

# Alpacas



*Scientific name: Lama pacos*

## Physical attributes

**Size:** 78–104 cm at the withers

**Weight:** 47–80 kg

**Age at adult size:** 2–3 years

**Weight at birth:** 5–10 kg

**Gestation period:** 11.5 months, range 11–12 months

**Number of offspring:** 1

**Weaning age:** 6–8 months

**Sexual maturation:** Females: 12–14 months, Males: 1.5–2 years

**Life expectancy:** 20–25 years

**Healthy characteristics:** Temperature: 36.4–37.8°C  
Heart rate: 60–100 beats/min  
Respiration: 20–30/min

## Environment

### Space

Alpacas may be kept in extensive situations with a carrying capacity similar to that of large sheep.

### Movement and exercise

Alpacas need to run and need room for a *dust bath*.

Access to shade throughout the day is essential and sprinklers may be provided on very hot days to allow the animals to cool down. Alpacas prefer shelters that allow them to see out.

### Fencing

1.2 m high sheep fencing is adequate to keep alpacas in. Do not use barbed wire where alpacas may come into contact with it.

Alpacas rarely *test* fences but, if they are confined and stressed, will easily jump over 1m high pens, particularly if they are confined without a companion. For this reason, it is always advisable to take a pair to shows and displays.

### Temperature

Alpacas are susceptible to heat stress. They should be provided with access to shade and sprinklers in very hot weather. Shear them each year around September or October. They rarely seek shelter from rain but usually lie down with their legs tucked underneath them. Cria and freshly shorn alpacas need protection from the cold.

### Bedding

Due to the problems of fleece contamination, bedding for penned animals should be made from rubber, woven or slatted matting rather than straw. If straw is used, ensure that it is free from seed as it is very difficult to remove from the alpaca's fleece.

### Cleaning

Alpacas avoid defecating in their pens unless confined for long periods. They usually wait until they can get to the *dung pile*.

## Food and water requirements

Although slightly heavier than sheep, alpacas are also more efficient feed converters so require a similar amount of feed to sheep. As with most animals on school farms, supplementary feeding will probably be necessary due to a shortage of space and, consequently, insufficient grazing. Alpaca can have their diets supplemented with a stud mix, lucerne hay or alpaca pellets.

A maintenance diet for alpacas is about 1.5% of their body weight each day on a dry weight basis. The energy and nutrient requirements of a lactating alpaca increase by 2 to 2.5 times that of maintenance.

## Handling

Alpacas need to be handled calmly and with care to prevent distress and injury to the animals and the handlers. When working with alpacas, consistent quiet and slow behaviour makes them very easy to handle and they will usually herd easily.

Alpacas learn quickly and will usually learn to come up to a feeding pen when called.

## Normal behaviour

Alpacas are normally alert and inquisitive. They move together when herded. They groom themselves by having regular dust baths and scratching on posts or bushes. The herd will have a community dung pile and, if necessary, will even line up and wait for their turn. Alpacas chew their cud, usually while lying down early in the morning. They will sprawl out and sun themselves, especially after periods of rain, and will wade in creeks, dams or even water troughs to cool down. Alpacas can swim.

## Disease prevention

Disease control methods and internal and external parasite control programs should be developed in consultation with a veterinarian or NSW Agriculture officer. All action should be documented in the appropriate records.

## Signs of illness

The first sign noticed is a change in the animal's natural demeanour. It may be listless or lethargic. Closer examinations may show:

### variations in:

- body temperature
- gastrointestinal function, e.g. diarrhoea, weight loss, loss or change of appetite, lack of regular dust bathing or bathing in unusual places
- urogenital function such as abortion, infertility or abnormal discharges
- respiratory function, e.g. persistent coughing, gasping or panting; or

### evidence of:

- body temperature
- skin condition such as lesions or abnormal growths
- a tucked up appearance, stiff gait, abnormal posture, patchy coat or loss of hair
- excessive scratching or rubbing
- swollen joints or lameness.

A failure to thrive or grow is another sign of illness.

If unable to identify and correct the cause of ill-health, assistance from a veterinarian familiar with alpacas should be sought. Any signs of illness or injury, and treatments given, must be documented in the appropriate records.

## Euthanasia

Where animals are so sick, diseased or injured that recovery is unlikely or undesirable on humane grounds, then euthanasia must be arranged with a local veterinarian.

## Disposal

Alpacas can be sold privately or at auction. Carcasses must be disposed of in accordance with local council regulations.

## Suggested resources

### Web sites

Animal Health Australia:  
<http://www.aahc.com.au/>

### Printed texts

Bravo, W. (1995) *Female Reproduction, Cria to Criation*, International Alpaca Industry Seminar Proceedings, Australian Alpaca Association, Victoria.

