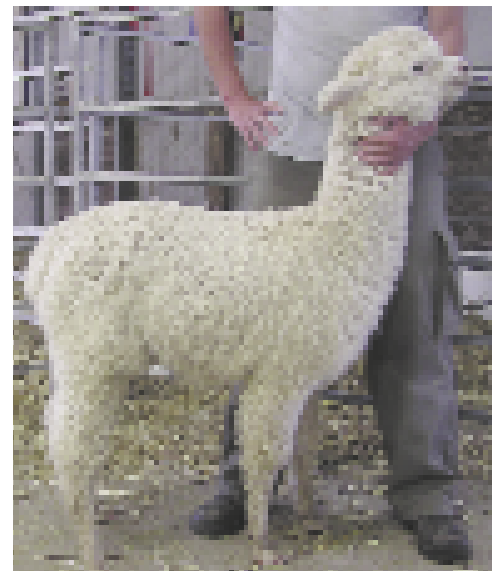


the best is yet to come!



by IAN DAVISON

In the longer term, in the broader scheme of things, ultimately, and all things considered, the alpaca industry is all about the fleece.

Phew! There, I've said it. That wasn't so hard, though it took some getting around to. And the present reality is that, whilst the *talk* is all about the fleece, the *facts* are that—for the vast majority of breeders—the issues are more about the income derived through the sale of animals and services to the alpaca industry, and the lifestyle options that alpacas afford to a wide range of people. That so many people have been attracted to the industry at a stage when the wool cheque cannot yet hope to match the cost of production is testimony to the fact that, either they see dividends in the ownership of alpacas other than the income from fleece

sales, or they have an unshakeable faith in the future of the fibre.

In fact, both are probably true.

But, inescapably, alpacas would be of no more relevance to Australian primary industry than giraffes or axolotls, were it not for their exquisite fleece.

Which brings me to another reality check. Like many alpaca breeders, we at Illawarra Alpacas have just received our clip report back from Australian Alpaca Fibre Ltd (AAFL), and are lamenting the meagre financial return for our year's effort: a total of 835kgs of fleece sent down to AAFL, for a return of just \$1325.16. That's an average return of just 159 cents a kilo for alpaca fleece across the board. In fairness, that includes fleeces shorn from white to black, crias to 18-year-olds, males and females, saddles, necks, skirts, and NCV. In short, all comers. Just 40 of the 835 kilograms sent to AAFL were valued at over \$10/kg.

To be fair, it did not include a lot of cria fleeces, nor did it include our very best fleeces, which have been reserved for showing. It excluded also a few suri fleeces, and represented *in toto* only about 75% of our herd. But, nevertheless, production costs far exceed our return on fleece, with shearing alone costing roughly three times the value of our 'wool cheque'. That despite a considerable investment in stud stock, and all the usual overheads of funding a farm and a herd of over 400 alpacas.

Not much cause there for rejoicing, surely?

So why not breed Merino sheep, where the benchmark price for all grades of wool is presently between 600 and 880 cents/kg?

Thankfully, there is a very good answer.

The bottom line is that there remains a fundamental confidence amongst breeders in the future of the alpaca industry. A few months ago, a male sold in the United States for \$US600,000 (\$A800,000). There have

been many sales of males in Australia for prices in excess of \$100,000, including most recently the top price at the National Show and Sale for (\$187,000) and our own syndicated purchase of Prestige Valentino in May for (\$123,000). Top females sell regularly for scores of thousands of dollars.

What the alpaca industry has that the Merino wool industry does *not* is huge scope for genetic improvement and industry development, and current alpaca breeders and investors have their eyes firmly on the future.

The work of anthropologist, Dr Jane Wheeler, has shown that the modern alpaca does not compare in fineness with the alpacas of the Incan kingdom, having been diluted by many years of indiscriminate breeding and interbreeding with llamas. Australia's own wool guru, Dr Jim Watts, estimates that the alpaca has achieved only 30% of its genetic potential. By AAFL's own admission, the market for alpaca product is relatively undeveloped in international terms, and huge opportunities exist when both quality and quantity can be guaranteed.

It is to that end that most Australian alpaca breeders aspire: to be producing genetically improved alpacas that are recognised internationally as being of superior quality, producing *large amounts* of the kind of *high quality* fibre for which AAFL and the international market are prepared to pay a premium. But in the meantime, all breeders will have to take a deep breath in, and help to subsidise the development of both the market and the animal.

It is not my purpose to discuss here the development of the market. The managing director and Board of AAFL have invested a great deal of time and energy in that area, and their efforts are likely to establish a sound basis for future market development. There are many reasons why growers should expect a substantial improvement in the international benchmark price for alpaca fleece.

But for the grower, the price paid for alpaca fleece is largely beyond his individual control. It is abundantly clear to every grower that his only opportunity of securing a bigger wool cheque is by producing *larger quantities of better quality* fleece.

In fact, it is this topic that I wish to address.

Let's consider firstly the question of quantity. We can achieve this by simply having **more alpacas**, but since the cost of shearing currently exceeds the value of most fleeces,





that is probably the fastest way to go broke! What we really want is a *greater return per alpaca*, that is, higher weights of more valuable fleece. So how can we achieve that?

