, who are used to a cooler climate in Oregon, still felt the humidity a little.

The show had about 500 alpacas entered with three judges judging simultaneously in three rings over two days. The auction was held on the Friday evening with top prices being paid for a black female suri ($US47,500), a fawn/white suri female ($US41,500) and a Peruvian huacaya female ($US40,000). There were five donated alpacas in the auction which sold for $US123,500.

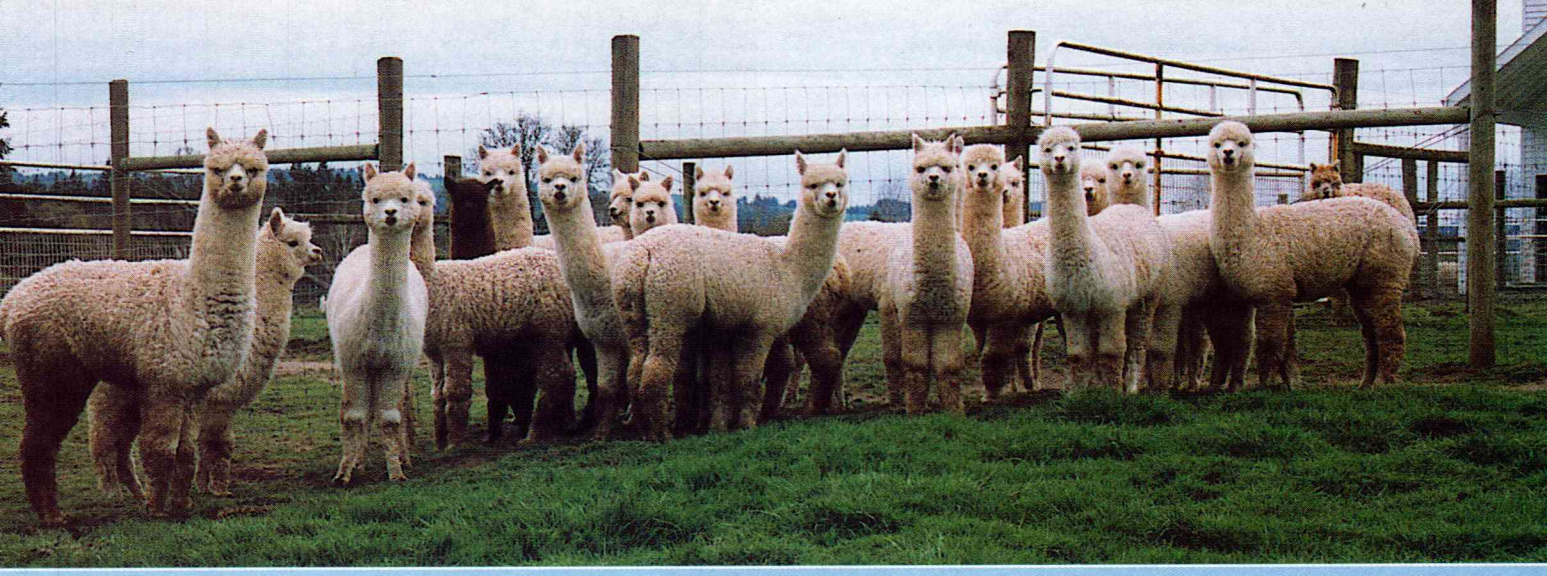
On Monday morning we again loaded up the truck and set out for Estes Park in Colorado for the Wool Market show. We arrived late on Wednesday morning and were able to let the alpacas out into a large dirt arena for a few days before the show started on the Saturday. They were most grateful to be able to run and play with their friends, roll in the dirt and get as grubby as they possibly could. We spent a few days doing some sight seeing and relaxing.

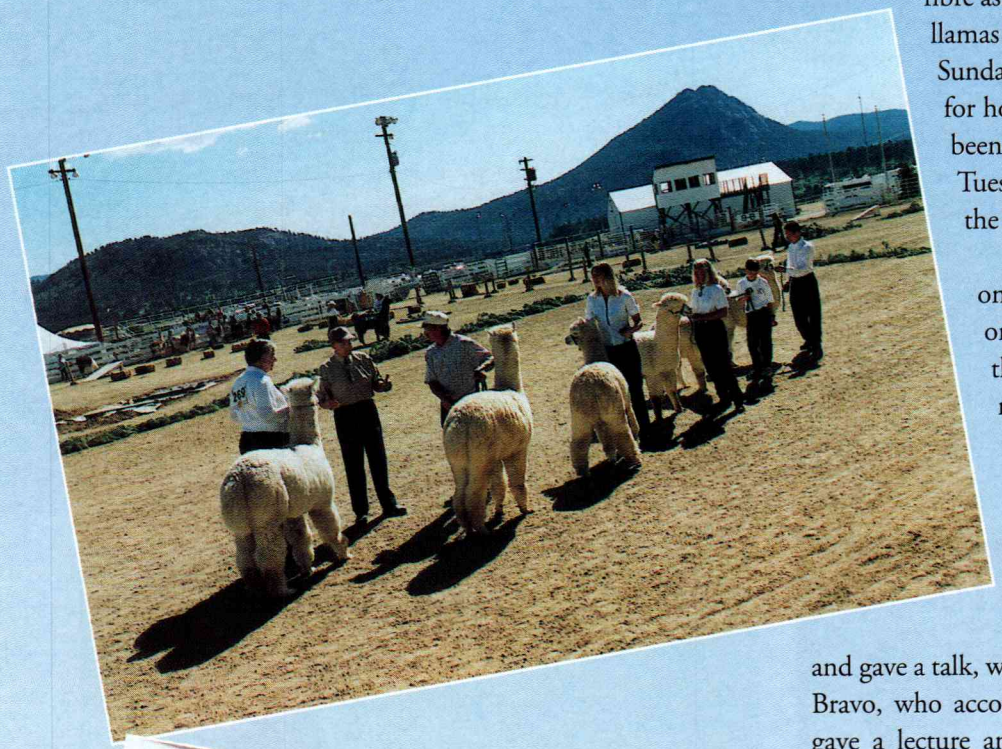
Relaxing after a long day showing at the All American Alpaca Futurity in Oklahoma City.

The Wool Market show is similar to agricultural shows. Any animal that produces a fibre which can be used in clothing (rabbits, sheep, llamas, goats, alpacas, etc) are exhibited over two days. The alpacas were housed in two large marquees and shown outside in a large arena next to their cousins, the llamas.

The llamas that you see in the USA are very different to those that you see over here.

They are the most gorgeous and placid animals – and I thought I would never say that about a llama! The llamas I saw in Estes Park were beautiful, producing a single coat of





fibre as fine as 14-15 micron, as well as the rare suri llamas which are becoming very popular.

Sunday afternoon we packed up again and headed for home – at least our trip on the way back had been split up. We arrived back at Pacific Crest on Tuesday night, to the delight of the alpacas and the drivers.

No rest for the wicked though! There were only ten days to go until the Accoyo Auction on July 3 and 4, and there were plenty of things to do to get ready. The show alpacas, now home, were put out and the auction animals were brought in so I could start working on them.

A stage was to be erected in the barn for the auction as well as seating and tables for over two hundred people.

Don Julio Barreda was the special guest and gave a talk, which was translated, on the Saturday. Walter Bravo, who accompanied Don Julio and his daughter also gave a lecture and slide presentation to the guests during Saturday.

On Sunday, the auction got off to a great start with the highest price being for a medium fawn suri female at $40,000 and, to top it all off, we had a great fireworks display to celebrate the Fourth of July.

It was very interesting to make comparisons between the ways we run our farms in the two countries. Some differences were very subtle, others quite major. All in all, I had a fantastic three-and-a-half months and made some great friends along the way. It was an experience that I will never forget.

Top: Northwest alpacas – Show team '99.

Centre: Judging at Estes Park Wool Market.

Judging at AOBA, – Ohio rings 1 and 2.

Shanbrooke Alpaca Stud

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- **Junior Champion Male**
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Melbourne Royal 1997

- **SUPREME CHAMPION**
  Shanbrooke Society Lass
- **Junior Champion Female**
- **Junior Champion Male**
- **Intermediate Champion Male**
- **Most successful exhibitor**

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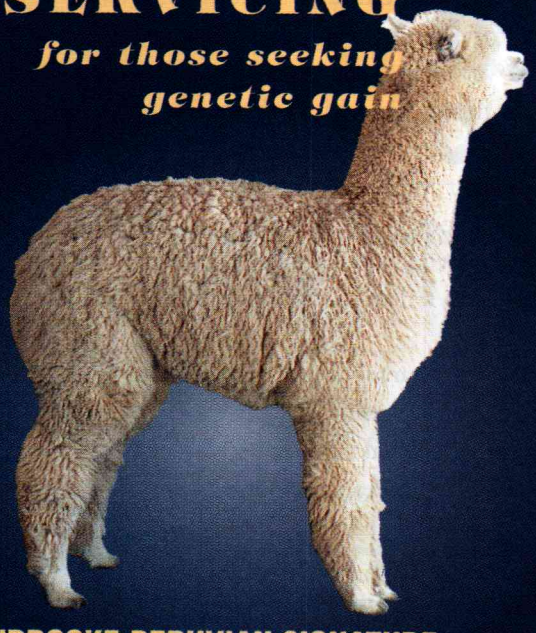
for those seeking genetic gain



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Shanbrooke High Society; Shanbrooke Society Lass; Shanbrooke Enchanter

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A spin-off from efforts to find environmentally sound methods of treating fibre to make products machine-washable has been the discovery that wool undergoing Nagawa's new Enviro-treatment has an anti-bacterial quality. In this new process, the surface cuticle of fibre, which causes felting, is peeled off using hydrogen peroxide. This eliminates the need to use chlorine and coat the fibre with chlorite resin. Dioxin can be generated as a byproduct of chlorine processing, but Nagawa's technique eradicates this problem.

Additionally, it seems that the Enviro-treatment may transfer to the processed fibre its original protective functions, rendering it bacteriostatic. According to Aki, this bacteriostatic quality has been confirmed by researchers from the Medical Department of Tokyo University and the Life Science Department of the Tokyo Institute of Technology, and studies of the mechanism are continuing. (There are significant possibilities for this application in the manufacture of medical dressings.) The Enviro-treatment process can be applied to alpaca and angora rabbit tops, with perfect washability obtained.

The cost of processing fibre in Japan is very high and a number of mills have closed. In a joint project with South Africa, the Nagawa company has recently established a spinning mill in that country to process mohair, with the machinery brought in from Japan, as well as personnel to provide training and support for the local spinning industry. Aki sees no reason why such an arrangement could not eventuate here in the future, enabling us to process alpaca in Australia with the benefit of Japanese expertise. Although it may seem cheaper to relocate to a country such as India, Aki prefers the idea of processing where the raw product is produced and where regulations governing industry are consistent and not subject to constant change.

Mr Ogura seems impressed with the effort Australians are making to achieve success in the alpaca industry and, no doubt, he will be watching how quickly we can advance our know-how and the quality and quantity of fibre we produce. And why not? If we're able to deliver, Japan is ready to do business.

These are in your face animals . . .

Kate Graham on Christine Navarre

Christine Navarre, with husband, Joe.

In Adelaide for the Australian Alpaca Association's 1999 National Conference, Dr Christine Navarre, was realising a long held ambition to visit Australia.

Christine grew up in Louisiana and trained as a veterinarian at Louisiana State University. With a father in the dairy industry, it's hardly surprising that her main interest lay in large animals and that her first veterinary appointment after graduation, in 1990, was with a dairy practice in Texas. After twelve months, Christine was keen to do a year of residency and was pleased to be accepted into the Texas Agriculture and Mechanical College. The vet school at Texas A & M has a focus on large animals, including South American camelids and ostriches. David Pugh, head of the College of Veterinary Medicine, encouraged Christine's involvement in camelids.

'At first I was scared to death of them,' she laughs. 'They're not like sheep that run away from you. These are in-your-face animals that walk right up to you and look you over. Llamas especially are quite big, and I knew of their reputation for spitting, so I felt very intimidated. But once I began working with them I got to know their good points. They remind me of goats – dogs with a rumen!'

After completing her residency in Large Animal Internal Medicine and Masters degree at Texas A & M, Christine accepted her current food animal hospital position with the Department of Large Animal Surgery and Medicine at Auburn University. Her primary interests are food animal and South American Camelid gastrointestinal and neonatal diseases. In 1997, she presented material on these topics at the AOBA Alpaca Conference in Colorado.

Home is an old farmhouse on a 5000 acre property where her husband, Joe manages a large cattle operation; some of the land is also leased for cotton growing.

Three-year-old son, Beau, enjoys their menagerie of animals – the not-very-productive chickens (his favourites), the dogs, cats, horses, and a small dairy herd – in fact, just about one of everything except an alpaca. However after viewing the new AAA video, Christine's dyed-in-the-wool (can that be right?) cattleman husband, who wouldn't even look at a sheep, amazed her by commenting that perhaps they should think of getting some of those alpacas – testimony to the effectiveness of the production!

Christine has just been granted tenure and a promotion at Auburn University and says there is no shortage of research projects. The problem is building up research herds and obtaining finance. She would like to work on finding better ways to treat animals, for example fluid therapy: the types of fluids and administration techniques for the nutritional support of sick animals, so that owners have easy ways to get some nutrition into the animal that is not eating.

'Also we don't yet know enough about the effects of over-feeding good nutrition,' Christine says. 'There has been a focus on poor nutrition, but there are also dangers associated with too much of a good thing. We need to be asking how, over a period of years, has getting rid of the surplus protein in the very good diet been affecting that animal's kidney and liver, its longevity, as well as the fleece quality?' She points out that, nutritionally, animals don't need more than 14% protein, and those on high 18-21% protein hay are in danger of the effects of over-feeding.

'Much of the nutritional research is coming out of Australia,' Christine says, 'and there is a useful sharing of information between our countries to advance our combined knowledge and understanding.' Other important issues which require ongoing study are reproductive and fertility problems, evaluating for breeding soundness and, of course, genetics.

Christine encourages her veterinary students to become involved with SACs and is quite attached to the PR animals at the University's vet school: an alpaca called Chip, and Rocky, a brown and white llama-guanaco cross. Rocky was given to the school after David Pugh delivered the cria, responding to an emergency call-out while he was driving to the hospital with his wife in labour with their own first baby. Just a small diversion.

After the conference Christine and Joe were looking forward to seeing Kangaroo Island and then travelling to Alice Springs, Darwin and Cairns before returning home after their brief two weeks away. They'd like to come back to see more one day. And who knows? Maybe they'll be breeding alpacas by then.

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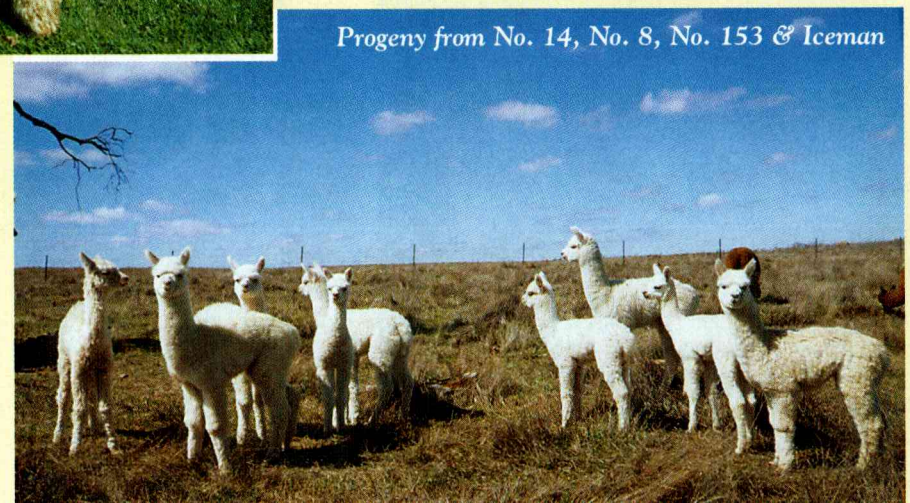
Sire of the future
Cedar House Braveheart



Progeny from No. 14, No. 8, No. 153 & Iceman

CEDAR HOUSE ALPACA STUD 'Kenilworth', Yass
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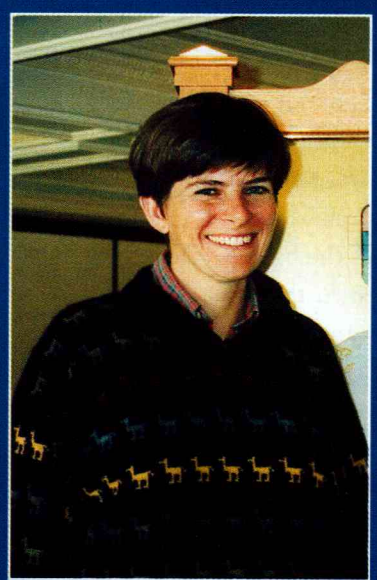
The scientist and the farmhand

by Kate Graham



Dr Jane Vaughan

'Fascinating!' That was the word I heard most after the National Conference session on 'The role of reproductive technologies in genetic improvement and multiplication of alpacas', presented by Dr Jane Vaughan and Prof David Galloway, who was filling in for colleague Prof Michael D'Occhio. Jane is working with Professor Michael D'Occhio of Central Queensland University, on an investigation of ovarian follicular dynamics in alpacas as part of an RIRDC funded Doctor of Philosophy in alpaca reproduction.

