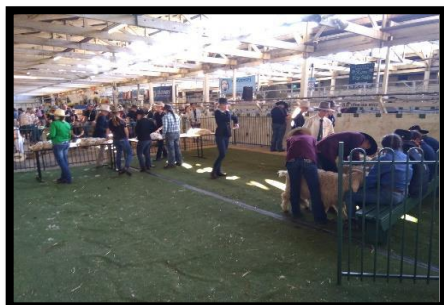


# Agricultural Schools Handbook for Angora Goats

## Healthcare and Husbandry Practises



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Credit J Stevens

This information sheets provides students with a general overview of the health care and husbandry practise for angora goats in Australia

## Fencing & housing

### Fencing

Make sure that you have sound fencing in all areas and in the handling areas, height to avoid any animals jumping over fencing, or crawling underneath.

### Housing/Pasture

Shelter and space for all animals must be adequate to house all animals

During cold spells and rain angora goats must have hard covered shelters with substantial straw bedding provided for them to keep them dry in rain events.

A major consideration in housing and running Angoras is that their pastures/paddock must be free of burr and grass seeds that will become entangled in the mohair and render it worthless

## Feeding

When goats are young, they should be able to grow in size and weight rapidly.

The goats are at a time in their life that they should be able to grow in size and weight rapidly. Unlike many people's perceived ideas, angora goats do not eat 'everything and anything' and do not thrive on small amounts of poor-quality feed.

To achieve the best results, goats need to be fed high quality feed on an increasing ration to meet their growing needs.

One method of keeping track of their growth would be to have a weekly or fortnightly weigh-ins and use a spread sheet to record and tack their weight gain. Daily weight gains in excess of 100g/head/day should be achievable. If growth rates are well below this figure there may be underlying health issues present or the ration may need to be changed

### Feeding rations:

If goats are to be fed predominantly grain or concentrate mixture, it must be introduced slowly to the diet over a period of two to three weeks to prevent ruminal acidosis.

Refer to **Fact Sheet 8 Feeds for goats** **Fact Sheet 6 Digestive System of the goat**

Under no circumstances should Angoras be fed wheat (full grain or cracked) or with wethers fed plain oats as this could lead to acidosis and urinary calculi.

**Resource:** South African Mohair Growers <https://www.angoras.co.za> . Information on angora goats feed and mineral needs

Goats prefer a diet containing forage. In particular, where goats are confined to yards they should be supplied with forage daily in the form of good quality hay or browse, or pelleted feeds which contain at least 30% forage.

Adlib Good Quality Hay, Lucerne or even oaten or hay daily to cover all animals in your care, Place into hay racks not placed on the ground

Nutritional stress or sudden dietary changes (such as in the concentrate mixture, in the amount or type of green feed, or the introduction of grains) predispose goats to serious diseases (including enterotoxaemia, ruminal acidosis, and pregnancy toxaemia) and should be avoided.

Feed your goat pasture in paddock if available

Include some other fibre such as vegetables: cabbage, Spinach, carrot, apple, bread (**no** potatoes, rhubarb leaves)

**Refer:** Poison Plant list <https://www.agrifutures.com.au/wp-content/uploads/publications/00-139.pdf>

## Water

Clean cool Water must be available at all times

Electrolytes and Mineral blocks like 'cattle/sheep trans' can be added to water during periods of stress or before, during and after movement of the animals

## Minerals

It is important to make sure their mineral health is also being catered for Mohair production and growth rates

Olsen goat block, Trace Element Blocks, Sheep Blocks or Loose Licks that meet the requirements of Angoras should be provided ad lib.

Resource South African Mohair growers website outlines the mineral requirements of Angora goats

<https://www.angoras.co.za/page/vitamin-and-mineral-supplements-requirements-for-angora-goats#122>

Refer to **Fact sheet 5** Mineral requirements for goats

## Goat Husbandry:

Refer **Fact sheet 2** Routine health care for your wether

## General Goat Health Information

Average Pulse rate 90 beats per minute (variation 70-135)

Average temperature (daytime) 39.3° c- 40.5c

Average respiration rate for a resting goat is 19 breaths per minute

## Taking my goat's temperature

It is important to take the temperature of a goat that you think is sick, because the temperature can change quite quickly when the goat become unwell

Use a rectal thermometer to take the temperature of a goat and never use the same thermometer for humans after you have used it in an animal

