

Correlation between soil nitrogen distribution characteristics and physical properties of mountain meadow soil

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Analysis of the mountain meadow of Wugong Mountain, Jiangxi Province, China , under the condition of different altitude height (1600 - 1900) and different soil depths (0-20 cm and 20-40 cm), soil total nitrogen, alkaline hydrolysis nitrogen, distribution of organic matter and pH value, and soil physical and chemical properties of the correlation. Results show that: (1) the Wugong mountain meadow soil nitrogen content showed a "W" shape distribution trend, total nitrogen, alkaline hydrolysis nitrogen and organic matter content of the range of variation were 1.81-9.34g/kg, and 48.89-200.01g/kg 100.88-592.37mg/kg; soil total nitrogen, alkaline hydrolysis nitrogen and organic matter between showed extremely significant correlation;(2) at 1900m and 1600m elevation, human disturbance is large, resulting in reduced soil bulk density, total porosity, quality for the reduction in water content; (3) soil total porosity and alkali hydrolyzable nitrogen, density showed a highly significant positive correlation; total porosity and total nitrogen (TN) and mass water content had a significant positive correlation. The results of the study reveal the correlation between Wugong mountain meadow soil nitrogen distribution pattern and soil physicochemical properties, but also for the degraded meadow restoration to provide the theory reference and scientific basis.