



RED DEER IN A FARM SYSTEM

Behaviour & Mating

It is important that farmers understand normal behavior in their deer in order to manage this unique animal (in a farmed sense). This facilitates provision of the right environment for their needs and recognition of abnormal behavior that may signal illness or stress. Also, for the safety of deer handlers, recognizing aggressive and panicky behaviors is critical.

Mating

The rut is the 3-4 week period of hyper-sexual activity in autumn (October to late November) when stags actively and aggressively compete for access to hinds for mating. During this period they exhibit various sexual and combative behaviors, including 'roaring' and territorial defense of harems (hind groups) and rutting areas.

Stag behavior during the rut

Rutting activity in stags is driven by very high levels of testosterone from the testes that start to peak in Mid September-early October. They will then defend their rutting area and attempt to hold together in the area groups of hinds. Roaring vocalizations can start in September but reach their peak about mid October-early November when hinds are in oestrus (heat).

Actively rutting stags invest huge amounts of energy into protecting their area and herding hinds, but do very little eating for 2-3 weeks during the peak of the rut. Consequently, they will lose up to 30% of their body weight over this period.

Stags actively competing in the same vicinity may engage in combat by locking and clashing antlers, using their strength to wrestle the opponent off-balance. However, more often than not, combat is avoided by a threatening ritual display in which stags roar aggressively and show-off their antlers and body size. Smaller stags will generally not further challenge a larger stag in combat. Fighting generally occurs between evenly matched opponents.

After the rut, when mating is over, stags will generally wander away from the rutting area and recover.

Oestrous behaviour in hinds and mating

As hinds approach their first ovulation of the season, they tend to move towards the rutting areas inhabited by stags. However, they are not receptive to mating until they come into oestrus. Oestrus is a hormonally-induced condition that starts about 24 hours before ovulation, and may last for 12 hours (depending on mating). Stags seem to be able to detect which hinds are about to enter oestrus a few hours before the hinds actually show any overt heat behavior, actively seeking out and chasing these hinds. When in full oestrus, the hind will stand for the stag and allow him to mount her. Characteristically she will display certain behaviors indicative of oestrus, including frequent preening by rubbing her chin over her back and rump. Occasionally she will approach and mount the stag, or rub her chin over his back. Oestrus hinds will often mount, or be mounted by, other hinds.

The stag may attempt a number of mounts before successful copulation occurs, at which point the stag gives a single ejaculatory thrust in which his whole body often leaves the ground, and the hind is propelled forward. Stags often show little further interest in hinds following copulation. Most hinds terminate oestrous behavior following copulation, although some may be mated again 4-6 hours later.

Hinds that fail to conceive to the first oestrus/ovulation will return to oestrus 18-21 days later (termed an oestrous cycle). While the main period of the rut is generally over, it is not uncommon for stags to re-initiate roaring vocalisations when these hinds enter their second oestrus.