

## عنوان مقاله:

Effects of manure nitrogen on vegetables' yield and nitrogen efficiency in Tanzania

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## خلاصه مقاله:

Due to an increasing demand of leaf vegetables, and hence their economic importance in the tropics, it is very common that excessive fertilizer N rates are applied to vegetable gardens and fields to attain high yield. This calls for more information on their nutrient requirements. In this study, we designed experiments to explore the effect of organic N levels on the yield and agronomic N use efficiency (ANE) by chinese cabbage (*Brassica rapa*) and amaranthus (*Amaranthus cruentus*). The experimental design was a randomized complete block design consisting of chinese cabbage (CC) and amaranthus (AM) with three replicates. Chicken manure (CHM) and cattle manure (CAM) were the source of N. The treatments were 0, 200, 300 kg N ha<sup>-1</sup> and 0, 170, 250 kg N ha<sup>-1</sup> for CC and AM, respectively. Chicken manure resulted in increased fresh and dry matter yield of CC and AM compared to CAM. All treatments at first harvest induced higher marketable yield of vegetables than controls except with low levels of CAM N. At second harvest, only 300 kg CHM N ha<sup>-1</sup> resulted in significantly ( $P < 0.05$ ) higher marketable yield of CC compared to control, while no significant difference observed in AM by 170 kg CAM N ha<sup>-1</sup>. Agronomic N use efficiency was decreasing with increasing N levels. Nitrogen levels can be reduced to 200 and 170 kg N ha<sup>-1</sup> for CC and AM without significantly affecting the yield.

## کلمات کلیدی:

Manures, Chinese cabbage, Amaranthus, Yield, N efficiency

## لینک ثابت مقاله در پایگاه سیویلیکا:

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