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Differential responses in yield of pumpkin (*Cucurbita maxima* L.) and nightshade (*Solanum retroflexum* Dun.) to the application of three animal manures

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ABSTRACT

Crop responses to different manures differs considerably, however, the factors responsible for it have not been conclusively elucidated. Consequently, this study examined the biomass response of *Cucurbita maxima* and *Solanum retroflexum* to application rates of chicken and kraal manures of cattle and goat, and soil factors related to salinity. The crops' biomass yield increased linearly with increase in application rates of kraal and chicken manures, but steeper in the latter. Results showed that significant decline in biomass yield in chicken manure at rates above 8.5 tons ha⁻¹ were not due to salinity. The crops' response to cattle and goat kraal manures was linear but polynomial (cubic) in layer chicken manure. It was concluded that the yield decline in chicken manure was due to other manure factors except salinity, probably toxicity effect of the manure fatty acids. Further research was however, recommended to elucidate this claim.

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