

## Chemical composition, palatability and physical characteristics of venison from farmed deer

### ABSTRACT

The quality of venison from farmed deer were evaluated based on chemical composition, palatability scores, W-B shear force, ultimate pH, and color. The samples of venison were derived from javan rusa (*Cervus timorensis russa*), moluccan rusa (*Cervus timorensis moluccensis*), sambar (*Cervus unicolor brookei*), fallow (*Dama dama*) and imported red deer (*Cervus elaphus*). Moluccan rusa and red deer were fed grass. Javan rusa, sambar and fallow deer were fed concentrate. The venison obtained from grazing deer (grass-fed) gave higher moisture content (75.3%) than concentrate-fed or confinement-raised deer (74.4%) and imported venison (70.62%). Fat content in venison shows some differences between muscles and species. The concentrate-fed animals had a higher ( $P < 0.05$ ) fat content in the venison than the grazing deer. Temperate deer (fallow and red deer) showed higher ( $P < 0.05$ ) fat content than tropical deer (rusa and sambar deer). Venison obtained from concentrate-fed deer showed normal ultimate pH values (pH  $\approx$  6.0) and more reddish in color than grass-fed deer. The concentrate-fed venison produced slightly higher ( $P > 0.05$ ) palatability scores than grass-fed venison. Feeding regimens (grass-fed vs. concentrate-fed) significantly ( $P < 0.05$ ) influenced fat composition in the venison of farmed deer in this study.

**Keyword:** Chemical composition; Concentrate-fed; Farmed deer; Grass-fed; Palatability; Venison