



Australian Alpaca
ASSOCIATION

Introduction to Alpacas for RSPCA Officers

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Overview of the Alpaca

These notes have been prepared by Australian Alpaca Association Ltd and are provided as an introduction to alpaca and guide for RSPCA Officers to assist in the assessment of alpacas considered to be at risk.

Further information is available from Australian Alpaca Association Ltd.

The management practices detailed in this overview is for general guidance only and does not constitute veterinary advice. Any alpaca appearing to have any adverse condition should be assessed by a veterinarian.

Background

Alpacas are part of the Camelid family. Alpaca in its homeland is farmed for fleece and meat. In Australia, alpaca are primarily bred for their fleece/stud stock and are also used as flock protectors by sheep graziers and goat producers. The alpaca meat industry in Australia is in its infancy. There are an increasing number of alpaca as 'livestock companions' or 'herd guards' in Australia.

In their native country, alpaca farming is concentrated in the Altiplano – the high altitude regions of Southern Peru, Bolivia and Chile. Australia's alpaca herd now numbers approximately 100,000 and is considered the largest herd outside of South America.

- The average life span: 15-20 years
- The average female fertility: 12-18 years
- Age of sexual maturity - Male: 2-2 ½ years
Female: 12-18 months
- Average adult weight: 55 – 80 Kg
- Average birth weight: 6 – 8 Kg
- Average gestation: 335 - 342 days

In Australia today, the descriptions and names for stages of life of an alpaca have been adapted to include both South American and Australian expressions;

- Newborn to 6 months of age: Cria (pronounced cree-ah)
- 6 months to 12 months: Weaner / Weanling
- 12 months to sexual maturity: Tui (pronounced too-ee)
- Breeding female: Hembra / Dam
- Breeding male: Machos / Entire / Sire
- Castrated male: Wether

Alpaca Nature: Alpaca are curious animals with an exceptionally strong herd instinct. An alpaca should never be kept on its own. Some alpaca have bonded with other species; however two or more alpaca kept together is preferable for their well being.

Alpaca's will hum as a method of communication with other herd members. Dams may cluck at their young. When an alpaca sees what they consider a source of danger, they may emit a high pitched squeal to alert other herd members.

Alpaca's protective nature towards their herd makes them very efficient at protecting their young and other species with whom they have bonded, such as lambs and kids. Alpacas are no match for two or more dogs however and many losses have been sustained to dog attack, most often domestic dogs.

Defence mechanisms: Alpaca in their evolving environment are prey animals. Their natural instinct is to escape capture and disguise illness so as not to attract the attention of predators. This instinct can make detecting illness difficult.

An alpaca's preference is to avert danger or capture; however they are not without defense mechanisms. Some alpaca can kick out occasionally in confined areas, although their soft padded foot presents no danger to the recipient compared to the kick of a horse.

Alpaca spit is the foul smelling contents of the rumen. Spitting is the means for an alpaca to establish its place in the pecking order of the herd. Spitting at humans is not as common as assumed but can occur when an animal is protecting its young or feels threatened in a confined space. An alpaca will generally not spit on its own cria. When handling cria, placing or holding the cria between the dam and the handler may prevent being spat on.

Aberrant Behaviour Syndrome (ABS): Like all livestock species, an alpaca that is over petted or over handled can be predisposed to develop excessively familiar behaviour towards humans. In essence, the alpaca will consider humans as one of its kind.

This situation is not common in alpaca but should it occur it is most often due to cria that have been raised as a poddy by inexperienced persons, or those that are kept as pets and fussed over excessively.

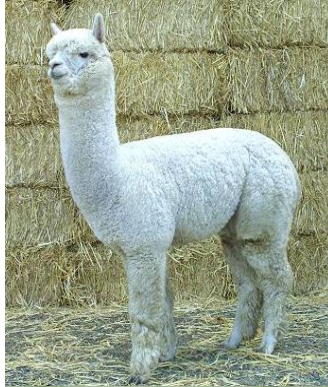
The condition Aberrant Behaviour Syndrome (ABS) is also referred to as Berserk Male Syndrome, however the condition does not always apply to just males.