The three year project commenced last September and Jane was at the conference to outline her research on follicular waves and describe what might ultimately be gained for the industry as a result.

The coming together of Jane and Michael was a happy coincidence. They were both speakers at last year's AAA Conference in Fremantle. Jane was there to present a paper on alpaca nutrition with Nick Costa of Murdoch University, while Michael presented material on his work in Peru using oestradiol at the conclusion of one of Julie Koenig's sessions.

The word was that Michael was looking for a vet to help him with a new project for which he already had funding. He needed someone who was obsessed with alpacas, liked travelling, and could start straight away. Jane knew she fitted the bill perfectly (even the need for immediate start – she was unemployed at the time) and immediately volunteered herself for the job.

Jane graduated from Melbourne University with Honours in Bachelor of Veterinary Science in 1988. For the next eight years she worked in mixed practices 'here, there and everywhere' in Victoria, NSW, Qld, NT, WA and overseas.

In 1991, while working with a dairy practice at Finley in southern NSW, Jane discovered an interesting diversion: working with a herd of 500 alpacas at nearby Tocumwal. It made a nice change from being knocked around by cattle. She spent an enjoyable three years there and when the alpacas were moved south into Victoria, Jane decided to move on as

well, heading north to see more of the country as a locum.

A call from Geelong vet Denis Ryan, whom she'd often consulted about alpacas, brought these special animals back into her life. Denis was then working with the Jolimont Alpacas shipment, doing the required animal testing prior to importation. He told Jane that a full time vet was needed to care for these alpacas during their quarantine on Cocos Islands. She followed his advice to apply for the job and got it.

Jane flew to Peru and spent two weeks at Tacna, a small town near the Chilean border, observing how the herd was being managed in their pre-export quarantine. Then, it was off to Cocos Islands with half the shipment on board a DC8; the remainder of the animals followed a week later.

She spent 1996 as veterinarian to more than six hundred alpacas at the AQIS quarantine station on Cocos Islands. Employed by Pat and Rosa Visconte, Jane managed the herd, its nutritional needs, breeding program, and virtually ran the place. She had a ball.

'It was hard work, but great fun and I learned a lot. I suppose it was going to make or break me when it came to alpacas. But it just enthused me more,' she laughs, remembering fondly her 'girls', even the ones that were a bit snitchy.

When the Jolimont work ended in January 1997, Jane was disinclined to return to mixed practice. There was a job at Western Australia's Murdoch University in food animal work: sheep, cattle and pigs. Offering residency in the food animals area, this position suited her because of her genuine interest in sheep and cattle ('...not so much pigs!'). It also occurred to her that she might be able to wheedle someone into including alpacas in the program.

Veterinarian colleagues, Jane Vaughan and Ewen McMilllan (such a close working relationship!) at the AAA National Conference dinner.

'I had my ways and means!' she says, somewhat mysteriously. She had, of course, made contact with prominent Western Australian breeders who had visited the herd on Cocos Islands.

Within six months she was invited to take students on regular fortnightly excursions to Dr George Jackson's property where they could gain hands-on experience with alpacas, doing feet, teeth, castrations, and collecting blood samples. The students really appreciated this part of their course and gained in confidence as they worked with the animals.

'The two biggest things I got out of my time at Murdoch were enthusing people about alpacas, and broadening my knowledge about nutrition. That's been very useful, because it's the basis of the industry. I mean, the first thing you've got to do with these animals is feed them properly. My adage is, "the best animal to treat is a healthy one". It's much better to prevent disease, than have to pick up the pieces afterwards.'

She is taking the opportunity to include some nutritional studies as part of her herd management program for the RIRDC oestradiol project.

Setting up

To get the project up and running she had to acquire an alpaca herd and a place to keep them. David Hopkins a principal of the Bellarine Veterinary Practice knew a local with an unused property that could do with a tenant to keep down the grass. Sixteen animals are now located in a de-stocked ostrich farm on four acres near Geelong, Victoria. This was an excellent location as far as Jane was concerned, with the library and laboratory facilities of the veterinary school at Werribee close by.

The property is ideal for the purposes of the project. Facilities include undercover yards, a good shed (where the ostrich eggs were once incubated) with concrete floor and water laid on. The fencing is secure and there's ample shade and water. Every paddock has its own small shed and the farm boasts its own small hay shed.

Necessary purchases of equipment, such as ultra-sound machines, were made and the services of an intrepid assistant engaged to help handle the animals. This swung the project into action on its three major activities:

- observational study of breeding behaviour and its correlation with ovarian follicular size and plasma hormones;

- investigation of the pharmacokinetics of 17B-oestradiol, ie, what levels it reaches in the blood. (It is now known to be cleared from the system in approximately 12 hours.); and
- investigation of ovarian follicular dynamics using 17B-oestradiol. This involves ultrasounding the ovaries every second day to find out what is happening.

Through this research, it is hoped that a protocol will be developed for reprogramming ovarian follicle growth so that the presence of an ovulatory follicle can be predicted. This will enable breeders to mate their females at a time when pregnancy is most likely to occur. The industry as a whole will obviously benefit from increased reproductive efficiency.

For the future, establishment of the oestradiol protocol will be important to the development of other reproductive technologies, such as artificial insemination (AI), multiple ovulation and embryo transfer (MOET) and in vitro fertilisation (IVF).

Jane emphasises that AI and embryo transfer work is still at the research stage. 'We don't know enough about the physiology of reproduction in alpacas,' she says. David Galloway agrees, pointing out that there are problems with AI in getting the timing and technique right, even in cattle. 'We need to know how to control the timing for insemination for optimal conditions for fertilisation,' he said to listeners in his session, urging them to support Jane's work.

Support has already come from a number of areas. On the Bellarine Peninsula, Jane has ready access to two large vet practices and the support of experienced alpaca vets, Denis Ryan at Torquay and Ewen McMillan at Geelong, who each work with large numbers of alpacas in their districts. Local alpaca studs, Benleigh and Pucara are involved in assisting her work. At Pucara, Jane does regular observations of mating behaviour; at Benleigh, she practised ultra-sounding techniques. 'I could do uteruses – but I needed to learn how to do ovaries,' she comments.

Jane will also be visiting Coolaroo Alpaca Stud in New South Wales to do trials on some females the stud has made available.

At the Conference, a number of breeders offered additional animals for her test herd in Geelong. However, there's an upper limit for the number Jane can manage. This is no 'ivory tower' exercise – she's not merely the scientist, she's the farm hand as well.

We're positively beaming over cyberspace

by Stephanie Pope

Industry focused and full of information, the new AAA website puts out the welcome mat for visitors.

Over the past 12 months, a large amount of thought and effort has gone into creating a new association website. The result is that site cyberspace surfers visit today is far different to the one they may have visited last year. The AAA's first site, created some three years ago was planned largely with the needs of Association members in mind.

The new site has taken a much more outward looking approach. While members' needs are well catered for, its prime orientation is toward informing visitors about the Australian alpaca industry via a dual approach that is developing well. It caters for those who have not been involved with alpacas, but who may be considering joining the industry; it is also projecting the essential 'Australian-ness' of the industry to those visitors (especially based overseas) who are interested to see how we do it down under.

In the three years since the AAA first went online, there has been an exponential increase in 'Net awareness' among both the general public and business. How many ads do you see in the press and on TV now that don't have a website prominently displayed? Not a lot!

That trend is reflected among Australian alpaca breeders. Many are not only Net active, they also have their own sites or subscribe to a group site. There's absolutely no doubt at all that e-business and online marketing are here to stay and here to grow – especially among young people.

If we are to attract tomorrow's investors into the Australian alpaca industry, we need to offer ways for them to explore our industry in the same way that they would explore the stock market and other opportunities. What better way to start than in the comfort of their offices and homes in front of a computer screen? After all, if they can buy and sell stock on their computers, they should be able to explore the investment opportunities, lifestyle benefits and exciting challenges offered by the Australian alpaca industry. And that, folks, is precisely our aim!

That aim is obviously shared by the Association's National Committee which has allocated funding to develop the new site.

After a terrible rush to get 'something up' for the National Conference (as rough as all getout, but at least a beginning) we've developed the material considerably. (If you haven't visited recently, do it now). Apart from really 'bedding down' the industry / investment focus, there are many other features.

A particularly useful achievement was to expand the scope of search listings on major search engines. Previously, you could find the AAA website if you typed in the word 'alpaca' or 'llama' or 'camelid'. Now, you will find alpacas if you key in words such as 'investment', 'livestock', 'fibre' and many other industry-related topics. In other words, you no longer have to know what an alpaca is to find it on the Internet.

Is the website 'complete'. The answer is that it isn't – and it probably never will be. We will constantly be looking for ways to enhance the appeal of alpacas and to attract new markets. In this sense, it will always be 'under construction' and I welcome your comments, ideas and feedback.

For members, there are the 'Member's Section' and 'Regional Pages'. The 'Member's Section', still being developed, will contain contract guidelines, NATCOM reports, a bulletin board and other services. Here you will also find statistics on who is accessing the site. They tell us how many people are visiting, for how long and where they are spending the most time – valuable marketing information for us.

'Regional Pages' lets you know what events and shows are coming up in AAA regions all over Australia and are maintained by Regional Committees.

We believe the new site will 'put us on the map', and we are looking for breeder support to make it the most powerful Aussie showcase possible. So why not take the opportunity to have your message available nationally and internationally, 24 hours a day, 7 days a week. Here's how to obtain this virtually unlimited exposure.

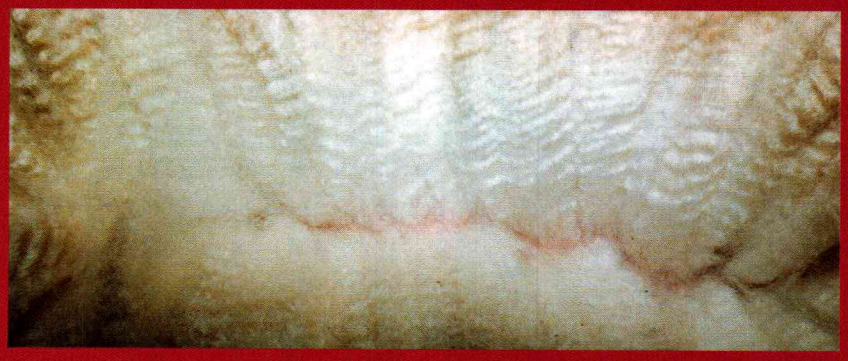
For those who do not have their own website, take a banner ad on one of the pages of the site. If you are online, use a banner ad as a link to your stud's website (the visitor clicks on your banner and, hey presto! instant link). The cost is a mere $250 per year (you supply digital artwork).

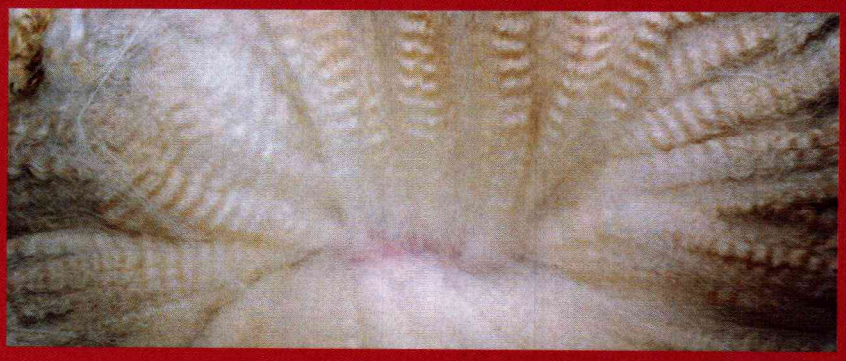
Alternatively, let us set up a direct link to your own web page in the "Links" section.

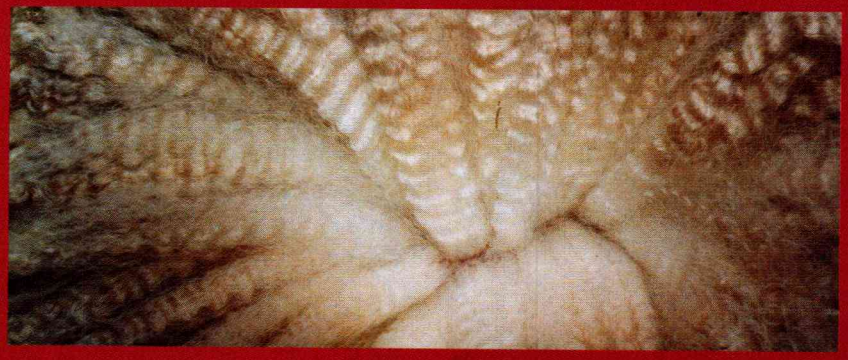
For only $50 per year, your stud name will be listed and connected to the AAA site.

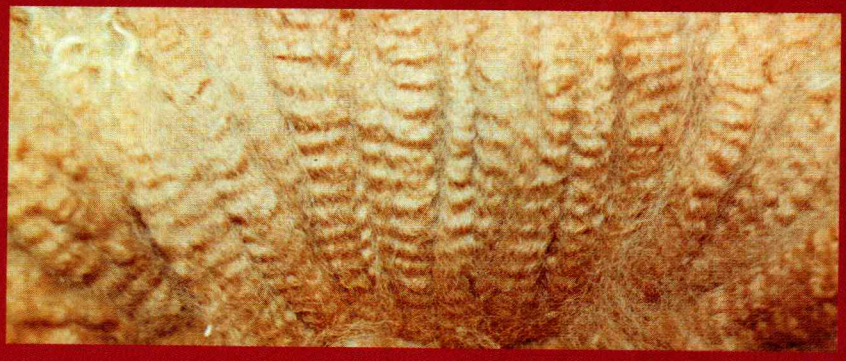
For further information or to get connected, please e-mail me at stephanie@alpaca.asn.au or call me on 08 8536 0040.

