

Population dynamics of earthworms in relation to soil physico-chemical parameters in agroforestry systems of Mizoram, India

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Source: JOURNAL OF ENVIRONMENTAL BIOLOGY Volume: 32 Issue: 5 Pages: 599-605 Published: SEP 2011

Times Cited: 0 (from Web of Science)

Cited References: 42 [[view related records](#)] [Citation Map](#)

Abstract: Earthworm population dynamics was studied in two agroforestry systems in the tropical hilly terrain of Mizoram, north-east India, over a period of 24 months, from July 2002 to June 2004. Two sites of agroforestry situated at Sakawrtuichhun (SKT) and Pachhunga University College (PUC) campus, Aizawl, having pineapple as the main crop, were selected for detail studies on population dynamics. Five of the total twelve species of earthworm reported from the state were recorded in the study sites. The density of earthworm ranged from 6 to 243 ind.m(-2) and biomass from 3.2 - 677.64 g.m(-2) in SKT. Comparatively the density and biomass in PUC, which is at relatively higher altitude were lower with a range of 0 to 176 ind.m(-2) and biomass from 0 - 391.36 g.m(-2) respectively. Population dynamics of earthworm was significantly correlated with rainfall and physical characters of the soil. Earthworm biomass was significantly affected by rainfall and moisture content of the soil. The influence of chemical factors was relatively less.

Accession Number: WOS:000294378600011

Document Type: Article

Language: English

Author Keywords: Biomass; Earthworm; Population dynamics; Rainfall; Soil; Agroforestry systems

KeyWords Plus: EXOTIC EARTHWORMS; CENTRAL HIMALAYAS; TEMPERATURE; COMMUNITIES; DIVERSITY

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Publisher: TRIVENI ENTERPRISES, C/O KIRAN DALELA, 1/206 VIKAS NAGAR, KURSI RD, LUCKNOW 226 022, INDIA

Web of Science Categories: Environmental Sciences

Research Areas: Environmental Sciences & Ecology

IDS Number: 813PE

ISSN: 0254-8704