

ENGLAND &  
WALES **BEST  
PRACTICE  
GUIDES**

# Cull Planning.

Deer Management





# Introduction

**T**he reproductive biology and survival rates of deer mean that deer populations will increase if unmanaged.

Culling is a means of maintaining a deer population at an agreed upon level or reducing it to that level and holding it there. This must be done in a humane, responsible and sensitive manner.

The aim of this guide is to describe the principles of setting annual cull targets. The Management Plans, Population Dynamics, Population Modelling and Cull Records guides should also be considered essential reading in relation to this matter.

## Objectives

When culling wild deer populations, it is important to have a clear understanding of objectives. Ideally an agreed deer management plan will identify the objectives, together with targets for achieving them.

In general, these will be to:

- Control deer numbers to prevent over population,
- Control deer impacts on human interests,
- Utilise the deer resource.

**Utilisation of the deer for venison or any form of licensed or let stalking should not be at the expense of unacceptable impacts caused by the deer.**

When forming landscape scale objectives, good cross-boundary communication is needed to ensure shared objectives, cull plans and effort can be agreed upon.

## Culling

Keeping deer numbers at an agreed level can help to ensure that:

- Deer numbers and population structure are predictable from year to year.
- Impacts to crops, timber and habitats are tolerable.
- Conflict with human activity such as deer vehicle collisions are minimised.

The most important function of culling is to reduce deer to and/or keep deer numbers at agreed levels. Culling is also a means of:

- Manipulating population structure,
- Maintaining quality through selection,
- Removing animals that are sick, injured or in poor condition,
- Providing a sustainable source of income through sales of venison or access to stalking.

If a population is too high, a **reduction cull** is required to bring deer numbers to a desirable level.

Once at this level a **maintenance cull** is required to keep the population in line with management objectives.

## Reduction culls

**A reduction cull must focus on achieving the target cull of female deer.**

During this phase there is little point in being too selective about which individuals are culled as long as welfare is assured.

**The male and female seasons often overlap. While the females are in season the temptation to make up the cull total by shooting males instead of females should be avoided.**

A single male deer will remain just that throughout his life, but a female deer will be responsible for producing many young over her lifetime, both herself and through any of her female offspring.

If a population is reduced substantially from a very high density, there is likely to be an improvement in the condition of the remaining animals. The consequences of this may be that survival rates improve, and females may breed at a younger age with reduced natural mortality.



In addition, there may be a degree of “in fill” from surrounding areas. Together these are commonly referred to as population “bounce back”. This must be taken into account in planning subsequent culls.

Reducing numbers from very high levels may take many years to achieve. One off, heavy culls, followed by little or no culling, almost never achieve a sustained drop in numbers. A successful reduction cull must then be followed by a realistic and effective maintenance cull.

## Maintenance culls

For a population being maintained at a particular level, the cull for each age/sex class will be similar from year to year. Again, achieving the female cull is a priority but during this phase it is possible to be more selective about which individual animals are culled, according to objectives.

Census, cull and impact data should be monitored throughout the cull to identify where changes in effort may be required.

The below are very approximate guides for cull targets to achieve a maintenance cull, presuming that sex ratios are approximately equal:

- **Red, Fallow and Sika populations will require a cull of at least 20% of the population.**
- **Roe, Muntjac and Chinese water deer will require a cull of around 30% of the population.**

**At least half of the total cull for all species should be females.**

If there are too many females in the population, the total cull rates and the proportion of females in the cull will have to be significantly higher.

If population numbers cannot be estimated then other measures such as habitat impact assessments may determine cull levels, see example in the next section.

## Cull targets

Cull targets are usually set for individual properties but may also take into account wider, landscape scale culls. It is not sufficient to simply set a cull total, cull targets must recognise the importance of the different effect of culling males and females.

There are some situations where the cull target might be very simple.

For example:

- If unacceptable habitat impact was being caused by high deer numbers, the cull target would simply be the largest number that could realistically be humanely culled each year, with the emphasis on females.
- The driver for culling more or fewer deer would be to measure deer impacts, rather than perceived deer numbers.
- Over time, if the cull was effective, a trend towards improving habitat condition would be seen.
- Once impacts became acceptable, the culling effort could reduce to a lower figure and then be maintained at that figure to prevent impacts worsening once again.
- Monitoring of impacts, deer numbers and other indicators of population level would continue throughout.



## Forming the cull plan

Creating a cull plan to meet agreed objectives should follow these steps:

- 1** Use all available sources of information to guide the cull plan:
  - Management plan- outlines objectives, targets and constraints,
  - Impact records – provides measure of the level of impacts,
  - Past cull records – measures past culling effort and provides recruitment data,
  - Census records – indicates trends in population and population structure.

Please note that some or all of this information may not be available at the outset, but keeping good records will help to add confidence to future planning decisions.

- 2** Model the population (if appropriate) in order to help predict the required cull.

- 3** Set the minimum and maximum culls required for breeding females and for the other sex and age classes. Provided that minimum female cull figures are achieved, the numbers and ages of males culled can be flexible to suit objectives. A maximum cull limit is often set for mature males to avoid them being overshot, the bulk of the male cull coming from the juvenile age classes. If the production of high-quality antlered males is an important part of the management plan, overall population numbers should not be allowed to rise too high to limit competition for resources between male deer.

- 4** Make every effort to carry out the cull to the plan. For landscape scale culling across boundaries, ensure that an adjustment made on one holding is compensated for elsewhere if necessary.

- 5** Gather census, cull, and impact data to determine the effectiveness of the cull and guide future culling decisions.

- 6** Renew the cull plan annually using the latest information available.