

AEC STANDARD OPERATING PROCEDURES

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| SOP No: | 22 | |
| SOP | Goats | |
| Scientific Name: | <i>Capra hircus</i> | |
| Category: | 2, 3, 4, 5 | |
| Approved activities | Activity | Category |
| | a. Capture, restraint and handling of goats | 2 |
| | b. Measurement of body weight, growth or body proportions (Non-invasive) | 2 |
| | c. Measurement of body condition of goats (non-invasive) | 2 |
| | d. Measurement of pulse or respiration of goats (non-invasive) | 2 |
| | e. Measurement of age by dentition in goats | 2 |
| | f. Measurement of scrotum and testicles by palpation in goats | 2 |
| | g. Measurement of mild dietary effects in goats | 3 |
| | h. Taming/gentling of goats | 3 |
| | i. Collection of hair, milk, faeces and urine samples (non-invasive) | 2 |
| | j. Collection of saliva | 2 |
| | k. Collection of blood, faeces and ruminal fluid samples (invasive) | 5 |
| | l. Tattoo application and microchipping of goats | 4 |
| | m. Ear marking or tagging of goats | 4 |
| | n. Shearing of goats | 3 |
| | o. Milking of goats | 3 |
| | p. Disbudding of goats | 5 |
| | q. Dehorning of goats | 4 |
| | r. Hoof paring of goats | 3 |
| | s. Administration of oral and drench treatments by backline, spray or dip to goats | 3 |
| t. Administration of treatments by subcutaneous, intramuscular or intravenous injections | 4 | |
| u. Loading and unloading of goats into transporters | 3 | |
| v. Transport of goats | 3 | |
| w. Castration of goats | 5 | |
| x. Artificial insemination of goats | 5 | |
| Approval Level: | Where an activity is not listed in this SOP, approval must be sought from the Animal Ethics Committee and confirmed before it can be undertaken. | |
| Authority: | Government Schools – Department for Education and Childhood Development Animal Ethics Committee Independent and Catholic Schools – Non-Government Schools Animal Ethics Committee | |
| Authority Approval Date: | 1 August 2010 | |
| Last update | 21 April 2020 | |
| Disclaimer: | <i>This document may be updated at any time. You should check the web site regularly to ensure that you are meeting the most recent recommendations. If you note any concerns with the information provided (inadequate, incorrect) please contact the relevant AEC</i> | |
| Licensing Requirement: | Not applicable | |
| Compliance Requirement: | The keeping of this species requires approval from the School Principal or the AEC. It is recommended that this Standard Operating Procedure be followed as a minimum in the provision of appropriate care and housing for this species. | |

General Information:

Breeds commonly used in Australia can be divided into the following categories:

- fibre production, including Angora and Cashmere;
- milk production, including Anglo-Nubian, British Alpine, Toggenburg and Saanen;
- meat production, including Condobolin and Boer-feral and Boer-Cashmere crosses; Boer goats imported from South Africa are becoming increasingly popular for crossbreeding in Australia.

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- **Movement:** There are a number of restrictions on the movement of goats. To ensure that the appropriate legislation is followed, see the Primary Industries and Resources SA (PIRSA) website.

- Physical Attributes:**
- **Size:** at the withers, dairy goats: 790 mm-950 mm (does 790 mm-930 mm, bucks 900mm-950 mm) vs. Angoras 500 mm-650 mm (does 500 mm-550 mm, bucks 600 mm-650 mm)
 - **Weight:** adult males 50 kg-100 kg, adult females 45kgs (Angora), 50 - 65 kg (dairy)
 - **Age at adult size:** 1.5 – 2 years
 - **Average life span:** 8 - 15 years
 - **Weight at birth:** 1.5 kg - 4kg
 - **Body temperature:** 39°C (+/- 0.5°C)
 - **Heart rate:** 70-90 beats/minute
 - **Respiration rate:** 12-30 breaths/minute

Behaviour: Goats are agile, alert and observant. They will seek shelter from rain and avoid waterlogged areas. Generally, goats have a hierarchical or mob structure, have leaders and are not aggressive unless provoked. Guiding the leaders in the mob will encourage the rest to follow.

Goats are particularly prone to attempting to escape when they are stressed: for example, when they are separated from the rest of the flock and at weaning time. Kids play together.