Animals with ABS will display extreme aggressive behaviour towards humans and other alpaca alike. Aggressive behaviour includes rushing at the fence and rearing up, running towards a person in a weaving motion with head lowered towards the ground, chest butting, broad side posturing with head tilting upwards and biting. Extreme care must be taken when entering a paddock or handling these kinds of animals. There is no rehabilitation or retraining for an animal with true ABS.

Types of Alpacas

Huacaya

Pronounced wua'ky'ya, this is the most common alpaca type in both South America and Australia. The dense body fibre grows straight out from the body, similar to Merino fleece.



Suri

As a type, the suri (soo'ree) is much less common than the huacaya. In Australia, only a small percentage of alpacas are suris. The suri is covered in long, pencil fine locks, not unlike dreadlocks, that hang straight down from the body.



Basic Husbandry Requirements

Basic husbandry procedures can be carried out by catching and handling in a calm and sensible manner.

Catching and Handling

Never try to catch an alpaca running free in a paddock and always move the alpaca into a holding yard before catching. Portable pens can suffice.

Quietly but with purpose, shepherd the alpaca towards the holding yard (moving too slowly looks like stalking to an alpaca). An alpaca that is not panicked will respect boundaries and two people holding a long rope or flexible poles can provide a greater 'boundary' that will assist moving the alpaca towards the yard.

Once yarded, move quietly but decisively and place your arm around the neck and your knee in front of the chest to stop the alpaca moving forward. The alpaca is more likely to stand still if gently manoeuvred against the yard rails whilst holding the neck just below the head with one arm and placing your other hand upon the withers.

If lifting an alpaca's foot off the ground, try to keep the neck and spine in a straight line, as this will assist the alpaca to balance. An alpaca that feels as if it is going to fall will struggle; a balanced alpaca is usually relaxed.

Minimal restraint is frequently more effective than applying the use of force.

Weak or older alpacas may not be able to tolerate having their rear legs lifted as high as their pin bones and can struggle fearing they will lose their balance. In these cases try to lift the foot just off the ground and move down to the foot rather than bringing the foot to you.

Teeth

Alpacas have no upper teeth, their lower teeth bite on to an upper dental pad. Lower incisor teeth that are correctly aligned with the upper dental pad will naturally wear down as the animal grazes. Some alpacas (usually older) can occasionally have teeth that overshoot the dental pad and thereby continue to grow. Normal practice is to trim these teeth as required. If the teeth are not trimmed, these animals may have difficulty grazing sufficient quantities of feed on short summer pastures to maintain their body condition.

Males develop fighting teeth at about two years of age (around sexual maturity) and these should be trimmed to avoid injuries being inflicted on other males.

Teeth trimming should only be carried out by a Veterinarian or trained and competent person.

Toenails

Alpacas have soft padded feet with two toenails on each foot and a soft leathery pad.

Alpacas' toenails require trimming two to three times a year... However, nails will grow at different rates on different animals so should be monitored on a regular basis.

Nails left unattended can twist and deform the foot and cause lameness. Neglected toenail trimming may also invite infection under the nail.

Toenail trimming is done with the use of goat/lamb foot shears or straight edged garden secateurs and should be performed with one person gently restraining the animal while the second person lifts the foot and trims the nails.

Shearing

Alpacas are born with a naturally clean breech and do not require mulesing or crutching.

Huacaya alpacas should be shorn once per year (mid spring through to mid autumn - depending on the geographical region). Suri's may be shorn every two years with no ill effect to the animal due to their style of fleece.

Generally, pregnant females should not be shorn within the first 8 weeks and the last 8 weeks of their pregnancy. However, if done with care, shearing heavily pregnant females is preferable to the possibility of her being in full fleece through summer due to the high potential of hyperthermia.

Alpacas do not shed their fleece and an unshorn animal can be prone to matting at the skin with the potential of creating skin conditions and further inhibiting air movement to aid in the cooling of the animal making them predisposed to hyperthermia.

Over-fleeced animals are also at risk of hypothermia. With hypothermia, rain can weigh a heavy fleece down creating a part down the spine, thus allowing water to enter the fleece and chill the skin.