To use a Bulb thermometer

- make sure the thermometer is clean
- shake the liquid in the thermometer into the bulb
- hold the goat in a standing position
- slide the thermometer, bulb first, into the rectum of the goat for about 2 finger widths
- hold the thermometer there for 2 minutes
- remove the thermometer and read the temperature immediately

The normal temperature of a healthy goat should be 39°C . A goat with a temperature of 39.5°C or higher is sick with a fever. After use, wash the thermometer in clean soapy water and store the thermometer safely, away from children

If the thermometer breaks, very carefully collect all the liquid by scraping it onto paper and wrapping it in a plastic bag and disposing it as a hazardous material

- Then Wash your hands very carefully.

## First aid kit

In the first Aid kit you put together for your goats, you will need

- thermometer
- salt, Dettol or similar as an antiseptic
- Flint's Medicated Oil-For healing cuts and abrasions
- syringes-various sizes
- needles-Size 20-23 gauge is good for injecting vitamins, medication if required
- tweezers
- mohair or cotton wool)
- poly pipe (splint) Bandages for wrapping poly pipe on leg fracture

## From Produce store:

- Exstinosad Spray, Fly strike, wound dressing
- Vytrate or similar for dehydration (available in sachets or liquid) *Vet script is required in some states*
- Terramycin Spray/ Powder- Grass seeds Pink eye spray/powder for eyes.
- Yellow Lotion foot problems wet winter scold and feet or Zinc Sulphate solution
- Bi -Carb Soda Acidosis

## Vitamins

- B1 for thiamin deficiency -injectable or powder for oral drench
- B12 encourages appetite, and for iron and cobalt deficiencies
- B Complex for vitamin B deficiencies and stress
- C -to promote healing in injury and illness, poisons, bites & shock
- Bio-Start/ Protexin provides enzymes for better food conversion and rumen microbial development in young animals & after antibiotic course
- Clostridial disease vaccination Glan-Vac vaccines 3 in 1 plus B12 is registered for the use in goats
- Drench Check for worm drench protocol yearly [www.wormboss.com](http://www.wormboss.com)
- work with the Calender of Operations /Management plan for your age group of animals

## From your Vet:

Please consult your local Veterinarian for the use of antibiotics treatment required for your sick animals and prescribed medicines.

**Please check:** What is registered for use in goats on Australian Food and drug administration website along with goat industry websites :Animal Health Australian, Meat and Livestock Australia ,Goat Industry Council of Australia Worm Boss





## Administering injections to your goats

In goats some vets use the jugular vein to administer IV injections and to draw bloods for pathology testing. Some medications have to be injected into the goat via subcutaneously or inter muscularly. Some medicines have to be injected into the goat rather than given by mouth.

### Drawing of a syringe and needle

- You use a syringe and needle to inject medicine into the goat. Injecting under the skin.
- A convenient place to inject under the skin is on the side of the neck.
- The place to inject is on the higher third of the neck; not the lower part of the neck where a large vein is found.
- Make sure the syringe and needles are sterile.
- Prepare the correct dose for the animal to be treated.
- Restrain the goat.

### Subcutaneous –under the skin SC

- Lift the skin between your index finger and thumb, and push the needle under the skin.
- Make sure that you do not push the needle right through and inject through two layers of skin, by mistake.
- Pull back on the plunger and make sure that no blood enters the syringe.
- If there is blood, remove the needle and put it in at a different place.
- If there is no blood in the syringe, gently push the plunger down into the syringe.
- Pull the needle out after the injection has been given.
- Rub the area for a few seconds.
- Properly dispose of the needle and syringe.

### Injecting into a muscle IM

- A convenient place to inject into the muscle is on the rump of the animal.
- Make sure the syringe and needle are sterile.
- Prepare the correct dose for the animal to be treated.
- Separate the needle from the syringe.
- Restrain the goat.
- With your fingers, feel for the pad of muscle on the animal's rump about a thumb's length behind the hip bone.
- Holding just the needle, without the syringe, between the thumb and forefinger, insert the needle in one quick movement into this muscle.
- Check that there is no blood in the hub of the needle.
- If there is blood, pull the needle out and try again.
- If there is no blood, fit the syringe on to the needle and push the plunger to inject the medicine into the muscle.
- Remove the needle.
- Rub the area for a few seconds.
- Properly dispose of the needle and syringe.