Environment: **Space:** Clean, dry straw or wood shavings should be provided for bedding. Bedding needs to remain clean and dry and should be regularly inspected and replaced. When housed intensively in sheds, air circulation must be adequate to prevent ammonia build up, and humid, damp conditions. **Fencing should be no less than 1.2 metres higher to prevent escape.**

For intensive housing: each pen should be designed to hold no more than three or four goats and provide an area of at least 3 m² per animal.

For extensive housing: Goats perform well in open pastures that have plenty of water available.

Movement; As they are agile animals, goats should have enough space to be able to run. Kids are very playful and can be discouraged from climbing into feed bins by providing them with something else to climb on. Fences should be at least 1.2 metres high. Ensure they are secure, as some breeds of goat are prone to going under or through fences. Avoid fencing in which goats can catch their legs.

Water: Fresh water must be provided at all times. Water must be clean, as goats may refuse to drink contaminated water. As goats can drink between 5-10 litres of water per day depending upon their life stage ensure adequate supplies are always available.

The float mechanisms in troughs should be protected to ensure that goats do not damage them.

Temperature: Newborn goats are particularly susceptible to cold, wet weather. Due to their low fat coverage goats are more prone to weather related stressors than sheep and cattle. Ensure adequate shelter is provided for protection.

Covering: Goats are particularly prone to attempting to escape when they are stressed (e.g. at weaning) so fencing should be adequate to prevent escapes. Goat paddocks must provide adequate protection from predators (e.g. dogs and foxes).

Shelter: Shelter must be provided from the sun, wind and from cold weather. Goats may kid in the open on frosty nights. When kidding is imminent, goats should be confined overnight.

Cleaning: Goat pens should be cleaned daily. Wooden slatted floors can help with cleaning if goats are to be housed for long periods. They improve room ventilation and cleaning capabilities. Feed bins should be raised off the ground and automatic water tanks used to allow fresh water to be available at all times.

Feeding: **Diet:** The quantity of food required varies with the animals' weight, stages of growth and stages of production. For older goats, grazing and browsing are the most economical. Hay and pasture should be freely available. Supplementary feeding

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with hay and concentrate mixes may be necessary. Goats are considered to be browsing animals and, given the choice, will obtain 40 per cent of their food in this way. Pasture species required are generally the same as those for sheep, but goats will avoid many clovers. They prefer longer pastures than sheep and will not graze as closely. If there is no browsing available, the carrying capacity of pasture for goats is similar to that for sheep. Monitoring of live weight and condition scoring will indicate the adequacy of the feed conditions. Goats must not be fed fish or animal meal (called swill). Fresh, clean water should be readily accessible.

Dairy animals: concentrates should be fed at each milking and, for others, once per day. Dairy breeds require a supplement of nutritious feed, such as crushed oats, some barley or goat mixes, if they are to produce well.

Lactating goats and kids: Kids can have free access to the does. As twins and triplets are not uncommon, it is important to ensure that during the last third of their pregnancies, does receive progressively more nutrition. Young kids are suckled or fed milk replacements. Newborn kids must get colostrum in the first 24 hours. If goat colostrum is not available, sheep or cow colostrum may be used. However, as adverse reactions to the latter have occurred, care is needed. Good nutrition is also particularly important for young, actively-growing goats and for does during the last six weeks of pregnancy and when they are lactating.

Hand-rearing kids: when hand-rearing kids ensure that all bottles and feed-mixing equipment are washed thoroughly and sterilised after feeding. Scrub equipment thoroughly with detergent, sanitise it with a commercial sanitiser such as Milton® and then store the equipment in a way that prevents recontamination. As an extra precaution, sanitise equipment before use. Contact your local Veterinarian or Animal industry representative for advice on suitable goat milk replacements and feeding schedules for kids.

Disease prevention:

Schools are encouraged to seek advice from Veterinarians and Animal Industry Representatives and to develop an animal management plan. This plan should outline a calendar of routine husbandry events and treatments (e.g. vaccinations) the school will undertake throughout the year. This is particularly important not only for goat welfare but to ensure compliance with withholding periods where goats are utilised for meat production. Treatments must be documented in the appropriate records.

