

Turkish Journal of Agriculture and Forestry

Turkish Journal

of

Agriculture and Forestry

 [Keywords](#)
 [Authors](#)



agric@tubitak.gov.tr

[Scientific Journals Home Page](#)

Pilot Study for an Assessment of Vegetation Structure for Steppe Rangelands of Central Anatolia

Hüseyin Kansur FIRINCIOĞLU¹, Bilal ŞAHİN², Steven SEEFELDT³, Fehmi MERT⁴,
Basri Hakan HAKYEMEZ⁵, Mecit VURAL²

¹2. Cadde 34/4, 06500, Bahçelievler, Ankara - TURKEY

²Biology Department, Science and Art Faculty, Gazi University 06500, Ankara -
TURKEY

³SubArctic Agricultural Research Unit, USDA-ARS Rm 355 O'Neill Bldg., University of
Alaska, Fairbanks, Alaska 99775 USA

⁴Department of Crop Production General Directorate of Agricultural Production
Development, Eskişehir yolu 9.km Ankara - TURKEY

⁵Department of Field Crops, Agriculture Faculty, Onsekiz Mart University, Çanakkale -
TURKEY

Abstract: In the last 50 years, rangelands in the Central Anatolian Region of Turkey have been converted to cropping lands, which has negatively accelerated vegetation change, resulting in overgrazing and poor condition and productivity. In these steppe rangelands, to develop a rational basis for making restoration and management decisions, the vegetation structure must be well understood. Thus, the objectives of this study were to: (1) define vegetation patterns through assessing spatial distribution of the plant species and groups, (2) evaluate the relationships between vegetation and environmental aspects and range condition, and (3) outline possible restoration implementations. Therefore, a study was carried out in Paşalı village rangelands of Nevşehir province in 2004. Thirty-seven sites in 733 ha range area were surveyed, and 78 plant species were identified. Most of the identified species were forbs (60), followed by grasses (11) and shrubs (7). The major range species were *Thymus sipyleus* (7.2%), *Festuca valesiaca* (6.9%), and *Bromus tomentellus* (6.4%). Range condition scores fell between 1.20 to 3.40, representing very poor to poor condition. The positive relation of *Bromus tomentellus* cover, as an enviable perennial grass, with the range condition score ($P < 0.001$) can pave the way for the condition improvement. Our classification result displayed several groups of species, although there were not many environmental differences, indicating that the groupings are most likely to have occurred due to the spatially-varying grazing intensity. In order to increase the proportion of desirable species in this overgrazed rangeland, the implementation of deferment grazing especially until after seed setting should be essential.

Key Words: Semiarid, steppe-rangelands, vegetation-pattern, Central Anatolia, Redundancy Analysis

Turk. J. Agric. For., **32**, (2008), 401-414.

Full text: [pdf](#)

Other articles published in the same issue: [Turk. J. Agric. For., vol.32, iss.5.](#)