

ANIMAL HUSBANDRY

Domestic livestock is a term which covers animals traditionally used in farming to produce food and fibre or labour.

Farming pursuits can be carried out either for commercial purposes or by individuals aiming to be as self-sufficient as possible. Traditionally domestic livestock covered a range of animals including sheep, cattle, horses, pigs, poultry and bees, whereas today more exotic animals such as alpacas, fallow deer, camels, ostriches and fish are also farmed.

An animal is considered domesticated when their breeding and living conditions are controlled by people. The result of domesticating animals, or raising livestock for human benefit, is that we then become responsible for the animals welfare.



General animal welfare covers:

- Food and water
- Shelter
- Health and wellbeing
- Handling and injury
- Companionship
- Reproduction

The following points are general; this factsheet does not have the capacity to cover all points of care necessary for all animals which may be farmed.



NUTRITION

The Department of Primary Industries, Parks, Water and Environment (DPIPWE) states that the most common problem for small landholders running cattle on their holding is poor nutrition, usually caused by overstocking.

The landholder may see lots of grass in the height of spring or because the property has perhaps been de-stocked for a period of time, and it is easy to overestimate the carrying capacity of the holding. Carrying capacity – often talked about in dry sheep equivalent (DSE), is a tool to help work out the correct number of animals for a given area. One DSE is rated at the amount of feed (kg of dry matter) required for an adult 45 - 50 kg wether or non-lactating ewe to maintain its weight. It is used as a standard to compare between different classes of livestock and to determine stocking rates and carrying capacity of a property. One way calculate your average stocking rate (DSE/ha), divide the average liveweight per hectare by 50.

TABLE 1: HOW MUCH FEED DOES MY STOCK REQUIRE?

This table gives the DSE rating of different livestock. Local agronomists can advise you on the DSE rating per hectare for your region to help you determine your property's stocking rate. At certain times of the year when pasture quality or quantity might be limiting, supplementary feed maybe required to help you meet livestock feed requirements.



CLASSES OF LIVESTOCK	VALUE OF DSE
<i>SHEEP</i>	
Dry sheep: wethers, ewes, hoggets (45kg)	1.0
Merino ewe: Spring lambing	1.5
Merino ewe: autumn lambing	1.8
Ram	2.0
<i>Dairy Cattle</i>	
Cows: milking or double suckling (350kg to 500kg)	14.0 – 16.0
Yearling steer or heifer	6.0 – 7.0
Weaner (3-6 months)	3.0 – 4.0
<i>Beef Cattle</i>	
Dry cow or steer (350kg – 450kg)	8.0 – 10.0
Yearling steer: fattening (250kg – 400kg)	8.0 – 10.0
Yearling steer: store (250kg – 350kg)	5.0 – 7.0
Fattening cattle: 20 to 32 months (350kg – 550kg)	9.0 – 12.0
Cow with calf at foot (up to 8 months)	12.0 – 14.0
Bull (800kg)	14.0
<i>Alpacas (65kg)</i>	
Dry adult	0.9
<i>Deer</i>	
Fallow dry female or castrate	1.5
Fallow breeding female with fawn	2.2
<i>Goats</i>	
Dry Angora	1.0
Breeding Angora	1.5
Dry milk or meat goat	1.5
Milk or meat goat lactating	3.0
<i>Horses</i>	
Pony	8
Large horse	10

FOOD & WATER

Some pastures are more nutritious than others; environmental factors such as annual rainfall, seasonal conditions, soil type and soil fertility as well as pasture composition affect the amount of pasture produced, which directly equates to the number of animals a property can carry.

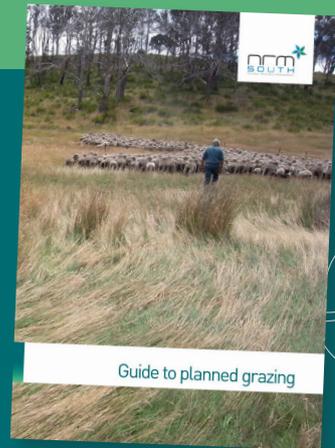
In addition the amount of weeds and fertiliser history of pasture impact on productivity. Farming methods also affects the number of stock which can be carried. Rotational grazing practiced by dairy farmers results in a property carrying more stock because the pasture is rested between grazing rotations, as opposed to properties that are set stocked, where animals are grazing in the same paddock for most of the time. Adequate feed results in less health problems. The best (and cheapest) feed for cattle is good pasture. Most cattle need some supplementary feeding during



Photo:
A. Renkin

late winter and, in some areas and seasons, late summer as well. Make sure you buy only good quality hay as many people bale rubbish pasture that stock will not eat.