Breeding:

- **Gestation period:** 150 days, range 145-155
- **Number of offspring:** 1-3. Twins are common, triplets rare. 150% - 180% kidding rates are not uncommon
- **Weaning age:** 3-6 months
- **Range of breeding ages:** sexual maturity is closely related to growth rate and size. Average age for a buck is 6 - 7 months and for a doe is 7- 8 months. Animals should not generally be bred until 15 -18 months of age.

When kidding time approaches, a doe will separate from the flock. Does hide ('plant') their newborn kids while they graze or drink, to prevent predator attacks. Kidding paddocks should contain scrub or cover so does can plant newborn kids and to help kid survival. Kids are particularly vulnerable to predation and exposure shortly after birth. It is important that the doe be allowed to orient herself with newborns and move them away at her own pace. Once the kids are a few days old, does tend to share kids more than sheep share lambs making mothering up very difficult after the first few hours post birth.

Handling:

Humans: Goats need to be handled calmly and carefully to prevent distress and injury to both goats and handlers. Goats have basic natural instincts such as herding and flight like other livestock. Vision, point of balance and flight zone, are all factors which influence a goat's behaviour. Understanding these behaviours will help ensure a stress free environment when handling goats. Goats have a panoramic field of vision of 320°– 340° with only a small blind spot behind them and a binocular vision of 20°– 60°. This means they can detect movement behind them without moving their heads so if approached from behind they will turn to look at you. Stay out of the blind spot directly behind the animal.

The point of balance in most livestock is at the shoulder. The animal will move forward if the handler stands behind the point of balance and backward if the

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handler is ahead of the point of balance. Goats, like all animals, have a 'flight zone'. This can be compared to the goat's personal space, which, if entered, will cause the goat to move away. The flight zone for wild, non-domesticated goats that are not used to humans will be different to that of farmed goats that have had more human contact. Understanding the impact of a handler entering (pressuring) or leaving (releasing) the flight zone will have on animal response will make handling goats less stressful. If a handler stands outside the 'flight zone' the animal will not move. If the handler moves into the flight zone, the animal will move in a direction to avoid the handler.

Along with an understanding of goat behaviour, food incentives should be used to train goats to get used to routine handling and restraint. When feeding goats by hand, the rule is to introduce new food types slowly and carefully. Feed plenty of high-quality roughage and feed small amounts at frequent intervals. Do not feed excessive quantities of grains. Kids can be picked up by the body and adults and kids should never be picked up by the horns or fleece. Goats can be caught by putting the handlers hand around the body. Never catch them by the legs as this can cause dislocation of joints. A simple, small version of a cattle-type bail can be used for all purposes, including hoof trimming, washing and milking. A simple collar can be used for milking. Most sheep equipment can be used for goats. Shearing Cashmeres involves using a simple collar restraint, while Angoras are held in the same way as sheep.

Hygiene: After handling or working with goats, thoroughly wash hands with soap and running water for at least 15 seconds. Dry hands with clean paper towel or an air dryer. Turn off the tap with the paper towel if possible.

Signs of illness: Indicators:

- Neurological signs including disorientation and nervousness;
- changed feeding habits;
- scouring;
- nasal or ocular discharge;
- separating from, or lagging behind, the main body of the flock;
- lameness or an abnormal gait;
- failure to grow or thrive or wasting; or
- lethargy or a reluctance to rise.

Goat health should be monitored at least daily, and preferably more often. Common ailments in goats include mastitis, bloat, parasites and milk fever

Treatments: Schools are encouraged to develop relationships with a Veterinarian and Animal industry representatives (e.g. stock agent) familiar with goats. These contacts can be used for disease diagnoses, treatment options including vaccinations, dietary and husbandry and welfare advice. Veterinarians can also assist with advice for activities that may illicit pain where pain relief is required and for emergencies particularly when euthanasia is needed. Treatments must be documented in the appropriate records.

Euthanasia: Where an injury or illness is such that recovery is unlikely then a goat must be euthanised by a Veterinarian. Schools should contact their local Veterinarian to discuss emergency treatment options prior to an event occurring when keeping goats. Any adverse event including death must be reported to the AEC using the ADVERSE EVENTS form. Forms must be returned to the AEC within 7 days of the event occurring.

Disposal/fate planning: Goats can be sold privately, at auction or consigned to abattoirs. Carcasses must be disposed of in accordance with local council regulations. Goats must not be slaughtered and sold for meat unless prepared in a licensed processing facility.

