

## VARIETAL DIFFERENCES IN SOME NUTRITIONAL COMPOSITION OF TEN MAIZE (*Zea mays* L.) VARIETIES GROWN IN NIGERIA

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### ABSTRACT

Grains of ten maize varieties grown in Eastern part of Nigeria were collected from national seed company of Nigeria and investigated for their nutritive value to assess their dietary value for humans. Proximate composition shows moisture content in the range of ( $9.85 \pm 0.01^f$  -  $11.35 \pm 0.01^a$ ), ether extract ( $3.17 \pm 0.01$  -  $4.09 \pm 0.01^a$ ), protein ( $10.72 \pm 0.04^i$  -  $12.33 \pm 0.03^a$ ), crude fiber ( $1.84 \pm 0.01^e$  -  $2.06 \pm 0.02^a$ ) and carbohydrates ( $68.73 \pm 0.05^e$  -  $72.17 \pm 0.01^a$ ), starch ( $59.72 \pm 0.08^h$  -  $71.14 \pm 0.05^a$ ), sugar ( $7.53 \pm 0.01^f$  -  $8.78 \pm 0.02^a$ ). The data indicate that seeds of these varieties vary greatly in term of protein, fats and crude fiber contents as well as in carbohydrate, sugar and starch contents. ART/98/SW1-1 and SDM-2 varieties were determined to contain higher protein content (>12 protein) while SUWAN-1-SR-Y and SDM-2 contain high fats content of (>4%). TZPB-SR-W and BR9943-DMR-SR-W contain higher starch content. In minerals the level of sodium is ( $61.77 \pm 0.03^g$  -  $180.68 \pm 0.24^a$  ppm), K ( $315.71 \pm 0.09^i$  -  $342.78 \pm 0.02^a$  ppm), Ca ( $163.77 \pm 0.03^i$  -  $180.68 \pm 0.24^a$  ppm), Fe ( $2.79 \pm 0.01^e$  -  $3.46 \pm 0.02^a$  ppm).

Keywords: maize varieties, nutritional composition, minerals, grains, sugar.