Clean water needs to be readily available at all times for domestic animals, and understandably in the summer all animals drink more. Water requirements range between animals, sheep may need approximately 2 litres per head per day, horses can drink 40-50 litres a day, while a lactating cow can need up to 100 litres a day.



Guide to planned grazing

NRM South has produced a guide to planned grazing which will help you conduct a small scale trial on your property to see if it's right for your land.

www.nrmsouth.org.au

SHELTER

Animals need access to shade and shelter. For larger livestock this is usually provided by trees, hedges or shelterbelts.

Besides the fact that it is a requirement under the *Animal Welfare Act 1993* to provide shelter for livestock, an animal which does not have shelter, particularly in times of bad weather, will require a much greater food intake to keep warm. Therefore providing shelter also lessens the demand on pasture or hay.

HEALTH & WELLBEING

Most livestock need periodic drenches or vaccines. Common problems are intestinal worms and lice which are treated with drenches, and clostridial diseases which need a prophylactic vaccination.

Clostridial diseases are caused by bacteria and include black leg, black disease, pulpy kidney and tetanus. There are many different products available on the market, so whenever you use a drench, vaccine or other chemicals, always read the label.

It is very important to follow the instructions about dosage rates and withholding periods. These will vary between different products.

Also if you use herbicide or insecticide in a paddock, check the label for information about how long the paddock must be destocked. Many people want to reduce the amount of chemical they use in the environment, but be aware that if you spread poultry manure or compost onto your paddocks, you need to destock the paddock for three weeks.

It is possible for soils to be deficient in minerals necessary for optimal livestock health. An example is copper – coast soils are generally considered to be low in copper. Selenium is another trace element necessary for animals to thrive, and is locally deficient in parts of Tasmania. A local agronomist or vet can provide advice.

Livestock diseases impact on animal welfare, reduce productivity, and can infect humans. Animal diseases may be reduced through good animal husbandry and good nutrition because healthy animals are more resistant to disease.

Worms are a common problem on many small farms and are commonly found in cattle, sheep and goats. Sheep and goats are more susceptible to worms than cattle. Young animals are at higher risk of infection and you should avoid grazing young stock on higher risk pastures e.g. short pastures, set stocked pastures. Rotating pasture grazing to allow for rest periods and rotating grazing between different stock types (e.g. sheep and cattle) can help to reduce worm burdens. A strategic drenching program is also an effective way of managing worms. Worm faecal egg counts can be undertaken by Department of Primary Industries Parks, Water and Environment (DPIPWE) to help you understand what type of worms you might have and the level of infection on your property.

All livestock owners are required by law to report any signs of an emergency animal disease. If you think your animal is showing the signs, please contact your local vet.

HANDLING & INJURY

Using low stress stock handling practices are very important when handling livestock. This will reduce stress on the animal, reduce the risk of injury to you or others and will impact on livestock temperament and performance.

Low stress stock handling training courses are offered by some training providers. Techniques such as yard weaning, feeding stock in the yard and having well designed handling facilities / yards will have an impact on your livestock's temperament and ease of handling. Poor temperament is a hereditary trait and therefore it may not be best to breed from poor tempered animals.

Specialised facilities are required for a number of domestic livestock. Most sheep, alpacas and some goats require a shed or at least yards for shearing, crutching and drenching. A cattle crush or headbail in cattle yards is essential for most handling of cattle, for example drenching.

Paddocks provided for stock need to have good fences to protect both the animals and the general public. If livestock stray onto a road and are hit by a car, the owner of the livestock is legally responsible. Public liability insurance is essential.

For the safety of livestock the fences must not have loose wire where the animals can get caught or cut themselves. All but minor injuries need to be attended to by a vet, as soon as possible.

Be aware that the male of the species can become territorial, dominant or aggressive. This is partly due to inherited genes which encourage the male to protect "his flock" but aggression can also come about through familiarity and lack of respect for people. It is best to handle males which you intend to keep for a long time with respect, demand respect in return, and don't become too familiar with them. You are actually helping the male animal establish a "correct code of conduct".

