SOIL EROSION AND RUN-OFF STUDIES IN RUBBER PLANTATIONS

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Inadequate ground cover during the early stages of growth of young rubber results in run-off and soil losses. Investigations were therefore undertaken to study the influence of ground cover crops, mulch and natural rubber formulations on run-off and soil losses. This paper discusses the preliminary results obtained from these investigations.

Run-off plots were constructed at slopes of 35 to 40%. Each plot contained four planting points of clone PB 86. At the bottom end of the slope, a conveyance channel helped the water to flow through a "H-flume" device into a collection tank via a multislot divisor. Run-off recorders fixed along the "H-flume" device measured the rate of flow of water. The collection tank at the end measured the total volume of water and weight of soil collected.

Mulching with Guatamala grass loppings reduced run-off and soil erosion markedly, compared with leaving the land clean weeded and bare. The delay in the establishment of leguminous cover crop resulted in the loss of soil that was comparable to that in clean weeded land, in the early stages. No appreciable soil losses were evident in the plots in naturals (weeds). Of the natural rubber treatments, latex-oil emulsion gave effective protection against erosion. This effect does not appear to be due to reduced run-off.