

INFLUENCE OF MANAGEMENT SYSTEMS ON WATER INFILTRATION IN
YELLOW LATOSOL AT MANAUS STATE OF AMAZONAS¹

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Five cropping systems were selected to study their influences on the infiltration of water into a yellow latosol of Manaus-AM, Brazil. Equilibrium infiltration rates were much higher for rubber with tropical kudzu, second growth vegetation and virgin forest (40.2, 22.7 and 22.3cm/hora, respectively) than for rubber with grass (3.3cm/hora) and intercropping rubber x coffee (5.9cm/hora). It was found significant differences between final infiltration rates of rubber with pueraria and the two latter. This was expected for the contrast with pueraria x coffee but not for the rubber with grass. A possible explanation for the extraneous as well as unusual behavior of the last cropping system could be a severe compaction of the upper-most soil layer due to excessive machinery traffic during periodic grass cutting operations. The results of this study emphasize once again the beneficial effects of canopy covers, when conveniently managed, on the preservation and/or improvement of the physical condition of the soil.

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