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Farmers in any animal industry are now realising that they must produce an increasing proportion of lean meat and less fat in their farm carcasses. The deer farmer has the advantage over sheep and cattle farmers that his/her animal is basically leaner than traditional farm animals. What you want is the maximum amount of lean meat at the highest possible price in the shortest time.

General information for various types of deer is shown in Table 1.

Points to Note

* The weights shown for yearling and 2 year old red deer are bigger than most currently being presented for slaughter. In 1983/84 the average carcass weights of yearlings and 2 year old was around 50 and 61 kg respectively.

* Dressing % tends to increase with age.

* The information from Wapiti and hybrids is based on very few animals and should be regarded with caution.

* There is scope for substantially increasing carcass weights from 2 year old fallow bucks although increased fatness will also result. Two year old fallow from Invermay had an average carcass weight of 42 kg.

* Dressing percentages allows nothing for loss due to bruising and other damage.

With the current difficulty in selling velvet antler from 2 year old stags, it seems that efforts should be made to improve the feeding management of yearling stags so that they reach 95-100 kg by March and can be slaughtered at 15-16 months of age for a carcass weight of 55-60 kg.

Fatness is the single most important consideration in the marketing and sale of venison game meat. The image of leanness is justified but carcass fat content needs continuous surveillance to guard against overfatness.

How fat is overfat? In 1983/84 the industry classified any carcasses which had a tissue depth over 12th rib of more than 10 mm as overfat. With this system about 40% of the 2 year old carcasses were penalised and the system was unreasonably tough on the biggest carcasses, which were often very lean but had tissue depths (often mainly lean) of slightly more than 10 mm.

In recognition of this problem, the G.I.B. in 1984/85 is using a 10; 12; 14 mm allowance for carcasses weighing 50; 50-70; 70+ kg respectively. While this is a big improvement on the previous system, it still tends to penalise the carcasses in the 65-69 kg range which may have rib fat of 13 mm. In the longer term, it is hoped that a system can be devised which will allow a good estimation of total carcass lean to be made and payment based on that figure. Research is currently in progress at Invermay on that project.

In Table 2 carcass weight is related to tissue depth over the 12th rib (GRD) and some chemical measurements are given.

Points to Note

* Mature red deer are grossly overfat. GRD values of 50 mm can be recorded in red stag carcasses weighing 120 kg.

* A considerable number of 27 month old red deer will still be overfat even on the new stepwise grading system.

* Wapiti at 27 months and at a carcass weight of 100 kg have about the same amount of fat as a red yearling carcass weighing 55 kg.

* Twenty-seven month old hybrids can have big carcasses and be very lean.

* Mature Wapiti and hybrids are overfat for quality venison. With fallow deer Asher (1985) has measured 83.7% of the yearling carcasses as "trimmed yield" and this decreased as fat trim increased to a yield of 74.8% of cold carcass weight at 4 years of age (41 kg carcasses).

Mature stags lose virtually all their fat over the rut and should be slaughtered during the winter. Many farmers think that it is possible to cut an extra crop of velvet in November and then slaughter the stags before they lay down much fat. Our research data (and recent DSP experience) indicates that mature stags are grossly overfat (GRD more than 30 mm) by velvetting in November and need to be slaughtered in winter.

In conclusion, it is to be hoped that commercial buyers (or the G.I.B.) will ensure that farmed venison is a very lean product by heavily penalising overfatness. A price of $5/kg for overfat carcasses is no disincentive for the farmer to avoid presenting overfat animals for slaughter. Fallow deer should be slaughtered as yearlings, red deer as yearlings or 2 year olds, and Wapiti/hybrids probably at 2 years of age or maybe up to 3 years old. Any mature stags should be slaughtered during the winter when the carcasses are almost fat-free.

TABLE 1 - Slaughter data for different types of deer

	Age Group		
	15 months	27 months	3 years +
Red Deer			
Farm liveweight (kg)	96	133	176
carcass weight (kg)	55	77	105
dressing % **	57.3	57.9	59.7
NZ Wapiti			
Farm liveweight (kg)	?	189	240
carcass weight	?	97	132
dressing % **	?	51.3	54.9
Wapiti/Red hybrid			
Farm liveweight	?	165	215
carcass weight	?	91	121
dressing % **	?	55.1	56.0
Fallow Deer *			
Farm liveweight	49.8	57.5	66.9
carcass weight	27.7	33.1	38.6
dressing % **	55.6	57.6	57.7

* Data from G W Asher 1985: Proc. Int. Deer Biol. Conf.

** Cold carcass weight/farm liveweight

TABLE 2 - Fatness in deer carcasses

	Carc. Wt. (kg)	GRD * (mm)	Carc. Fat (% Carc. Wt.)
Red Deer			
Industry 15 months	49.5	6.1	8.2 **
27 months	61.2	10.7	11.1 **
Invermay 15 months	55	8	7.0
27 months	70	10	12.6 **
Mature	107	29	18.4 **
NZ Wapiti			
27 months	100	?	7.0
5 years	132	21	?
Wapiti/Red hybrid			
27 months	91	?	8.8
5 years	121	30	?

* Tissue depth 16 cm from backbone onto 12th rib

** Estimate