(Over-fleeced) Huacaya unshorn 4 years Huacaya with 11 months fleece

Worms / Drenching

Alpacas are susceptible to both cattle and sheep internal parasites, however alpacas' natural latrine practices and good nutrition can assist in ensuring these parasites are rarely in disease causing proportions.

Some alpacas are drenched for protection against internal parasites once or twice per year depending on the health regime determined between the owner and their Veterinarian. Some alpacas are never drenched for internal parasites as their owners monitor faecal egg counts and practice pasture rotation.

The most challenging internal parasites for alpaca are:

- Barber's Pole Worm – *Haemonchus contortus*
- Small Brown Stomach Worm – *Ostertagia ostertagi*
- Black Scour Worm – *Trichostrongylus* spp
- Liver fluke – *Fasciola hepatica*

Alpacas that contract the Barber's Pole worm can become anaemic and die in a very short period of time. Other types of parasites will result in weight loss and reduced appetite and will take longer to cause life-threatening situations to arise.

The alpaca industry is starting to experience some drench resistance; regular faecal egg counts and improved management practices are recommended over frequent use of Anthelmintics.

There are no drenches on the market today that are registered for use in Alpaca however their use under the direction of a Veterinarian is permissible. The following is a list of drenches commonly prescribed for alpaca by veterinarians:

- Ivomec – Ivermectin. Mectin (ML) family.
- Ivomec Plus – Ivermectin and Clorsulon.
- Cydectin – Moxidectin. Mectin (ML) family.

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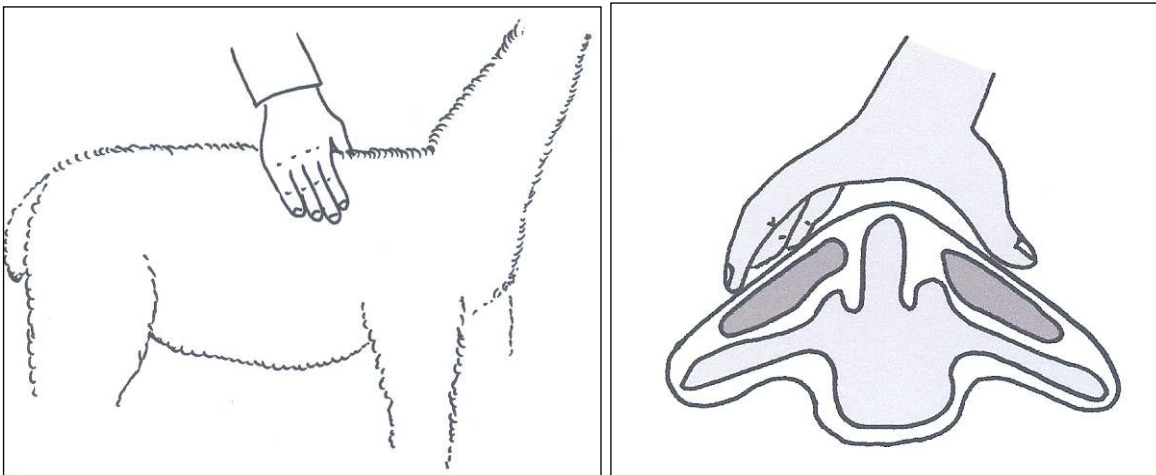
- Closicare – Closantel.
- Panacur – Benzimidazole (BZ) family, Fenbendazole.
- Valbazen* - Benzimidazole (BZ) family, Albendazole. (NB: * The chemical Albendazole, as present in Valbazen poses serious risk during early pregnancy and must not be used in that circumstance)