**Resource:** YouTube video injecting your goat

South African Mohair Growers website at [https://www.angoras.co.za/page/vets\\_corner](https://www.angoras.co.za/page/vets_corner).

## Medical Conditions

This section gives an overview of most common conditions. In the cases of all health issues consult your vet for advice and treatment.

## Internal parasites (Worms)

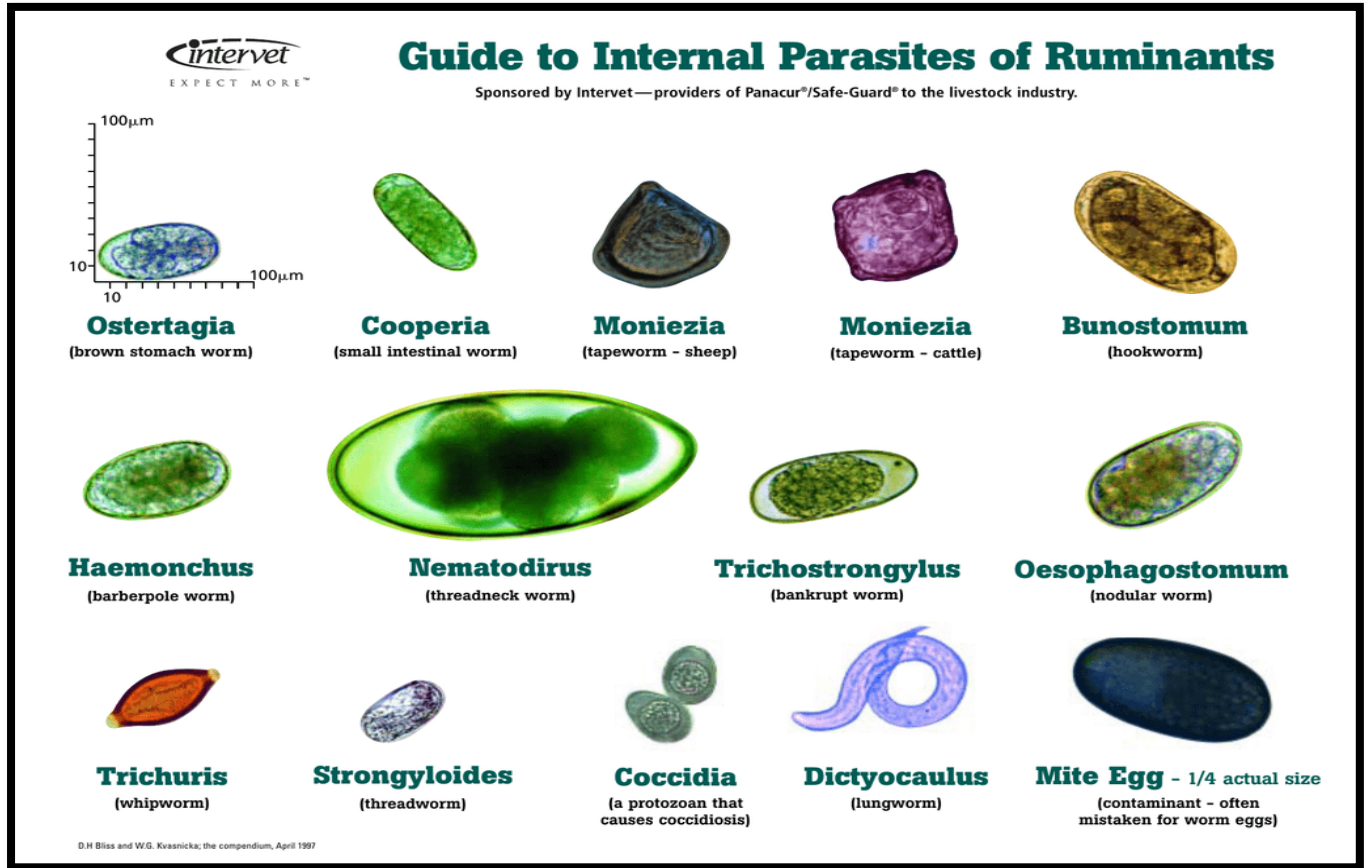
In warmer, wetter environments it is likely that internal parasites will pose the greatest risk to Angoras.

