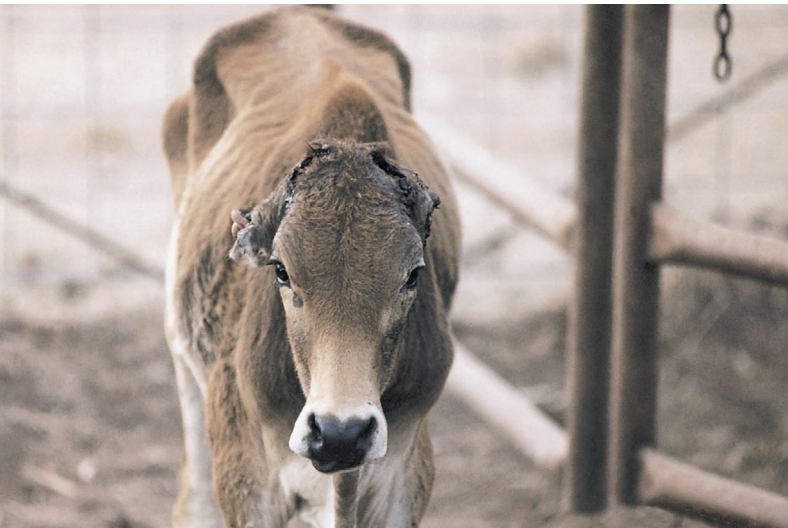


Predation of livestock

Recognising the signs



Recognising the signs of predation is important for livestock owners/managers.

The presence of predators in an area is not sufficient evidence to confirm predation of livestock. Predators will often scavenge on animals that have died of other causes, and livestock can disappear for other reasons.

Animal mortality is easiest to confirm and evaluate if examination is conducted soon after death. Carcass decomposition, which is rapid during warm weather, destroys evidence. Scavenging birds and mammals can also remove evidence, frequently within a few hours.

In separating predation from other mortality factors, the following information may be required:

1. predator species present in the area
2. habits and signs of each predator species
3. history of depredation problems in the area
4. normal and abnormal livestock appearance and behaviour
5. common causes of livestock losses other than predators:
 - a. starvation and/or exposure
 - b. internal parasites
 - c. bacterial and viral diseases
 - d. pregnancy disease and other metabolic diseases
 - e. 'hardware' disease caused by ingestion of nails, wire or other metal objects which penetrate walls of the digestive tract
 - f. bloat
 - g. suffocation
 - h. poisonous plants and mouldy feeds



- i. other poison sources such as chemicals and lead-based paints, or discarded batteries
- j. lightning
- k. snake bite.

Sometimes, the causes of livestock loss are obvious; in other cases, assistance may be necessary to determine the cause of death.

Three common predators of livestock are dingoes/wild dogs, foxes and feral pigs.

Wild dogs

There is no certain way to distinguish between domestic and wild dog attacks. Therefore, much of this discussion applies equally to damage caused by dogs.

Carcass examination

Dogs generally kill by bites to the throat, damaging the trachea and the major blood vessels of the neck. Blood on the throat is usually good evidence of dog predation. Blood is often found around the mouth and nose; however, care should be taken to distinguish between blood and other body fluids that will drain from a decomposing carcass.

Dogs will often attack sheep from behind as they run away, resulting in injury to the hind legs. Inexperienced dogs, or those attacking 'for fun', frequently inflict considerable damage to the hind end of the sheep, often leading to its death. In these cases, blood is often found caked on the hind legs. The pattern made by blood flowing down the legs while the sheep was still upright can be clearly distinguished from blood or fluids that may flow as a result of decomposition, or of animals feeding on a carcass. Dog saliva, even when dry, can sometimes be seen on the wool of attacked sheep.

The most rapid, distinguishing and verifiable proof of wild dog predation is revealed when the hide is removed, particularly along the legs, rump, flanks and throat of the dead animal. The true extent of injuries will not be obvious without this. Puncture marks (from canine teeth) and massive haemorrhaging will be evident on the limbs, back and/or throat. Even when no external evidence of predation can be seen on the fur/wool, removing the hide will reveal the most convincing proof of predation. Distance between puncture marks gives an indication of whether foxes or dogs are responsible.

