SOIL SCIENCE SOCIETY OF NIGERIA

35th ANNUAL CONFERENCE

SOIL RESOURCES MANAGEMENT, GLOBAL CLIMATE CHANGE AND FOOD SECURITY

MINNA, march 7-11, 2011

UNIVERSITY AUDITORIUM, MAIN CAMPUS (GIDAN KWANO)
FEDERAL UNIVERSITY OF TECHNOLOGY,
MINNA, NIGER STATE, NIGERIA.

BOOK OF ABSTRACTS

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at a fixed time, without fail, every single day. And to analyse the daily data collected over months and years, more painstaking paperwork was required. Automatic weather stations (AWS) have become the worldwide standard for meteorological monitoring. The paper highlighted benefits of the use and implementation of Automatic weather stations (AWS) in Nigeria compared to the epileptic manual weather stations.

PAPER C-35

STRATEGY FOR SAVING IRRIGATION WATER THROUGH RESIDUAL SOIL MOISTURE UTILIZATION

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ABSTRACT

Irrigation is poised at supplementing the augmented rainfall by enhancing available soil moisture for the purpose of crop production. Since water is a limited resource, its efficient utilization is capable of improving the quantity of food generation with a view to meeting the Federal Government Millennium Development Goal on food security and sufficiency by 2015. If all agriculturally viable floodplains are effectively harnessed, current pressure being exacted on irrigating upland crops such as maize/sorghum would not only be reduced but also increase harvested yield tonnage per hectare per annum. Two sets of experiments were conducted in three replicates each on both upper and lower fringes of the inland valley. While the upper fringe was subjected to surface irrigation the residual moisture in the lower fringe provided the maize yields with all water requirements from planting to maturity. The experimental design was Randomized Complete Block Design (RCBD). The results showed that the actual maize yield obtained in plots 1, 2 and 3 on the upper fringe were 100.15 kg/ha, 180.45 kg/ha and 200.45 kg/ha respectively, whereas 168.78 kg/ha, 240.16 kg/ha and 271.20 kg/ha were recorded in the lower fringe for a similar range of plots. The difference in means of the maize yield grown under irrigation and residual moisture were statistically insignificant at 5% and 1% level of significance.

Keywords: Irrigation, inland valley, food security, maize yield, residual moisture, evapotranspiration rates

PAPER C-36

EFFECT OF DOMESTIC WASTEWATER ON THE QUALITY PARAMETERS OF A FISH POND IN THE NORTH-CENTRAL AREA OF NIGERIA.

Musa, J., Adewumi, J. and Adeoye, P.

PAPER C-37

POTENTIALS OF ORGANIC AGRICULTURE AS A SUSTAINABLE STRATEGY FOR CLIMATE CHANGE MITIGATION AND ADAPTATION IN NIGERIA.

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