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**Key words :** Range ,animal unit ,animal unit requirement ,grazing capacity

**Introduction** More than 27 sheep breeds with different body size and different daily requirement are adapted on rangelands in different climatic zones of Iran . Valentine (2001) suggested the concept of animal equivalence to express different kinds and class of grazing animals in a common form . Objective of this research was to determine animal unit weight and animal unit equivalent of each breed which is essential for determination of animal requirement in a grazing capacity assessment model .

**Material and methods** Body weight of 27 sheep breeds grazing on rangelands was determined based on body weight of 3 and 4 years old ewes of two herds for each breed . Based on body size they were classified to three classes of (light ,fair and heavy) . Animal unit weight was calculated based on metabolic weight of all breeds . Animal unit equivalent for each breed was calculated by deviding metabolic weight of breed by animal unit weight . Animal requirement was estimated based on formula of ME (MJ/ kgDM) $= 1 .8 + 0 .1$ W suggested by MAFF (1984) .

**Results and discussion** Mean body weight of small ,moderate and big size sheep were 37 .8 ,50 .6 and 63 .27 Kg ,respectively (Figure 1) . Animal unit was 49 .5 Kg with daily requirement of 6 .75 (MJ) metabolisable energy . Animal equivalent for each breed are illustrated in table 1 . The finding of the research would help range managers to determine daily animal requirement to facilitate grazing capacity assessment in each climatic zones .
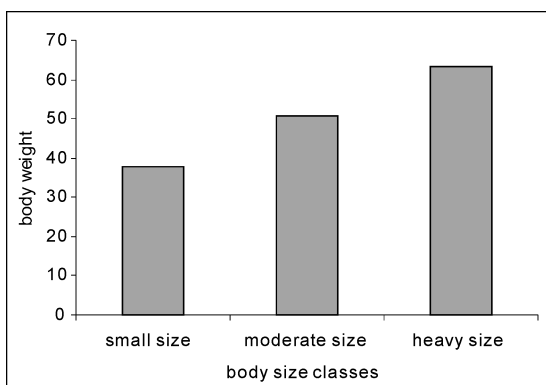


**Figure 1** *Mean body weight of size classes .*

**Table 1** *Animal unit equivalent for each breed of size .*

| Breed | Live weight (kg) | Animal equivalent index |
|---|---|---|
| Zel | 30 .84±5 .00 | 0 .70 |
| Balochi | 33±4 .11 | 0 .75 |
| Sangsary | 37±2 .74 | 0 .80 |
| Naeini | 38 .38±6 .88 | 0 .83 |
| Farahani | 41 .98±1 .70 | 0 .88 |
| Zandi | 44 .55±4 .17 | 0 .92 |
| Makoee | 45 .36±6 .97 | 0 .94 |
| Kordi khorasan | 45 .90±7 .33 | 0 .94 |
| Kermani | 46 .32±5 .77 | 0 .95 |
| Lori bakhtiari | 47 ±3 .54 | 0 .96 |
| Afshari | 49±5 .40 | 0 .99 |
| Torki ghaghaei | 49 .32±6 .64 | 1 .00 |
| Moghani | 50 .98±3 .60 | 1 .02 |
| Dalagh | 51 .75±7 .07 | 1 .03 |
| Varamini | 52 .34±9 .03 | 1 .04 |
| Kabodeh | 52 .66 ±6 .31 | 1 .05 |
| Kordi kordestan | 52 .69±5 .91 | 1 .05 |
| Gharegol | 53 .53±6 .67 | 1 .06 |
| Lori lorestan | 54 .35±10 .32 | 1 .07 |
| Shal | 57 .33±4 .66 | 1 .12 |
| Mehraban | 60 .11±3 .80 | 1 .16 |
| Sanjabi | 60 .68±4 .10 | 1 .16 |
| Fashandi | 60 .70±4 .18 | 1 .17 |
| Ghezel | 71 .57±9 .95 | 1 .32 |

**References**
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