Embryonic development and implantation in red deer hinds

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Embryonic development during early pregnancy was studied in 12 farmed red deer hinds for which mating dates were recorded following progesterone-synchronised matings. Reproductive tracts were recovered after slaughter from 2-4 hinds at weekly intervals from days 27 to 55 after mating.

Mean (± s.d.) embryo length and weight were as follows:

Age (days)	n	Crown-rump length (mm)	Embryo weight (g)
27	2	5.7 ± 0.9	0.02 ± 0.01
34	2	13.1 ± 0.1	0.35 ± 0.04
41	3	28.2 ± 1.5	0.96 ± 0.13
48	3	37.7 ± 2.6	3.02 ± 0.49
55	2	55.3 ± 8.4	7.56 ± 1.97

The trophoblast had extended throughout both horns and gastrulation was completed by day 27. Limb buds were apparent by day 34 and by day 48 separation of the phalanges into hooves and dew claws was evident. Implantation commenced with an apposition phase between days 27 and 34, continued with an adhesion phase between days 34 and 41 and true attachment (interdigitation of cotyledonary villi and caruncular crypts) occurred from day 41 onwards.

These results indicate that implantation occurs in red deer at a generally similar stage to other deer (eg, fallow) but considerably later than in other domestic ruminants (eg, the sheep and the cow).