A FAMACHA program would be advisable in managing the Internal parasite load in the goats

[https://web.uri.edu/sheepngoat/files/FAMACHA-Scoring\\_Final2.pdf](https://web.uri.edu/sheepngoat/files/FAMACHA-Scoring_Final2.pdf)

Resource FAMACHA Training online

Reference InterVet Worm Egg Chart

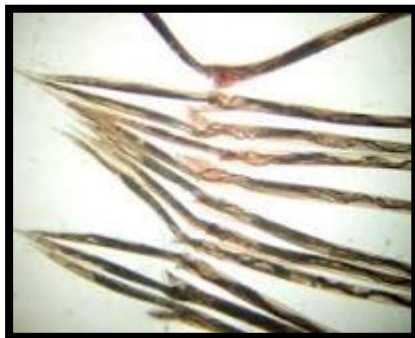


## Barbers Pole worm:

Symptoms: Scouring, swelling under chin, increased pulse, increased respiration, Paleness, Severe weakness, Water Belly –swelling of lower extremities and belly with fluid

Treatment: Consult Vet to find the most effective de-wormer

Prevention: All animals should be de-wormed upon arrival and when put on pasture. Avoid overgrazing pastures



Barbers Pole worms

## Coccidiosis

Symptoms: Scouring (may be bloody, black in colour, repulsive odour), Water Belly, some loss of appetite, loss of weight, possible sudden death.

Treatment: Consult with a vet

Prevention: Good sanitation, isolate sick animal, maintain strong and healthy animals and avoid overgrazing pastures

## Scouring

Scouring can be caused by several different things including coccidiosis, internal parasites, bacterial infection or change in feed or Stress. A faecal egg count should be conducted to eliminate coccidiosis and internal parasites. If they are not found to be the cause then alternative treatment should be conducted.

Treatment: Administer orally 4-6 Charcoal tabs crushed mixed with 1 tablespoon Protexin powder or 2 capsules emptied of Inner Health Plus (Human) added to 10mls of water and drench eight hourly. Remove animal from mob, isolate and monitor condition only fed hay / chaff or branches to encourage eating and water add suitable hydration powder or mixture to be drenched and add to water bucket to assist in reducing dehydration of animal. If scouring doesn't slow or stop contact competent breeder or Veterinarian for advice

Prevention: To avoid scouring, slowly change increase to rations daily and monitor goat

## Urinary Calculi

Urinary Calculi are stones in the goats urinary tract can be caused by high levels of phosphorous and an imbalance with calcium levels in the feed ration .It is predominate in male goats

Symptoms: difficulty Urinating, Swollen bladder, straining to pass urine

Treatment: Ammonium chloride 20 gms per day in 60mls of water add a good tablespoon of honey to sweeten mixture -give Orally. Massage the sheath to help break down any lumps that are felt. Tip the buck upside down to shift stone at the neck of the bladder and urethra, these, along with plenty of fresh drinking water add 60mls of Apple Cider Vinegar to bucket will help to dissolve and pass the calculi stone.

Consult with your Vet immediately if you observe symptoms

*NB this is the author successful treatment regime and is not recommended by vets.*

Prevention: Avoid feeding rations that heighten the risk of Urinary calculi give a balance of Calcium and Phosphorus in feed rations

## Acidosis (over eating disease ) can be fatal

Symptoms: Bloat, Dehydration, Weak Pulse, Increased Respiration, No rumen movement, Full, watery stomach, Very Weak

Treatment: Administer mineral oil plus Bi-carb soda via stomach tube this will help to break up the excess gas

Prevention: Change and Increase feed rations gradually and avoid feeding grains that have a higher propensity to cause Acidosis or keep Bi- Carb soda available adlib for the goat

## Enterotoxaemia (Pulpy Kidney)

Symptoms: Full stomach, Fever, Star gazing, Convulsions and tooth grinding, Sudden death is common

Treatment: Contact your vet Administer Antitoxin immediately

Prevention: Glan vac vaccine 3 in 1 is suitable for goats' up to 4 times per year if on high grain rations

## Pneumonia- common cause of sickness and death in housed goats

Symptoms: Animals may seem tired and walk behind the rest of the flock when they are herded .They may stop eating properly. Goats with pneumonia often have a high fever. Animals with pneumonia show fast



breathing and breathe with difficulty. They may gasp for air and cough. There may be mucous discharge from the nose

Treatment: Contact your vet immediately if your goats show the above symptoms

Prevention Correct weak management problems that cause stress to the animals.