Holiday and weekend care: It is preferred that goats remain onsite for quarantine reasons and are not mixed with other livestock offsite, while being used for school activities. Goats can be taken offsite however with the permission of the school Principal and the carers and on advice from a Veterinarian. Staff should provide carers with animal care

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and record-keeping instructions, emergency contacts and provide appropriate equipment and food. Goats must be checked daily, records kept and any problems reported to the school immediately whether kept onsite or taken offsite.

Approved activities: **Where an activity is not listed in this SOP, approval must be sought from the Animal Ethics Committee and confirmed before it can be undertaken.**

Activity: **a. CAPTURE, RESTRAINT AND HANDLING OF GOATS**

Category: Category 2

Objective: To instruct students on the correct methods of capture, restraint and handling of goats.

Staff should be experienced and familiar with goat behaviour when undertaking this activity. Goats that are experienced with handling including walking on a halter are preferred. Goats move as a mob when grazing in large paddocks containing trees and shrubs but will tend to disperse when mustered. The hierarchical or mob structure also influences behaviour when moving goats. There is usually a large dominant male within a herd of goats, which may initially lead the group. This leadership is generally shared with an older doe during grazing. Guiding the mob leaders will encourage the rest to follow. In general, only move as fast as the slowest goats in the mob. Goats need to be guided and allowed to move at their own pace. Give goats time to assess a situation. For example, it is often better to wait a few minutes at a gate and allow the lead goat to find the opening and walk through, taking the others with it, rather than trying to force an unwilling mob. The use of laneways leading to yard facilities will allow goats to move freely rather than being forced.

Activity: **b. MEASUREMENT OF BODY WEIGHT, GROWTH OR BODY PROPORTIONS (NON-INVASIVE)**

Category: **Category 2**

Objective: To instruct students on collecting measurements of body weight from goats.

The animal's growth can be recorded by measuring the width of a goat's body parts (e.g. girth). A soft plastic tape measure can be used to measure different body parts. Two handlers are required for the measurement of body proportions using low stress handling techniques. One handler is required to restrain the goat while the other handler takes measurements. It is important to ensure that all the equipment required is ready prior to restraining the goat. Goats should not be excessively distorted to make measurements of body parts. Growth measurements can also be shown by photographing or drawing a goat against an appropriate background scale. Use a sufficient number of goats to determine individual difference.

A goat's bodyweight can be recorded by weighing the goat regularly. This measurement should be done with low stress handling techniques (e.g. halter a lead trained goat to the scales with food training) returning the goat to its enclosure promptly. Only goats accustomed to being handled should be used. It is important to ensure that all the equipment (e.g. scales) required is ready prior to catching any goats. Rubber matting or towels can be used to avoid the surface of scales being slippery. Scales should be cleaned regularly. Recording regular measurements of weight can give an accurate measure of weight over time.

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Activity: c. MEASUREMENT OF BODY CONDITION OF GOATS (NON-INVASIVE)

Category: Category 2

Objective: To instruct students on the measurements of body condition in goats

A goat's body condition can be measured using a chart that compares the goat's fat coverage at certain bony points on its body. See the body condition scoring chart at the end of this SOP for more information. This method uses a 1-4 scale.

Activity: d. MEASUREMENT OF PULSE OR AND RESPIRATION OF GOATS

Category: Category 2

Objective: To instruct students on the correct methods for measuring pulse and respiration in goats

Respiration can easily be measured by visually observing a goat's chest movements as it breathes. Alternatively, goats can be observed in warmer weather conditions as indications of respiration become more obvious. Observe and record a goat with its mouth naturally open and nostrils flared, recording the number of nostrils flare movements.

The use of a stethoscope or palpating over specific locations on the head or body is required to measure a pulse rate in goats. With a little practice, students should be able to hear a pulse rate using a stethoscope or feel the pulse with their fingers. One handler should restrain the goat while a second handler measures the pulse. It is best if students practise using a stethoscope on each other prior to performing this procedure.

Activity: e. MEASUREMENT OF AGE BY DENTITION IN GOATS

Category: Category 2

Objective: To instruct students on the use of dentition to age goats.

Staff should be experienced and familiar with goat behaviour when undertaking this activity. Goats that are experienced with handling including walking on a halter are preferred.

