

Feral fallow deer

Dama dama



Originally introduced in the 19th century from Europe and Asia as game animals by European settlers, Australia is now home to six species of deer; fallow deer, red deer, chital deer, hog deer, rusa deer and sambar deer. Queensland is home to four of the six species; fallow deer, red deer, chital deer and rusa deer.

While deer continue to be farmed for venison, the wild populations are causing significant environmental damage. They can damage crops, pastures and forestry plantations and compete with livestock for pasture.

Feral deer can alter the structure and composition of endangered ecological communities, cause erosion and spread invasive plant seeds. They stray onto roads becoming traffic hazards and may cause motor vehicle accidents in rural and urban areas. Deer may also play a role in transmitting diseases that affect livestock.



**Queensland
Government**

Legal requirements

Feral fallow deer is a category 3, 4 and 6 restricted invasive animal under the *Biosecurity Act 2014*. They must not be moved, fed, given away, sold, or released into the environment.

The Act requires everyone to take all reasonable and practical measures to minimise the biosecurity risks associated with invasive animals under their control. This is called a general biosecurity obligation (GBO).

At a local level, each local government must have a biosecurity plan that covers invasive animals in its area. This plan may include actions to be taken on feral fallow deer. Some of these actions may be required under local laws. Contact your local government for more information.

An animal ceases being considered an invasive restricted animal (feral) if a person is keeping it in a deer proof enclosure and has become a registerable biosecurity entity (RBE) to keep that designated animal. Feral fallow deer can be considered as designated animals if a person keeps them.

Description

Fallow deer come in four colour varieties ranging from white to black. Their most common colour is tan or fawn with white spotting on the flanks and a white rump patch outlined with a black horseshoe pattern.

Adult bucks stand up to 90 cm at the shoulder, does around 80 cm. Adult bucks weigh around 90 kg, does around 45 kg.

Male antlers are flattened and palmate with numerous points, and up to 70 cm long. Adult males have a prominent 'Adam's apple'.

Life cycle

Mature bucks live apart from the does until the start of the rut. The breeding season usually begins in April and lasts six to eight weeks, with males remaining aggressive until early August. The gestation period is about 230 days and females usually produce a single fawn in December.

Males take possession of a territory and mark the boundaries by thrashing vegetation and making shallow scrapes with their forefeet. They utter a hoarse rattling sound or croak to call females in oestrus to the territory.

Habitat and distribution

Fallow deer are native to Iran and Iraq but were introduced to Europe in Roman times. They are the common park deer of England. Fallow deer were the first species of deer to become established in Australia.

In Queensland, fallow deer were successfully released at Westbrook and Warwick on the Darling Downs between 1870 and 1872. The Pikedale population, south-west of Warwick, is now the major wild fallow deer herd in Queensland. The herd numbers around 2 800 and is broadly contiguous to larger numbers of fallow deer on the New England Tableland in New South Wales.

In recent years, five other fallow deer populations in Queensland have been identified, three originating from deer farm escapes (two in southern Queensland and one near Rockhampton) and two from translocations (one in southern Queensland and one in the Wide Bay area). These herds are all estimated to number fewer than 100 animals.

Southern Queensland is close to the northern limit of suitable habitat for fallow deer in Australia. However, the species could expand its range in southern border areas if translocations continue.

Fallow deer are normally found in groups of three or four in quite dense habitat, but large groups occur in open country. They are most active at dawn and dusk. When alarmed, they display a bouncy gait.

Predominately grazers with a preference for improved pasture, fallow deer will browse acacia, blackberry and the tips of rushes and bracken. They prefer open, grassy glades in forest, with dense understorey a favoured retreat.

Impacts

Production losses

Feral deer are opportunistic and highly adaptable feeders that both graze and browse. Their diet is largely determined by what is locally and seasonally available. Fallow deer show a dietary overlap with sheep and cattle. An adult fallow deer may eat as much grass as 1.4 dry sheep equivalents. Five and a half adult fallow deer may eat as much grass as one dry cow. Because of this, deer can impose substantial costs on primary producers

Feral deer have been reported to cause damage to a wide variety of agricultural crops, pastures and forestry plantations.

Other impacts on rural enterprises include damage to fences, spreading of invasive plants and fouling of water holes.

Parasites and diseases

Feral deer are susceptible to exotic livestock diseases including foot-and-mouth disease, rinderpest, vesicular stomatitis, rabies and blue tongue. Unchecked, wild herds could play a major role in the spread of infection and act as a reservoir if these diseases are introduced to Australia.

Feral deer are also susceptible to a number of diseases and parasites currently in Australia including cattle tick, leptospirosis and ovine and bovine Johne's disease.

