



Effects of Overgrazing on the Physico-chemical and Biological Properties of Semi-arid Forest Soils in Western Algeria

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Abstract: In Algeria, in recent years long periods of drought have forced several breeders to ride with their herds to the north of the country to find food for their flocks. The semi-arid zone that represents the last barrier against desertification is fragile and vulnerable. The pressures exerted by these animals have an effect on the soil. In present study, the impact of overgrazing on the quality of semi-arid soils in western Algeria was estimated on the physicochemical and biological properties of a grazed area were compared with that of a protected area in an Aleppo pine forest in wilaya of Saida. The physical properties like bulk density, moisture and retention capacity are negatively affected by overgrazing. The overgrazing has a negative effect on organic matter. Microbial biomass and basal respiration decreased in the grazed area compared with the witness. The metabolic quotient recorded a higher rate in the area affected by overgrazing than the protected area. This research shows us that overgrazing can affect certain soil characteristics and irreversibly degrades the soil continuum of the semi-arid zones.

Keywords: Aleppo pine, Forest, Overgrazing, Soil quality, Semi-arid