Weight Loss and Emaciation / Body Score

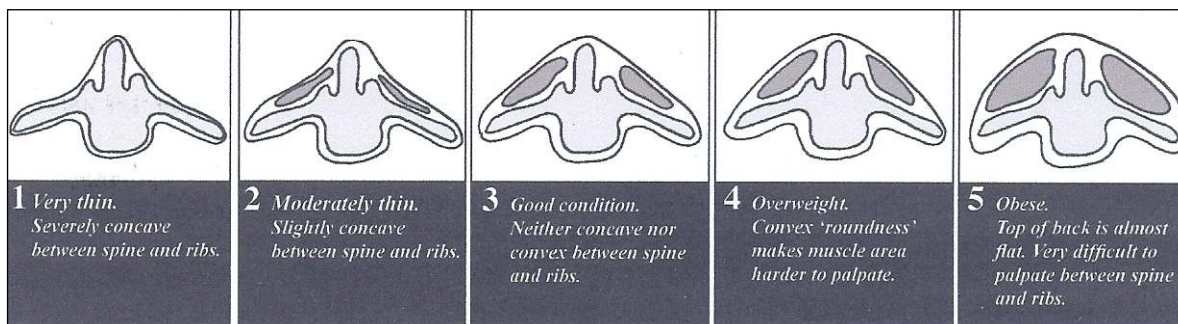
Weight Loss and Emaciation: Alpacas need to be maintained on a good nutritional plane to ensure health and to minimize variations in fleece characteristics. Expected weights for mature females should be between 60-75kgs (average 70kgs); mature males can weigh up to 100kg (average 85kgs)

Visual assessment of the condition of alpacas is misleading as fleece length and later stages of pregnancy can hide their true status. Hands-on appraisal to assess an alpaca's condition is imperative.

In the absence of weighing scales, Body Condition Score (BCS) is a technique commonly used to assess condition and can be applied by palpating over the central backbone near the last rib and behind the shoulders. An assessment over the pelvis area should not be made as this area often feels boney, even with obese animals.



Alpaca body score is based on ranges 1 to 5. 1 = Emaciated 5 = Obese



Preferable body scores can differ according to stage of life. Optimum body scores:

- Wether (Castrated male) 2.5 to 3.0

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- Cria and Weaner (0–12mths) 3.0 to 3.5
- Pregnant Females 3.0 to 3.5
- Non-Pregnant Females 2.5 to 3.5
- Working Males 3.0 to 3.5

Growth Rates

The average growth rates for young alpaca per month are:

- 1st month 6 kg gain
- 2nd month 6 kg gain
- 3rd month 5 kg gain
- 4th month 5 kg gain
- 5th month 4 kg gain
- 6th month 4 kg gain

Average weight at weaning at 6 months = birth weight plus 30kg

Hyperthermia or Heat Stress

Hyperthermia occurs when the core body temperature is elevated above the normal range of 37.5°C – 38.6°C. Cria can be up to 1°C deg higher. Daytime body temperature for adults may also raise 1°C.

The potential for heat stress to occur is when the body temperature reaches 40°C – 41°C and is further exacerbated with high humidity. To determine the degree of risk the following rule may be applied:

- $\text{Temp } ^\circ\text{C} \times 2 + 30 + \% \text{ Humidity} = \text{risk index}$
- Risk index:
 - < 150 indicates low risk
 - 150 – 180 indicates hyperthermia is possible
 - 180 is the danger zone
- Alpaca Normal Heart Rate 60-90 beats per minute
- Alpaca Normal Respirations 10-30 breaths per minute

Signs of Heat Stress

Alpacas transfer heat and cold through their ventral area (bellies) and the following signs may be indicative of heat stress:

- Animals can be lethargic and appear depressed.
- May be seen panting with their mouths open and nostrils flared.
- May be recumbent and refuse to stand.
- The central nervous system can be affected; causing depressed mental function and possible convulsions.

In pregnant females heat stress can cause reproductive failure, abortions and foetal damage. Heavily pregnant females are highly susceptible to heat stress. In entire males temporary or permanent

infertility is possible. New born cria are highly susceptible to heat stress. Losses of newborn and very young cria through dehydration have been recorded.

NOTE: Alpacas carrying excessive fleece are highly prone to heat stress

Management of Hyperthermia

Shade and fresh water must be available at all times.

Alpaca will actively seek to cool themselves by standing in their water trough. Regular monitoring of water supplies in hot weather is imperative.

- Any animal exhibiting the signs of heat stress requires urgent intervention.
- Provide shade and through ventilation
- Gently hose under the belly and legs, parting the fleece down the spine and hosing can assist.
- Drench with cool fluids and electrolyte solution ('Vytrate' or 'Lectade').
- Cool water enema under veterinary supervision

Hypothermia or Cold Stress

Hypothermia is a reduction in the body's core temperature usually caused by low ambient temperatures, wind and rain. Hypothermia can occur irrespective of climatic zone.

