GROWTH AND BIOMASS PRODUCTION OF

Treculia africana (Decne) And Parkia biglobosa (Jacq.)

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ABSTRACT

A field experiment was conducted to assess the Performance (Growth and Biomass production) of Treculia africana and Parkia biglobosa. Seeds of these species were raised in germination boxes. After germination, the seedlings were pricked into polythene pots with potting media of river sand, top soil and cow dung in ratio 1:2:1. The transplants were watered twice daily (Morning and Evening). The following growth parameters; Height, Stem diameter and leaf production were assessed fortnightly for twelve weeks. Parts of the seedlings, stems and roots were excised separately, weighed and oven dried for determination of biomass production at the end of the first two weeks and at the twelfth week. The result showed that there was significant difference between the two species in height growth and biomass production at 5% level of significance. But there were no significant difference in leaf production and stem diameter. It was observed that the seedlings of Parkia biglobosa exhibited better growth rate with minimum fortnight mean height of 13.50cm and a maximum of 38.28cm. Leaf production ranged from 3.2 to 10.2 at the end of second and twelfth week respectively, as well as -dry matter yield which range from 0.66g to 2.10g. On the other hand, Treculia africana had height growth range of 7.30cm to 21.90cm, leaf production range of 4 to 10.4 leaves and dry matter yield which range from 0.41g to 1.57g. In addition, Parkia biglobosa has given a Net Assimilation Rate (NAR) and Absolute Growth Rate (AGR) higher than Treculia africana. However, this study has shown that both species as Nigerian indigenous species have great promise due to their fast growing ability, closeness in biomass production. The species were thus recommended for agroforestry.