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GLM SAS

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$$\theta_v = \theta_m \frac{\rho_b}{\rho_w}$$

$$D_{e= D} \theta_v$$

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$\rho_w$

$\theta_v$

$\rho_b$

$\theta_m$

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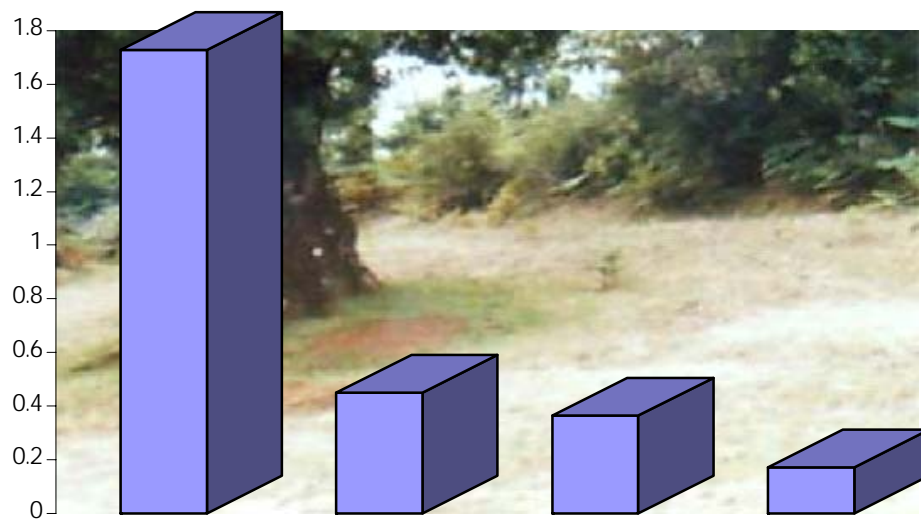
$$\theta_m = \frac{\text{_____}}{\text{_____}}$$

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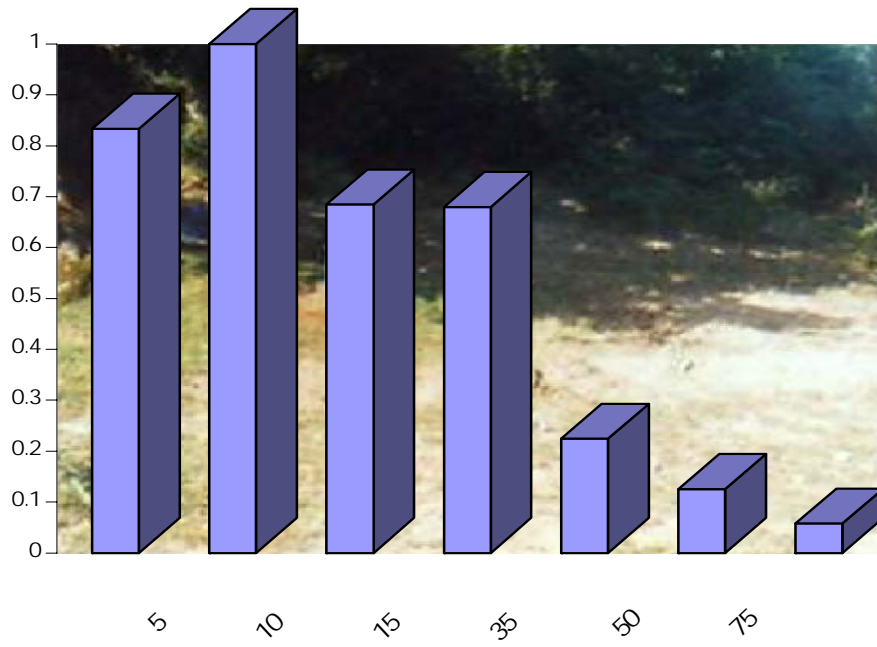
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G.P.kalinin &D.L.Soklovsky

M.A.A.V elikanov

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M <sup>3</sup> /year/ha		

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## A Study on the Interactive Impact of Tree's Aerial Parts and Physical Factors in Rain Production

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### Abstract

Environmental factors such as water vapors affecting tree's aerial parts. Clearly, these factors also affect the masses of air and water vapor moving above or hanging over threes. This interaction enhances cloud seeding in forest regions and encourages higher precipitation in these areas as compared to other places. Improper land use shifting (from forest to cultivation or rangeland) not only decreases soil's permeability, moisture storage capacity and, as a result, mechanical resistance in the face of natural phenomena such as the wind, water and agricultural machinery but also reduces precipitation, which lengthens soil drought period. This study focuses on 4 treatments, including fallow, rangeland, shrub land & forest at the height of 1,700 meters in south of Gilan (Cibon forests). Based on meteorology predication and before clouds cover the sampling region, in 3 replicates the soil's moisture weight was measured in depths of 0,5, 15, 25, 35, 50, 75 cm. Sampling repeated after the rainfall and the moisture percentage was determined in the laboratory. and after rainfall this measurement was repeated. Simultaneously, the soil samples were measured for their specific weights by the SAS statistical software program and according to the GLM method. The result showed that when rainfall does not directly originate from clouds the impact of water and its permeability was significant by 95% and 99%. However, this trend decreases as one leaves the aggregated forest (bushes, pastures) and reduces to zero in more remote distances.

**Key word:** Hydrological cycle, precipitation, factors, air masses