We can breed **bigger alpacas** for a start. If we can assume that a bigger alpaca grows more fibres, then that will certainly increase his fleece weight. But if the number of fibre follicles is determined very early in life, and is not genetically increased along with frame, we will just be stretching the same coat over a bigger frame, without actually increasing the total number of fibres. And even if we are breeding genetically bigger alpacas, their feed requirements are likely to increase faster than their fleece weights, as the former is a volumetric (cubic) function, and the latter a surface area (square) function. Put as a crude approximation, if we double the size of the alpaca, we will increase the surface area (or fleece) by a factor of four, and increase its weight (or nutritional requirements) by a factor of eight.

So let's not go there.

The quickest way to increase fleece weight would be to **increase the average fibre diameter**. For example, doubling the micron would quadruple the fleece weight (presuming all other factors remained unchanged), as the weight of a fibre would be determined by its volume, and doubling the radius quadruples its volume (remember the formula for the volume of a cylinder, $Volume = \pi r^2 h$). This ignores the effect of hollow fibres, or 'medullation', of course, which tends to increase as fibre diameter increases, and effectively reduces the total fleece weight. But really, it's of little consequence, as the value of 'coarser' fleece (as we call fibre of larger diameter) rapidly diminishes as it becomes unsuited to use in fine textiles. This is because the coarse fibres produce a feeling of discomfort when the free fibre ends press directly on the skin, causing 'prickle' or 'scratch'. Moreover, the medullation makes the fibre more brittle and less even in its

uptake of dye. So, with few exceptions, breeding coarser alpaca fibre is not a commercial option.

The next solution would be to breed alpacas which **grow fibres faster** than most others. Doubling fleece length over a given period would effectively double fleece weight. But here there is also a warning: if fleece is allowed to grow longer than the preferred A length of 80-120mms, the value of the fleece may be substantially discounted and classed as overgrown. Alternatively, alpacas growing fleece at a faster rate may have to be shorn more frequently than annually, an added expense and inconvenience to be sure, unless the quality of the fleece justifies the increased effort and expenditure. And if an alpaca grows between 120 and 160mms a year, shearing twice in 12 months would not produce *any* A length fibre. Consequently, the grower would have to accept a reduced return on his short fibre, or shear noncyclically at different times each year, whenever fleece length reaches 80mms or more.

The *ultimate* solution addresses issues of both quality and quantity simultaneously. This can be done by breeding alpacas which grow **more fibres per square millimetre** than

the average alpaca. This is the driving principle behind the **SRS® Breeding System**, a scientifically-based system initially designed to drive rapid improvement in fleece quantity and quality in the Australian Merino, but now refined to apply the same principles to angora goats and alpacas. The system is the brainchild of Australian scientist, and now international fibre consultant, Dr Jim Watts. In simple terms, the theory suggests that, as more and more follicles are packed into a smaller space, the fibres are 'squeezed', and have no option but to become finer. But the follicle, the 'fibre factory', continues to produce raw materials at the same rate, which is therefore extruded at a faster rate, resulting in a longer, more rapidly growing fibre. The increased fibre density means that the fibres grow in close alignment to each other, resulting in fleeces that have a characteristically bold crimp, and high lustre. The end result is that fleeces are heavier (more and longer wool fibres per unit area), and of higher quality (better alignment and finer fibres).

Which brings us back to the earlier statement about the scope for genetic improvement in alpacas. If we can breed better Australian alpacas, which grow big fleeces of finer, more lustrous, well aligned, even, crimped and quickly growing fibre, there is plenty of scope for profit. Even accepting international benchmark pricing, there is an opportunity to vastly increase the return on fibre for every individual alpaca, by pursuing these goals.

How to do it?

There are two important scientific tools at your disposal. The first tool is the Across-herd Genetic Evaluation (AGE) Program, a



program designed for and by Australian alpaca breeders for the Australian Alpaca Association, to empower breeders to measure their progress in a range of commercial traits, and to compare the breeding values of their alpacas against an industry norm for each of those traits. The details are freely available on the AAA website (<http://www.alpaca.asn.au/genetic/index.shtml>), and the AAA publishes a handbook, downloadable from the web, which will explain how any member of the AAA can become involved in this exciting and far-reaching program.

The second tool is the SRS® Breeding System. A small group of AAA members have together formed **SRS® Alpacas Australia**, inviting any AAA member to join should they share an interest in advancing their alpacas through the SRS® Breeding System. Involvement in the AGE is integral to the breeding plan of SRS® members. To learn more, check the SRS® website at [www.srswool](http://www.srswool.com)

In the meantime, there is much reason for optimism. The historically low prices for natural fibre that have been in evidence for the past few years have finally started to turn around, and the recent meteoric rise in petroleum prices shows no sign of stalling, rendering synthetic fibres more expensive to manufacture, and natural fibres more competitive. Some recent market initiatives by AAFL may potentially underpin a longterm market for Australian alpaca: the Australian industry is developing a range of onshore and offshore commercial relationships which might potentially account for the entire Australian alpaca clip, at preferred prices.

And so, despite a disappointing wool cheque for 2005, we at Illawarra Alpacas share an unshakeable confidence in the future of the Australian alpaca fleece industry, and are committed to the scientific improvement of our herd. All breeders with a long term view of the industry will be doing the same, positioning themselves to be at the forefront of the industry as it matures, when the 'wool cheque' will be the new commercial reality. Those who fail to do so are not likely to be around when that reality transpires. In the meantime, Illawarra alpacas will join with all those farsighted Australian breeders who continue to back AAFL in its product and market development, and will concentrate all our efforts on fleece development through the AGE and SRS®.

With certainty ... *the best is yet to come!*