Times of bad weather, will require a much greater food intake to keep warm. Therefore providing shelter also lessens the demand on pasture or hay.

COMPANIONSHIP

Most domestic animals are also herd animals, and are much happier with others of their own kind for companionship.



REPRODUCTION

Breeding animals whether they are sheep, cattle, horses, pigs or goats have special needs, so consider carefully before planning a breeding program. A pregnant female requires a rising plane of nutrition as her pregnancy progresses.

In the case of sheep, if the female doesn't have enough nutrition in the last 4-6 weeks before lambing she is at risk of pregnancy toxemia (also called twin lamb disease).

The name twin lamb disease is explicit because if the ewe is going to have twins or triplets, her nutritional requirements are greater than a ewe carrying a single lamb. Ewes will die from pregnancy toxemia.

There are also particular risks for cows associated with the quality of feed available; grass tetany and milk fever can cause death, and these conditions relate to a lack of calcium (milk fever) or magnesium (grass tetany) in the pasture. Difficult births do occur, and may need vet assistance. A basic rule of thumb to help decide if a sheep or cow is having difficulty giving birth, is not to let more than 4 hours elapse from the time the water bag or feet of the foetus are showing until the lamb/calf is born. If it takes longer the unborn lamb/calf will be in distress and it is time for immediate vet assistance. For cattle, a cattle crush will be needed to restrain the cow to prevent disease.

SPECIFIC ANIMAL TREATMENTS

SHEEP & GOATS

Sheep and goats have some very similar animal husbandry needs, and they are often considered easier than cattle to handle because they are smaller. However they do require specific facilities for handling.

Unless the sheep is a shedding sheep breed such as Dorper or Wiltshire, it will need to be shorn once a year, and Angora goats need shearing twice per year. At least on one other occasion during the year both breeds will need to be crutched, which means removing the wool from around the face and rear end. They need to be drenched for internal parasites, so yards and a holding race are essential, and a working dog may be needed to get the sheep into the yards, because sheep quickly learn that the yards are like the dentist chair to most of us!

If carrying lice, sheep and goats will need treatment, usually after shearing, and in the summer the owner needs to keep a close watch for fly strike, particularly in unshorn sheep. Fly strike will kill animals, slowly and very painfully.

Flies generally strike in humid weather, often around a dirty tail or pizzle, so if an animal is seen kicking or biting at a part of its body, closer inspection is urgent. It is possible to use preventative measures against fly strike, again facilities for handling are necessary. Sheep and goats need hoof paring (trimming) to assist good foot health. The bacteria that causes scald and footrot is spread by infected sheep or goats, the condition is painful to the animal and can be quite debilitating. Some breeds are more resistant than others but purchasing clean stock will avoid the problem.

Johnes disease is becoming a major issue in Tasmania and purchasing vaccinated stock from reputable breeders is advisable. Both sheep and goats are herd animals, and are much happier in company. Fences need to be especially good to keep goats at home.

ALPACAS

These social animals like to be kept in flocks, and require shearing once a year.

They do not produce lanolin in the fleece like sheep, so in Tasmania alpacas require protection from cold, wet conditions when their fleece is waterlogged. They drink around five litres of water a day, and need routine toenail trimming and their teeth should be periodically checked. Alpacas are susceptible to clostridial diseases such as tetanus and pulpy kidney, and are also vulnerable to Rye grass staggers, Vitamin D and Selenium deficiencies, and Johnes's Disease.

PIGS

Pigs can live up to 25 years, and need a clean shed to shelter from the weather, in particular the sun, because pigs suffer from sunburn. They also need clean water at all times.

All pigs over 10 weeks of age must have a tattoo which is registered to the property, and is obtained from DPIPW. Pigs also require a number of vaccinations against diseases such as parvo, leptospirosis and erysipelas. In Australia it is illegal to feed pigs swill – food waste containing meat, bone or meat products or some dairy products such as soft cheeses because swill feeding can potentially lead to Foot and Mouth disease or Swine fever. As with poultry feed, most pig feeds contain Restricted Animal Material or RAM. If you are planning to purchase pigs, contact your local council first to check if you need any approvals.

It is most important that ruminants such as cattle, sheep, alpacas, deer or goats cannot access pig feed.