Provide shelter during bad weather. During a long journey, allow the goat's stops to rest drink water and eat hay. Keep their environment clean

**Resource:** for most common Angora goat ailments -South African Mohair Growers website

[https://www.angoras.co.za/page/vets\\_corner](https://www.angoras.co.za/page/vets_corner)

***NB** In the cases of all health issues consult with a local Veterinarian for advice and treatment management.*

## External parasites

**Lice** are the most common external parasites that are found on angora goats. Lice live close to the skin of the goats. If a goat is scratching excessively it can indicate it has lice.

Goats should have been treated before they arrive, at you school or farm however if lice are found they should be treated as soon as possible. Avoid treatments that will leave a colour residue on the fibre.

**Treatment** Dipping with Exstinosad wash will kill lice and has no with-holding period



Lice- what they look like

**Itch mites** are another less common external parasite that can infest angora goats.

They are usually found on the lower portion of the leg ,so the goat can exhibit symptoms that are described as dermatitis such as excessive scratching and biting at their legs

To some degree it can be controlled effectively by macrocyclic lactone (ML or 'mectin') drenches (ivermectin, abamectin and moxidectin). NB Check with your Vet for a management plan

If there is a sever infestation a more targeted approach will be required.

For more information visit **Worm boss** website at

<http://www.wormboss.com.au/worms/other-occasional-parasites-of-sheep-and-goats/itch-mite.php>

## Foot trimming

Foot trimming is very important in goat husbandry. Feet can either be trimmed with the goat standing up like a horse or they can be rolled onto their back and be held between the knees as they are during shearing. Trimming goat feet is the same as trimming sheep feet.

The wall of the foot should be trimmed so that it is level with the sole of the foot.

The feet should be trimmed a couple of times before the final trimming before a show This is to give both you and the goat practice. The final trimming should be done at least 14 to 21 days before the show. This allows time for any healing.

To take care of your goat's feet:

- Use a pair of hoof shears to trim the hooves when necessary

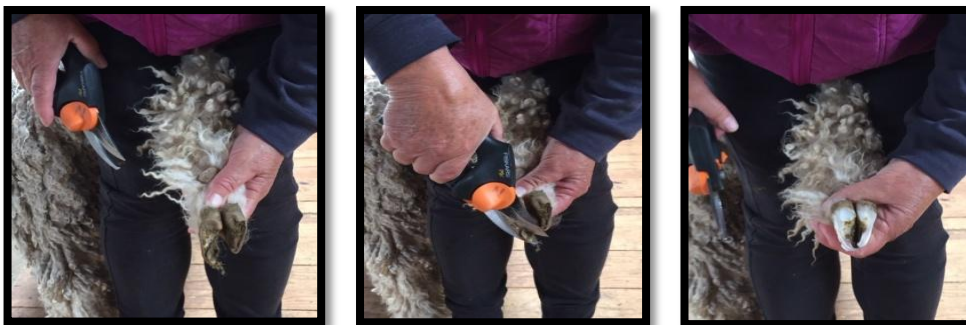


- Trim hooves regularly so that they keep their normal shape

The following pictures show how to trim the hooves:

- Using the tip of the hoof shears, remove dirt and mud from the hoof
- Determine the level of the sole of the hoof before starting to cut any of the wall of the hoof away
- Gradually trim the hooves down until you can see the white line of new hoof growth
- First trim off the point of the hoof of one claw
- Then trim the outer side of the hoof
- Finally trim the inner side of the hoof.
- Then repeat the process on the hoof of the other claw

Rear feet



Front foot



This will help ensure that the goat does not develop foot problems or go lame

- You will need an assistant to hold the goat for you while you trim its hooves
- The assistant must put the animal in a comfortable sitting position
- To trim rear feet hold between your knees.

## Crutching and Wiggling

Angora goats need to be crutched and wigged between shearings. Three monthly is optimum time so the animals can still see and feed well in the paddocks.

The wethers need to be crutched, wigged and ringed (cleaning up the urine stain from their belly). About 15 cm circle around the pizzle should be done to keep stain and avoid flystrike on wethers

Crutching and Wiggling can be conducted while the goats are standing but ringing can only be done when the animals is turned over. Crutching and Ringing prevent the animals from becoming fly struck.

