

EMBRYO TRANSFER – a first for New Zealand

by Kit & Sheryl Johnson – Silverstream Alpaca Stud

THE DREAM

A desire to fasttrack our breeding programme led to our decision to investigate embryo transfers. With Benleigh, Banksia Park and others leading the way in Australia and Dr Jane Vaughan offering her services to New Zealand breeders, it seemed too good an opportunity to miss.

Our regular excursions to Australia on the lookout for that illusive perfect alpaca had put us in touch with a number of breeders, some of whom were actively involved in embryo transfers. Armed with their words of wisdom, and after discussions with Dr Jane Vaughan, the pioneer of embryo transplant in alpacas, we elected to try super ovulation.



If our bottom tier of alpacas became the recipients for the embryos from our best dams, we could rapidly improve the overall quality of our herd in a relatively short period of time. We had imported from Australia a number of top quality dams with some exciting genetics – embryo transfer would allow us in one year to establish what influence our males could have on the progeny. With the results of embryo transfer, we could concentrate the traits that we were seeking in our breeding programme.

THE ACTION PLAN

Six donors and eighteen recipients were chosen based on their fertility and proven motherhood. The donors represented some of the best genetics in our herd and all had produced good healthy cria in the past. The donors



and recipients were separated from the rest of the herd for ease of giving the required injections and to avoid undue stress. The days leading up to the start of the treatment were a testing time as the family came to grips with the requirements of ET and ensuring that everything was in order for the big day. A strict routine had to be followed and any error or omission could have had serious consequences to the success or failure of the venture.

BEST LAID PLANS

An important day in the ET calendar is the day the donor females are mated.

We awoke that morning to find that one of our males had broken through a gate and partied all night with four of the recipient females. Our hearts sank as this effectively left us with only two males to mate six donor females.

We compensated by using the two remaining males in the morning for short matings and then used the party boy in the afternoon. This was less than perfect but the best we could do under the circumstances.

THE BIG DAY

January 27th was supposed to be a special day - ET coinciding with Sheryl's birthday. Our high hopes were dashed when two of the donors sat, thereby ending their involvement in the programme.

At 9.30am with everything finally ready, we scanned Pucara Juliana, the mother of two supreme champions and arguably our best dam. Early indications were promising. Through a rectal scan, Dr Jane Vaughan could see three corpus luteums indicating that our series of hormone injections had worked.

Juliana had produced three eggs – we began flushing with enthusiasm. Each female is flushed about four times. The embryo is usually seen in a second, third or fourth flush so we were not too disappointed with the absence of an embryo at first. However by the end of the fourth flush, we still did not have an embryo. Our other three girls produced similar results – they each had multiple corpus luteums but no viable embryos. One female did produce a small misshapen embryo that Jane decided not to transplant.

THE DEBRIEF

After the cleanup, we sat around with a bottle of wine trying to ascertain how or where we went wrong. Jane was happy with our preparation – after all we had an optimum number of corpus luteums from each donor female. Our females had ideal body scores for embryo transfers – they had had access to good

quality pasture and had been relatively stressfree leading up to the procedure. To some extent, the boys had let us down, even though two out of the three males had been rested for a week leading up to the servicing date. We also decided to administer extra selenium to our herd.

A NEW START

We were not about to let this disappointment stand in the way of our ambitions and decided to make a second attempt in mid March. Changes were made to try and improve our chances of success including some changes to the donors and the males. Our first effort in January had been during a particularly hot and dry period and this may have impacted on the male performance. Alas despite our best efforts, our second attempt in March was to end in disappointment as well.

THE COST

Whilst the initial financial outlay for ET may appear somewhat daunting, spread over a number of embryos, the cost is reasonable and not too dissimilar to a typical service fee. The more donors you have, the cheaper the exercise because there is a greater chance of obtaining embryos. Working in with other breeders in the same area also helps to reduce the travelling cost to and from Australia, for Dr Jane Vaughan.

One of the bigger issues to consider is keeping a large number of donors and recipients empty until the commencement of the programme. This can mean three or four months depending on pregnancy status and the availability of Jane Vaughan.

THE FUTURE

We are philosophical about our experiences with ET – it is still after all in a developmental stage and there are risks as we found out.

Fortunately we are delighted to advise that two out of the four breeders involved in the March ET programme were successful.

Our dream has not been shattered, more to the point our resolve has been strengthened by the knowledge that it can work in New Zealand

IF AT FIRST YOU DON'T SUCCEED, TRY, TRY AGAIN. 

