



RED DEER IN A FARM SYSTEM

Temperament

What do we mean by 'temperament'?

Temperament is a term used by most deer farmers to describe the behavioral characteristics of individual deer to indicate their suitability as a farmable animal. For example, farmers may talk about culling deer with 'bad' temperament, or selectively breeding deer with 'good' temperament.

However, the term 'temperament' is seldom well defined; an animal's behavior is a reflection of its temperament. There are many types of behavior expressed by deer and these behaviors vary according to the situations each deer faces. Generally, farmers make subjective decisions about what constitutes good or bad behavior for individual deer during handling, when the animals are well outside their 'comfort zone' in the close proximity of people.

As humans have long been a predator of deer, the close presence of people elicits in deer the classical 'flight or fight' response, which is a natural response in a threatening situation. Such behaviors present risks of injury to both handlers and other deer. Farmers would generally prefer deer that remain calm during handling and 'flow' well through the pens.

What is 'bad' temperament?

'Bad' temperament could be defined as any behaviors elicited by individual deer that pose risks to the well-being of people and the other deer. This can range from overt aggression (the "fight" response: biting, kicking, flaying, teeth grinding, charging) to severe panic/flightiness (the "flight" response: jumping, vocalising). However, it may also include behaviors that seriously slow the handling process, such as cowering or sinking to the floor, and refusing to move.

What is 'good' temperament?

In the context of handling, 'good' temperament could be defined as remaining calm and moving in a predictable manner. For many, it is represented by individuals that move freely and voluntarily through doorways and onto the weigh scales or crush without exhibiting signs of panic.

In the field, it may include flight distance behaviors, that is, the distance from approaching people that deer prefer to maintain. Obviously, a very low flight distance may not be desirable, as such animals can be hard to move down raceways (e.g. bottle reared hinds), or charge you. A certain flight distance is, however, good as it often makes it easier to move animals, for example, down a raceway, but the distance should not be so great that the deer cower against the furthest fence line anytime someone passes by; or panic in the pen.

Warning about stag temperament

We often see photos of people hand feeding or petting large stags in velvet. These, however, are tamed individuals whose behavior in this context is not necessarily an expression of 'good' temperament. The behavior of stags changes dramatically during the year due to physiological changes that occur. Tame stags can become very dangerous. All stags can be dangerous during the rut, but tame animals may be even more dangerous due to a very low flight distance created, for example, by having become accustomed to human contact whilst being hand fed.

Assessment of temperament

Having made the decision to select or cull animals based on 'temperament', it then becomes necessary to define the temperament characteristics that are meaningful for the farm system. It is about setting objective criteria that apply to all individuals in the herd. In other species, temperament testing has often been carried out using subjective scoring of animal behavior. Subjective measures can sometimes be useful to discriminate between extremely different temperaments, or when a single observer carries out all measurements. However their subjectivity may be less useful under other circumstances. Therefore it is best to use objective measures of temperament that are:

- meaningful
- practical
- repeatable
- reliable between observers



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Culling decisions based on temperament

Sometimes it is easier to make judgment calls on culling 'bad' animals than it is about selecting 'good' animals...especially if you just received a whack to the head from a pair of flailing hooves! There is no doubt that dangerous animals should be culled immediately. There is no place for them on the farm.

However, this is a different scenario to making longer-term rational decisions about which animals to keep for long-term breeding purposes, which is where record keeping becomes useful.

Can I breed for good temperament?

The answer to this is....probably. An animal's temperament consists of innate (genetic) and acquired facets that are developed through experience (by training or habituation). We do not yet know how heritable the various behavior traits are for deer. For some behaviors, the heritability is likely to be low, and thus the rate at which those behaviors will naturally evolve in the herd will be slow. Other behaviors may be more heritable, especially if they are closely linked to the evolutionary survival or reproductive fitness of the animal, in which case selective breeding for those behaviors will give a considerably higher rate of change.

It is important to understand that many of the behaviors we see in farmed deer are easily modified by learning and experiences. Can you determine whether bad behavioral traits expressed by your deer are the result of their genetics or your management? Deer behavior is very 'plastic' in that it can change according to the environment in which the herd is reared. This is one reason why red deer are such a good candidate for domestication: they are able to adapt their behavioral repertoire to cope with being farmed and to the presence of humans.