Coleby, P. (2000) *Natural Goat and Alpaca Care* (2nd ed.), CSIRO Publishing, Australia.

Hoffman, E. and Fowler, M. (1995) *The Alpaca Book*, Clay Press, California.

Pigot, R. (1996) *Practical Alpaca Nutrition*, International Alpaca Industry Seminar Proceedings, Australian Alpaca Association, Victoria.

### Contacts

Rural Lands Protection Board  
NSW Agriculture  
Local council  
Local farm supplies trader

## Approved activities: alpacas

*Please note:*

*The categories of activities are explained in Table 2, on page 16, in Part A of these guidelines.*

*The letters and numbers used in approved activities correspond to those detailed in Table 3, Description of Activities, on pages 17–19 of Part A of these guidelines.*

*Category 4 and 5 activities may be undertaken by students only if prior written approval from the SACEC has been obtained by applying on the form, on page 44, in Part A of these guidelines.*

*Before demonstrating to students a category 5 activity, the teacher must have written certification from the SACEC. A three-yearly certification should be requested by completing the form, on page 49, in Part A of these guidelines.*

## A. Very low impact activity

- **Observation of the normal behaviour of animals (Category 1)**

Alpacas can be observed carrying out their normal activities of sunning, wading, dust bathing and communicating with each other. Depending on the circumstances, alpacas have a wide range of noises, the most common being a gentle humming.

## B. Low impact activity

- **Capture, restraint and handling (Category 2)**

A moveable fence can be established by having a long rope held at waist height between two people and stretched across a paddock. This enables the alpacas to be herded to a particular spot. Capture is easiest with the handler's arm low down around the alpaca's neck. Most alpacas will be quite comfortable in this position while a halter is fitted. Before students attempt these tasks, they should be familiar with alpaca behaviour and be instructed to move quietly and slowly.

An alpaca can be restrained by holding the animal's head and neck firmly to the handler's chest whilst the other hand rests over the animal's withers. If necessary, another person may be used to pin the back end of the animal firmly to the side of a pen. Take care that the animal is not able to get its legs caught in fencing.

Alpacas may be restrained further by tying a loop of soft rope, with approximately 15 cm of slack, around the body, just in front of the pelvis. The rear legs can then be lifted and the feet placed into the loop under the abdomen. If it is necessary to lay the animal down, use two people standing on one side of the animal. Both lean across the animal's back and grasp the legs closest to the handlers. Carefully flip the animal over with the front handler also supporting the neck.

## C. Non-invasive measurement of

1. **body weight (Category 2)**

Alpacas that are handled regularly can be easily trained to stand quietly on livestock scales.

3. **growth (Category 2)**

The animal's growth can be followed by measuring the height of the animal at the withers.

Wool growth can be measured by using a ruler to take a series of random measurements on different sections of the animal's fleece. Students can compare the growth rate of the different sections. While the quality of the saddle and neck fleece may often be similar, it is the different growth rates that necessitate its separation during classing. After shearing, wool can be sent off for fibre diameter analysis. This process is quite cheap and provides an excellent resource for students.

4. **body proportions (Category 2)**

Photographing animals progressively throughout their growth period can show body proportions.

5. **pulse or blood flow (Category 2)**

The pulse can be recorded by feeling the animal's carotid artery at the base of the jaw. With a little practice, students should be able to hear the heartbeat using a stethoscope. It is best if students practise on each other first.

6. **respiration (Category 2)**

Respiration can easily be measured by holding a hand close, without touching, to the animal's nostrils to feel the breath.

8. **temperature (Category 3)**

Temperature is measured rectally using a clinical thermometer. Ensure that the animal is carefully restrained and use a plastic digital thermometer to prevent injury from a broken glass thermometer.

## D. Measurement of mild dietary modifications

4. **palatability (Category 3)**

This should be restricted to observation of grazing preferences and palatability of different feeds, e.g. offer native or introduced grasses, different types or grades of hay, etc.

## E. Behaviour activities

### 2. taming and gentling (Category 3)

All alpacas to be used at schools should be tamed as early as possible to avoid stress on the animals when students handle them. Young animals at 6–8 months, that have just been weaned, are easy to tame. Older animals that have been handled extensively and are well tamed will be the most suitable to purchase for the school environment. Older, untamed animals may never settle in and are likely to become stressed when handled extensively by students.

Even when there is adequate pasture, animals can be given a small amount of hand feeding each day to help the taming process. Alpacas respond to calm and gentle handling and usually prefer not to be touched on the head.

