Assessment of the residual effects of the organic manures (*Tithonia diversifolia* and bat-guano) on maize cultivation in the Ngandajika region in central DR Congo

**ABSTRACT:**

The objective of this study was to determine and compare the residual effects of *Tithonia diversifolia* and bat guano on corn cultivation. The experiments were carried out in a completely randomized simple block design with three treatments viz: **T**₀ - the treatment without residual effects of manure, **T**₁ - treatment with residual effects of *Tithonia diversifolia* and **T**₂ - treatment with residual effects of bat guano. At the end of this study, **T**₂ gave the yield of 2.87 t/ha and 3.16 t/ha in maize monoculture and maize-cowpea combination respectively, which was significantly higher than that achieved with **T**₁ (2.27 t/ha and 2.55 t/ha respectively) and control (1.41 t/ha and 1.63 t/ha respectively). Thus, it was confirmed that bat guano had greater residual effects on the cultivation of corn than those of *T. diversifolia* and the latter being effective more than the control. Both organic manures with their residual effects not only increased the yield of maize cultivation, but they also increased soil fertility.

**Keywords:**

*Tithonia diversifolia*, Maize cultivation, Ngandajika.