WINDSONG
VALLEY
ALPACAS









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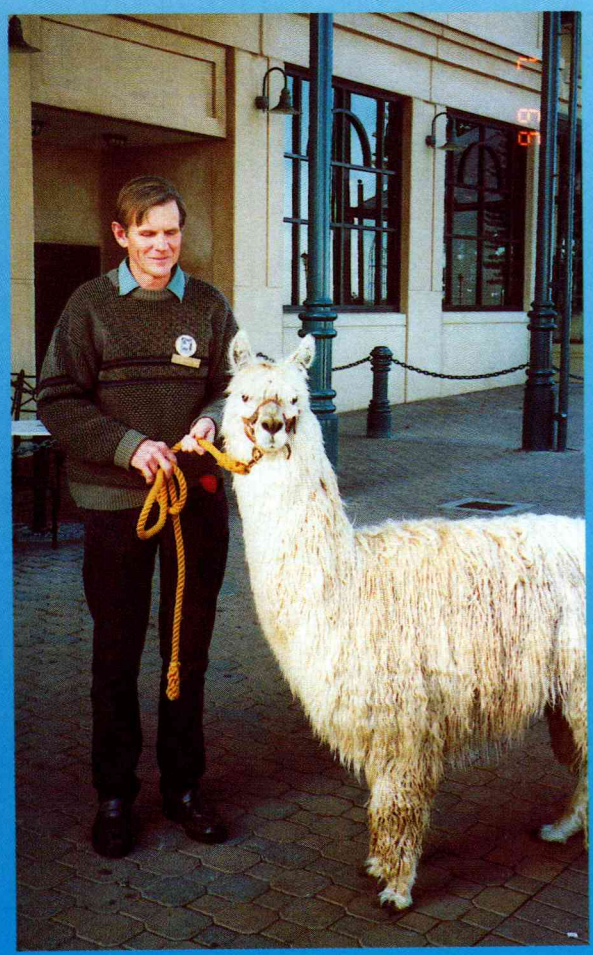
Don't throw the baby out with the bath water

By Roger Haldane



The alpaca herds of Australia and New Zealand have been built up over the last ten years with imports from Chile and Peru. A few small shipments of selected alpacas have also been brought in from the USA. These alpacas have their origins in Chile, Peru and Bolivia.

The genetic make up of these alpacas reflects the wide range of economic and environmental forces which man and nature have exerted on these animals over thousands of years.

Pre-Inca and Inca management of the South American camelid stocks had a profound influence in developing these animals to produce fibre for textiles but, with the coming of the Spaniards, the breeding of the South American camelids was sent into disarray and decline.

More recent events have also had a dramatic influence. Over the past 40 years, the demand for white alpaca fibre by the textile buyers has encouraged breeders to breed white animals. The result today is that large commercial herds of Peruvian alpacas are predominantly white.

The market has now changed and natural coloured fibre is in demand. Possibly a greater folly was the underpaying by textile buyers for fine fibre. The premiums paid for fine fibre were nowhere near the value to compensate for the loss in weight which results from producing fine fibre. The end result is that the Peruvian alpaca herd is now made up of mainly medium to strong fibred animals.

Fine fibre is produced by baby alpacas. A few dedicated alpaca breeders are trying to rectify this situation by selecting from the very fine and coloured animals left in their herds. We must learn from these lessons and start shaping our own destiny.

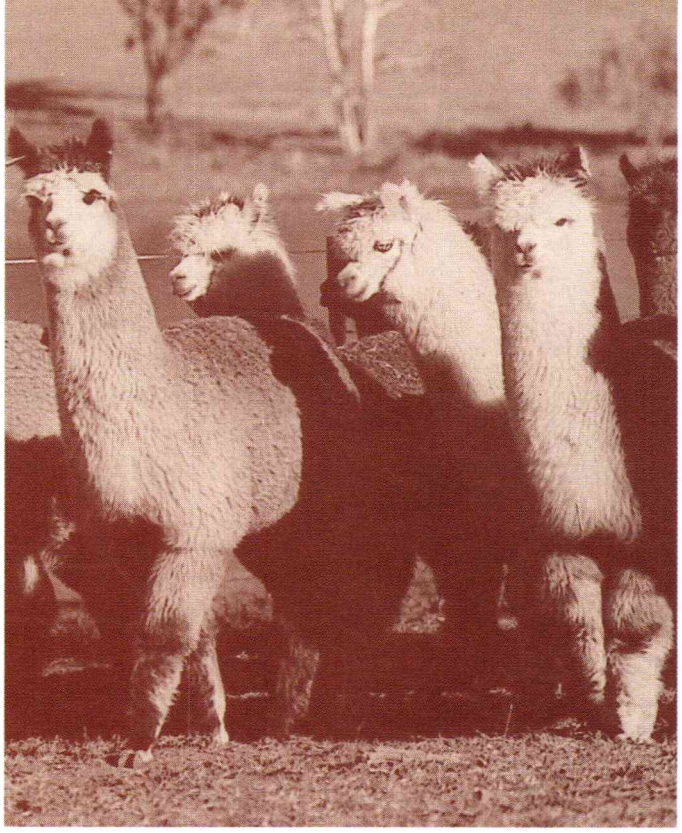
The Australian and New Zealand alpaca breeders are blessed with the building blocks necessary to create something special. We have the animal husbandry skills and the animal fibre technology. Most importantly, we also have the imagination to realise the true potential of the alpaca.

I have classed and judged a large number of alpacas over the past ten years and have recognised some unique individuals. Their uniqueness is a product of their complex inheritance.

Beyond the name alpaca, there exists a kaleidoscope of genetics which have an influence on colour and fibre characteristics. The alpacas imported from Chile contain genes from random matings to wild vicuna and guanaco. It is also possible they carry the remnants of camelid sub species which are now extinct.

From here on, it gets really exciting. There is potential to produce fibres from these animals the world has never seen before. Imagine herds of alpacas producing fibre as low as 12 micron.

Herds of pink alpacas: soft mauve pink to deep burgundy; light pink to deep red; pink fawn to champagne.



Yellow alpacas from light to canary; orange alpacas: light apricot to deep orange.

At the moment, these colours – or at least, their potential progenitors – are lost in a limited colour classification which was implemented to simplify the registration of the national herd. It is now time to move on to recover these unique colours from obscurity and allow the breeders to express and develop the full potential of their animals. This must be addressed with some urgency as these genetics will disappear if they are not identified.

If breeders could work together and do some group breeding to amalgamate these coloured animals into meaningful numbers, they would be well on the way to achieving an end goal. The breeders of black alpacas have already demonstrated that this is possible. This could be duplicated in all the colour ranges to create specialised niches within the industry.

The suri alpacas should follow the same trend. Breeding pink, silver or black suris is not an unachievable goal.

I myself have set off down the road to breed a golden suri. With two years' breeding, I already have a little nucleus from which to select.

We must learn a sobering lesson from our wool-producing countrymen, and not go down the road of the bulk commodity, over-supply and ruin, but take the road to speciality and prosperity.

The crossroad and the signage for the future are just ahead.

A very good year

The industry should be proud of its achievements in 1999.

In this issue, we report on the new RIRDC funded project, headed by Gordon Institute's Ian Knox and CSIRO's Dr Peter Lamb, that will establish national standards for clip preparation and owner classer registration.

The oestradiol protocol project, so vital for increased efficiency in predicting fertility peaks for female alpacas, is up and running with Dr Jane Vaughan being kept very busy (see more this issue).

Showing procedures were streamlined and showing classes revamped; a most successful Industry Conference was held in South Australia (and we have interviews with keynote speakers in this issue); a new industry video was produced that received a standing ovation at its National Conference preview; and the Association's website has been totally revamped (see page 18).

And these are just a few of this year's highlights.

Contributions of articles to Alpacas Australia have also come in thick and fast. We have needed to be very artful with our available space to fit everything in.

This all suggests to me that the prognosis for the Australian Alpaca Industry is extremely healthy. The Association itself is providing stronger leadership than ever before, with the Executive, the National Committee and individual committees working very hard on behalf of the general membership. I am particularly impressed by importance placed by these bodies on communicating with members and receiving and responding to feedback. The Newsletter, which deals very much with internal Association matters, has taken a leading role in informing members and I congratulate those responsible for its publication.

There is a feeling among members that we can lead the world in the production of alpaca fibre. There is no doubt that our industry is very well regarded globally. Consequently, it was with great pleasure that I accepted an advertising booking from an alpaca stud from the USA, Alpacas of America for this issue. Personally, I like the idea of an international clientele (looks very good on the CV!). But it also brings home to us all the increasing 'globality' of our industry. My personal view is that, as the successful development of our Australian industry depends more on co-operation than rivalry, so it is with the development of a strong international industry. I am sure we will do our very best to 'out quality' the Peruvians, the Americans and anyone else in the alpaca world. I am equally sure that our practical contributions to the success of the global industry will do more to stimulate international market demand than an isolationist attitude.

As I put this issue to bed with the usual sigh of relief, it occurs to me yet again how much this magazine owes to its contributors. Thank you for enabling us to produce what I believe have been four very newsworthy issues this year.

To all readers of Alpacas Australia, have a wonderful Christmas and may 2000 be another very good year for us all.

Carol Hosking, Editor.

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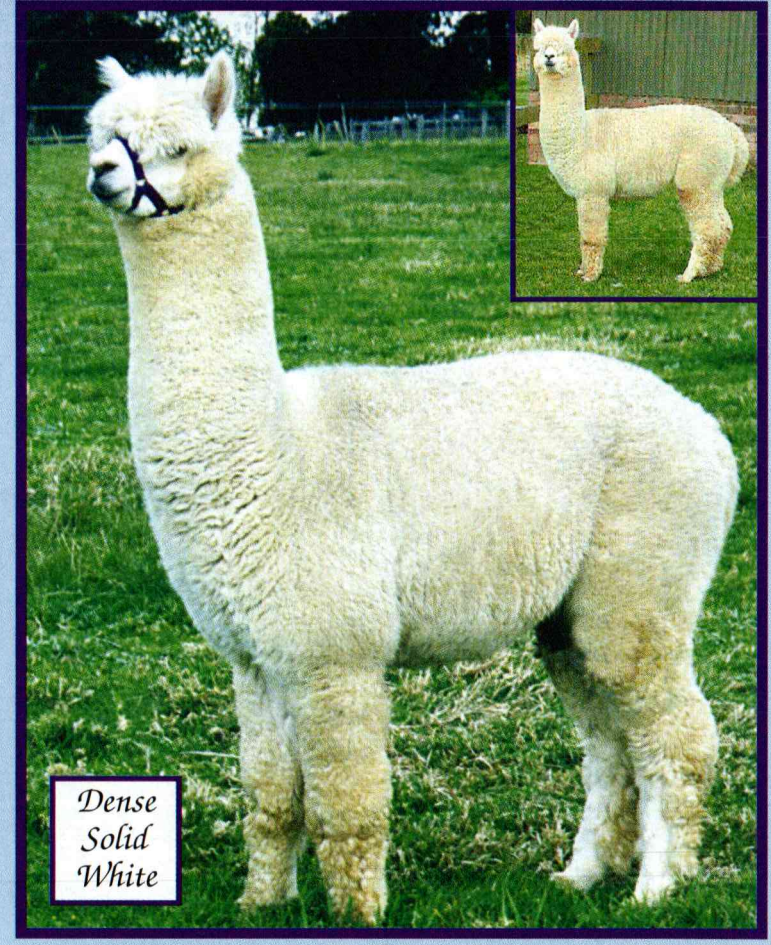

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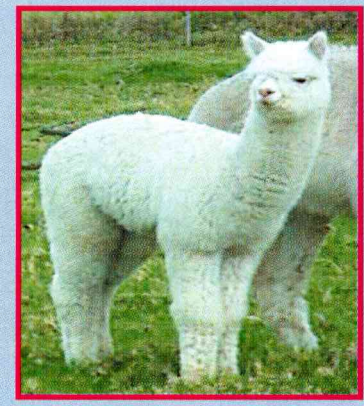

Lorraine Cooper
& Roger Porter

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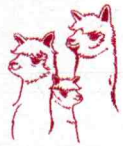
Gorge Alpacas



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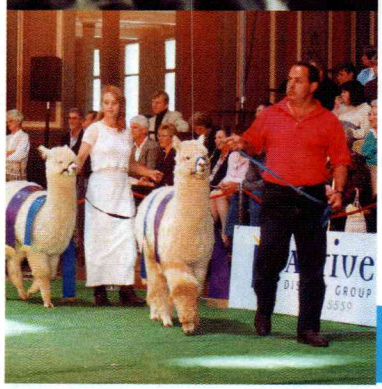

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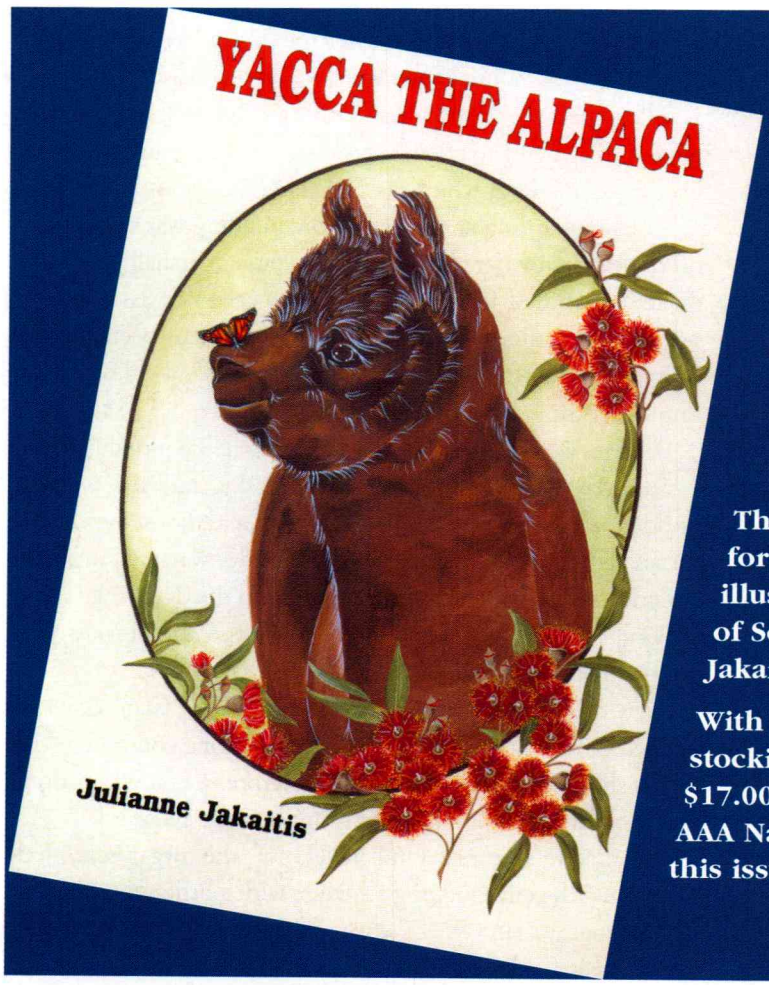


Give 'Yacca the Alpaca' for Christmas

This is a lovely, large format paperback for kids. Written in rhyme and beautifully illustrated, Yacca the Alpaca is the creation of South Australian AAA member, Julianne Jakaitis.

With a bonus poster, this is an excellent little stocking filler for any youngster. The cost is $17.00 including postage. Order today from the AAA National Office (see order form page 56 this issue).

National Show

1999 National Show Judge, Jodi Robinson.

by Jeanette Hollingworth

Supreme Champion Huacaya, Ladysmith Absolute.

Proud owners, Philip and Jennie Cohalan with Ladysmith Absolute outside the Tamworth Regional Entertainment Centre.

For some 40 volunteers, the National Show & Sale began on Thursday 5 November when they descended on the Tamworth Regional Entertainment Centre to begin setting up. This involved assembling over 400 pens, laying the real grass turf in the spacious judging ring, putting up tiered seating and arranging the special lighting.

On Friday, a steady stream of vans, floats and trucks arrived to unload their cargoes - almost 400 alpacas.

Among the first arrivals were the intrepid travellers from Western Australia. They had landed at Sydney airport on Thursday evening and then travelled by truck to Tamworth, arriving at around 4 am.

It was good to see lots of Queensland exhibitors, along with a considerable entourage of Victorians and South Australians who had travelled up the Newell Highway. As expected, all regions of New South Wales were well represented.

The alpacas enjoyed their visits to the well-grassed area outside the Centre and seemed quite at home in their pens inside the building, which was amazingly spacious.

The judging ring at one end of the building was surrounded on three sides by tiered seating with a large marshalling area to one side, divided into two sections to cater for assessed and non-assessed animals. Nine double rows of pens occupied the centre and, in the foyer area, the AAA stand adjoined an impressive array of trade displays.

A large, well-lit room was set aside for fleece judging.

