

### Practical Advice for Achieving Pregnancies

This article provides practical advice on how to achieve pregnancies. It is not written with veterinary expertise, rather as a result of 12 years of alpaca farming experience, including thousands of joinings and resultant pregnancies. We recommend you always consult your local veterinarian to obtain specific advice, as the following is intended as a guide only.

A few brief reminders before we start. Female alpacas are induced ovulators, requiring specific stimulation for egg release from the follicle on the ovary to occur. Generally that stimulation will be the joining or mating. Very occasionally spontaneous ovulation will occur, usually due to presence around another mating. Research has shown that at any one time the majority of females have a follicle of sufficient maturity to erupt and release an egg in response to mating. If the male's sperm fertilizes the egg the pregnancy begins.

#### Receptivity, Behavior and Maidens.

It is vital to remember the age-old adage that there is no such thing as people with animal problems, only animals with people problems! Alpacas are, reproductively speaking, extremely forgiving animals. The majority of females breed well, despite being forced into our methods and timetable. Unfortunately, those that do not quite fit in with our grand plan are often termed difficult or problem breeders. The good news is that in the majority of cases all that is required to fix the "problem" is a different approach.

There is little point in mating a female that is not receptive. They will be highly unlikely to fall pregnant, as receptivity is related to the presence (or not, as the case may be) of a mature follicle. Levels of receptivity vary, but ideally the female should sit with little encouragement from the male or us.



In lots of cases matings are scheduled with either the male or female traveling. In many others the stud master on the farm schedules them. So in most scenarios little thought is given to the alpaca's "timetable". If a female is repeatedly not receptive, and provided she does not have a false pregnancy (see later), simple techniques can be used to gauge when she is most receptive.

Vary the times and days at which the male is introduced. An excellent way to do this is to use a combination between hand and paddock mating to simulate as far as possible natural herd breeding. The female is put into a mob of females that are ready for or are in the process of being mated. That mob is put in a small yard and the male is introduced under supervision. The most receptive females will sit first. If this is done on a regular basis, preferably daily, you will be able to monitor the receptivity of your females and mate them at the optimum time. This technique works particularly well with maidens, who may panic when put with a male for the first time. If they are put in with the mating mob at, say, 11 months of age they will be able to become accustomed to the process without pressure and will invariably sit when ready. There is no specific age or weight guide as to when a maiden is ready for mating. Rather, she should be mated when physically and psychologically ready. Physically she should be at least 2/3 of her adult size and weight, taking into account the size of her sire and dam. Psychologically she should be sitting readily. Some maidens may not be reproductively mature until two years of age. With alpacas slower may be quicker in the long run. A female forced into early production may

abort or develop other problems.

It is also worth mentioning the hymen. It may not be broken with a maiden and it may be quite persistent and difficult for the male to break. If the male is having difficulty with full penetration you can check the hymen by inserting your small finger (gloved and lubricated) in the vulva. If you feel the hymen (1-2cm in) you can very gently probe to break it.

Maidens are best bred with proven working males, and similarly young unproven males are best tried with proven breeding females, so that if there is a problem the cause is clearer.

### Matings.

If the female is receptive and is not pregnant after three good matings, it is time to try something new. The first thing to consider is changing the male, particularly if he has no confirmed pregnancies or does little work. This simple step often solves the problem. It is said females should be mated 2-3 weeks post partum. Most will be receptive within this time frame. Some will not. Again, let the female's behavior be your guide and take into account factors such as a problem birth, which may require a longer recuperation period.

The duration of matings can vary between 1 minute and 1 hour. Duration has little effect on the possibility of pregnancy. In fact, long matings are not particularly good for the uterus. 15-20 minutes is plenty. Also it is important to check that the male has in fact fully penetrated the female.



### Ovulation and Pregnancies.

After the mating, check the female with a male at 7 days to see if her behavior has changed. A change of behavior at 7 days indicates ovulation and if that change continues to 14 days that indicates a pregnancy. A change in behavior may be the traditional "spit off" where the female spits at the male or it may be running away or even just planting the feet firmly and flattening the ears. Also look out for the "escape sit". Some females respond to the male's pressure by beginning to sit and then lunging forward and upward at the last moment. They are simply trying to avoid the male's attentions, albeit in a less traditional way. It is therefore important not to remove the male at the first sign of sitting. Wait until you are sure of the outcome. It also pays to be aware of the escape sit, as it can be dangerous for the handler.

In summary, what you are looking for is a change from the female's receptive behavior as an indication of ovulation and pregnancy.

Some females will "spit off" after a matter of hours; others will take up to 7 or possibly even 8 days to know if they have ovulated. If the female has ovulated and is not pregnant, she will be receptive again some time after 7 days from the mating date, but time frames do vary. If the female has not ovulated she will continue to be receptive. However, she should not be mated until at least 7 days since her last mating. Repeated mating can make the uterus too disturbed and unhealthy to hold a pregnancy due to factors such as infection or damage.

If a female continues to fail to ovulate she may need an ovulation-inducing drug to assist her. If a female continues to ovulate but fails to fall pregnant often a course of penicillin can help as she may have a uterine infection that may or may not be detectable on ultrasound. Your vet can advise on the specific drugs, dosages and management plan.

It is important not to rely solely on the female's behavior as an indication of pregnancy. Once she is "spitting off" have the pregnancy checked by ultrasound or some method whereby you can confirm that her behavior is

consistent with a pregnancy.

### "False Pregnancies".

Occasionally a female that has ovulated but is not pregnant will have a retained corpus luteum ("CL"), resulting in a "false pregnancy". The CL has failed to regress, despite the egg not being fertilized. She thinks she is pregnant and behaves accordingly, but is in fact empty. Such a female may require prostaglandin to facilitate regression of the CL and she should be receptive again anywhere between 24-72 hours afterwards. If she is not then she may have a persistent CL that may require a course of prostaglandin. These are often the result of a retained CL not being detected and being left for some time. This is one reason why it is important to confirm pregnancies to ensure the change in behavior is consistent with an actual pregnancy and not a false one. Your vet can advise on the use of prostaglandin.

### Summary.

- Get to know the behavior of your females and listen to and monitor it. They will "tell" you all you need to know!
- Keep good records and don't rely on your memory. Records will help you and they will assist your vet to assist you. Most females follow consistent behavioral patterns year after year. Similarly, reproductive behavioral traits appear to be quite heritable, so familial traits emerge.
- Health, nutrition and stress can have an effect on whether or not a female is ovulating and falling pregnant, so bear these factors in mind. Similarly there are anatomical and hormonal problems that may arise that your vet can assist with.

The techniques mentioned above are simple yet effective. The main ingredient required is observation and patience. Enlist the help of your vet where necessary, and beware of following a regime involving drugs unless your vet has formulated it for a specific alpaca of yours.



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