Signs of Hypothermia

Risk for hypothermia must always be suspected when there is a (unseasonal) drop in the temperature combined with and rain and a resulting windchill factor.

- Animals will be down, unable to 'cush' (sitting position with legs tucked under the body), slow respirations and in severe cases may be moribund.
- The normal temperature for an alpaca is around 37.5°C – 38.6°C degrees. A core temperature of 34 degrees or lower is a critical sign.
- Huacaya in the first 3 weeks off shears are particularly vulnerable to hyperthermia. Suri alpacas, due to the structure of their fleece are vulnerable to hyperthermia in all severe cold/wet weather events regardless of length of fleece.

Management of Hypothermia

Alpacas require access to shelter from the elements, particularly for 3-4 weeks after shearing in most cases and for longer if the climatic extremes are severe.

Many breeders have loose boxes in paddocks, which the alpacas may use for protection from rain and wind in severe weather conditions.

Alpaca will use any shelter for protection from the wind when the weather is severe i.e. Round hay bales in a paddock, a wooded area, shade mesh clipped to the fence in the corner of the paddock.

Because of their different fleece structure, Suri's need for shelter is greater than the Huacaya.

Any alpaca exhibiting the signs of cold stress or hypothermia requires urgent intervention.

- Get the animal into a shelter and out of the inclement weather
- Dry the animal using hair dryer or warm towels.
- Cover with towels, hessian bags, blankets or cria coats

- Maintain in the 'cush' (sitting position with legs tucked under the body) using bales of bedding straw or Lucerne on either side of the alpaca for support.
- Drench with warm fluids and consider 'Vytrate' or 'Lectade' to restore the electrolyte imbalance and always ensure the animal has an adequate swallowing reflex to prevent fluid going in to the lungs
- Warm water enema under Veterinary supervision
- Monitor core temperature and when normal gradually remove towels and hessian bags
- If weather alerts are broadcast be prepared to get animals to shelter

Water and Feed Requirements

Water

Most alpaca are attracted to water and will actively seek to keep cool on hot days by standing in their water troughs, irrespective of whether they have been shorn or not; this in turn will foul their drinking water.

A clean water supply is essential for sustaining a healthy alpaca. Consumption rates are generally in the range of 5 – 8 % of Body Weight per day.

In hot weather lactating females may consume up to 10 – 15 % Body weight / day

i.e. 55 Kg x 5% = 2.8 Ltrs 80Kg x 8% = 6.4 Ltrs per day

A lack of volume of water or a fouled water supply can cause a reduction in water intake and will increase the risk of hyperthermia.

Feed

Alpacas are primarily grazers and eat small amounts of a wide variety of plants. They will eat approximately 2% of their body weight in feed per day and far prefer shorter pastures. Although they can survive harsh conditions alpacas fare better on good quality pasture. Good quality lucerne or clover hay is normally offered to alpacas to supplement pasture shortages.

Care should be taken to avoid consumption of poisonous plants such as oleander, azalea and lantana. Bracken fern is known to be poisonous to alpaca; however there are anecdotal reports that alpaca have ingested a small quantity without ill effect. Alpaca should not be kept in paddocks with minimal pastures and a preponderance of bracken fern.

Vitamin / Mineral Supplementation

Cria and young alpaca are susceptible to Rickets and White Muscle Disease (selenium deficiency) with breeders routinely supplementing their animals according to the requirements of their particular region. Veterinary advice is recommended.

The following photograph displays an alpaca with rickets and a comparison photograph of well nourished and well grown alpaca.

The symptoms of Rickets and White Muscle Disease can mimic each other. Veterinary attention must be sought for young alpaca displaying the following symptoms:

- overly quiet or depressed demeanor
- hunched back
- shifting lameness
- excessively crooked leg/s

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- loss of appetite



16 month old huacaya with rickets (Vitamin D/Phosphorous deficiency)



12 month old, well grown and healthy huacaya.

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