Saturday dawned to a threatening sky, but the weather outlook was forgotten as last-minute preparations were made for an early start to judging. We were under way at 8 am, with American judge, Jodi Robinson settling to the daunting task of judging almost 40 alpacas in some of the earlier classes of young, light-coloured animals.

New England Federal MP, Mr Stuart St. Clair officially opened the Show at 10 am, after which judging continued with only a short break for lunch. By the afternoon, rain was pouring down outside and loud claps of thunder could be heard.

To the amazement (and relief) of the organisers, Jodi completed the day's judging schedule with a little time to spare, so the huacaya Sires Progeny was brought forward and became an excellent finale to the day, with 50 alpacas in the ring.

and Sale

Champion Junior Male Huacaya: Cedar House Taboo

Cameron Holt had been meticulously inspecting the 60 odd fleece exhibits and had also finished his judging at day's end, though the results were held over until Sunday.

The Saturday evening function at the West Tamworth Leagues Club went off with a bang, to say the least, with 370 alpaca enthusiasts obviously enjoying themselves. Entertainment by country music singer and song writer, Pat Drummond and bush poet, Len Knight set the scene for a lively night. The fun auction of goods was a great success, grossing $16,500. Items included an antique clock, a maremma puppy (what a hit he was!) and, of course, the excellent purpose-built alpaca trailer supplied at cost by G & C MFG of Orange in NSW.

Sunday was dry and quite hot. Suri judging was followed by Junior Judging and photo sessions of interstate exhibitors. An impressive parade of auction animals took place at 1 pm.

By 2 pm, the stands were full in readiness for the auction, the number of animals being increased from 13 to 14 with the addition of the wild card entry, Champion Intermediate Female from the Show the day before.

The auction results were very pleasing, with strong bidding and solid prices. Top price was $30,500, the auction grossing $198,750.

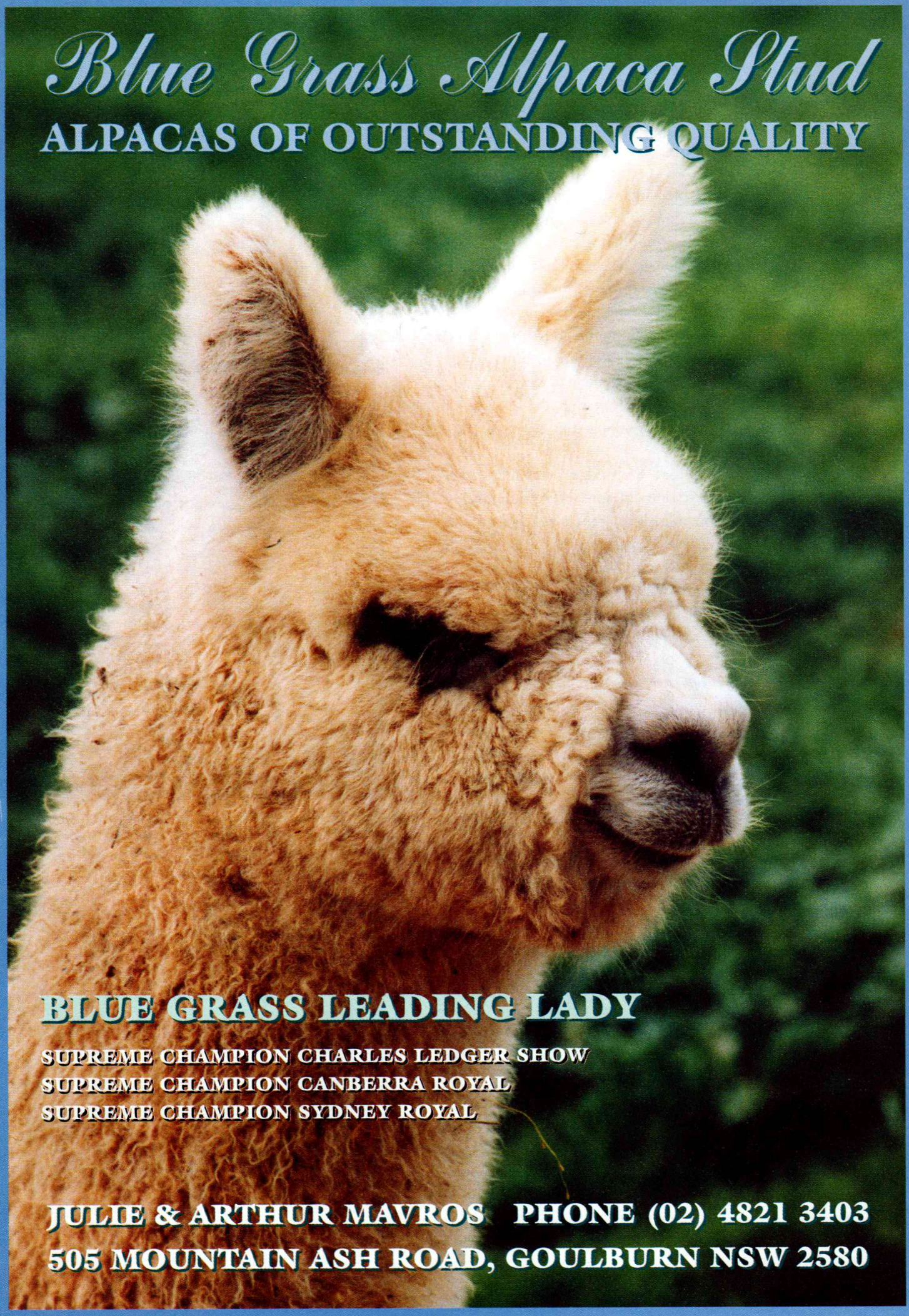
By late Sunday, the atmosphere was very relaxed with most exhibitors opting to take advantage of the opportunity to stay overnight and leave for home on Monday morning. Members were very positive about the weekend. The venue and its facilities were excellent; it was easy to park and unload and accommodation was very close to the Centre. The Tamworth locals were very friendly and helpful - the caterers, feed merchant and a less visible 'army' whose behind the scenes work contributed hugely to the event's success.

Monika Ware with handler, Carolyn Jinks and Kentucky Brindabella, Reserve Champion Senior Female Huacaya. Included in the National Auction as the wild card, this superb alpaca brought the top price of $30.500.

Kevin and Jill Rubie with their successful Meadow Bank team. From left: Meadow Bank Rebecca, Champion Intermediate Female; Junior Female Class winner, Meadow Bank Lydia; and Meadow Bank Golden Wynstra, Champion Junior Female;

Lynne Ohlson, with her Supreme Champion Suri, Bush Echoes Peruvian Star.

All photography except Meadow Bank shot, courtesy Peter Lowe *The Land* Newspaper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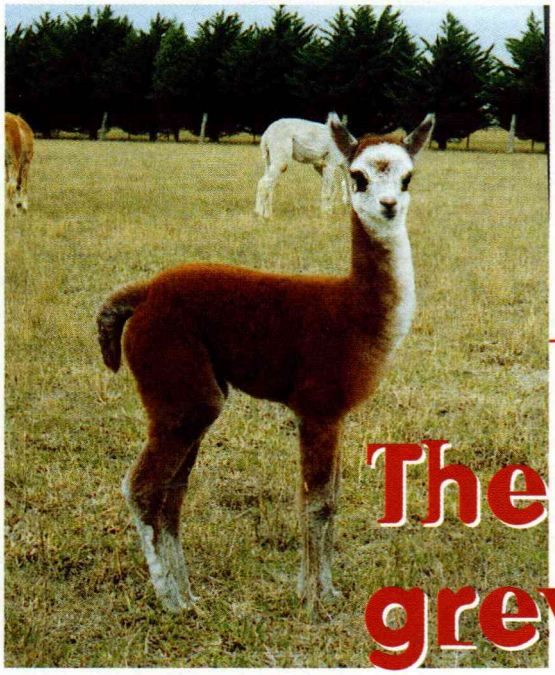
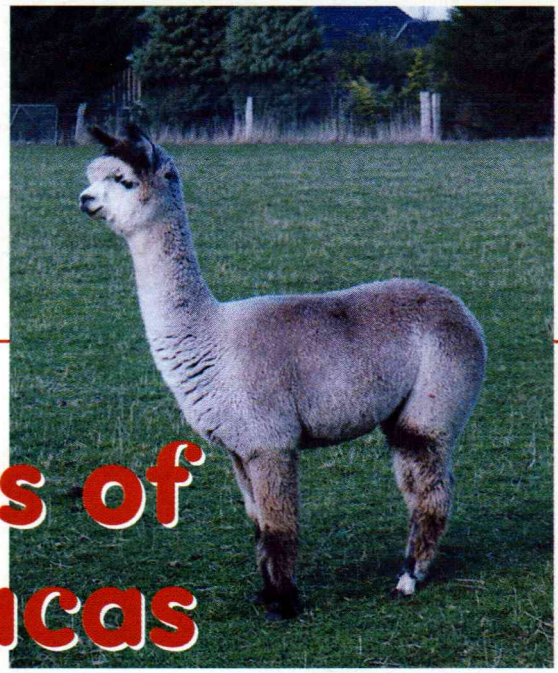




The status of grey alpacas in the Australian herd

By Elizabeth Paul,
B.App.Sci., (App.Biology)
R.M.I.T., Cert.Animal Technology.F.I.T.

Top Left: 1 week old Rosegrey cria.
Top Right: 2½ year old adult Rosegrey.

INTRODUCTION

The relationship between black and brown colour in alpacas does not seem to be the same as that which exists in dogs or horses. In dogs, black B is the clear dominant allele of the black/brown gene. The recessive allele b produces liver colour when it is homozygous and is also associated with amber or yellow eyes and brown noses. Mating a homozygous BB black dog to a liver bb dog produces all black, Bb offspring. Mating a heterozygous (Bb) black dog to a liver bb dog should produce half Bb black offspring and half bb liver offspring (Little, C. L.).

In the model originally proposed by the author, it was assumed that red and black were the two base colours found in alpacas. However, it would appear from the results assessed so far that the base colours may be red and brown, with black being the recessive allele of brown. Mating black to brown alpacas has produced approximately 50% brown progeny and 40% black progeny, with less than 10% red and white progeny being produced. (It is interesting to note that red x black matings produced 55% brown progeny, 18% each of red and black progeny and 8% white progeny.) (Paul, E. 1999, Table 2.)

There are several genes which produce grey hair in animals, including greying genes and diluting genes. Both may exist in the one species of animal (Searle, A. G.).

Breeds of horses such as the Lippizaner and Percheron are born dark and progressively lighten with age as the greying gene takes increasing effect (Draper, J.).

Diluting genes dilute black pigment to blue-grey, as in blue greyhounds; and liver to a silvery, milk-coffee as in Weimaraners. These types of dogs are born more or less the adult colour (Little, C. L.).

Silvergrey alpacas are born silvergrey and could certainly be described as being shades of blue. However, rosegrey alpacas are not any shade of liver, but are born with a russet coloured or dark baby coat with the

Author's Note

This study, while dealing specifically with grey alpacas and their occurrence in the Australian alpaca herd, is also a direct continuation of the author's previous article, 'Theory of Colour Inheritance in Alpacas', first published in Issue No. 28 of Alpacas Australia. The final table of results in that article was Table No. 3.: the first table of results in this article is therefore Table No. 4.

grey showing in the fleece or on the tail and legs. They range from a light, warm lavender shade to a much darker shade which has brown tips and shows grey only when the fleece is parted.

Most grey alpacas also have white throats and faces and white or pale lower legs, at least, when young. In some of the darker shades of rosegrey, the white may be restricted to a white face and feet, or a white throat patch, or even just a greyer shade down the throat.

In order to assess the status of grey alpacas in Australia, the Australian Alpaca Association Herd Books Volumes 2-6 were surveyed and all matings involving at least one grey parent were assessed. The results are presented in Table 4.

All matings involving non-grey parents which produced grey progeny were also assessed and the results presented in Table 5. Only matings where both the parents' and the progeny's colours were listed have been surveyed. For this reason, the Association's Herd Book Volume 1 was excluded from the survey. Herd Books Volumes 1-6 were surveyed for imported grey alpacas to form a base level of parents.

There were 209 rosegrey alpacas and 536 silvergrey alpacas, forming approximately 12% of imported alpacas.

If the rosegrey and silvergrey colours are assumed to be dilute brown and dilute black fleece colours respectively, then the progeny colour results from matings involving grey parents would be expected to be similar to the patterns found in solid colour matings.

Summary

Grey progeny accounted for 62% of total progeny produced from grey x grey matings, and for 24% of total progeny from other matings involving at least one grey parent.

Table 4: Results of all matings involving at least one grey parent

Progeny Phenotypes	Brown	Rosegrey	Black	Silvergrey	Red	White	Totals
Parent Phenotypes:							
Rosegrey x Rosegrey	16	34	1	7	1	1	60
% all colours of total	26.7	57	1.7	11.7	1.7	1.7	
Rosegrey x Silvergrey	36	84	24	39	1	6	190
% all colours of total	19	44	12.6	20.5	0.5	3.2	
Silvergrey x silvergrey	30	27	71	135	2	7	272
% all colours of total	11	10	26	50	0.7	2.6	
Rosegrey x Brown	63	26	8	6	8	14	125
% all colours of total	50	21	6.4	4.8	6.4	11.2	
Rosegrey x Black	27	16	15	14	2	9	83
% all colours of total	32.5	19	18	17	2.4	11	
Rosegrey x Red	50	23	11	5	36	15	140
% all colours of total	36	16.4	8	3.6	25.7	10.7	
Silvergrey x Brown	198	57	88	52	11	69	475
% all colours of total	42	12	18.5	11	2.3	14.5	
Silvergrey x Black	42	17	167	125	6	37	394
% all colours of total	10.7	4.3	42.4	32	1.5	9.4	
Silvergrey x Red	110	18	18	16	30	32	224
% all colours of total	49	8	8	7	13.4	14.3	
Rosegrey x White	37	23	8	5	41	37	151
% all colours of total	24.5	15.2	5.3	3.3	27	24.5	
Silvergrey x White	77	34	46	54	55	123	389
% all colours of total	19.8	8.7	11.8	14	14	31.6	
Total Progeny	**686**	**359**	**457**	**458**	**193**	**350**	**2503**
% all colours of total	**27.4**	**14.3**	**18.3**	**18.3**	**7.7**	**14**	

Table 5. Results of matings of non-grey parents which produce grey progeny

Progeny Phenotypes	Brown	Rosegrey	Black	Silvergrey	Red	White	Totals
Parent Phenotypes:							
White x White	271	30	80	15	365	1261	2022
% all colours of total	13.4	1.5	4	0.7	18	62.4	
White x Brown	444	68	77	43	318	233	1183
% all colours of total	37.5	5.7	6.5	3.6	27	19.7	
White x Black	126	8	86	45	56	64	385
% all colours of total	32.7	2	22.3	11.7	14.5	16.6	
White x Red	358	42	54	38	631	376	1499
% all colours of total	24	2.8	3.6	2.5	42	25	
Brown x Brown	530	14	93	3	140	19	799
% all colours of total	66.3	1.8	11.6	0.4	17.5	2.4	
Brown x Black	460	10	426	14	31	11	952
% all colours of total	48.3	1	44.7	1.5	3.2	1.2	
Brown x Red	986	24	94	11	838	73	2026
% all colours of total	48.7	1.2	4.6	0.5	41.3	3.6	
Black x Black	128	2	1229	20	14	5	1398
% all colours of total	9.2	0.1	88	1.4	1	0.4	
Black x Red	215	2	78	3	86	17	401
% all colours of total	53.6	0.5	19.5	0.7	21.5	4.2	
Red x Red	253	10	17	3	989	97	1369
% all colours of total	18.5	0.7	1.2	0.2	72.2	7.1	
Totals	**3771**	**210**	**2234**	**195**	**3468**	**2156**	**12,034**
% all colours of total	**31.3**	**1.7**	**18.6**	**1.6**	**28.8**	**18**	

Rosegrey x silvergrey matings produced approximately twice as many rosegrey and brown progeny as silvergrey and black progeny. Overall, grey progeny accounted for 33% of total progeny from all matings involving at least one grey parent.

