

Biomass Dynamics, Net Primary Production and Turn-over Rate of Grassland Community in Bundelkhand Region (U.P.)

R.K. GUPTA AND NEELAM RATAN

Department of Botany, D.V. Post Graduate College, Orai 285001, U.P., India

ABSTRACT

In present investigation the biomass dynamics, net primary production and turnover rate in a dry sub-humid grassland dominated by *Ischaemum laxum* (Hack) of Bundelkhand region Uttar Pradesh, India are presented, the time-series standing live biomass of above ground part exhibited a bi-modal growth pattern with highest peak of 1215 gm² in October. The annual net above ground production was 1259 gm² and below ground net production was 761 gm². Total dry matter disappearance was more than 42% of the total input. Thus, the grass land showed a net accumulation of surplus organic matter, indicating the several nature of the grassland.

Key Words: Biomass, Disappearance, Grassland, Primary production, Turnover rate.

INTRODUCTION

Grasses are an economical live stock feed. Parallel to human population, there is similar explosion in the livestock, particularly in ecologically fragile areas, like Bundelkhand region which leads to very serious threat to long range ecological security. Grassland are among the least investigated biomass of Bundelkhand region (U.P.). Except for a few studies (Gupta 1976, Trivedi 1976, Srivastava 1980, Kanodia 1981, Kanodia et al. 1993, Singh and Srivastava 1984) from some parts, little information exists on any aspect of structure and function of the grassland in this region. Determination of dry matter production by the plants always constitutes the basis for further studies in different aspects like geographical, phytosociological, chemical, food chain etc. therefore, the objective of the present study has been designed to assess the community biomass dynamics, net primary production and turnover rate in a grassland of Bundelkhand region of Uttar Pradesh.

STUDY SITE

The study site lies between 25°29'N latitude and 79°37' E longitude at an elevation of 141.6m above mean sea level. The site was about 1500m² in area and given fresh and full protection from all types of biotic interference. Though Bundelkhand region

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