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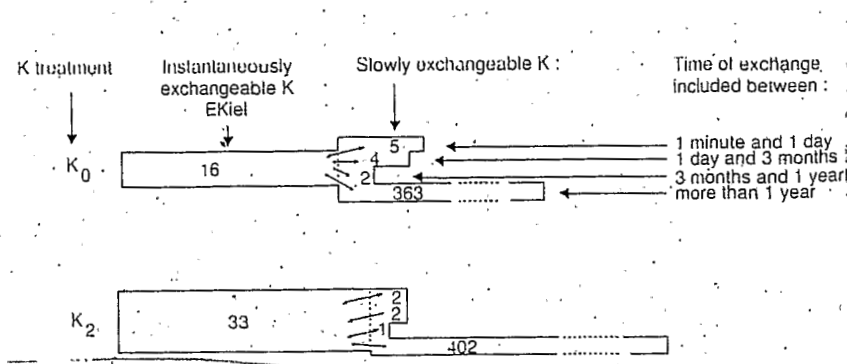
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K-Cycling under Maize Cultivation in Togo

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first five years of the experiment resulted in an output of 255 kgK ha⁻¹ for K0 and 420 kgK ha⁻¹ for K2.



In the soil, the difference between the two plots was 574 kgK ha⁻¹ for total K and 450 kgK ha⁻¹ for acetate exchangeable K in the 0-160 cm layer (2). Soil balance based on total values were then consistent with the input-output balance, but the soil balance based on exchangeable values was too low. By wetting and drying the samples, the isotopically exchangeable potassium (about 10% higher than 1M NH4-Ac extractable K) increased by an average of 31 mgK kg⁻¹. Wetting

Figure 1. The different compartments of K in the soil from isotopic exchange (mgK kg⁻¹)

and drying the samples after K addition resulted in an increase of isotopically exchangeable potassium about 20% lower than the K applied. Release and fixation of K were then significant in this Ferralsol. The time of exchange between the different compartments was deduced from ⁴²K measurements (1) and represented as a memellary model (Figure 1). The