

Reproduction and fawn survival

Fawn Survival

The period of highest risk in the life of an animal is during or immediately after birth. During this short time the newborn fawn goes from a completely protected, temperature controlled environment where it is fully fed, transported, has a waste disposal system and doesn't even have to worry about breathing. From this position it is violently thrust into the cold, dirty world while taking its first gasp of cold air into its lungs. From that moment it is dependent on its own ability to breathe, stand and find its own food and warmth. It would perhaps be some advantage to the newborn if it was not immediately dependent on its mother for nutrition in the form of milk, however that is the one essential requirement it still has. The hind may also offer some protection to its fawn from predators and may teach it behaviours and where to find good food but on the whole as long as it has someone to feed it and stimulate it to defecate, it will survive.

Without the colostrum required, the newborn fawn will quickly succumb to dehydration, starvation, hypothermia or infection. So even after it has overcome the initial shock of the birth process, it is still in a very vulnerable position until it can successfully fight for its food. Miraculously, that hind instinctively knows to nurture that particular fawn and will ensure its ongoing survival while dependent upon the mother. This is a most critical stage to the survival of the newborn. Most fawns probably make it quite successfully through the birthing process (except a few cases of birthing difficulty or dystocia) and it is likely that the fall-down happens in the forming of the bond between the hind and the fawn.

The instinctive, overwhelming behaviour that the hind has to protect and feed its baby. Anything that interferes with the hind during this process has the potential to switch off the bonding process and cause her to walk away from her fawn or refuse to feed it. This observation is often made when hinds have to be assisted to give birth and then refuse to accept the fawn and in some cases will attack it.

There are some other potential causes of death between scanning and weaning and these can be quite large problems on some farms, so a full investigation of all the possible causes should be undertaken.

Mismothering

- No 1 issue is disturbance at birth
- Desertion
- Bullying
- Starvation (30-40% of deaths)

Solutions

Find suitable environment where hinds can feel safe giving birth and the bonding process will not be interrupted.

High country farms often have much higher survival rate and this is likely due to the lower stocking density, more cover and hiding places and hill contour.

Finding the ideal paddock is not easy - requires observation. Records of weaning % from different paddocks can vary from year to year.

Reduced stocking rate

Bully hinds

- Younger hinds (yearlings) with MA hinds
- Deer are highly social. Often subordinate deer can't secure a birth site

Solutions

Identify bully hinds and cull

Observe aberrant behaviour. Not necessarily a pecking order but overly dominant

Establish stable social structures well before fawning

Fawn yearling hinds separately

Low stocking rate

Do not mix widely divergent groups

Cover and hiding places for fawns

- Longer grass and deal with rank pasture afterwards
- Branches in the paddock if no natural scrub, fawns like low cover.

Fencing

"Fawn proof paddocks increased fawn survival"

Animal Health

Copper

Swayback in hinds, joint injuries, leg fractures in fawns

Brassicas low? PK high in copper

Has been a major cause of problems on some properties

Solutions

Test animals (liver biopsy in winter)

Apply copper as required

If feeding palm kernel need to monitor effects

Iodine

No sound data on this

Efficacy of optigrow unknown

Hard to identify real issue at this time of year

Treatment trial

Losses during pregnancy

- Variable between farms and years
- Not usually a major time for losses

Maternal behaviour score

- Done in sheep
- Could be something to go on the maternal traits on DeerSelect
- Poor milkers, not good mothers can be identified by marking the small, malnourished fawns on the head with dye and checking which hinds have dye onto their udders.

Co-grazing

- Heifers in fawning paddocks may not be good idea.
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Calving spread

- Tight calving spread might cause problems due to competition for birth sites
- Trade off is grazing management

When is there a problem?

MA < 92-95%

R2 < 88-90%

If less than this drill down to problem with systematic review from mating to weaning.

Where is the problem/s occurring?

Conception

Abortion

Dystocia and death at birth

Mismothering and death shortly after birth

Health issues and death between 1 week and 6 weeks

Health issues and death weeks 7 to 12 (or weaning)

Very difficult to observe

Period of Loss	Tell-tale signs	Possible causes
Conception	pregnancy test in June, not in fawn	Nutrition, disease or age structure of the herd Stag infertility Social issues
Early abortion (April to July)	pregnancy test again in October Udder prior to set stocking - easier if foetal aged	There are no strongly proven causes of abortion in deer but some possibilities extrapolated from other species include leptospirosis (if first infected while pregnant), toxoplasmosis, stress, BVD. This topic is the subject of ongoing research.
Late term abortion (August to November)		
Dystocia	dead hinds, requires paddock checking/fawns with swollen head, no sign of walking	overfat hinds on flat land. Very large terminal sires although this is not generally an issue.

Mismothering/Desertion	Hind pacing fence line prior to fawning Bully hinds seen chasing others and killing fawns Fawn no milk in stomach (if found)	Disturbance, social unrest, lack of safe fawning places.
Death 1-6 weeks	Small weak fawns, found dead - requires paddock check. Could check hinds in early Feb/count fawns and hinds as long as all the fawns are big enough to be yarded	Selenium deficiency, iodine deficiency, copper deficiency, no feed in paddocks, stress, cryptosporidiosis,
Death 6-12 weeks	small, weak fawns with signs of disease. Udder hinds	Trace elements, leptospirosis, clostridial diseases, grain engorgement (if fed grain), lungworm (high risk situations only), facial eczema (late and eating quite lot of high risk pasture).