

HEAT PRODUCTION AND BODY FAT CONTENT OF FERAL AND DOMESTIC FOWL

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Domestic fowl have been feral for about 90 years on Northwest Island, off the coast of Gladstone, Queensland, and were studied intensively (McBride et al. 1969). Their behaviour is different from that of domestic poultry (Rose et al. 1982). Calorimetric measurements were made on adult cockerels from the second and third generations of feral fowl trapped on the island and taken to the University of New England in May, 1980. Measurements were made over 24 h in two respiration chambers (Farrell and Swain 1977) of the heat production of 24-h starved adult feral fowl and weight-paired adult bantam Australorp cockerels. Body water was determined using tritiated water on eight birds from each group, and body-fat content calculated (Johnson 1981).

There was no difference ($P > 0.05$) in heat production of five feral fowl from the second generation and eight feral fowl from the third generation, measured on separate occasions. (Mean \pm SE) values are shown in the Table.

Group	n	Liveweight (g)	RQ	Heat production	
				kJ/d	kJ/kgW/d
Feral	13	1477 \pm 65	0.72 \pm 0.005	439 + 16	296 + 8
Australorp	13	1415 \pm 30	0.72 \pm 0.005	429 \pm 13	300 \pm 9

Body fat contents averaged 16.8% and 17.5% of liveweight for the feral and bantam cockerels, respectively. There were no differences ($P > 0.05$), using a paired T-test, in heat production or body fat between feral and bantam cockerels. Heat productions (kJ/d), expressed for comparative purposes per unit of metabolic weight ($\text{kg}^{0.75}$), were 328 and 309 for the feral and Australorp birds respectively. These values are close to the interspecific relationship of $300W^{0.75}$ for adult animals (Kleiber 1961).

Despite the flighty temperament and lean appearance of feral fowl there were no differences between these and bantam Australorps in heat production or body fat.

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