

Nutritional Evaluation of Different Quercus Species in Temperate Regions of Himachal Pradesh

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Abstract : The present investigation was carried out at different locations of Shimla and Kinnaur district and nutrient analysis was done in the laboratory of Department of Silviculture and Agroforestry, Dr. Y.S. Parmar University of Horticulture and Forestry, Nauni, Distt. Solan, Himachal Pradesh during 2019-2020 with the objectives to study the seasonal variation in the nutritive value of different Quercus species and to study the farmers' preference rating of fodder tress species. From each location leaf samples were collected at 3 months interval from each Quercus spp. The findings of the present study revealed that the nutritional traits of leaves of different Quercus species varied among different seasons throughout the year. The dry matter (61.12 to 64.99%), ether extract (4.07 to 4.42%), crude fibre (34.38 to 37.85%), neutral detergent fibre (57.70 to 61.54%), acid detergent fibre (44.64 to 48.51%), total ash (3.57 to 3.91%), acid insoluble ash (44.64 to 48.51%) and calcium (1.31 to 1.53%) increased with the maturity in the leaves of different Quercus species. While, crude protein (9.10 to 10.61%), nitrogen free extract (44.73 to 47.41%), organic matter (96.09 to 96.43%), and phosphorus (0.16 to 0.31%) decreased with the advancing maturity in the leaves of different Quercus species. Maximum mean values for dry matter (65.05%), ether extract (4.45%), crude fibre (40.82%), neutral detergent fibre (61.48%), acid detergent fibre (48.44%), and organic matter (96.67%) among different Quercus species were recorded in Quercus ilex, while, Maximum mean values for crude protein (10.54%), nitrogen free extract (50.53%), total ash (4.05%), acid insoluble ash (0.59%), calcium (1.61%) and phosphorus (0.40%) were recorded in Quercus leucotrichophora.

Keywords : nutritional evaluation, fodder species, crude protein, carbohydrates

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