Activity: f. MEASUREMENT OF THE SCROTUM AND TESTICLES BY PALPATION IN GOATS

Category: Category 2

Objective: To demonstrate to students the palpation and taking of measurements of a goat's scrotum and testicles

Staff should be experienced and familiar with goat behaviour when undertaking this activity. Goats that are experienced with handling including walking on a halter are preferred

Activity: g. MEASUREMENT OF MILD DIETARY EFFECTS IN GOATS

Category: Category 3

Objective: To instruct the students on measuring mild dietary effects in goats

Goats can be observed for dietary preference by offering a range of diets to them

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that are suitable for goats. Unsuitable diets should not be fed and goats must still have access to their normal diet.

Activity: **h. TAMING/GENTLING OF GOATS**

Category: **Category 3**

Objective: To instruct students in methods of taming or gentling goats.

Staff should be experienced and familiar with goat behaviour when undertaking this activity. Goats that are experienced with handling including walking on a halter are preferred

Activity: **i. COLLECTION OF HAIR, MILK, FAECES AND URINE SAMPLES (NON-INVASIVE)**

Category: Category 2

Objective: To demonstrate the collection of samples of hair, milk, faeces and urine from goats to students.

Staff should be experienced and familiar with goat behaviour when undertaking this activity. Goats that are experienced with handling including walking on a halter are preferred. Samples of hair, faeces and urine can be collected with minimal restraint. Milk collection will require a little more restraint and is usually done to collect colostrum for newborn kids.

Activity: **j. COLLECTION OF SALIVA FROM GOATS**

Category: Category 3

Objective: Staff should be experienced and familiar with goat behaviour when undertaking this activity. Goats that are experienced with handling including walking on a halter are preferred

Activity: **k. COLLECTION OF BLOOD, FAECES AND RUMINAL FLUID SAMPLES OF GOATS (INVASIVE)**

Category: Category 5

Objective: To demonstrate to students the collection of samples of blood, ruminal fluid or faeces using invasive techniques.

Staff should be experienced and familiar with goat behaviour when undertaking this activity. Goats that are experienced with handling including walking on a halter are preferred. Students must be supervised at all times and handling kept to a minimum. All equipment must be ready prior to capturing and restraining the goats.

Activity: **l. TATTOO APPLICATION AND MICROCHIPPING OF GOATS**

Category: Category 4

Objective: To demonstrate the application of tattoos in goats

Staff should be experienced and familiar with goat behaviour when undertaking this activity. Goats that are experienced with handling including walking on a halter are preferred. A local Veterinarian should be consulted prior to undertaking these activities.

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m. EAR MARKING or TAGGING OF GOATS

Activity:

Category 4

Category:

To instruct students on the correct method of ear marking and tagging of goats

Objective:

Schools should refer to the Primary industries and Regions of South Australia website for goat tagging requirements (e.g. National Livestock Identification Scheme) needs. Schools must also have a Property identification code if keeping livestock on site.

n. SHEARING OF GOATS

Activity:

Category 3

Category:

To instruct students on the correct method of shearing goats

Objective:

Care should be taken when shearing goats to minimise cuts. Any severe injuries should be addressed in consultation with a Veterinarian to provide pain relief and to prevent any infection from establishing. .

It is important to ensure that goats have adequate shelter post-shearing from the elements Adequate feed and water must be available for newly shorn sheep and goats.

Goats that grow and retain long wool should be shorn annually and fleeces should not exceed 250mm in length. Mohair goats should be shorn twice each year and cashmere goats may be shorn twice each year.

o. MILKING OF GOATS

Activity:

Category 3

Category:

To instruct students on the correct method of milking goats

Objective:

Staff should be experienced and familiar with goat behaviour when undertaking this activity. Goats that are experienced with handling including walking on a halter are preferred. Students must be supervised at all times and handling kept to a minimum. All equipment must be ready prior to capturing and restraining the goats. Milk collection is often done to collect colostrum for newborn goats.

p. DISBUDDING OF KIDS

Activity:

NOTE: Caustic disbudding is deemed a prohibited activity (Category 6)

Category:

Category 4

Objective:

To instruct students on the correct method of disbudding kids

Disbudding of kids must be carried out by a Veterinarian or other suitably experienced person as soon as the bud can be located coming through the skin. Care must be taken to ensure the entire bud is cauterised to prevent regrowth. Trimming of hair around the bud will reduce smoke and make it easier to target and monitor disbudding. Kids should be well-restrained e.g. in a disbudding box, and a topical antiseptic applied after cauterisation. Regrowth should be checked two to three weeks after disbudding. Care should be taken when disbudding young bucks as damage can be done to the scent glands which are located near the horn buds. Disbudding of kids should be by heat cautery only. Disbudding by means of chemicals is considered a prohibited activity.