The main concern is the cost in lost livestock production or the spread of disease to disease-free areas (e.g. bovine Johne's disease). However, some of the diseases and parasites also have significant implications for human health.

Environmental impacts

Because deer are large animals, they are capable of damaging native vegetation by browsing and trampling understorey and seedling plants and ring-barking young trees.

Deer are also selective feeders. Over time, their browsing will influence the variety and abundance of native plant species. A significantly lower diversity and abundance of plant species is evident in environments where deer densities are high.

Feral deer can significantly impact ecologically fragile areas and have the potential to eliminate threatened plant species from an area.

Other environmental damage attributable to wild deer is the fouling of waterholes, the spreading of invasive plants and overgrazing causing erosion (including the subsequent degradation of water quality in creek and river systems).

Social impacts

Fallow deer occur in both rural and peri-urban areas of south-east Queensland. Grazing deer may damage parks, residential gardens and fences in outer urban areas. In some areas, orchards and other horticultural enterprises may suffer considerable damage. Where close to major roads, wandering deer represent a serious traffic hazard and may cause motor vehicle accidents.

There is also the potential threat to human health of rutting stags, particularly in peri-urban areas where deer may become habituated to people.

Beneficial considerations

Fallow deer can be trapped for the wild venison trade in accordance with Food Safety Standards. Trapping deer to use as foundation stock for a farmed herd is less viable due to the animal welfare and human safety aspects of handling feral deer.

Recreational deer hunting

The cost of deer control may be minimised by enlisting or utilising commercial or recreational hunters to assist in their control. Landholders wishing to engage a third party to assist in deer control on their property should carefully consider a number of points before allowing access to their property, including conditions of access, public liability insurance, and references.

Control

Managing feral fallow deer

The GBO requires a person to take reasonable and practical steps to minimise the risks posed by feral fallow deer. This fact sheet provides information and some options for controlling feral fallow deer.

In many cases, deer control is best done as a joint exercise, involving all land managers in the district. Local governments and landcare groups can assist coordinating efforts.

Prevention and early detection

The first and most effective step to managing the impacts of deer in Queensland must be to prevent more deer from entering the wild.

Thirty-five per cent of all current feral deer populations have resulted from deer farm escapes or releases, with a significant percentage of the remaining populations resulting from the deliberate translocation of deer.

Under Queensland legislation, the release or translocation of feral fallow deer is prohibited. Farmed deer and deer in game parks must be contained in deer-proof fences and it is the responsibility of the owner to ensure that deer are contained. Failure to do so is a breach of the Act.

Shooting

Shooting must be carried out by trained personnel with appropriate firearms licenses. Shooters must possess the necessary skill and judgment to kill deer with a single shot. Lactating females should not be shot, but if inadvertently shot, efforts should be made to find the young and euthanase them.

Ground shooting

Although time consuming and labour intensive, ground shooting is considered to be the most effective and humane technique currently available for reducing wild deer populations. Such shooting is usually done at night from a vehicle, with the aid of spotlights.

Helicopter shooting

Helicopter shooting is most effective (highest kills per hour for a given deer density) in relatively open habitats such as broadacre crops, open rangeland and swamps.

Where deer populations are at comparatively low densities and in areas of thick cover, kills per hour will be lower for helicopter shooting, but it may still be the most economic option. There is no evidence that this form of control risks disturbing and dispersing the deer population.

Fencing

Generally, the minimum escape-proof enclosure for farmed deer or an exclusion fence for feral deer is a well maintained high netting fence or equivalent. An example of an effective deer fence is one that is 2.1 m high, has strainers and posts made of heavy duty material such as hardwood or metal that are set deeply into the ground and no more than 9 m apart.

The netting would be 17/190/15 or 13/190/30 for feral fallow deer, supported by well strained top, bottom and belly wires and pegged securely to the ground. Gates would be of a similar standard and the same height. Fence lines should preferably be cleared to minimise trees falling on the fence.

Note that this is an example only and fence construction should be appropriate for the individual circumstances.

Trapping

Trapping may be an option for deer control in some circumstances, particularly in areas where shooting may not be an option such as urban and peri-urban locations. The simplest form of deer trap uses a trip wire to activate a self-closing gate. Deer may also be trapped in clover traps.

Traps must be monitored closely and deer should be promptly tranquilised or euthanased after trapping. Deer mortalities of 3–7 per cent post-trapping have been recorded in US studies and animal welfare issues must be considered in using this method.

More information

For more information contact your local government or to download a copy of the Queensland feral deer management strategy 2022–27, visit biosecurity.qld.gov.au.



Image courtesy of Andrea Von Hoff

