

PHYSIOLOGICAL ASPECTS OF MEAT PRODUCTION FROM DEER

K.R. Drew

Invermay Agricultural Research Centre

Mosgiel, New Zealand

As the world's population continues to rise at a rapid rate there is an ever increasing need to provide more food. One of the best of all foods is meat and it has been estimated that the need for animal protein will have increased by 300% in the year 2000 as compared with the year 1960. The current requirement is for low-fat meat and in this regard the development of deer farming has much to offer. Although the current high price for velvet antler is operating against expanding venison production, game meat could become an important and efficient industry in New Zealand.

Deer show a seasonally high growth rate pattern and lay down relatively little carcass fat. Most commercial lamb and beef carcasses contain about 25-35% fat and yet carcasses from 2 year-old farm raised deer weighing approximately 70-75 kg contain no more than 10-12% fat.

The strength of the New Zealand pastoral industry lies mainly in the efficient conversion of pasture into animal products of which meat is by far the most important one. Because lean tissue is 75% water, and fat has a very high energy content a lean carcass requires much less pasture per kg of carcass gain than a fat one. It has been estimated that approximately 30 kg of pasture dry matter is required by lambs to grow 1 kg carcass while other estimates have suggested that the figure for deer is nearer 9.5 kg per kg carcass gain.

The paper examines tissue growth and composition in red deer up to 27 months of age and compares the findings with some other game animals and domesticated species.

The comparative energy values of leg or venison, rump steak and leg of lamb are 630, 1460 and 1130 Joules/100 gms of meat respectively. These figures demonstrate the desirable "fat-free" nature of venison.