Good hygiene should be practiced in relation to facilities, hands, handling and instruments. Gloves should be worn when using a cauterising tool. Consideration of weather and yard conditions and fly activity should be made when planning the

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activity e.g. avoid muddy yards and wet or humid weather.

Risk of infection can be limited by ensuring does have been routinely vaccinated and that the kids are vaccinated at this time or at kid marking.

Schools are encouraged to develop a relationship with their local Veterinarian that is familiar with goats to develop an animal management plan. This should include developing a calendar of events including disbudding that will occur throughout the year. This discussion should include welfare, pain relief use and withholding periods. Ideally schools will source goats that have already had this activity undertaken prior to the animals' arrival on the farm.

q. DEHORNING GOATS

Activity:

Category 4

Category:

To instruct students on the method of dehorning goats.

Objective:

Dehorning (as distinct from disbudding) should ONLY be performed by a Veterinarian. **Horn trimming** or the removal of sharp horn points is recommended to minimise injury to other goats. It should be performed so as to avoid bleeding and ensure that no sharp horn projections remain after the procedure. Schools are encouraged to develop a relationship with their local Veterinarian that is familiar with goats to develop an animal management plan. This should include developing a calendar of events including dehorning that may occur throughout the year. This discussion should include welfare, pain relief use and withholding periods. Ideally schools will source goats that have already had this activity undertaken prior to the animals' arrival on the farm.

r. HOOF PARING OF GOATS

Activity:

Category 3

Category:

To instruct students on the correct method of hoof paring goats

Objective:

Foot bathing or foot paring may be undertaken by staff as a treatment for footrot without a Veterinarian onsite. However, it is recommended that schools consult with their local Veterinarian to ensure an accurate diagnosis prior to treatment. Footrot is a notifiable disease in South Australia requiring notification to PIRSA.

s. ADMINISTRATION OF ORAL AND DRENCH TREATMENTS TO GOATS

Activity:

Category 3

Category:

To demonstrate the administration of oral and drench treatments used in goats to students

Objective:

Schools are encouraged to develop a relationship with their local Veterinarian that is familiar with goats to develop an animal management plan. This should include developing a calendar of events including drenching that will occur throughout the year. This discussion should also include welfare, pain relief use and withholding periods. All the animals on site should be treated and ensure that products are only used that are suitable for the age of goats you have. Doses should be calculated accurately based upon an animal's bodyweight. Schools should talk to their local Veterinarian or Animal industry expert for product advice.

t. ADMINISTRATION OF TREATMENTS BY SUB-CUTANEOUS, INTRA-MUSCULAR OR INTRAVENOUS INJECTION TO GOATS

Activity:

Category 4

Category:

To demonstrate to students the correct method of administering treatments to goats by subcutaneous, intra-muscular or intravenous injections

Objective:

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Schools are encouraged to develop a relationship with their local Veterinarian that is familiar with goats to develop an animal management plan. This should include developing a calendar of events including drenching that will occur throughout the year. This discussion should also include welfare, pain relief use and withholding periods. All the animals on site should be treated and ensure that products are only used that are suitable for the age of goats you have. Any doses should be calculated accurately based upon an animal's bodyweight. Schools should talk to their local Veterinarian or Animal industry expert for product advice. Vaccinations can be given to livestock by suitably trained staff without the supervision of a Veterinarian.

u. LOADING AND UNLOADING OF GOATS FOR TRANSPORT

Activity:

Category 3

Category:

Objective:

To demonstrate the principles of loading and unloading goats for transport to students

Considerations must be given to goat behaviour when loading and unloading goats. See the Land Transport of Livestock Standards and Guidelines for more information in relation to goat transportation and the Animal Welfare Regulations 2012.

