Book of Abstracts

27th NATIONAL CONFERENCE AND ANNUAL GENERAL MEETING

Organised by

BOTANICAL SOCIETY OF NIGERIA

FEDERAL UNIVERSITY DUTSE, JIGAWA STATE

Main Theme:

HARNESSING PLANT RESOURCES FOR SUSTAINABLE DEVELOPMENT

VENUE: Nuhu Sunusi Auditorium Federal University Dutse, Jigawa State

On: 8th - 13th September, 2019

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CIFS0088

EVALUATION OF DIFFERENT VARIETIES OF SORGHUM ON GRAIN YIELD

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ABSTRACT

A field experiment was conducted at Minjibir, International Crop Research Institute of Semi-Arid Tropic (ICRISAT) station, Kano state situated within the Sudan savanna of North West Nigeria between longitude 08.66485°N and latitude 12.1459°E at an altitude of 440m, to identify the sorghum variety with highest yield on grain and to identify the yield of local check with improved sorghum variety. Nineteen (19) sorghum improved varieties were used for the experiment including five (5) local check, making the total of twenty four (24) varieties. Alpha design was used for the experimental design in which the experiment were replicated two (2) times. Significance difference were found among the growth parameters including: 50% date to heading (D 50% H), date to flowering (DF), plant height (PLH) and also yield parameters including panicle length (PNL) and grain weight in which significance difference were found among them while panicle appreciation (PaAp), threshing percentage (Trh%), 100 grain weight (100 GW) and grain appreciation (GrAp) showed no significance difference. Among the twenty four (24) varieties, 121CKNSV-40 were found to have highest yield on grain followed by 121CKNSV-47 and 121CKNV-437 been improved varieties while CSR-02 and ICSV400 been local check were found to produce least grain. Therefore, it can be concluded that use of the improved sorghum varieties such as 121CKNSV-40 is advisable and is appropriate for sorghum production in the test area.

Key word: evaluation, different varieties, sorghum and grain yield.

CIFS0089

IMPACT OF PHYTOCHROME MIMICRY IN THE RHIZOGENESIS of *Stevia rebaudiana* Bertoni

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ABSTRACT

Stevia rebaudiana Bertoni, a member of the family compositae, is known for the production of sweet steviol glycosides embedded in the leaves. It is an alternative to sugar due to its zero calorie and strong health and dietary implications. The poor seed germination problem in this crop posed obstacles towards its large-scale establishment. Therefore, vegetative means remains an alternative for the propagation of the crop; however, lack of suitable vegetative propagation technique for mass production constitutes an obstacle. Phytochrome is a proteineous photoreceptor pigment that plants use to detect light, and it is highly sensitive to light in the red and far-red regions of the visible spectrum. The role of phytochrome in root development has received little attention over the years. Due to the forgoing therefore, efficacies of red (600nm, 1 watt) and white light (400-700 nm, 1 watt), irradiation boxes, as phytochrome mimicries, on root induction in young stem cuttings were investigated. Parameters evaluated were (i) day of root emergence, (ii) percentage of rooted cuttings,(iii) number of roots, (iv)length of roots and (v) width of roots. ANOVA was carried out at $p<0.05$. Results showed that either of the light box has good impact on all evaluated traits on rooting over the control at $p<0.05$. Furthermore, the red light box differ significantly in most evaluated parameters at $p<0.05$ over the white, this might be due to phytochrome receptor responding effectively to red light than the white. The new prototype contributes effectively to mass root induction in *Stevia rebaudiana* Bertoni.

Key word:- Stevia, poor seed, germination, vegetative, propagation, phytochrome.