If the animals scours, daggs should be removed as soon as practical, to avoid flystrike  
Wiggling is to ensure the animals can see at all times, if the animal becomes mohair blind, there can be significant weight loss and additional stress on the animal.

These processes can be done with blade shears as easily as they can be with electric shears or Battery operated handpiece.

Crutching and wiggling and pizzle should occur about 2 months before the show but additions trims may be required.

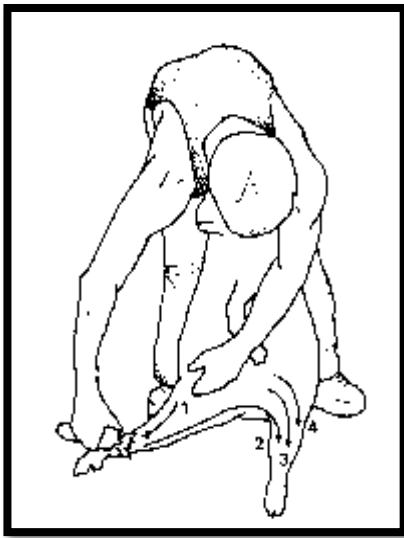


Fig 1 Crutching inside leg



Fig 2. Removing the topknot

Credit- New Zealand Shearing and Hand blade Teaching Notes

## Drenching

Drenching is the method used to give medicine by mouth, and is normally used to treat animals against worm infections. This can be done by using the syringe without the needle or by a drench gun  
Prepare the correct dose for the animals by weighing the biggest to the smallest.

Then follow the directions on the product you are using for worms

To drench

- Restrain the goat
- Open the goat's mouth by placing your thumb into the side and over the tongue



- Place the syringe or drench gun in the side of the goat's mouth and over the base of the tongue



Syringe method



Drench gun method

The syringe or drench gun should be directed towards the left-hand side of the mouth

- Raise the head of the animal a little, but not too high, which will prevent the animal from swallowing
- Do not hold the mouth open while dosing
- Slowly squeeze the contents of the syringe into the mouth
- Make sure the goat is swallowing the medicine and not choking on it
- If the goat jumps forward, move with the animal to prevent damaging the roof of its mouth

## Tattooing

If you want to register your animal with Mohair Australia and show your goat, it will need to be tattooed  
To insure a good tattoo on your animal:

- Clean the ear(s) before tattooing. The tattoo will be more legible and there will be less of a chance of infection if the site is clean.
- Place the correct number/letters into the pliers and tighten. ALWAYS check the tattoo in a piece of paper or a paper towel before tattooing the animal. This eliminates a lot of headaches after the tattoo is put in backwards or upside down.
- Smear tattoo ink over the spot you plan to tattoo. Green ink is my preference. It works better for animals with dark ears. Try to make sure there are no blood veins, warts, or scar tissue in the area to be tattooed. Remember to hold the pliers so that you are tattooing with the needles going into the inside of the ear and that the pliers are held upright so the tattoo will not be upside-down!

- Squeeze the tattoo pliers closed over the inked area in a firm, quick motion. You will not be able to see the imprints very well at that point and there may be some blood, but don't worry about that. Sometimes with new pliers and digits the needles will go through the ear and you will have to peel the ear off of the needles. It happens, don't get excited. Immediately ink the area again and rub the ink in with your fingers or gently scrub the ink in with an old, SOFT piece of cloth or toothbrush.
- Clean the tattoo pliers and the digits using a mild dish soap and very hot water. I like to boil mine or disinfect them before I put them away. If you choose to disinfect use a mild form, so the next time you tattoo you don't end up with a chemical burn.
- Let the ear heal undisturbed. Some tattoos may take 2 to 3 weeks to heal and others heal in a week. Always try to tattoo at least a month ahead of the show so your goat's tattoo can be read without causing discomfort to the goat.

1. Tattoo applicators paste, pins
2. Hold ear between fingers
3. Apply the pliers and squeeze gently



## Ear tagging and Ear marking

Ear tagging and ear marking are used to identify livestock.

Ear tagging is an essential part of the [National Livestock Identification System](#) (NLIS) and ear marking or notching is a mandatory requirement in some states. It also has business benefits by enabling livestock to be identified on-farm, leading to improved management. Keep good records of all animals on farm

### National Livestock Identification System

The NLIS is Australia's system for the identification and tracking of cattle, sheep and goats for biosecurity, food safety, product integrity and market access purposes.

