

REARING ORPHANS



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Although it is likely that the need will arise for all deer farmers to hand-rear a calf/fawn, it is often difficult to determine whether a calf/fawn is really an orphan or whether it has just been left hidden at a particular location in a paddock as part of normal maternal management of offspring.

Hutching [48] reports that if a given newborn is not seen nursing successfully within three to five hours, it may be assumed to be abandoned or orphaned, however it is also important to remember that in a farm environment, it is not uncommon for lactating dams to allow orphans to nurse.

The most common reasons that result in orphan calves/fawns are:

- The death of the dam soon after birth
- Rejection of the calf/fawn by the dam
- Mismothering from a range of causes including: dystocia, assisted calving/fawning

The likely survival of an orphan is dependent on:

- Its natural viability (influenced by birth weight, will to survive, birth traumas, etc)
- The farmers' ability to identify the orphan
- The time taken to identify the orphan
- Prevailing weather conditions
- How much colostrum the orphan has consumed

Temperature

Calves/fawns are very susceptible to hypothermia, particularly if their dam has not dried them soon after birth.

Orphans that are wet and cold should be dried and placed in a warm environment that will not only warm the animal but also prevent further heat loss.

Colostrum

Deer offspring should receive all the deer colostrum they are willing to drink within the first 24 hours of life. If deer colostrum is unavailable the next best alternative is goat or cow colostrum. Each animal requires at least 100 to 200ml of colostrum in total depending on bodyweight and the volume of colostrum fed should be about 15-20% of body weight [31].

As it is often difficult to obtain deer colostrum when it is needed, it is wise to consider collecting and freezing ewe or goat colostrum well in advance of the potential need. Commercially available artificial colostrum replacers also exist.

Thawing Colostrum

Do not microwave or apply direct heat to the colostrum, as proteins in the colostrum that contain necessary antibodies are likely to be destroyed. Place frozen colostrum in a container surrounded by a water bath at no greater temperature than normal body temperature [19].

After Feeding

After each feed:

- Wipe gently around the anus with a disposable nappy-liner moistened with baby oil. This stimulates the fawn/calf to defecate
- Clean the coat and mouth to prevent a build-up of stale milk that can cause diarrhoea and thrush.
- Teats and bottles MUST be washed after each feed in a chlorine based disinfectant.

Red Deer

Fyffe [31] described the formula for feeding Red deer orphans detailed below.

Formula

- Full cream powdered milk at 150g/litre made up to 1 Litre with cooled boiled water
- Two egg yolks, 150ml thickened cream, 1 tablespoon of natural yoghurt, 10ml glucose powder
- Make sure that the yoghurt is added just BEFORE mixing each feed. If it is added to a bulk mix in advance, it will curdle the whole batch of formula.
- Whisk all this together, warm to body temperature and feed the fawn/calf using a standard lamb teat. Small fawns may need a smaller teat (teats for human, kangaroo or wombat babies have been used successfully)

Feeding Technique

Fyffe [31] described the feeding technique detailed below.

In the second 24 hours (the first 24 hours the orphan is fed colostrum) feed the formula at half strength mixed with an electrolyte replacer such as Vy-Trate.

In the third 24 hours feed at three quarter strength and after 72 hours feed at full strength. If diarrhoea develops reduce to half strength for 48 hours and gradually return to the full strength mixture.

The orphan must have a routine. Feeding volumes and times must be set and adhered to. Start with four feeds per day for the first seven days (9am, 2pm, 6pm & 10pm) then as they can take more per feed cut down to three feeds daily.

Don't make a rod for your own back! Keep orphans outside when warm and in a shed or yard at night away from foxes. They can quickly become pets and when older a hand raised buck/stag can be very dangerous during the rut and a doe/hind can be difficult to mate.

The volume of formula fed should be about 15-20% of bodyweight. A 10 kg Red deer calf will need up to two litres per day. The volume of formula need not be increased as the orphan begins to eat solids provided it is gaining weight. Monitor the weight gain weekly.

Fallow Deer

Hill [43] described the following formula for feeding Fallow deer orphans. Use only homogenised milk that can be purchased in a carton from the local supermarket. Homogenised milk has the fats broken up into minute globules that do not coalesce and form a layer of fat (cream) on the top of the milk after it has been allowed to stand.