Decomposition and/or scavenger damage can mask the cause of death in older carcasses; however, the blood-stained wool will remain (especially on the lower legs, which often dry intact). Again, take care to ensure that decomposition fluids are not mistaken for blood. Depending on the age of the carcass, dissection is often warranted. Bruised tissue can still be distinguished from undamaged tissue in a decomposing carcass. Provided that the skin is still intact, damage can often be revealed simply by pulling out the wool. Puncture wounds in the throat may also be uncovered in this manner.



Apart from dogs, there are no predators in Australia that are large enough to inflict such damage on adult sheep. The situation can be more complex in the case of sheep younger than about six months of age.

Many young lambs die from causes other than predation; however, predators are often suspected because they will scavenge on already dead, or dying, lambs. To verify predation, dissection must show haemorrhage and bruising (as described for adult sheep).

A further complicating factor in relation to lambs is that predators other than dogs could be involved.

Predation of livestock

Attacks on cattle tend to target calves and young stock. Often wild dogs continually harass a single cow and calf or shadow a herd until there is an opportunity to attack. Calves are bitten on the hamstrings, shoulders, lower back or ears. Surviving animals display bitten hind quarters, tails and ears. Abscesses secondary to dog bites are common and downgrade carcass quality.

Foxes

While the incidence of fox attacks on healthy lambs is low, it does occur occasionally. It can be difficult to distinguish between fox and dog predation on lambs, except when there are other signs (e.g. tracks, scats, damage to adult sheep in the area). The size of bites and puncture marks probably provides the most reliable guide.

Although foxes often tend to feed from the heads of lambs, there are variations in the behaviour of both individual foxes and dogs, which can make predator identification difficult. Generally, foxes will only kill young or small animals—particularly lambs and kids—usually by attacking their throats. Some, however, are killed by multiple bites to the neck and back, perhaps as a result of being caught while lying down.

As foxes do not have the size and strength to hold and immobilize adult sheep and goats easily, or to crush their skulls and large bones, repeated bites may be required to subdue prey. Numerous injuries also may result when young foxes attempt to kill but lack the experience to attack the throat or other vital areas.

Foxes generally prefer the viscera, and begin feeding through an entry behind the ribs; however, some seem to prefer the nose and tongue, and may consume the head of small prey. It has been noted in some areas that red foxes tend to feed on the side of carcasses of large prey and carrion that is nearest to the ground. Red foxes are also noted for carrying small carcasses back to their dens to feed their young. This may account for some poultry, lambs and kids that disappear and are never found.

Foxes rarely cause severe bone damage to livestock other than poultry.

Feral pigs

From recorded observations, it would appear that adult pigs are more likely to be lamb killers than young pigs, although anecdotal evidence suggests pigs can learn lamb killing behaviour from the sow at a young age.

Feral pigs, particularly large boars, have been known to move onto properties and into lambing paddocks when ewes are lambing.

It is believed that feral pigs act in several ways:

- Pigs kill and eat lambs shortly after birth. The only evidence of a recently lambled ewe being preyed on will be a wet area on the ground, possibly with some blood on the soil. Usually no remains are present; however, the skin, feet and skull are sometimes left. As the pig may be killing lambs that would have died anyway, all losses cannot be attributed to feral pig predation.
- They kill and eat healthy lambs up to one week old and older—these are lambs that would have otherwise survived.
- They kill and eat any weak lamb in the mob. These losses are due to scavenging by pigs, not predation, as these lambs would probably have died anyway.
- They scavenge on stillborn lambs. Normally lambing carcasses will be seen in lambing mobs, but few can be found when feral pigs are present.

Very few people have seen pigs kill lambs because pigs become active at dusk, feed during the night and camp during the day. A predatory pig will approach a lambing flock and then, once close, rush a young lamb to knock it off balance. It will then put a forefoot on the lamb and start eating the chest region. When lambs killed by pigs have been examined, they have blood-stained belly wool, indicating haemorrhage from this area while the animal was alive.

Feral pigs have a characteristic pattern of feeding on lambs that distinguishes them from other predators. For example, pigs sometimes trample lambs when eating them, while predation by dogs or foxes is distinguished by tooth marks either side of the area bitten.

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Animal health

Death in livestock could be caused by any number of factors. When the cause of loss is unknown or uncertain, expert assistance in diagnosing the cause of death may help prevent further losses.

Further information

Further information is available from your local government office, or by contacting Biosecurity Queensland on 13 25 23 or visit www.biosecurity.qld.gov.au.

