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Effect of fertilizer types on nutritional quality of two cabbage varieties before and after storage.

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ABSTRACT

Objectives: To determine the effect of fertilizer types on the nutritional compositions of two cabbage varieties before and after storage.

Methodology and results: The treatments involved 8 fertilizer types (NPK, neem, alesinloye organomineral, sunshine organomineral, sunshine organic, cassava peel compost, alesinloye organic and pacesetter organomineral fertilizers) applied at 60kg/ha and a control, each to two cabbage varieties (Copenhagen market and F1 milor). The treatments were laid out in randomized complete block design fitted into split plot with variety as the main plot factor and fertilizer types as sub plot factor, replicated three times. Data were collected on the number of rottened leaves, degree of rottenness and nutritional compositions of cabbage before and after storage. The nutritional compositions of cabbage head before and after storage was significantly ($p = 0.05$) influenced by the applied fertilizers and variety. Higher K and vitamin C contents were obtained from Copenhagen market while F1 milor recorded better P, Ca and crude protein compositions before storage. The two varieties had same average

value of Mg content in the cabbage head before storage. Organomineral fertilizers recorded the highest phosphorus, potassium and crude protein contents of cabbage head before storage while NPK had more vitamin C. Although, there was inconsistence in the nutritional compositions of cabbage after storage F1 milor retained most of the minerals more than Copenhagen.

Conclusion and application of findings: Organomineral fertilizers such as pacesetter followed by sunshine and alesinloye, compared with NPK (15:15:15) enhanced optimum nutritional compositions of cabbage varieties before and after storage. Neem fertilizer improved the storability of cabbage varieties. Despite the pre and post- harvest constraints encountered by the cabbage varieties used, F1 milor had better nutritional values than Copenhagen market with or without fertilizer, therefore can be recommended as the better variety among the two in Ogbomoso, South West, Nigeria.

Keyword: *Brassica oleracea L, nutritional values, organomineral, storage losses, minerals, organic*