v. TRANSPORT OF GOATS

Activity:

Category 3

Category:

To demonstrate the correct methods of transporting goats to students

Objective:

Considerations must be given to goat behaviour when loading and unloading goats. See Section B7 Specific requirements for the land transport of goats in the Land Transport of Livestock Standards and Guidelines and the Animal Welfare Regulations 2012 for more information in relation to goat transportation. This outlines requirements with regards to time off water, long distance travel, food and water requirements when travelling, vehicle and facilities requirements and handling. All goats must be deemed fit for travel prior to transporting them. As well as making sure the goats do not smother each other when trucking goats, through the provision of appropriate dividing fences and stocking densities in livestock crates, it is important to understand that goats typically have less insulating fat than sheep and cattle and can suffer cold stress in wet and cold conditions. For this reason, some producers and carriers choose not to load the top deck in bad weather, as this is the most exposed area of a livestock crate.

w. CASTRATION OF GOATS

Activity:

Category 5

Category:

Objective:

To demonstrate the method of castration of goats.

Schools are encouraged to develop a relationship with their local Veterinarian that is familiar with goats to develop an animal management plan. This should include developing a calendar of events including castration that will occur throughout the year. This discussion should also include welfare, pain relief use and withholding periods. When castration is required, it should be performed as young as possible and before kids are 12 weeks old. Only experienced operators under the supervision of a Veterinarian or a Veterinarian should undertake castration of goats. **Castration of animals over two months requires an anaesthetic and must be done by a Veterinarian.** All goats over the age of 6 months must have appropriate pain relief provided and haemorrhage from the wound controlled appropriately. Methods of castration can be undertaken by placing an elastrator ring at the neck of the scrotum, by removal using a knife or by using a specifically designed, heated knife that seals the wound. The method chosen should use the most appropriate

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tools, be familiar to the operator and the least painful method to perform the castration that is applicable to the production system.

Good hygiene should be practiced in relation to facilities, hands, handling and instruments with disinfectant being used and changed frequently. Consideration of weather and yard conditions should be made when planning castration of goats (e.g. choose mild days and avoid muddy or dusty yards not extreme weather days). Castration should be conducted early in the day to allow time for mothering-up and monitoring by staff. Kids should be away from their mothers for the shortest time possible. Castration should only occur after a secure maternal bond has been formed between kid and mother. A kid cradle should be used to restrain kids and when released they should land on their feet to avoid the wound contacting the ground and being contaminated. Risk of infection can also be limited by ensuring does have been routinely vaccinated. Castration should be done when fly activity is minimal and in conjunction with appropriate preventative flystrike treatments. Wound haemorrhage should be minimised by selecting an appropriate method, preventing overheating in kids. After castration and when kids and their mothers are placed into a paddock for recovery, they should be monitored regularly for any signs of post-operative complications during the healing process with minimal disturbance. Any post-operative complications need to be addressed in a swift and appropriate manner.

When any pain relief or other medications are used on goats, schools should in consultation with their Veterinarian, ensure that products are only used that are suitable for the age of goats the school has. Any doses should be calculated accurately based upon an animal's bodyweight. Schools should talk to their local Veterinarian or Animal industry expert for product advice

x. ARTIFICIAL INSEMINATION OF GOATS

Activity:

Category 5

Category:

To demonstrate the process of artificial insemination in goats to students.

Objective:

Artificial insemination (AI) of goats should only be undertaken by schools after a discussion with their local Veterinarian as part of their goat management plan. AI requires skill and should only be undertaken by highly experienced operators under indirect supervision of a Veterinarian or Veterinarians. **Laparoscopic AI can only be undertaken by Veterinarians.** Schools must also give consideration to plans for extra stock created from breeding of goats and ensure they have the appropriate facilities and resources to provide for the goats needs prior to undertaking breeding.

