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(Canopy cover)

(Basal cover) (Foliage cover)

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$$N = \frac{t^2 \left(\frac{s\bar{x}}{\bar{x}} \right)^2}{p^2}$$

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Agropyron trichophorum

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. *Festuca ovina* *Bromus tomentellus*

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Artemisia sieberi-Besser

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Agropyron trichophorum

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Bromus tomentellus

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(Grasses)

Bromus Agropyron trichophorum

Hordeum Festuca ovina tomentellus

Stipa barbata Poa bulbosa bulbosum

(Forbs)

Iris songarica Astragalus cyclophyllon

Silene arbuscula

(Shrubs)

Eurotia ceratoides Artemisia sieberi

Salsola rigida Noaea mucronata

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Festuca ovina

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Silene arbuscula

Hordeum bulbosum

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Artemisia sieberi

Poa bulbosa

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Eurotia ceratoides

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Stipa barbata

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Noaea mucronata

Astragalus cyclophyllon

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Salsola rigida

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Iris songarica

| | | | <i>Agropyron trichophoru</i> | | <i>Bromus tomentellus</i> | | <i>Festuca ovina</i> | | <i>Hordeum bulbosum</i> | | <i>Poa bulbosa</i> | | <i>Stipa barbata</i> | | <i>Astragalus cyclophyllon</i> | | <i>Iris songarica</i> | | <i>Silene arbuscula</i> | | <i>Artemisia sieberi</i> | | <i>Eurotia ceratoides</i> | | <i>Noaea mucronata</i> | | <i>Salsola rigida</i> | |
|--|--|--|------------------------------|----------------|---------------------------|----------------|----------------------|----------------|-------------------------|----------------|--------------------|----------------|----------------------|----------------|--------------------------------|----------------|-----------------------|----------------|-------------------------|----------------|--------------------------|----------------|---------------------------|----------------|------------------------|----------------|-----------------------|----------------|
| | | | X ₂ | X ₃ | X ₂ | X ₃ | X ₂ | X ₃ | X ₂ | X ₃ | X ₂ | X ₃ | X ₂ | X ₃ | X ₂ | X ₃ | X ₂ | X ₃ | X ₂ | X ₃ | X ₂ | X ₃ | X ₂ | X ₃ | X ₂ | X ₃ | X ₂ | X ₃ |
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| Y= -1/15+4/25 X ₂ Y= 17/7+0/03 X ₃ | / | / | X ₂ X ₃ | <i>Agropyron trichophor</i> |
| Y= 11/85+1/7 X ₂ Y= 13/72+0/02X ₃ | / | / | X ₂ X ₃ | <i>Bromus tomentellu</i> |
| Y=10/47+1/94 X ₂ Y=17/5+1/008 X ₃ | / | / | X ₂ X ₃ | <i>Festuca ovina</i> |
| Y= 3/32+2/89X ₂ Y= 19/71+0/018X ₃ | / | / | X ₂ X ₃ | <i>Hordeum bulbosum</i> |
| Y= 4/3+ 1/01X ₂ Y= 3/05+0/025X ₃ | / | / | X ₂ X ₃ | <i>Poa bulbosa</i> |
| Y= -1/15+4/25 X ₂ Y= 17/7+0/03 X ₃ | / | / | X ₂ X ₃ | <i>Stipa barbata</i> |
| Y= 2/11+0/045 X ₃ | / | / | X ₃ | <i>Asteragalus cyclophyllon</i> |
| Y= -11/86+8/24X ₂ Y=-5/67+1/041X ₃ | / | / | X ₂ X ₃ | <i>Iris songarica</i> |
| Y= -2/34+.08X ₃ | / | / | X ₃ | <i>Silene arbuscula</i> |
| Y= 3/38+4/9X ₂ Y= 1/78+0/023X ₃ | / | / | X ₂ X ₃ | <i>Artemisia sieberi</i> |
| Y=51/36+0/097 X ₃ | / | / | X ₃ | <i>Eurotia ceratoides</i> |
| Y=-20/4+1/036x ₃ | / | / | X ₃ | <i>Noaea mucronata</i> |
| Y= 0/21+8/29 X ₂ Y= 0/29+0/27X ₃ | / | / | X ₂ X ₃ | <i>Salsola rigida</i> |

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Relationships between canopy cover, foliage cover and basal cover with production

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Abstract

Determination of range grazing capacity is one of the most fundamental aspect of range management and understanding the effective factors on grazing capacity is an important issue. Grazing capacity is determined on forage production during the growth period. The objective of this study was investigation of relationships among canopy cover, foliage cover and basal cover with production. Three vegetative communities including 1-Grass-Shrubland, 2-Grassland and 3- Shrubland with 10 vegetation types were selected in Semirrom, Isfahan province and Nadoshan and Nire in Yazd province. In each vegetation type 30 plots having 1.5×2 meter quadrats, were randomly established. After recording the species in each quadrat, canopy cover of palatable species was determined by using ruler. Basal cover and foliage cover were also measured using a point frame in quadrats. Grasses were clipped at height of 1cm above ground and current growth of shrubs were clipped for dry weight determination. Regression analysis was carried out between basal cover, foliage cover and canopy cover as independent variables and production as dependent variable for each species. According to the results, canopy cover of all species and foliage cover of most species had highly significant correlation with production ($p < 0.05$ or $p < 0.01$). However no significant correlation was found between basal cover and production due to small number of point touches with this type of cover.

Keywords: Grazing capacity, Canopy cover, Foliage cover, Basal area, Production