The homogenised milk does not need to be shaken up to disperse cream in the milk and it is more easily digested by fawns and so reduces risks of scouring.

Formula

- 1 litre of homogenised milk (full strength) but do not use skim milk or cow's milk straight from the cow
- 1 egg yolk (for 3 days)
- 2 teaspoons cod liver oil
- 2 teaspoons powdered glucose
- Whisk the egg yolk, cod liver oil and powdered glucose together using about 250 mls of milk then add the remainder of the milk
- Gradually reduce the cod liver oil and the powdered glucose to nil by the end of the second week

Feeding Technique

For best results feed small amounts regularly. Feed 500 to 600 mls of the mix in the first 24 hours and gradually increase to 800 mls per 24 hours over the next couple of days. By the end of the first week the volume per 24 hours should be about 1000 mls.

After about 8 weeks begin to dilute the milk with water so that by the end of the twelfth week if the orphan wants to drink from the bottle it will only get water.

Use a baby's bottle with a teat hole made a little bigger so that the milk flows out more easily. Cutting a very small cross across the manufacturer's hole using very fine scissors can appropriately increase the size of the hole in the teat.

Best results have been obtained by using a 'NUK 2 Vented Latex Rubber Teat - size 1'. This teat already has a hole with a cross over it but it usually needs to be made a little bigger, however the milk should not pour out.

If the fawn resists the bottle it may need to be held firmly while squeezing the teat for the first day or two. If after 24 hrs the fawn is still resisting the teat try a bowl. A small plastic container will be suitable for the first few days then a sturdier container (saucepan) is required for best control. The fawn will try to butt it right out of your hand.

There is more waste using the bowl technique, so allow for this when measuring out. You may try the bottle first and then the bowl each feed for a couple of days to find out which you prefer. Orphans should have access to a bucket of clean, cool water at all times. On a very hot day fawns may need to be given some water from the bottle if they do not drink from the bucket.

Either hold animals in a corner of a pen in a deer shed or, using bales of hay, make a small pen in the corner of a small paddock that ideally includes a couple of shrubs. Do not keep them locked inside during the day because they need exercise.

After a week or so introduce them to the laneway to get used to the other animals. After a couple of weeks introduce them to mobs of does that have finished fawning for short periods over a couple of days. If after two or three days of exposure to the does the orphan tries to suck from any of the does, remove the orphan from the paddock for a few more days before trying the introduction again.

Do not sell buck fawns without telling prospective buyers of potential dangers of hard antlered deer that have no fear of humans during the rut.

Wapiti/Elk

Similar to other species, if the calf has not had colostrum and it cannot be obtained from another Wapiti/Elk cow, it can be obtained from a goat, sheep, cow, or from a substitute colostrum powder.

There are different opinions on the most appropriate milk for feeding the orphan calf over its first 8-12 weeks of life. Options include lamb milk replacer, cow's milk and goat's milk.

A rigid feeding schedule for at least the first 8 weeks as described by Haigh [11] is shown in Table 33. Haigh reports that calves should be started at 250 ml per feeding and should gain anywhere from 0.5-1 kg/day. Once the calf is approximately 40 days old it can be started on good quality hay and by 14 weeks should be weaned entirely to grass and concentrates.

Week	Feeding rate
1	5 feeds/day
5	4 feeds/day
9	3 feeds/day
11	2 feeds/day (could wean here)
13	1 feed/day
14	Wean to grass and concentrates

Table 33: Feeding Schedule for Hand Reared Wapiti Calves

Rusa Deer

Requirements of Rusa deer fawns are similar to other species. Dryden [24] reports that it is difficult to rear fawns that lose their mothers two weeks or more after birth. Like most orphans, rearing Rusa deer orphans is more successful if the animals are given frequent small feeds, especially in the first weeks of feeding.

Successful rearing has been achieved [24] by feeding four times per day for the first four weeks of feeding, three feeds per day until week nine and then twice daily until week twelve. Intake should be about 400 to 600 mls/day for the first two weeks and gradually increase to a peak intake of 1000 to 1200 mls per day in the 8th or 9th week before declining.

Fawns are likely to begin consuming small amount of forage from four or five weeks of age and by about seven weeks of age will consume appreciable amounts [24].