Solid brown progeny accounted for 27%; solid black progeny accounted for 18%; and solid white progeny accounted for 14% of total progeny.

Solid red progeny accounted for 8% of total progeny and were least likely to be produced from grey x grey matings.

Rosegrey progeny accounted for 14% of total progeny and silvergrey progeny for 18% of total progeny from this whole group of matings.

These results generally follow a similar pattern to solid brown x solid black matings. The larger number of silvergrey progeny overall is due to the fact that there were more than three times as many silvergreys as rosegreys in the original importation and there have been more than twice as many matings involving silvergrey parents than involving rosegrey parents.

Summary

White x white matings produced 2.2% grey progeny. Solid colour x solid colour matings produced 1.7% grey progeny. White x solid colour matings produced 8% grey progeny.

Rosegrey accounted for approximately 6% of total progeny from white x solid brown matings.

Silvergrey progeny accounted for approximately 12% of total progeny from white x solid black matings.

Grey progeny were least likely to be produced from solid red x solid red matings, where they accounted for less than 1% of total progeny.

Overall, grey progeny were produced in a proportion of approximately 3% of total progeny from this group of matings.

Table 6. Results of matings of non-grey parents which produced white/coloured (non-grey) progeny*

Progeny Phenotypes	Brown	Wh/Brn	Black	Wh/Blk	Red	Wh/Red	White	Totals
Parent Phenotypes								
White x White	114	157	17	63	309	56	1261	1977
% all colours of total	5.8	8	0.9	3.2	15.6	2.8	64	
White x Solid Col	692	130	138	51	874	60	569	2514
% all colours of total	27.5	5.2	5.5	2	34.8	2.4	22.6	
White x Wh/Col	37	69	8	20	48	23	104	309
% all colours of total	12	22.3	2.6	6.5	15.5	7.4	33.7	
Sol. Col x Sol. Col	2248	58	1723	39	1904	54	173	6199
% all colours of total	36.3	0.9	27.8	0.6	30.7	0.9	2.8	
Sol. Col x Wh/Col	179	72	133	39	122	9	40	594
% all colours of total	30	12	22.4	6.6	20.5	1.5	6.7	
Wh/Col x Wh/Col	10	5	0	3	8	1	7	34
% all colours of total	29.4	14.7	0	8.8	23.5	3	20.6	
Totas	**3280**	**491**	**2019**	**215**	**3265**	**203**	**2154**	**11,627**
% all colours of total	**28**	**4.2**	**17.4**	**1.8**	**28**	**1.8**	**18.5**	

* Grey x grey matings produced 4 white/coloured (non-grey) progeny.
White x white/coloured (non-grey) matings produced 4 grey progeny.
Solid colour x white/coloured (non-grey) matings produced 10 grey progeny.

From the limited amount of literature available (Cape, D. and M.) and from personal observations, the white fleece on white/coloured and grey alpacas appears to extend in a regular pattern from the feet upwards to the belly, throat and face and, occasionally, across the withers or higher. This is similar to the effects of regular white-spotting genes in dogs such as Welsh Corgis and Beagles (Little, C. L.). The incidence of white/coloured (non-grey) alpacas in the Australian alpaca herd was surveyed to determine what, if any, links there were between this group and the greys.

For the purpose of the survey, alpacas listed as white/coloured in the Herd Books were assumed to follow the above pattern.

Matings involving two solid coloured (non-grey) parents which produced white/coloured (non-grey) progeny were assessed and the results presented in Table 6. Matings involving at least one white/coloured (non-grey) parent were also assessed and their results were included in this Table.

DISCUSSION OF RESULTS OF TABLE 6

White/coloured (non-grey) progeny accounted for 26% of all matings involving at least one white/coloured (non-grey) parent. They accounted for 14% of total progeny from white x white matings; and for approximately 10% of total progeny from white x solid colour (non-grey) matings.

White/coloured (non-grey) progeny were produced at less than 3% of total progeny for solid colour x solid colour matings.

Comparing these results with those of Table 5, it would seem reasonable to conclude that there is an overlap in the production of grey progeny and white/coloured (non-grey) progeny from white x solid colour matings.

An interesting aspect of breeding grey alpacas is the effect of mating greys to white/coloured partners. Matings involving one clear grey parent and one white/coloured (non-grey) parent were surveyed and the results presented in Table 7.

DISCUSSION OF RESULTS OF TABLE 7

These results are very small, as both grey and white/coloured alpacas occur in low numbers in the Australian herd. However, they show similar patterns of progeny colour production as larger groups and may, therefore, be considered as valid.

Matings between grey and white/coloured partners resulted in approximately 43% solid colour progeny; 32% white progeny; 14% white/coloured progeny and 12% grey progeny.

Thus grey alpacas have the capacity to reduce the white/colour factor and produce more solid colour and white progeny than either grey or white/coloured progeny.

This capacity has been previously noted by George Davis of New Zealand in his 1996 paper and is well known to breeders of grey alpacas.

CONCLUSIONS

1. The patterns of progeny colour production were similar across all types of matings.

1 day old Rosegrey cria.

4 month old Rosegrey juvenile.

2. The results of the survey support the assumption that rosegrey alpacas are a form of brown and that silvergrey alpacas are a form of black fleece colours.
3. Crossing two grey alpacas had at least a 60% chance of producing grey progeny. Crossing a grey with a non-grey alpaca had approximately a 25% chance of producing grey progeny. Crossing two non-grey alpacas produced less than 5% grey progeny.
   (This study has not examined particular pedigrees. Non-grey alpacas with grey ancestors would be more likely to produce grey progeny themselves in the right mating.)
4. Grey progeny were least likely to be produced from red x red matings. Grey x grey matings produced less than 1% red progeny.
5. Both grey and white/coloured (non-grey) progeny were produced in a proportion of 8-10% of total progeny from white x solid colour matings.
6. Crossing grey alpacas with white/coloured (non-grey) alpacas was more likely to produce solid colour or white progeny, then either grey or white/coloured progeny.

In summary, it seems probable that the grey fleece colours in alpacas are the results of a combination of recessive diluting genes operating on brown and black pigment; and minor white-spotting genes producing the characteristic white face and feet of greys. Such a combination may account for the extreme rarity of grey alpacas.

Once this combination has been achieved however, the further production of grey progeny from grey x grey matings should not be difficult.

Table 7. Results of matings between greys and white/coloured (non-grey) parents

Progeny Phenotypes	Brown	Wh/Brn	R'grey	Black	Wh/Blk	S'grey	Red	Wh/Red	White	Total
Parent Phenotypes										
Rosegrey x Wh/Col	11	1	1	1	0	2	2	0	6	24
Silvergrey x Wh/Colour	21	6	5	10	8	5	3	0	29	87
Totals	**32**	**7**	**6**	**11**	**8**	**7**	**5**	**0**	**35**	**111**
% all colours of total	**29**	**6.3**	**5.4**	**10**	**7.2**	**6.3**	**4.5**	**0**	**31.5**	

REFERENCES

Paul, Elizabeth. 'Theory of Colour Inheritance in Alpacas.' pp 10-17, *Alpacas Australia*, Issue No. 28, '99.

Little, C.L., *'The Inheritance of Coat Colour in Dogs.'* Fifth Edition, Howell Book House, New York, 1973.

Searle, A.G., *Comparative Genetics of Coat Colour in Mammals* Logo Press Limited, London,1997.

Draper, Judith. *Horse Breeds of the World.* Sebastian Kelly, Oxford. Anness Publishing Limited, London, 1997.

Australian Alpaca Association Herd Books, Vols 2-6 incl.

Davies, George. MS. 'Observations on Fleece Colour Inheritance Patterns.' *The Alpaca Registry Journal,* Volume 1, No. 2. Summer-Fall 1996. pp 71-73.

Cape, D and M, *'Alpacas on the Move'* Volumes 1-6 inclusive Tangilly Rural Enterprises, Vic. 1998-1999.

Disclaimer

The author's opinions are based solely on personal research and interpretation of the mating results presented in the Australian Alpaca Association Herd Books Vols. 1-6 inclusive. The author is not responsible for any breeding or other decision taken by any other person in relation to these opinions or interpretations.

Editor's note

A couple of errors crept into Elizabeth's article in our last issue (28). Those who wish to do so should make the following corrections to pages 12 and 13.

On page 12

Small chart at top of page should be as follows

Parent:	Sire	x	Dam
Genotype:	$p^s p^s$	x	$p_e p_e$

(We had $p^e p^e$.)

'Colour inheritance analysis': item 4 should read:

'there is another gene which controls the production [not colour!] of pigment and, therefore, the expression of colour…'

On page 13:

Table 1 third column, top line should read RR BB mm.

Sorry!

SUPPORT AND PROMOTION

Pasture Study Group measuring grass height to calculate dry matter availability.

WORKING TOGETHER ON THE MORNINGTON PENINSULA

By Pam Larritt

AIMS, STRUCTURE AND MEMBERSHIP

The Mornington Peninsula Alpaca Breeders first formed as a group in June 1998. Whilst we are keen and active members of the AAA and Eastern Region, our Peninsula is a particularly identifiable and much visited area close to Melbourne. It was felt that a united approach to its growing population of potential lifestyle investors would be worthwhile. The intention was to provide support for local breeders through exchange of information, ideas and active assistance. A need was also seen to increase public awareness of the alpaca industry developing on the Peninsula. It was hoped that pooled knowledge, skills and resources would be more useful, more economical and ultimately more successful in promotion, marketing and the advancement of the industry.

The structure of the MPAB was initially looseknit with no office-bearers. Recently, however, due to the extent of our activities, members have seen the wisdom of incorporating to protect against liabilities. Once achieved, this will mean some increased formalisation of proceedings. Meetings are usually held bimonthly and are chaired by a different person each time. Decisions are based on one vote per stud irrespective of herd size. Matters to be researched are shared around and the emphasis is on involving the whole group.

Present members represent 25 alpaca farms within the shire boundaries. Names, addresses and contact numbers are listed in a pamphlet soon to be professionally printed. Around 400 alpacas are involved with herd sizes ranging from around 5 to 50 animals. A total herd database listing according to type, age-group, colour and sex with contact names and locations is regularly updated. This is to encourage referral of interested parties to other breeders who may be able to help fill specific requests. The proximity of Peninsula farms means that prospective buyers can view alpacas at several farms within a short time.

DISPLAYS AND PROMOTION

A major focus has been on getting information about alpacas and their management and prospects out to the general public, particularly on the Peninsula. This has led to rostered weekend alpaca displays and attendance at local markets and at the very popular Tyabb Packing House Antique Centre. The emphasis has been on giving people information and hands-on experience with alpacas. Promoting the industry as a viable agribusiness, and an easycare lifestyle investment has also been uppermost in our presentations.

MPAB members contributed to a joint full page colour

advertisement in several editions of The Peninsula Visitor. This showed a map with locations of farms and times of opening. In addition, linking in with Peninsula Wineries for their major Queen's Birthday Weekend promotion ensured an alpaca presence at six local wineries. It is hoped to extend this association next year. Notices, summertime window displays and alpaca displays are also being organised at other prominent locations on the Peninsula. And the new pamphlet is soon to be placed in many venues where people gather as well as being handed out at markets etc.

MPAB sub-committee hard at work organising the first Mornington Peninsula Alpaca expo.

Towards the end of the year the group was gearing up for the first Mornington Peninsula Alpaca Expo held on December 5 1999 at the Red Hill Showgrounds. This major event showcased the alpaca industry with informative presentations, demonstrations and displays, animals and alpaca products for sale and food and entertainment. Peninsula farms were open during the weekends preceding and following the Expo for people interested in viewing alpaca facilities and alpacas 'at home'.

KEEPING ABREAST

Whilst joint marketing and promotion are a big part of our 'raison d'etre', the MPAB also realises the need for keeping abreast of husbandry techniques, nutrition requirements, research and industry developments. To this end, we have had guest speakers and demonstrations at several meetings including a local veterinarian, a pen manufacturer who produced a set of alpaca panels along lines suggested by breeders, an insurance broker and an agronomist. A Pasture Study Group has been set up under the leadership of the agronomist to learn about more efficient pasture management. This has entailed visits to local alpaca farms to examine and target specific problems plus computer analysis of some farms' pasture use, production, future requirements and management.

Recently, the MPAB's efforts were recognised with a certificate in the manufacturing/agribusiness section of the inaugural Frankston and Mornington Peninsula Awards for enterprise and innovation.

Over the past 18 months the group has bonded into a cohesive unit through working together in a consultative fashion. The support and camaraderie of working together to achieve common aims has enabled much more to be achieved in a short time than could have been done individually. We recommend our approach to other groups of small breeders and are happy to provide further information if so requested. Call Stella Butler (03 5983 1927).

National clip standards to be established

A new project funded by the Rural Industries Research and Development Corporation (RIRDC) aims to develop minimum clip preparation standards for alpaca fibre and to pilot and establish owner classer training.

Ian Knox of Gordon Institute TAFE in Geelong is leading the project in association with Dr Peter Lamb, CSIRO Division of Fibre Technology, Belmont.

To run for two years, the project has completed its first phase, a series of forums held in all states. Participants were given insight into the current clip situation in relation to processors' requirements and took part in hands-on fibre workshops. From these forums, a team of AAA members will help develop a code of practice for clip preparation and identify key competencies to establish an owner classer course.

To establish clip preparation standards, a series of processing validation trials are planned at the CSIRO Division of Wool Technology at Belmont and at Elite Fibre Australia, Breakwater.

The proposed time-table for the project is as follows.

July 1999 to March 2000: processing validation trials; forums in all States; state fibre committees set up.

March 2000 to June 2000: develop and publish code of practice for minimum clip preparation standards.

July 2000 to June 2001: pilot owner classer courses; establishment of AAA classer register; processing validation trials of grower classed lots.

The establishment of minimum clip standards and their adoption by the Australian Alpaca Association will be of considerable benefit to the industry. According to Ian Knox, the low labour cost of processing South American fibre will be offset by the Australian industry being able to produce a highly specified top, allowing the industry to exploit niche markets for highly specialised products. For existing infrastructure organisations such as AAFMO, the Alpaca Cooperative and Elite Fibre Australia, the national clip standard will be extremely welcome.

The owner classer scheme will do much to streamline the handling of fibre. It will also save those growers who class their own fibre the considerable expense of rehandling. The advantages of preparing fibre on farm means that fibre can be sent straight to a mill or broker. The additional knowledge and ability to use objective performance records that will come with owner classer training will also help growers make better selection decisions for their breeding programs

This is a very important project for the industry. Ian Knox has published full details on the Internet and plans to update the material as progress is made. Please get online and read the full story on www.ozrural.com.

guess whose dad's got a whirlpool!

By The Mackas of Mirrabook.

Mum said she'd had enough. The old Whirlpool had to go! She wanted something which actually spun the water out of the clothes. Eighteen-year-old washing machines, she said, should be put out to pasture, especially ones like this – so rusted it was well down on its pasterns.

Dad did try. He asked the Salvos if they wanted it. It did still work a bit and it seemed a shame to take it to the tip. But no, they rejected it. 'Too much rust!' they said. So off to the tip it would go.

Later that day, banging could be heard from the shed. It was so loud it could be heard over the gentle humming and hushed jumbo jet engine-like winding up noises of the new washing machine. Mum sent me to the shed to find out what Dad was wrecking now. (She doesn't always appreciate the inventive genes Dad inherited from me.) I think it was the clicking and whooshing noises which finally caught her curiosity.

Boy, did Mum get a surprise when she saw the old Whirlpool – partly dismantled, still down on its pasterns, lid half off and surrounded by blue plastic feed bins. There, in the centre of this very peculiar arrangement, was Dad. But what he was doing was bizarre, to say the least.

Mum stood there a while, then said something like, 'What on earth …?' She sounded a bit despairing, just like she did when I took her clock radio apart to see how it worked.

But Dad just said, 'Just mixing feed for the alpacas, dear!'

'Well, I'll b…' Mum said (or something similar …).

