NUTRIENTS LOSS THROUGH SEDIMENTS AND RUNOFF UNDER UPLAND BANANA-PINEAPPLE INTERCROPPING SYSTEM

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ABSTRACT:

Soil erosion plays a major role in the loss of plant nutrients from the upland sloppy soils. A study was conducted in Malaysia to measure the extent of nutrient loss through water erosion from the upland intercropping system of banana-pineapple. The nutrient loss through sediments and runoff was monitored for a period of nine months from erosion plots planted with banana, pineapple, intercrop of banana pineapple and bare soil. Nutrient analysis of the sediments from all the plots showed that the loss of organic carbon was highest whereas analysis of runoff water showed that the loss of potassium was highest as compared to other nutrients. Nutrient enrichment ratio of sediments was greater than 1 for all the nutrients. Comparison of NPK in relation to their inputs and original status of soil showed that loss of NPK for pineapple and intercrop plots was less as compared to banana and bare plots. The results showed that intercropping of banana-pineapple is an effective intercropping system in controlling nutrient loss from upland agriculture.