NLIS devices for sheep and goats can either be a visual ear tag or an RFID ear tag.

NLIS devices include the Property Identification Code (**PIC**) or the brand in Western Australia.

NLIS devices are available from NLIS state authorities.

When applying NLIS devices producers need to:

Use the correct equipment.

Keep ear tag applicators in good working order.

Keep the applicators clean and dip in disinfectant between each animal (when in use).



## Ear marking livestock

The requirement to ear mark (ear notch) livestock varies around Australia.

It is possible that these requirements may change as part of the development of new [Australian Standards and Guidelines for the Welfare of Animals](#).

Producers should check with their state department of primary industries as to the legal requirement to ear mark livestock in their State. In some states livestock must be ear marked prior to sale.

When ear marking, producers should ensure that:

Ear marking pliers are kept well maintained and sharpened before use.

Ear punches are kept clean and dipped in disinfectant between each animal.

<https://www.mla.com.au/research-and-development/animal-health-welfare-and-biosecurity/husbandry/ear-tagging-and-ear-marking/>

<http://agriculture.vic.gov.au/agriculture/livestock/national-livestock-identification-system/nlis-sheep-and-goats/how-to-tag-sheep>

Ear tag Applicators

Ear tag size for goats –small cattle -must have your PIC Number visible



Fig 1 Ear tag applicator



Fig 2. Ear tags NLIS PIC no- tag pen

## Castrating a male goat

We recommend that you castrate male kids before or at weaning using the Elastrator® method or with a burdizzo

This is easier for you and safer for the animal than the open method of castration in which the testicles are removed

By allowing your best male goats to be selected for your genetic gene pool keep them for breeding

To keep improving the quality of your stock

The other male goats will be easier to handle if you castrate them

When you later slaughter them, the meat will taste better

By allowing only the best male goats to breed with your does, you can improve the quality of the kids in your herd

Ask an animal health advisor, veterinarian or breeder to demonstrate castration before you attempt the procedure for the first time

The Elastrator® method uses a special rubber ring that is applied around the scrotum above both testicles

This rubber ring is left there and this stops the blood supply which causes the scrotum and testicles to shrink and drop off after about three to four weeks . You can remove the dried purse if needed

Make sure you castrate by 8 weeks and administer pain relief- *consult with your veterinarian for proper medication requirements.*

Males kept as entire bucks must not be castrated after 8 weeks and sent to meat works if not used as a stud sires

- If possible, castrate the young males on a cool day
- Work as hygienically as possible
- Wash and disinfect the Elastrator®
- Hold the goat in a way that you can work on the testicles
- Before you start castrating, make sure that you can feel the two testicles

Shear any mohair away from the testicles and inside legs

- Place the rubber ring on the pliers
- Open the rubber band on the pliers and place around the neck of the scrotum by holding both testis and release the band by pulling the ring off the pliers
- Using a Burdizzo hold the scrotum towards you place the clamp over the right side first on the testis hold tight for up to thirty seconds, repeat on the left side- this works by crushing the spermatic tube and renders the male sterile
- Keep everything clean and disinfected between each animal

## Castration Tools



Burdizzo



Pliers



Fig 1. Place kid on back in a holder or hold

Fig 2. place rubber ring around the base of scrotum

Fig 3. Ensure both testes are felt before releasing the band

## Farm /School Bio –Security

What is Bio-Security?

Do you have a school plan?

**Activity:** Explore your school's Biosecurity plan

Australian Government Agriculture and water resources

<https://www.agriculture.gov.au/biosecurity/biosecurity-matters/farming>



## Looking after your Animals Health

Regardless of whether you own a large or small property, you are responsible for keeping your animals free from pests and diseases.

Good biosecurity practices can help prevent pests and diseases establishing on your property and spreading to neighbouring properties.

Simple things you can do to care for your animals:

- provide clean water and sufficient food
- regularly clean their living area
- provide proper grooming
- get vet checks
- prevent, control and promptly treat injuries, illnesses and diseases
- if keeping herd animals (such as angora goats), be sure to have more than one.

**Activity:** Look at your school plan and see if you can improve your Bio-security!

Compiled by Lynne Carter (September 2020)

Photos

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