Looks like the old machine is now listed as 'Ag Equipment' instead of 'Domestic Appliance'. Dad was pretty proud to be the new operator of old faithful. A few modifications were needed so the washing barrel could be removed to empty a blended load of feed into the feed bins. Mixing so far only seems to work on 'Suds Return, which is a mystery to Mum because that cycle never worked in the laundry!

Dad said he removed the agitator lock nut and collar on the main shaft, along with the top plastic cover joining the inner and outer barrels. Hoses were disconnected (I'm sure I can use them!). The top panel housing, the lid and controls were separated and propped up, taking care not to damage or break wires.

Dad said it works a beauty and seems to do a thorough mixing job. It saves mixing by hand, which is more hit and miss and hard on the back. He said it also saved a load off his wallet, as he was going to get a cement mixer to do the same job. (Maybe now he can buy that remote controlled plane?) They say the proof is in the pudding. Well, no complaints from the alpacas. We still get stampeded in the rush at feed time. So, hurry on down to your local Op Shop or tip and snap up a bargain of a feed mixer.

Personally, I can't wait to get my hands on Mum's new machine. I bet I could make it work even better! I wonder when Mum's going away to the next alpaca conference …

Carl Dowd elected to Co-op Board

Carl Dowd, prominent clothing manufacturer, was elected to the Alpaca Co-operative Ltd Board of Directors at its October Annual General Meeting.

After his election, Carl commented, 'I am optimistic that the Cooperative is paving the way for the Australian alpaca industry to become established as a main stream natural fibre industry and, in time, prove a very valuable enterprise for its members.'

'We have a luxury fibre which can be utilised in many ways. The products already developed demonstrate the softness, durability and thermal properties of alpaca.'

A third generation clothing manufacturer, Carl started his career with Dowd Associates' Hickory Intimate Apparel and went on to be appointed Marketing Director.

He is founder of The Clothing Company and Maggie T Concept and Retail Group (of which he is still a partner). He also founded the successful Dowd Corporation, suppliers of corporate apparel to some of Australia's leading companies.

Carl is breeding alpacas in both Australia and USA. He plans to bring his high quality American herd to Australia early next year in order to provide a wider genetic base for his Australian breeding program. Carl's property, Halcyon Stud is located in picturesque Healesville, Victoria.

PUREBLOOD

PART 4

by Mike Safley

ALPACA SHOWS, BREEDING OBJECTIVES AND BREED STANDARDS

This is the second instalment of Pureblood Part 4.

WHAT ARE BREED STANDARDS?

Breed standards help define the ideal animal of a given breed. Standards often evolve over time. They provide goals for breeders who are trying to improve their stock.

Standards become a breeder's objective in the form of a weighted combination of traits that help define the aggregate value or merit of an animal. They are a quantification of what constitutes the ideal animal. By having industry-wide, written standards, breeders will always have a bench-mark against which they can measure the individual alpacas in their herds.

Developing breed standards

Regardless of species, the best animal should be the one that best suits the end user. In developing breed standards, this is an important idea to keep in mind. Sometimes this concept gets lost in the effort to satisfy expectations that have little to do with the end use. An example of distorted breeding standards can be found in the emphasis that meat and dairy cattle breeders place on a particular spotting pattern or shade of coat color.

Coat color has little to do with production efficiency in these species.

Competition among breeders can also create distorted breed standards. In an effort to convince buyers that their animals are superior to those of their competitors, breeders may find it profitable to emphasize the qualities in their animals that set them apart, even if they are not particularly important production traits. For example, if a breeder's animals are especially large, he/she may be tempted to promote the value of increased size, whether or not size is inheritently valuable. If the breeder's promotional efforts are successful, they will be rewarded for having large animals and begin to promote even larger animals. Pretty soon the competition will react to the success of the first breeder and the race will be on.

To avoid these arbitrary variations in breed standards, alpaca breeders should simply remember the end user. By understanding the characteristics affecting the end use of our alpacas and defining the best animal accordingly, we will all have a valuable herd improvement tool. This goal could best be accomplished by establishing industry-wide breed standards, as opposed to having individual standards being set by individual breeders based on the alpacas they have in their pasture and the size of their advertising budget.

Breed standards and genetic change

If we are going to improve animals genetically, it stands to reason that we will attempt to change them. Breeders ordinarily take this to mean that they should change them in an established direction. This is where breed standards could be helpful. But, should every trait be changed in a particular direction? Do we always want finer fleece, more milk, faster speed, higher fertility?

The answer is, clearly, no. For some traits, it is easy to see why. Take, for example, the conformation trait called hock set. Animals whose rear legs are too straight are post legged.

Lacking sufficient angle at the hock, they run the risk of going lame.

Animals with too much angle at the hock are sickle hocked and can also develop soundness problems. The optimum hock set is somewhere between these extremes. The best animal has enough angle at the hock to be athletic, but not so much that it moves awkwardly. Clearly it would be a mistake to breed animals forever for increased or decreased set at the hock. Once an intermediate optimum has been reached, there is no reason for further change. These sorts of standards should be easy to establish.

Hock set is an obvious example of a trait with an intermediate optimum. Other traits with intermediate optimums are not always so obvious. Size in dogs and milk production in beef cows are examples. The balance of fineness and density in alpacas may also be an example of an intermediate optimum. For traits like these, improvement does not necessarily mean directional change. Improvement might better be defined as an increase in the proportion of animals with optimum or near optimum performance. In other words, improvement could be the increase in the uniformity of desirable traits.

This is where breed standards can be of considerable help in defining the breeders' goals.

Breed standard for the huacaya and suri alpaca

In the interests of stimulating a debate concerning industry wide standards, I have attempted to set out the following breed standards for the North American alpaca community. I have borrowed from the Australian breed standard; the Alpaca Lama Show Association rules; Maggie Krieger's excellent book, *The Secrets of the Andean Alpaca; Rigoberto Calle Escobar's book, Animal Breeding and Production of American Camelids;* the ARI screening standards; and many years of personal experience breeding alpacas.

The first set of standards for conformation and physical attributes applies equally to the suri and huacaya breed. The fleece standards, which actually define the difference between the two breeds, are found in two separate sections. I chose to call the suri and huacaya alpacas separate breeds based on the following definitions of a breed: (a) a race of animals within a species. Animals of the same breed usually have a common origin and similar identifying characteristics[1]; and, (b) a type of animal defined by different characteristics and recognized by particular or official association[2].

Head

The ideal alpaca's head is compactly formed, of medium length, with a dense top knot and a wedge shaped muzzle.

The eyes should be oval, alert, and set well apart, protruding slightly from their sockets, giving the appearance of being large and round, and may be blue[3], brown, or black. The nose has two well defined nostrils. The upper lip is divided and mobile. The ears are of medium length, covered with short, soft hair, erect and spear-shaped, pointing forward in the alert stance. The jaw should be well covered with fleece and should fit together correctly, with the lower incisors meeting the upper dental pad.

Faults

- Muffled face at 30 months of age (fiber or hair on the bridge of the nose impeding vision)
- Head very narrow or thick and llama-like
- Roman or long nose
- Lower jaw undershot or overshot
- Short or long ears
- Banana, rounded, or asymmetrical ears
- Incorrect bite

Neck

The neck of an alpaca is long and slender, with its length in proportion to its body and legs. The ideal proportion of neck to legs to body is one-third, one-third, and one-third.

The transition from back to shoulder to neck should be smooth and elegant.

Faults

- Length of neck disproportionate to body size (too long or too short)
- Crooked

Forequarters

The chest is broad, deep, and well sprung in the rib. Ideally the chest should be free of medulated fiber. The wither should be relatively wide where the shoulders meet, well fleshed, and well set into the shoulders forming a straight line with the back. The legs should stand square and be spaced adequately apart.

Faults

- Narrow chest
- Loose shoulder blades
- In or out at the elbows or knees
- High or low wither

Body

The back should be strong and the topline slightly convex. The loins should be broad, strong, and flat. The body condition should be well fleshed, not overweight nor underweight.

Faults

- Sway or humpy back
- Too long or short

Hindquarters

The rump should be broad with a slightly convex top line. The tail should be straight, covered with quality fiber, and set slightly lower than in llamas. The thighs should be strong and well muscled. The height of the pin bones should equal that of the shoulders.

Faults

- High tail set
- Narrow hindquarters
- Crooked tail

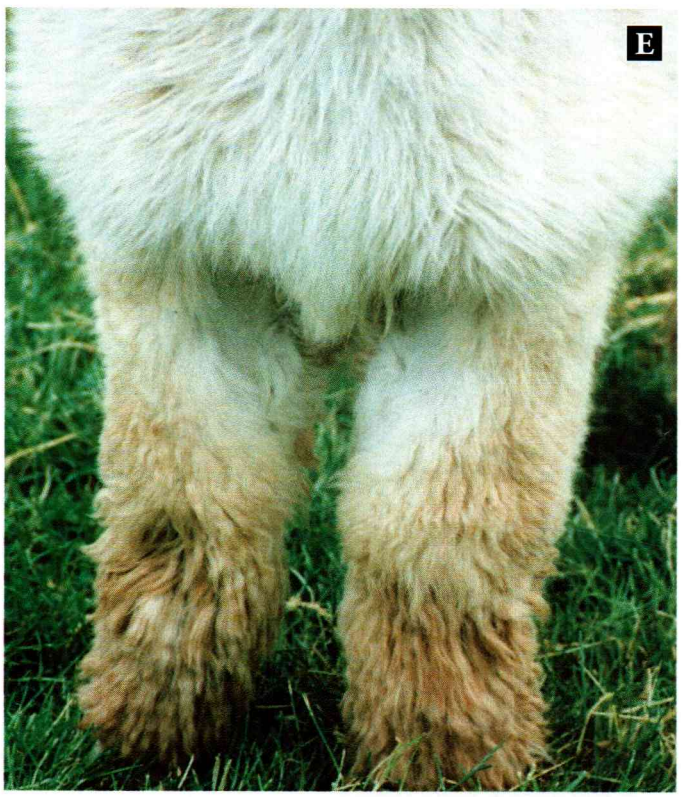
Legs

The forelegs should be strong and straight. The hind legs should be straight and parallel when viewed from behind with heavy bone evident at the hock. The legs should be well covered with fleece (see photo E). The pasterns should be firm and upright.

The feet should be neat, well formed, and bear two forward pointing toes, each carrying a long, strong toenail.

Faults

- Weak or cocked pasterns
- Knock knees
- Cow hocks
- Sickle hocks
- Post legged
- Splayed toes



1 *Understanding Animal Breeding,* Richard M. Bourdon, page 426.
2 *Animal Breeding and Production of American Camelids,* Rigoberto Calle Escobar, page 325.
3 I realize that blue eyes are a controversial subject. The fact is that there are no scientific studies for alpacas which establish that blue eyes are linked to genetic defect. The market place seems to discount the value of blue eyed alpacas, especially males. I, personally, would not use a blue eyed male for breeding, but might use a blue eyed female. Blue eyes seem to be an infrequent recessive trait.

Udder

The udder should produce abundant milk, adequate to foster strong, vigorous cria.

Faults

- Non-functional teats
- More or less than four working teats

Testicles

The scrotum should be well attached, relatively small, and carrying two large, even sized testes of good consistency.

Faults

- Testes of uneven size
- Relatively smaller testes at 30 months of age
- Undescended testes
- One testis
- Soft testes

Height and Weight

The ideal alpacas will exhibit good type at their optimum size. Animals exhibiting any llama characteristic should be avoided. Ideally, an alpaca should fit into an imaginary square, not too tall for its length, harmoniously proportioned. A mature animal should measure a minimum of approximately 33 inches for females and 35 inches for males at the wither. Minimum weight of 130 pounds for fully grown females and 150 pounds for fully grown males. (In general, appropriately sized females have fewer fertility and birthing problems.)

Faults

- Underweight
- Undersized
- Overweight
- Oversized, lacking good alpaca type, particularly if there are any llama like characteristics present

Color

Alpacas occur in a range of colors from white and black to shades of fawn, brown, and grey. Ideally, alpacas should have a uniform color throughout the entire fleece.

Gait

Alpacas should exhibit a fluent, free stride with two distinct tracks, the hind feet following the front ones.

Faults

- Choppy, short stride
- Throwing rear or front feet out or in as they walk or run
- Pigeon toed

SURI FLEECE STANDARDS

General Appearance[4]

The primary characteristics which distinguish a suri from a huacaya are its lock structure, high luster, silky handle, and longer staple length. The suri's fleece falls close to the body, moves freely, and gives the animal a lustrous, flat sided appearance. A more rounded or fluffy appearance can indicate volume, rather than density, in the fleece, which is undesirable. Due to the compactness of the fleece, suris often give the appearance of being smaller than the huacaya, but this is an optical illusion. The suri should be every bit as big and robust as a huacaya.

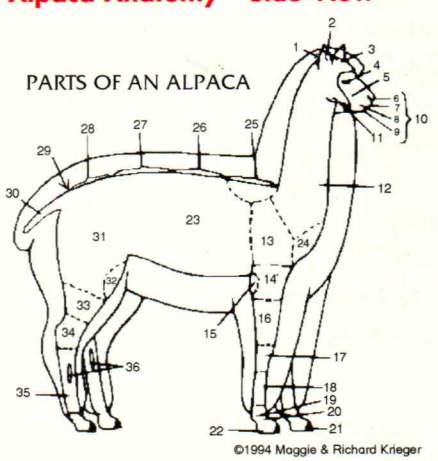
Head

Suris with well covered cheeks and bearded chins are desirable. The fleece locking should begin at the forelock and continue uniformly down the neck and across the body.

Fleece

The suri's unique fleece is the primary indication of the animal's quality. Luster is the most important suri quality. In addition, the fiber should have good handle (a more slippery feel than huacaya). Locks should be round, form close to the skin, and have uniform twist to the end. The fleece should display good architecture or definition of lock and good independence or free movement of the locks. The ideal lock should be uniform from the ear to the hock and particular attention should be paid to uniformity across the midside. Legs and underbelly should be well covered.

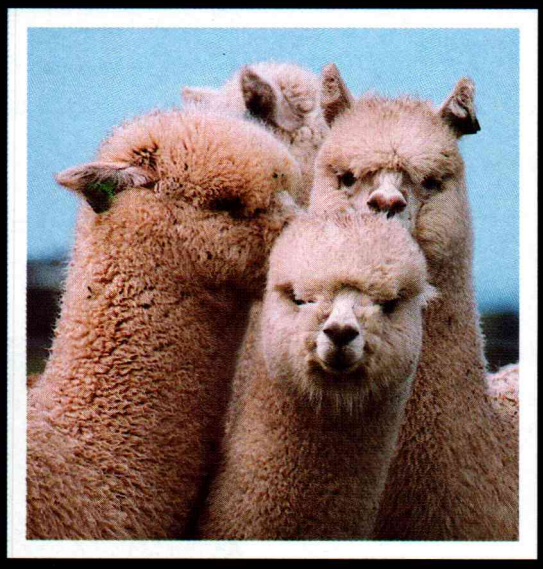
Chart 1: Alpaca Anatomy – Side View



1. Poll
2. Ear
3. Forehead
4. Eye
5. Cheek
6. Nostril
7. Upper Lip
8. Mouth
9. Lower Lip
10. Muzzle
11. Jaw
12. Neck
13. Shoulder
14. Arm
15. Elbow
16. Forearm
17. Knee
18. Cannon/Shank
19. Fetlock
20. Pastern
21. Nail
22. Pad/Slipper
23. Ribs
24. Chest/Breast
25. Withers
26. Back
27. Loin
28. Croup
29. Tail Head
30. Tail
31. Thigh
32. Stifle
33. Gaskin
34. Hock
35. Hind Cannon
36. Scent Gland

4 Please note charts 1 and 2, which are reprinted from *Secrets of the Andean Alpaca* by Maggie Krieger, for purposes of identifying specific parts of an alpaca's anatomy and fleece.

PUCARA ALPACA STUD



Which ever way, we're worth getting to know.

