

CUNHA FORESTRY HYDROLOGY RESEARCH PROJECT IN BRAZIL (II) SURFACE RUNOFF FROM GRASS LAND.

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RESUMO

Three experimental plots, 20 m width and 30 m length with 15 to 18 degree slope, for hydrologic studies were delimited on a hillslope with natural grass in Cunha Experimental Watershed. Volumes and intensity of surface runoff (overland flow) was measured using the tipping-bucket flowmeter in 1982 hydrologic year. The surface runoff, strongly influenced by rainfall intensity, occurred under the intensity of 10 mm/hr. The highest surface runoff volume represented 4.5% of the incident rainfall and the ratio of peak rainfall intensity to peak surface runoff was 2%, but annual surface runoff values was only 0.64 % of annual rainfall. These results show that the hydrologic response to rain by a hillslope with natural grass is dominated by the interflow within the soil layers, and surface runoff is a little or a rare occurrence.