

Growth Analysis in Wheat as Influenced by Water Stress and Variety in Sokoto, Sudan Savannah, Nigeria

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Abstract : The study was carried out on effect of water stress and variety on growth of wheat (*Triticum aestivum* L.), during 2009/10 and 2010/11 dry seasons. The treatments consisted of factorial combination of water stress at three critical growth stage which was imposed by withholding water at (Tillering, Flowering, Grain filling) and Control (No stress) and two varieties (Star 11 TR 77173/SLM and Kauze/Weaver) laid out in a split-plot design with three replications. Water stress was assigned to the main-plot while variety was assigned to the sub-plots. Result revealed significant ($P<0.05$) effect of water stress, water stress at tillering significantly ($P<0.05$) reduced plant height, LAI, CGR, and NAR. Variety had a significant effect on plant height, LAI, CGR and NAR. In conclusion water stress at tillering was observed to be most critical growth stage in wheat, and water stress at this period should be avoided because it results to decrease in growth components in wheat. Wheat should be sown in November or at least first week of December in this area and other area with similar climate. Star II TR 77173/LM is recommended variety for the area.

Keywords : wheat, growth, water stress, variety, Sudan savannah

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