PUCARA ALPACA STUD
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E-Mail: pucara@mail.austasia.net

400 Alpacas on farm
80 on sale list

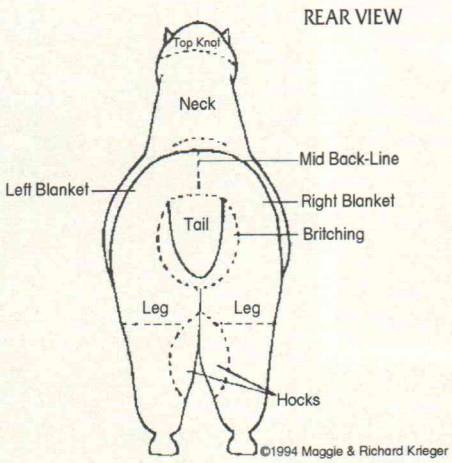
- Honesty
- Service
- Energy
- Integrity

Congratulations Ron & Dianne Condon of Shanbrooke in selecting "Extreme", a progeny of our Peruvian Drambuie to use at Stud.

Positive traits in their order of importance

- Luster 30%
- Fineness 30%
- Density 30%
- Staple Length 5%
- Uniformity 5%

Chart 2: Alpaca Anatomy – Rear View



Faults

- Crimp
- Medulation
- Guard hair
- Flat, open fleece with no lock definition
- Chalkiness or lack of luster
- Short staple length for age of fleece
- Coarse handle
- Lack of density
- Rounded appearance indicating fluffiness rather than density
- Tender breaks

Locks

The suri's locks should have a well-defined architecture, be narrow, independent, uniform, and start close to the skin. Locks may be twisted, curled or penciled and should start from the forelock and continue through to the hocks. Spirals in the locks may twist from left or right. Locks can be with or without a wave which should not be confused with crimp, which is a fault. The locks should hang straight and hug the body, giving a curtain like appearance. When the fleece is opened, the inside locks should be as well formed as the outside layer and exhibit luster at their base (see photo F).

Lock Definitions

- *Lock Architecture* The 'lock definition' is also referred to as 'architecture' and relates to the degree of twist or curl and the solidity in the lock. The best architecture has a tightly twisted lock.
- *Independence of Lock* The fleece should swing out freely from the skin when the animal is in motion or the fleece disturbed.
- *Staple Length* A suri, when compared to a huacaya of similar age and micron, will have a longer lock (staple) in the fleece.

HUACAYA FLEECE STANDARDS

General Appearance[5]

The ideal huacaya's fleece should be fine, beginning with a soft muzzle and dense topknot and continuing through a dense, uniform blanket and ending with well covered legs.

5 Please note charts 1 and 2, which are reprinted from *Secrets of the Andean Alpaca* by Maggie Krieger, for purposes of identifying specific parts of an alpaca's anatomy and fleece.

Fleece

The huacaya alpaca should be well covered with a soft, dense, crimpy, uniform fleece, except on the ears and the bridge of the nose of mature animals.

Positive traits in their order of importance

- Fineness 30%
- Density 30%
- Crimp 10%
- Staple length 10%
- Uniformity 10%
- Luster or brightness 10%

Faults

- Coarse guard hair through the saddle or blanket of the fleece
- A high proportion of medulated fleece
- Tender breaks
- Muffled face on adults
- Lack of density
- Lack of overall coverage
- Chalkiness or lack of luster
- Coarse handle
- Short staple length for age of fleece

DISQUALIFYING FAULTS FOR ALL ALPACAS

Body

- Tail absent or abnormally short, bent, or twisted
- Heart murmur
- Fewer than two testes
- Small, fused, or tipped vulva

Head

- Parrot mouth
- Wry face
- Cataracts
- Fused ears (short stubby ears or fused at the tips)
- Banana-shaped ears

Legs

- Extreme sickle hock or cow hock
- Extreme knock knees
- Extreme base narrow
- Extreme splay footed, buck kneed, or calf kneed
- Extreme cocked ankles
- Luxating patellas
- Polydactylism (more than two toes on each foot)
- Syndactylism (fusion of the two toes of the same foot)

Dentition

- Jaw not properly aligned
- Jaw overshot (bottom teeth extend considerably beyond top dental pad)
- Jaw undershot or parrot mouth (roots of the central incisors recessed substantially behind the top dental pad)

WEIGHTING THE BREED STANDARDS

All breed standards are not created equal. If breeders accept the premise that fleece is the primary end use of an alpaca, then it follows that the standards relating to an alpaca's fleece should be paramount. The Peruvian show standards allocate 70% of an alpaca's score to fleece; the Australians have a similar weighting. The original ALSA show rules (1990) weighted 45% conformation, 45% fleece, and 10% type. This was subsequently changed to 50% conformation and 50% fleece, where it stands today. The breed standards recommended here should be weighted 60% for fleece and 40% for conformation. The weightings for individual fleece characteristics have been noted in the text of the standards. In the future - say, three or four more generations of alpacas - the weighting for the North American standards should probably be reset at 70% for fleece and 30% for conformation.

Conformation standards should be weighted as well, with an emphasis on traits impacting the ability to eat efficiently, walk, and reproduce easily. For instance, a good bite is critical if a female is to forage sufficiently for both her and her cria's needs. The legs must be correctly formed and positioned to allow the alpaca to graze pastures for sufficient time and distance to stay well nourished. A male must have large testicles to produce abundant sperm and strong, straight back legs for use in mounting the female.

In other words, back legs on a male are more important than back legs on a female or front legs on either. Spring of ribs and a strong topline give a female good capacity to carry their young. Males, on the other hand, need the lung capacity to chase down females. Of the 40% allocated to conformation, the following order of priority is appropriate:

1. Bite
2. Testicles on male and vulva on female
3. Straight, strong legs, pasterns, etc.
4. Spring of rib
5. Strong topline
6. Correct proportion

The interrelationship of halter class shows, breed type, value characteristics and breed standards are important concepts upon which the alpaca industry should agree. This does not mean that every breeder needs to agree to all the details of every standard. But by collectively defining the alpaca's major purpose, the important characteristics, appropriate conformation, and fleece standards, breeders will go a long way toward establishing the goals necessary to sustain positive improvement in the national herd.

Dr Julio Sumar on selection

as interviewed by Cameron Holt

Dr Sumar, D.V.M., MSc, F.R.V.C.S. is a world renowned alpaca judge. He officiated at the Third International Festival of South American Camelids in 1997 and at the AAA National Spring Classic last year in Melbourne.

Over recent years many comments have been made regarding processor requirements and requirements for alpaca production on the farm. Whilst in Peru for the 3rd International Festival of South American Camelids I was fortunate to be given some private time with Dr Julio Sumar, Judge at the Festival (I also spoke to Dr Sumar at the Australian 1998 National Show). During these times, I took the opportunity to clarify some of the "much discussed" areas of selection. To do this I posed a series of questions to Dr Sumar who was most obliging and generous with his answers.

When selecting alpacas, what are the most important characteristics you select for in order of importance?

For huacaya, my most important characteristics are fineness (I reject animals 28 microns and above) and density. Other areas which are of equal importance are the character/crimp, length, uniformity, lack of guard hair and no dark fibres in the white fleece. In the suri there is much less variation between animals and the important characteristics are fineness, density and lustre. The length is normally O.K. growing 10-16 centimetres per year. Suris have much less medullated fibre than the huacayas.

What importance do you place on crimp in the huacaya?

Crimp is very important in the Huacayas as I can use it to judge fineness of the fleece.
(More crimps per inch equals finer micron).

Do you place any value on the definition and evenness of the crimp?

Yes, the better the definition of the crimp the more even in micron are the fibres in the staple.

What lock type do you prefer on Suris and why?

I prefer the ringlet type (curls to the left) followed by those with twist and wave. The ringlet or twist and wave should start close to the skin although some start in the middle. I prefer the former.

How do you judge for density?

To judge density on the huacaya I do this by parting the staples and looking at the amount of skin, feeling the thickness of the fleece on the animal and weighing the fleece.
In the suri I lift up the fleece from the bottom and feel the weight. I also squeeze by hand to feel the thickness of the lock as well as weighing the fleece.

Dr. Julio Sumar and Cameron Holt

Is density really important when selecting alpacas?

Most definitely, as density adds to your fleece weight.

Do you consider sheen (brightness) in the Huacaya fleece to be desirable?

Sheen/brightness is preferred in the huacaya fleece. Huacaya has brightness not lustre.

Do you cull those chalky fleeces or are they acceptable?

No, because there are very few alpacas in number, but I prefer them to have brightness. Chalky fleeces are not desirable.

How important is lustre in the Suri fleece?

Most important as this is what the processors want. Suri should have more lustre than Huacaya.

Would you cull those chalky fleeces?

No, because there are too few – as with the Huacaya.

Suri: good lock and lustre.

Evenness of micron over the fleece – is this important when breeding alpacas?

Yes, I prefer the fleece to have a similar micron all over the blanket area. I also want to see style in the apron of the suri.

We know medullation is undesirable, what would you accept (where do you draw the line and reject animals)?

Medullation is hard to visually assess. Depending on its micron, animals may be rejected. Heavy medullated animals are culled for slaughter.

Do you consider lustre or medullation as more important?

Both are important. In the Huacaya, medullation over lustre and in the suri, lustre over medullation (Suri is more free of medullation than huacaya).

When selecting alpacas, how much importance do you place on conformation compared to fleece?

I place 70% on fleece and 30% on conformation. If you use this you will improve fleece quality quicker. Production is more important.

How rigid are you regarding conformation. What would you tolerate and what would be a definite reject?

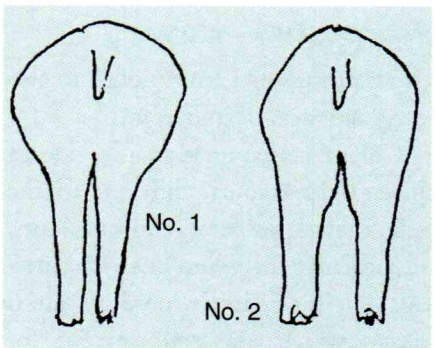
I tolerate small faults and when selecting animals I only place 30% for conformation if the fleece is good. If the alpaca is too twisted in the leg I will reject it as most legs in Peru are O.K. I will reject any deformity.

How much deviation will you tolerate in the front legs?

Not too much attention unless excessive or the animal has a bad walk.

Do you have a problem with No1 in the drawing below, or are they both acceptable.

I prefer the drawing No 2. Your example in No 1 is too narrow at the base.



What coverage of fleece do you expect as a minimum in huacaya and suri?

I prefer the fleece cover to be all over the legs and good coverage on the neck. I sometimes will tolerate some lighter cover on the back leg but want good cover on the front legs. It is most important to have length on the neck and top knot. I do not want wool in front of the eyes in adult animals. For the suri I want a clean face and no wool on the muzzle.

Do you think using scientific measurements is an aid when selecting alpacas and if so, why?

Yes, measurement most definitely can help you as your eyes and fingers can make mistakes. I just take a sample and send it to the laboratory. It is an aid to your visual appraisal only.

If you could make one or two improvements on the huacaya and suri alpaca, what would they be?

To give more fineness to the animals and reduce the guard hair on the apron, belly and sides.

What do you think is the most desirable testicle size?

We should select for bigger testicles as they have more sperm reserves and can serve more females in a day.
Minimum size no less than 4 cm in length in adult male (5 years) and 3 cm in width. In a 2 year old both testes should be in the scrotum sack and have around 2- 2.5 cm in length and 1.5 cm in width. They should have the same size and consistency.

At the National Show we looked at four types of lock (staple) in huacaya fleece:

a thick lock like a finger or large texta;
a dense lock similar in width to a large pencil;
a thin lock similar to a half pencil in thickness;
a very thick solid lock with high lustre and large wide crimp (huasu type).

What importance do you place on the staple/lock shape during the evaluation of the fleece on the animal?

The first two lock types you speak of are acceptable. I do not like the thin locks as they do not have a lot of density. The fourth type you mention is seen as a cross type. There is a need for studies on the density and arrangements of the staple in relation to follicle formation
The Huacaya staple should open easily and have good character (crimp definition) and should be dense. The Suris should hang free and part easily with the ringlet/twist and wave starting on the skin. The lock should also be dense.

When opening the fleece on an animal, do you have a particular area to look at first, and should it open in any special way?

I like to inspect 10 cm down from the midline. The fleece should open without entanglement. It can either open like a book or it can be in individual bundles of staples, as long as fibres are formed in a dense group whether in thicker staples or pencil like staples but not too thin.

Inspecting fleece, 10 cm down from the midline.

SOME CONCLUSIONS

What do Dr Sumar's comments mean to us?

First, Dr Sumar places importance on soft handling fibres, which are as free as possible from medullation.

Softness comes from not only the fineness of the fibre, its scale structure, but also from freedom of medullation and coarse fibres. The coarse fibres are clearly shown in histograms and the uniformity of evenness shown with the C of V. Peruvian processors remove the heavy medullated fibre and place this in the coarse lines. It was very noticeable during the judging, the importance that Dr Julio Sumar placed on freedom of medullation. Medullation clearly adds to the prickle factor, not only by micron but during spinning the medullated and coarse fibres are thrown to the outside of the yarn, thus compounding the prickle factor. Dr Sumar stated that in his experience, he found suris to have less medullation than that of huacayas. Recent research by the writer had a similar finding.

'The Suri results for medullation appear to be lower than that of similar microns for Huacayas.' (Holt / Scott 98)

Micron	Huacaya	Suri
20	12.9%	4.7%
26	36%	16%
36	60%	42.4%

'Diameter/Medullation for suri fibre had a correlation of .77. As the fibre became coarser in micron, there was an increase in medullation.' (Holt/Scott 1998).

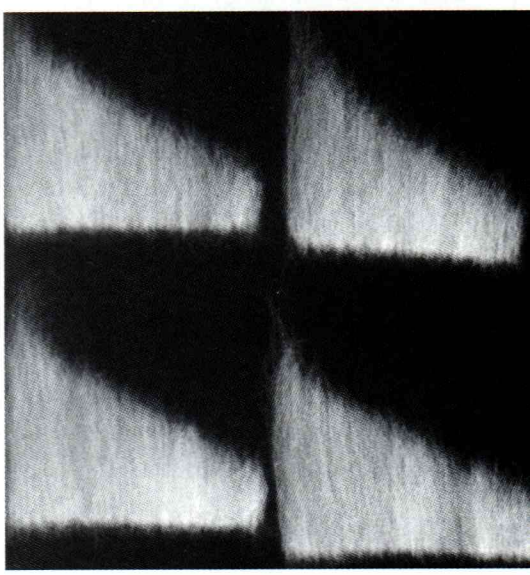
Processors' views

Other processors I have spoken to also identified areas of importance.

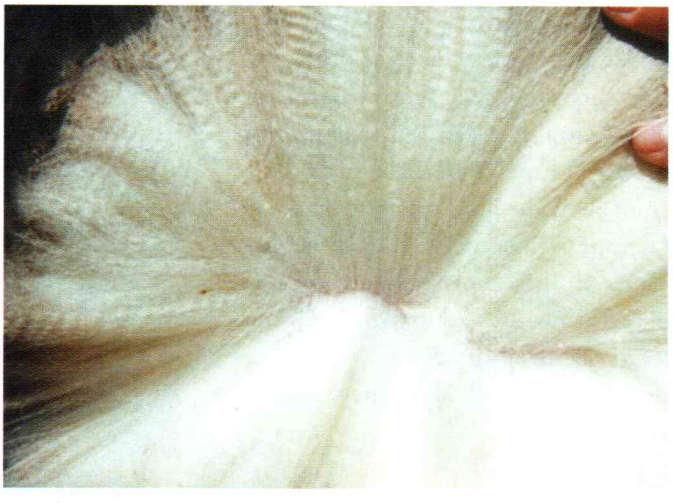
Colour contamination was one of these. Odd colours, different to the bulk, caused problems to most colours, in particular the white line. The message is clear that we need to breed fleeces which are solid (except for greys/roans etc) and our fleece preparation standards must be maintained at a high level. The breeding may take some time to achieve, but ensuring cleanliness in the shearing shed can be done now.

