

ชื่อเรื่อง

**Comparative Study of *Vetiveria Zizanioides*, *Vetiveria Nigritana* and *Andropogon Gayanus* in a Trial of Soil and Water Conservation**

ชื่อผู้วิจัย

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**Abstract**

Using vegetation in a trial of soil and water conservation is an important challenge in arid and semi-arid zones. The objective of the study is to obtain data on the comportment of three grass species, *V. zizanioides* (unknown in the country), the local Vetiver (*V. nigritana*) and *A. gayanus*. On a bare ferruginous soil (Lixisol), three stone lines were built along the microtopography with a distance of 33 meters. The three species were used for vegetalization of the stone lines.

The results obtained show a few mortality of *V. zizanioides* (3%) compared to the local grass (18% for *V. nigritana* and 34% for *A. gayanus*) in terms of growing after plantation. Concerning plant height, local grass (*A. gayanus*) have a total longer of 203 cm when Vetiver grass (local and exotic) have just 103, 5 cm after 103 days. The weight of dried material is respectively 7570 g for *Andropogon*, 3548 g for *V. zizanioides* and 866 g for *V. nigritana*. The coverage of the soil in amount of the stone line is about 80-90% for *Andropogon* and 50 to 60% for Vetiver grass. The soil moisture evaluate ponderal method is twice more under *A. gayanus* comparatively to *V. nigritana*. *V. zizanioides* maintained more moisture in the soil than the local Vetiver. These data revealed the potential of *Vetiveria zizanioides* growing in soudano-sahelian zone and the possibility to use it for stone line vegetalization to combat erosion.