### 3. training for showing (Category 3)

All school alpacas should be halter-trained. To do this, the handler needs to hold an animal firmly and use a reassuring voice. Then, with a lead attached to the halter, the handler stands in front of, and faces, the alpaca and pulls the animal gently forward. As soon as the animal takes a step forward, the tension on the lead is loosened. Continue this process until the alpaca walks with the handler. The alpaca can then be taught to walk beside the handler.

With a young alpaca that is happy to be handled, it may be easier for the handler to walk beside the animal with one hand holding the lead and the other hand over its withers to comfort it. A young alpaca will frequently follow a companion who has already been halter trained, making the job very much easier.

If animals are to be shown, they need to become used to grooming. Grooming consists of picking debris off the fleece and lightly blowing the dirt out of the fleece using the blower end of a vacuum cleaner or a cattle blower. Most shows have classes for alpaca wethers and for fleeces.

## F. Collection of samples from livestock

### 1. wool (Category 2)

If a small sample is required, scissors can be used. Ensure that the animal is adequately restrained.

### 2. milk (Category 2)

This procedure should only be carried out if a weak, newborn cria needs hand feeding. To obtain the milk, cut the end off a 20 ml disposable syringe and remove the plunger. Insert the plunger through the cut off end as far as it will go. Using a little milk to create a good seal, place the non cut-off end of the syringe over the teat and, very slowly, pull the inside plunger downwards. It is important to maintain strict hygiene procedures throughout.

### 3. faeces and urine (non-invasive) (Category 2)

Faeces can be easily collected from a dung pile. To ensure that the faeces come from a particular animal, a large cloth or feed bag can be placed over the dung pile and the animal will defecate on top of, or very close to it. Students should wear gloves and follow proper hygiene procedures.

Collection of urine would rarely need to be carried out. If it is deemed necessary, a bucket placed over the dung pile may be a useful technique to collect the sample. Ensure that students wear gloves and follow strict hygiene procedures.

### 6. ruminal fluid (Category 5)

### 7. blood (Category 5)

## G. Standard husbandry activities

### 1. administering treatments

#### oral

- drench (Category 3)

Whilst it is generally accepted that alpacas do not have a serious problem with intestinal worms due to their use of a dung pile, most school alpacas will be run with other livestock and, therefore, will need to be drenched routinely at the same time as the other stock. The dose will depend on the weight of the animal. Ensure the dose is calculated accurately. Restrain the animal securely and place the nozzle of the gun on top of the back of the tongue. Hold the animal's head upwards until it has swallowed the drench.

## injection

- subcutaneous (*Category 3*)

Alpacas should be regularly vaccinated using either *5-in-1* or *7-in-1* vaccine. First vaccinations should occur at three months of age. Injection should be subcutaneous and placed behind the *elbow*.

It is important to maintain a program of vaccination and control of parasites for all alpacas. When treating for internal and external parasites, all animals should be treated at the same time and pastures should be rotated in conjunction with the drench program. These activities need to be documented in the appropriate records.

When using vaccines, drenches or any other animal care chemicals, care must be taken and noted about the following:

- reading all labels
- maintaining appropriate storage
- adhering to withholding periods
- determining the weight of animals
- determining the correct dose rate
- using protective clothing if required.

## 4. ear marking/tagging of livestock (*Category 3*)

Registered alpacas have a brass ear tag that is placed on the left ear for a male and on the right ear for a female. Plastic numbered tags may be used in the opposite ear. The animal should be carefully restrained while the ear is

cleaned. Applicators should be smooth, sharp and thoroughly cleaned. Ensure that the tag does not puncture the veins.

## 6. hoof paring or nail clipping (*Category 3*)

An alpaca's nails may occasionally need clipping. This can be done using standard hoof paring or footrot shears.

## 9. shearing of alpacas and llamas (*Category 4*)

This procedure is best carried out by an experienced alpaca shearer. Alpacas are restrained by being stretched out on the floor and having their legs tied to wooden spacers. A handler holds the head of the animal. When one side of the animal has been shorn, the animal is flipped over and the other side is done.

It is important to have the fleece as clean as possible before shearing and students can pick off debris and blow out dust. Place a large tarpaulin on the ground to lay the alpaca on during shearing. Students can class and separate the fleece after shearing.

## 33. pregnancy detection (*Category 3*)

Initial diagnosis is made by the female *spitting off* a male when he tries to mate. Pregnancy can be confirmed after 15 days by ultrasonography. Due to a high rate of early embryonic mortality, 30–35% in the first 40 days, it is best to delay ultrasonography until after 40 days. Repeat at 120 days.