Hybridisation between red deer (*Cervus elaphus*) and Père David's deer (*Elaphurus davidianus*): gestation length

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P.F. Fennessy, A.J. Pearse, A.J. Whaanga, G.J. Goosen and H. Patene

AgResearch, Invermay Agricultural Centre, Private Bag 50034, Mosgiel, New Zealand.

The gestation length of the interspecies hybrid between Père David's deer (*Elaphurus davidianus)* (PD) and red deer (*Cervus elaphus*) is of major interest considering the 50-day difference between the parental/grandparental species.

The mean gestation length for the PD deer has been reported by Wemmer *et al* (1989) at 283.0 ± 6.1 (standard deviation, SD) days. This compares with a mean of 234.3 ± 3.4 days for a group of 86 red deer at Invermay. The large difference in variance between two is remarkable, especially considering the narrow genetic base of the PD deer.

The mean gestation for 20 F_1 hybrid singleton progeny of PD stags and red hinds born in New Zealand was 265.4 days, 31 days longer than the red deer mean (Fennessy & Mackintosh, 1992). However, there was a significant difference between the males (268.3 ± 6.7 days, n=10) and the females (262.5 ± 4.8, n=10, standard error of the difference ± 2.6, $P<0.05$).

Over three years the singleton progeny of F_1 hybrid stags and red hinds had gestation lengths averaging 251.7 ± 6.4 days (n=86) with no difference between males and females. In two years, F_1 hybrid hinds were superovulated, mated to red stags and the embryos recovered and transferred to red hinds. As a result, 16 calves were born after gestations averaging 241.0 (from the day of hind mating) ± 3.45 days. There was a significant 10-day shorter gestation in the backcross progeny of F_1 hybrid hinds than in the progeny of hybrid stags. This remarkable difference bears further investigation as in both cases calves were carried by red deer hinds. Unfortunately there are insufficient data available for F_1 hybrid calves carrying their own backcross calves to term.

The control of gestation length in the PD x red deer hybrid and their backcrosses is clearly complex. Consequently, the investigation of the reverse hybrid (red deer male mated to PD female) and the backcrosses would be of value to elucidate the genetic components of the control of gestation length.

REFERENCES

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