Resources:

Goat information - Meat & Livestock Association (MLA)

- Going into goats
www.mla.com.au/globalassets/mla-corporate/extensions-training-and-tools/documents/module11-goatdepots-jul2018.pdf
- Property planning for goats –
www.mla.com.au/globalassets/mla-corporate/generic/extension-training-and-tools/gig-property-planning.pdf
- Infrastructure for goats
www.mla.com.au/globalassets/mla-corporate/generic/extension-training-and-tools/gig-infrastructure.pdf
- Goat breeding and selection – MLA
www.mla.com.au/globalassets/mla-corporate/generic/extension-training-and-tools/gig_module-5_web.pdf
- Understanding goat behaviour and handling – MLA
www.mla.com.au/globalassets/mla-corporate/extensions-training-and-tools/documents/fs04-understanding-goat-behaviour-and-handling-final.pdf
- Looking after your goats (nutrition, husbandry, genetics and parasite control)
www.mla.com.au/extension-training-and-tools/going-into-goats/looking-after-your-animals/

AEC STANDARD OPERATING PROCEDURES

Land Transport of Livestock Standards and Guidelines 2012 – Australian Animal Welfare Standards and Guidelines

www.animalwelfarestandards.net.au/land-transport/

www.animalwelfarestandards.net.au/files/2015/12/Land-transport-of-livestock-Standards-and-Guidelines-Version-1.-1-21-September-2012.pdf

Animal Welfare Regulations 2012 – SA Legislation

www.legislation.sa.gov.au/LZ/C/R/Animal%20Welfare%20Regulations%202012.aspx

Goat identification - Livestock Regulations 2013

www.legislation.sa.gov.au/LZ/C/R/LIVESTOCK%20REGULATIONS%202013/CURRENT/2013.197.AUTH.PDF

Moving sheep and goats and NLIS – PIRSA

pir.sa.gov.au/__data/assets/pdf_file/0008/267227/NLIS_moving_and_selling_sheep_and_goats.pdf

pir.sa.gov.au/biosecurity/animal_health/sheep/nlis_sheep_goats

Identification – NLIS Sheep and Goats - Animal Health Australia

www.animalhealthaustralia.com.au/what-we-do/biosecurity-services/national-livestock-identification-scheme/nlis-sheep-goats/

Goat breeds

www.dpi.nsw.gov.au/animals-and-livestock/goats/breeds

afs.okstate.edu/breeds/goats

Shearing of cashmere goats

www.dpi.nsw.gov.au/data/assets/pdf_file/0011/178526/goat-shearing.pdf

Goats – Animal Health Australia

www.animalhealthaustralia.com.au/species/goats/

Body condition scoring of goats – Franklin Veterinary Clinic

franklinvets.co.nz/2018/11/25/many-animals-can-run-property/

See chart on the next page of this document.

Goats and farm Biosecurity – Farm Biosecurity

www.farmbiosecurity.com.au/industry/goats/

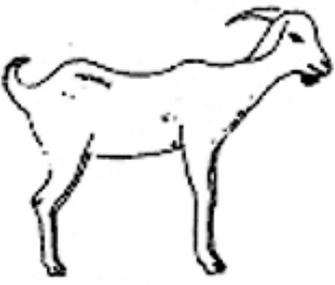
Behaviour principles of Livestock handling – Temple Grandin

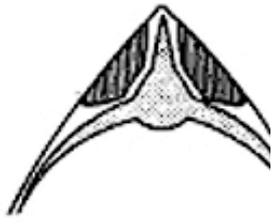
www.grandin.com/references/new.corral.html

AEC STANDARD OPERATING PROCEDURES

CONDITION SCORES

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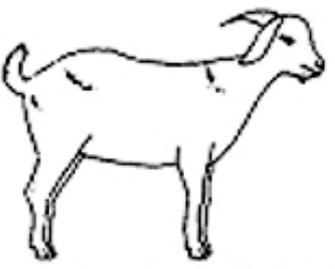




1
Very Lean

Body angular, narrow and slab sided. Backbone raised and sharp. Ends of short ribs sharp and easily felt.

© NSW Agriculture





2
Lean

Backbone raised and barely covered. Pin and hip bones obvious and barely covered. Ends of short ribs smooth but easily felt.

© NSW Agriculture





3
Medium

Backbone slightly raised, smooth and rounded over top. Pin and hip bones lightly covered. Ends of short ribs smooth but can still be felt. Moderately rounded appearance.

© NSW Agriculture





4
Fat

Smooth, rounded appearance. Backbone can only just be felt. Pin and hip bones smooth and rounded. Ends of short ribs cannot be felt.

Further reading: Condition Scoring of Goats, The New South Wales Department of Agriculture, Agfact A72