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THE EFFECT OF THREE RATIONS WITH DIFFERENT LEVELS OF ENERGY ON FATTENING PERFORMANCE OF IRANIAN LAMBS

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In Iran, one of the ways to supply meat requirements is by fattening lambs. The low biological efficiency of Iranian lambs is due to the inadequate feedstuffs, not meeting the standard nutritional requirements, and the use of imbalanced rations (Nik-khah 1984; Alkass *et al.* 1985; Nik-khah 1988). The current experiment was conducted to investigate the effect of different levels of energy in feed on the feed consumption and meat production by lambs from 2 native breeds.

Fifty Zel unfat tail and 50 Atabai fat tail male lambs 3-4 months of age were given 1 of 3 rations (low, 8.5, medium, 9.8 and high energy, 11.6 MJ metabolisable energy/kg dry matter). The lambs were divided into groups of 16- 17 and fed for 100 days in 6 similar pens. The feed consumption and liveweight of the animals were measured at regular intervals. Upon completion of the experiment the animals were slaughtered and carcase weights, weights of cuts and weights of fat tail and channel fat measured. From these measurements feed conversion (FC) ratios, average daily gains (ADG), dressing and carcase cut percentages, and fat tail plus channel fat percentages were calculated (Table 1).

Table 1. Final liveweight (LWT), average daily gain (ADG), feed conversion (FC) ratio, dressing percentage and carcase cuts of lambs on 3 rations with different energy levels

	Breed x Ration					
	Atabai			Zel		
	Low	Medium	High	Low	Medium	High
LWT (kg)	35.2^{b}	38.2^{b}	48.5^{a}	24.9^{c}	27.0^{c}	36.8^{b}
ADG (g)	81^{d}	134^{c}	210^{a}	48^{e}	69^{e}	149^{b}
FC ratio	14.7	9.7	6.5	13.6	12.7	6.4
Dressing (%)	41.6^{d}	46.2^{b}	49.2^{a}	39.0^{e}	43.1^{c}	45.0^{b}
Carcase cuts (%)						
Thigh	30.8^{c}	31.2^{c}	30.1^{c}	36.0^{a}	32.5^{b}	32.6^{b}
Front Leg	16.5^{b}	16.3^{b}	16.3^{b}	20.0^{a}	19.1^{a}	19.3^{a}
N+B+L+F[A]	39.6^{c}	38.7^{c}	38.4^{c}	40.9^{b}	44.0^{a}	35.6^{d}
FT[A]	13.1^{b}	13.8^{b}	15.2^{a}	2.9^{d}	4.4^{c}	6.0^{c}

Means with different letters are significantly different ($P < 0.05$).
[A]N = neck, B = brisket, L = loin, F = flank, FT = fat tail plus channel fat.

The results suggest that, apart from the effect of the rations, ADG of the Atabai lambs (141 g) was higher than that of the Zel lambs (88 g), but the FC ratios were similar (10.9 vs 10.8). The ADG of the lambs offered the high, medium and low energy rations was 180, 102 and 64 g, respectively, and these were different ($P < 0.05$). The highest ADG and best FC ratio were achieved with the Atabai x high energy ration (210 g and 6.5), while Zel x low energy ration had the lowest ADG and worst FC ratio (48 g and 13.6).

ALKASS, J.E., JUMA, K.H. and ALDOORI, T.S. (1985). *Wld. Rev. Anim. Prod. XXI 2:* 61-4.
NIK-KHAH, A. (1984). *Proc. Aust. Soc. Anim. Prod.* **15: 498-9.**
NIK-KHAH, A. (1988). Fars Meat Complex, Shiras, Third Seminar, pp. l-26.