

Farm Production & Practice



Ministry of Agriculture and Fisheries

The Wapiti (*Cervus elaphus canadensis*) is native to North America and Eastern Europe. There are a number of different races, although some are now extinct and they may be generally regarded as subspecies of red deer. The mature Wapiti is commonly twice the size of the red deer.

New Zealand Wapiti

A small herd of North American Wapiti was introduced into Fiordland early this century. Although they established a viable colony, the herd has not remained true to type, mainly because of interbreeding with red deer, and today the Fiordland animals must be classified only as of "Wapiti-type" (N.Z. Wapiti).

Fiordland has been described as "hostile" for good growth and development, partly due to the grazing and browsing pressure and also the relative lack of abundant high-quality feed during the spring/summer period when the Wapiti normally has a high growth rate.

Table 1: Calving performance.

	Red x Red		Red hind x Wapiti bull		Wapiti x Wapiti	
	1979/80	1980/81	1979/80	1980/81	1979/80	1980/81
No. of breeding females	39	91	40	40	30	31
No. of calves born	36	87	34	38	21	26
Calving %	92	96	85	95	70	84
Calf mortality %	14	6	6	24	10	8
Weaning %	79	91	80	73	63	77

When compared with the North American Wapiti, N.Z. Wapiti in Fiordland have a much flatter seasonal growth pattern, without showing the pronounced peaks and troughs of body weight in summer and winter.

The effects of crossbreeding with red deer, and 70 years of inbreeding among the descendants of the small foundation herd, are not known. It is possible that these factors have adversely affected the genetic potential of the animals.

Research

A research herd of captured N.Z. Wapiti has been established at Invermay to study body and antler growth and crossbreeding (using Wapiti bulls over red hinds). Being a much larger animal than the red deer, Wapiti bulls generally grow bigger antlers and the velvet antler, in addition to being heavier, will usually be of superior quality as judged by shape and main beam thickness.

When the N.Z. Wapiti from Fiordland is established on the farm with good feed conditions then the seasonal pattern of growth is similar to that in Red deer.

As meat production develops in the deer industry, the high rates of growth found in well fed Wapiti could be of benefit to the deer farmer.

Table 2: Feed distribution between mother and offspring.

Dam	Sire	Mother's share of the feed (%)*
Red	Red	38
Wapiti	Wapiti	38
Red	Wapiti	33

* $\frac{x}{x+y} \times 100$: Where x = mother's feed requirements for 12 months and y = calf feed requirement for 24 months.

Deer Wapiti and Hybrids

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Calving, Feeding and Growth

Calving

The calving performance of the Wapiti herd is compared with hybrid matings and with straight bred red deer in Table 1. For unknown reasons, red deer calf deaths in this particular herd were substantially higher in 1979/80 than the normal 5–10%. It is possible that red hinds carrying hybrid calves would have calving difficulties, so any problems were carefully recorded.

In 1980/81 some small red hinds had calving difficulties and the long legs of the calves contributed to the problem. There were no calving difficulties in 1979/80, so the calving problems might reflect the sires used and further records are needed to clarify the situation.

It is wise to avoid mating young or small hinds to Wapiti bulls, and it is essential that feed restrictions are placed on the hinds during the last 4 weeks of pregnancy, to prevent excessively large calves.

Feeding

It is important to make sure that the minimum acceptable quantity of feed is fed to the breeding female, and that the maximum quantity of high quality feed is given to the growing calf.

Table 2 shows that the mother's share of the total feed required to grow a calf from conception to slaughter at 2 years is 38% for pure bred red or N.Z. Wapiti animals, and 33% for red hinds rearing a hybrid calf.

The feeding management of Wapiti is likely to be an important factor in avoiding occasional loss through nutritional scouring. The provision of some roughage throughout the year is recommended. At Invermay, the herd is fed a small quantity of good quality lucerne hay even when pasture is abundant.

Table 3: Live weight measurements in 3 breed types of deer (male only).

	<i>Red x Red</i>	<i>Red hind x Wapiti bull</i>	<i>Wapiti x Wapiti</i>
Live weight (kg)			
Weaning (24 March)	51	56	75
14 months	104	118	153
Live weight gain (7 October – 10 February)			
● g/day	254	298	393
● Relative gain	100	117	155

Growth

The growth of red, Wapiti and hybrid males, from weaning at 3 months of age until the yearling stage, is shown in Table 3.

The red deer were very well grown and the Wapiti grew well, to reach 153 kg at 14 months. The hybrids grew 17% faster and the Wapiti 55% faster than the red deer. In earlier work at Invermay (with fewer animals), hybrids grew 38% faster than red deer of the same age.

There could be important sire effects within the breeding groups, and much more information is needed in order to assess any advantage of crossbreeding.

Handling problems

Extra care must be taken when handling Wapiti and hybrids in the yards because they are more inclined to use their front feet than most red deer and, because of their size, they can do more damage.



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