HORSES

Horses are an expensive undertaking because they require specific gear and regular care, often supplementary feeding, and possibly farrier and vet fees.

Although temperament varies between different animals, overall horses can be more excitable than other domestic livestock and seem to be more accident prone. Horses require dental checks as they age, because their teeth are continually growing and over time chewing will wear sharp edges on molars. They also need periodic drenches for intestinal worms, and their hooves will need trimming, or shoeing if the horse is in regular work. The condition of horses needs to be monitored because serious animal health problems will arise if they get too fat, or too thin. As previously mentioned they also need access to good water always because they can drink a lot in summer particularly after strenuous exercise. Shade and shelter from the elements needs to be accessible, and be aware that horses are very selective grazers, the pasture in a paddock set stocked with only horses will degrade over time. Resting paddocks and putting sheep in the paddock with the horses will keep pasture in a better condition.

POULTRY



Photo:
T. Ackroyd

External and internal parasites can be a problem for free range birds, and poultry does need to be protected from predation from dogs, feral cats and spotted-tailed quolls.

DPIPWE has a design for a “quoll proof hen-house” on their website. Poultry need access to clean water at all times and be aware when feeding chickens that they can eat products which are illegal to supply to cattle, sheep and goats. Processed poultry feed usually contains Restricted Animal Material (RAM) which is illegal to feed to ruminants (cattle, sheep and goats). The feed bag should state if it contains RAM, also, if you feed your poultry kitchen scraps containing even small amounts of meat or bone, make sure that ruminant animals cannot share these scraps. If you sell or give away eggs, there are hygiene and labelling standards set under the *Tasmanian Food Act 2003*.

NATIONAL LIVESTOCK IDENTIFICATION SCHEME

The National Livestock Identification System (NLIS) was established to facilitate the rapid tracing of animals if there was a major disease outbreak.

Each animal has a device attached to the ear which can be read or scanned. It is a permanent, whole-of-life identification system that enables individual cattle to be tracked from property of birth to slaughter. Before ordering NLIS devices, you need a Property Identification Code (PIC). The PIC will be recorded on each animal's ear tag. Whilst NLIS provides the facility for cattle to be electronically identified at the time of transaction, in saleyards and at the time of slaughter (a unique number for each animal), sheep and goats are identified with non-electronic tags which include the PIC. Cattle movements between properties are also logged on the secure central NLIS database.

DUTY OF CARE

“Under the Animal Welfare Act, persons who have the care or charge of animals have a legal “duty of care” for the welfare of those animals, and must take all reasonable measures to ensure their welfare.”

Animal Welfare Guidelines-
Sheep, DPIW, 2008.

Source: <http://dpiwwe.tas.gov.au/biosecurity/animal-biosecurity/animal-welfare/legislation-standards-guidelines/animal-welfare-act>

The Duty of Care is yours - you must take it seriously! If you have animals, own animals or look after animals, you are responsible for their welfare. This applies whether your animals are pets or livestock.

You may be deemed to have the care or charge of an animal if you are:

- The animal's owner
- A person with control, possession or custody of the animal
- An operator or manager of commercial premises involving the animal
- A share farmer
- A chief executive officer or a director of a company that owns the animal

Employers are liable for the actions, or inactions, of their employees in relation to the welfare of an animal.

NEGLECT IS CRUELTY



There is a legal requirement that animals unable to provide for themselves must be given appropriate and sufficient food, water, shelter and exercise.

It is most important, not just for the hobby farmers themselves but also for everyone else in the community, that all hobby farmers take their biosecurity and animal welfare responsibilities seriously. Biosecurity is the protection of industries, the environment and public well-being, health, amenity and safety from the negative impacts of pests, diseases and weeds.

WELFARE GUIDELINES



Photo: A. Renkin

Animal welfare guidelines published in accordance with the *Animal Welfare Act 1993* are available for sheep, cattle, horses, pigs, alpacas and poultry at FarmPoint.

The other side of the animal welfare issue is that ALL farmers will warn newcomers to animal husbandry that "If you have livestock, you have deadstock". Some stock losses, even with the best care, are unavoidable.

This fact sheet has provided information about some of the pitfalls and responsibilities of animal husbandry, but essentially the advice is care for them, have fun and enjoy them.

FURTHER INFORMATION

For more information please refer to NRM South's Healthy Farming & Environment Reference Guide: <http://www.nrmsouth.org.au/>