Length of fibre was important, too. As with all animal fibres, this is what determines the method of processing. The Peruvian Mills lengths are shorter than those classed for in Australia and North America, which is understandable considering the levels of nutrition available to the animals. The mills set their machines for the length of fibre received. The machines could be altered if they were receiving longer fibre. You may notice that the settings between mills also vary slightly.

Other areas of lesser importance are crimp and lustre. In the huacaya two processors I interviewed said they needed crimp in the individual fibres (crinkle). This helps hold the fibres together during processing. Derek Michell noted that not all Peruvian fibre has good crimp in the staple. Definition of crimp is highly heritable and those already selecting for this trait will notice how repeatable it is. Dr Sumar feels that the better the definition of the crimp the more even in micron are the fibres contained within the staple. If this, as some scientists suggest, makes a more uniform staple for micron which, in turn, gives you a lower spinning fineness/softer yarn, then this characteristic should be considered amongst the other main priorities you have selected in your breeding program. Dr Sumar also uses the crimp to judge the fineness of the fleece. The writer has found with animals in Australia that this may not be a reliable method for identifying fineness of micron. In the sheep industry, there are a number of strains of Merino which have similar crimp frequencies i.e. x number of crimps per inch. This is due to their varying genetic background.



Variation of lengths in huacaya tops (Peruvian mills).



Two examples of crimp; both fleeces are 21 micron.

For example:
Saxon 64s count = 20 microns;
Peppin 64s count = 21 microns.
South Australian strain 64s count = 22 microns.

This is more complicated when we compare one year old sheep with adult sheep as the above examples can vary from 18 microns to 22 microns for the same count number.

Mike Safley has identified alpacas with low crimp frequency and low microns in certain strains. This has also been observed by the writer in some Peruvian animals imported into Australia. Crimp measurements taken on early imports with questionable genetic backgrounds showed no relationship between micron and crimp frequency. If you stay within the same strain, you may be able to use crimp frequency in alpacas to approximate fineness, but age of the animal must be still taken into consideration.

The following charts, developed by Juan Villarroel and the writer, may give you some indication of the complexity of this assessment.

Estimation of Fitness by Bradford Quality Number Holt (1995)

HUACAYA (from Chile)

ACTUAL COUNT	EQUIVALENT BRADFORD COUNT	ESTIMATED COUNT ON CRIMP SIZE
22.3	60/64	56
26.9	56	58
30.8	50/46	58
22.5	60/64	60
29.2	54	58
34.4	46/44	58
32.2	46	54/46
36	40	56
21.1	64	60
24.1	60/58	46
28.6	54	no crimp
24.7	58	58
23.6	60/58	56
32.6	46	56/50
24.4	60/58	50
22.2	60/64	no crimp
18.4	74	58
24.2	60/58	50
28.5	54	56
35	44	46
20.4	70/64	60
25.1	58	58
23.2	60	58
21.9	60/64	58

NOTE: Ages were not known and fibres appeared to be of mixed background. There appears to be no relationship between count and micron.

Villarroel (1959)

ACTUAL MICRON	EQUIVALENT BRADFORD COUNT	APPRAISER NO 1 EST COUNT	APPRAISER NO 2 EST COUNT
31.4	50/48	48	50/48
15.8	100	58	74
25.1	58/60	56	60
26.1	58	54	60/58
27	58/56	50	58/60
27.9	56	50	58
21.7	64/66	56	58/60
36.4	44/46	4+6	46/50
23.3	62	50	60
23.8	60/62	50	56/50
28.8	56	54	58
25.2	60/58	56	64/60
39.1	36/40	50	56/58
27	58/56	50	56
25.2	58/60	50	58
28.1	56	50	58

NOTE: This table shows a great discrepancy between appraisers but appraiser 2 does show signs of some relationship between crimp size and micron. No ages of animals are disclosed which makes comparisons much harder.

With the suri fleece, the processors wanted a fibre that was straighter than that of the huacaya and showing a slight wave in preference to a straight fibre as often found in plain fleeced suris. With suri industries now growing, it is important to identify the preferred type required by processors. Dr Sumar preferred the ringlet type of lock followed by a staple formation showing twist and wave.

It is important to note that all suri fleece types are used and during processing, a false crimping is applied to the top, to aid its adhesion during its various processes post combing. Lustre in the suri fleece was considered most important, and a good bloom/sheen (brightness) in the huacaya fleece. (The huacaya was not to be as lustrous as the suri). Chalky fleeces are not desirable and are placed in lower lines.

These chalky types are easily identified and it has been noticed by the writer that when white fleeces showing this fault are tested for medullation, they have a higher content than those with a good sheen or lustre. This chalky type does not take dye well and does not display the vibrant look of a fibre with 'bloom'.

Although lines which the processors class vary slightly, all fibre coarser than 30 micron is classed as huarizo or coarse. The message is clear, mate those animals with fibre coarser than 30 microns to finer males. I am aware that some of these coarse fibres with C of Vs below 20 may handle well, but to the Peruvian processors this is not in the range of fibre they market as alpaca.

CLASSING ALPACA IN PERU

It is interesting to know what processors and Dr Sumar would change if they could. All mentioned less medullation, and the processors, improved crimp, with elimination of colour contamination and reduction of chalky fleeces, with one comment from Derek Michell, '... the fibre is heavy so would like it lighter if possible". That is interesting as many people say Alpaca fibre is lighter than wool due to its medullation.

In an article I wrote on Characteristics of Alpaca, I demonstrated how (in the case of huacaya) fibre with crimp makes a bulkier yarn than that of straighter fibre. This enables us to spin both types into similar thickness, with the crimped type (less fibres in cross section) being lighter (due to its bulk) than the straight fibre type. If Derek's wish for better crimped fibres and less medullation occurs, we may have a softer, lighter huacaya yarn. This of course does not help the suri fibre, which is not unlike mohair in its structure, which is considered a heavy fibre.

I hope that this interview with one of the world's foremost Alpaca Judges answers some of the contentious myths. We must remember that to have a marketable product we must supply what our client wants, so it is therefore important to be aware of the fibre specifications required by not only the processors but also by the people constructing the final product.

Fleece classing in Peru.

The Australian Alpaca Association would like to take this opportunity to wish all our readers a Merry Christmas and a Happy New Year.

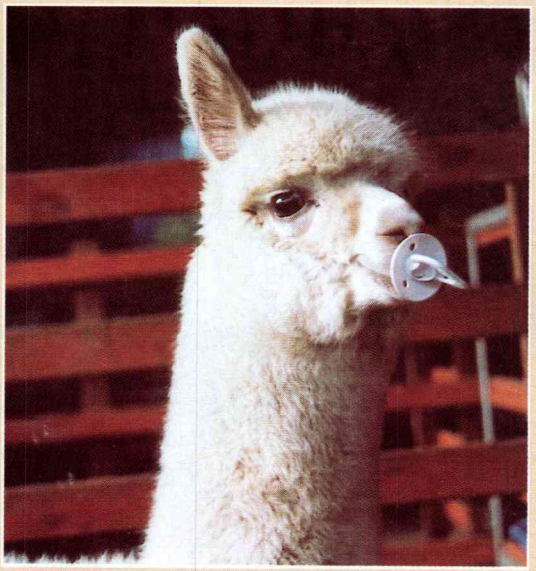
PACA ♥ PICS

Pick of the Pack

Don't worry, you'll get your spots when you're older.
Leanne Pearce, Leajay Alpacas.

Congratulations to our 'Pick of the Pack' winner! who receives $50.00 with the best wishes of the Association.

Send in your favourite Paca Pic and you'll be in the running for the cash prize. Remember, too, a photo judged good enough to appear on our front cover will win $150 for the sender.



Bottle please – or I'll spit the dummy.
Jeanette Hollingworth, Alpacandes Alpacas.

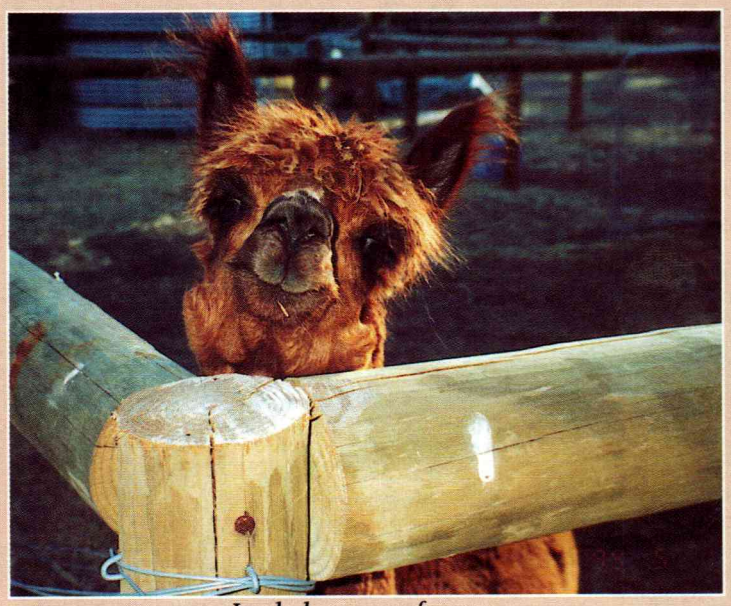
Could Kylie have a kiss, please?
Maree Trigg, Hazel Grove Alpacas.

Who's for morning tea?.
Carolyn Jinks, Benleigh Alpaca Stud.

Room service! More bubbles please!
Kevin & Lynne Holloway, Kelynya Park Alpacas.

I wonder if it's too late to start my Olympic training?
Lyn Dickson, Warralinga Alpaca Stud.

All dressed up and nowhere to go.
Heather Austin, Nyroca Park Alpacas.



I only have eyes for you.
Pearl Urquhart, Bodeguero Alpaca Stud.

I mightn't be crimpy, but I can hop.
Chris Moon, Fernridge Alpacas.

Please say you will be mine …
Rosemary Eva & Liz Coles, Longueville Park Alpaca Stud

Alpacas in the mist.
Lindy Quin, Summercloud Alpacas

Paca PICS

Alpacas AUSTRALIA

ADVERTISING RATES

	Casual Rate	x2 issues	x3 issues	x4 issues	Production
4 COLOUR					
Full page	950	885	825	750	Price on application
1/2 page	670	620	580	530	Price on application
1 column	620	580	530	480	Price on application
1/4 page	580	530	490	450	Price on application
MONO					
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1/3 page	300	280	260	240	95
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Bus. cards	100	100	100	80	n/a

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Editorial to Carol Hosking
If possible, all editorial contributions should be typed. Visual material can be colour photographs or transparencies. We will endeavour to return all photos and slides.

Advertising to Jennifer Davis
Specifications are available on request. We can accept camera ready material or will produce advertising material to specification. We cannot guarantee inclusion of late advertisements.

For further information
Phone: (03) 9428 9663
Fax: (03) 9428 2728
Email: carol@ptw.com.au
jennifer@ptw.com.au

Please address all editorial and advertising material to:
PTW Desktop & Design
Unit 9, 663 Victoria Street
Abbotsford 3067 Victoria

ADVERTISING AND EDITORIAL DEADLINES

Issue 30 – Autumn 2000
Due: March 2000
Deadline: Friday 14 January

Issue 31 – Winter 2000
Due: June 2000
Deadline: Friday 14 April

Issue 32 – Spring 2000
Due: September 2000
Deadline: 14 July

Issue 33 – Summer 2000
Due: December 2000
Deadline: Friday 13 October

ORDER FORM

PUBLICATIONS

The Alpaca Book: Hoffman & Fowler	$142.00	$.....
Alpaca Breeders Birthing Handbook: McMillan & Jinks	$22.00	$.....
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Animal Breeding & Production Book: Escobar	$75.00	$.....
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Glenelg, S.A. 1999	$28.00	$.....
'Camelids', Veterinary Proceedings 1995	$38.00	$.....
'Camelids', Veterinary Proceedings 1996	$72.00	$.....
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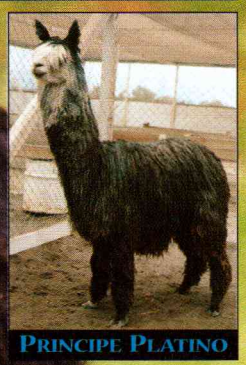
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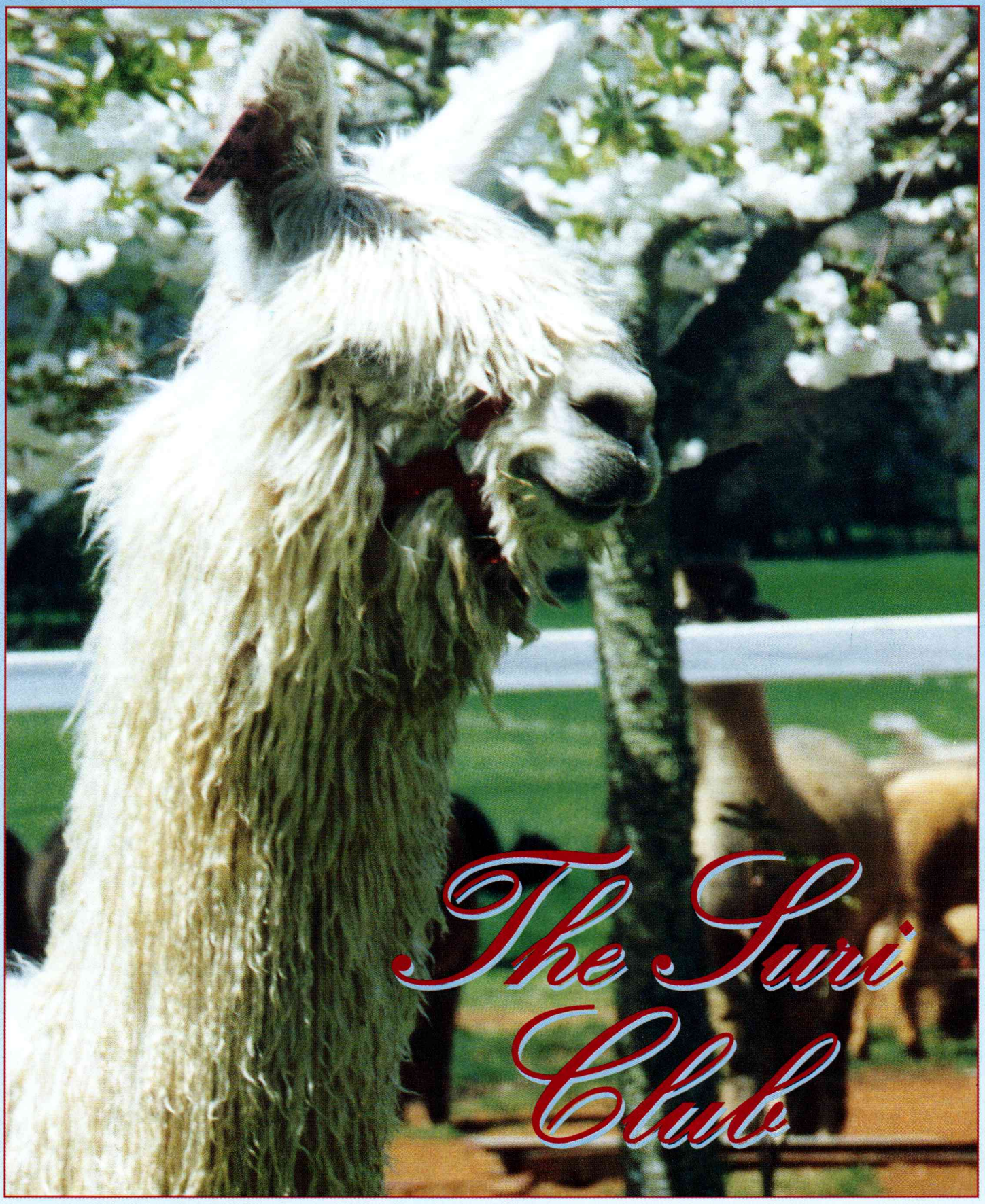

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