

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

Authors:

**Nkongolo Mulambuila
Michel**

Institution:

Official University of
Mbujimayi (UOM), Congo.

Corresponding author:

**Nkongolo Mulambuila
Michel**

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 : T₀. the treatment without residual effects of manure, T₁ - treatment with residual effects of *Tithonia diversifolia* and T₂ - treatment with residual effects of bat guano. At the end of this study, T₂ 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 T₁ (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.