

COMPARATIVE EVALUATION OF PRE AND POST-RUT WEANING OF FALLOW DEER (DAMA DAMA), TO ASSESS FAWN GROWTH RATE AND DOE FERTILITY

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The decision to wean fallow deer pre-rut has often been based on the potential for re-sale of weaned does for breeder recruitment, rather than for reasons associated with efficient fawn growth or doe fertility. Asher (1992) suggested that pre-rut weaning (mid-March) may not necessarily enhance reproductive performance of does or growth rate of fawns if favourable pasture conditions prevailed, although conceded that this strategy may assist herd management under certain conditions, and is necessary if single sire mating is practised. In Australia and elsewhere there are as many proponents for pre-rut weaning (mid-March) as there are for post-rut weaning (late-June), with only anecdotal evidence, or extrapolation from other domestic species, to support claims either way. Clarification of the benefits and disadvantages of pre-rut and post-rut weaning will assist fallow deer farmers to make this important management decision.

Rising 3-year-old fallow deer (n = 66) were confirmed pregnant by real-time ultrasound in August 1990 and run as 1 mob until March 1991. Fawns born in December 1990 were weighed and ear-tagged at birth, and subsequently matched with their dam where possible. In mid-March 1991 the fawns were stratified by weight and buck and doe fawns were allocated equally to each of 2 treatment groups. Group 1 fawns were weaned from their dams pre-rut, fed *ad libitum* a high energy concentrate ration comprising dairy meal, oats grain and lucerne chaff for 3 weeks as a supplement to pasture, and then placed on pasture (11.5 MJ metabolisable energy/kg dry matter). Group 2 fawns were returned to their dams and weaned at the end of June (post-rut). The growth rates of fawns weaned pre-rut were measured and compared with those of fawns weaned post-rut.

The does were divided into 2 mating groups according to whether their fawns had been weaned or not. An entire buck fitted with a mating harness was added to each group from early April until the end of June. Weight change, the onset and occurrence of oestrus, and fertility were monitored and compared for does with fawns weaned pre-rut and does allowed to suckle their young throughout the rut.

Unweaned fawns had a higher growth rate (15 g/day) for the period between March and June compared with weaned fawns. Does from both groups were approximately the same weight at the start of the rut (46.3 kg and 45.7 kg for weaned and unweaned respectively), began cycling on the same day (13 April), and exhibited a similar pattern of natural oestrus activity. Pregnancy testing of does by real-time ultrasound confirmed that pregnancy rates in both groups were similar.

Table 1. Mean (± s.e.m.) weights and growth rates, from birth to 7 months of age, of doe and buck fawns weaned in mid-March or late- June

Treatment	Sex	No.	Weight at birth (kg)	Weight in March (kg)	Weight in late June (kg)	Growth rate March to June (g/day)
Weaned	Does	11	4.5 (0.7)	20.0 (1.2)	25.1 (1.4)	54 (3.8)
	Bucks	13	4.7 (0.6)	23.7 (1.2)	29.0 (1.8)	50 (4.1)
Unweaned	Does	14	4.4 (0.7)	19.6 (1.3)	26.6 (1.5)	66 (3.1)
	Bucks	13	4.7 (0.7)	21.3 (1.6)	29.3 (2.2)	69 (4.9)

It was concluded that there were no production advantages linked to weaning fallow deer pre-rut.

ASHER, G.W. (1992). In "Progressive Fallow Farming", (Eds G.W. Asher and M. Langridge) p. 40 (Ruakura Agriculture Centre: Hamilton).