

For the number of leaves, there was a significant difference between seedlings raised in the mixture and the other two media. Seedlings of the mixture had denser foliage than those of clay and sand media. For the shoot dry weight, a significant difference was recorded between seedlings of mixture and sand media, while there was no difference between both mixture and clay, and clay and sand. Seedlings in the sand had the lowest shoot mass, and seedlings masses in mixture and clay media were almost alike. For the root mass, there was a significant difference between seedlings of sand and the other media. Root mass of sand seedlings was twice greater than that of clay and mixture media. Also, for the shoot/root weight ratio, seedlings of sand medium were significantly different from the respective ratios of seedlings of the other media. While, ratios of seedlings of clay and mixture media did not differ significantly. The weight ratio of seedlings in the sand was far greater lower than that of seedlings of clay and mixture media; this difference exceeded 3.7 folds. On the other hand, shoot/root weight ratio of seedlings of clay and mixture media were identical. The study which conducted by [5] illustrated that, the polybag size has main effects on performance of tree seedlings propagation in the nurseries.

TABLE I. Seedlings growth assessment of *A. polyacantha* in different growing media

Growing media	Seedling length/Cm	Number of leave	Number of leaflets	Shoot weight/gm	Mid diameter/Cm	Root weight/gm	Root length/Cm	Shoot/Root ratio
Clay	39.9a	16.9ab	3355a	2.2ab	3.3a	1.0b	21.3c	2.4a
Sand	34.1b	15.1b	2220a	1.4b	4.4a	2.215a	32.1a	0.6b
Mixture	42.8a	18.0a	3233a	2.8a	2.8a	1.306b	23.5bc	2.1a

4. Conclusion

Finally, the investigation concluded that, the following combinations are proposed for optimum tree seedling growth in nursery for *A. polyacantha*: sand-clay mixture in plastic pots. Moreover, in view of the importance of *A. polyacantha* as potential gum producing tree and render of multipurpose products and services, it is recommend the species to undergo in further research work, particularly:

- 1/ To investigate thoroughly the natural distribution and the physical requirements of the species, and explore prospects for bringing the species under some management prescriptions naturally.
- 2/ To intensify field trials and Silviculture work about the species in order to command its establishment and bring it under domestication in the future.

5. Acknowledgements

Authors would like to thanks the staff of Ministry of Agriculture North Kordofan State for their technical helps. Also the authors extend their gratitude to the staff of Gum Arabic Research Centre for their contribution in overcoming several problems faced by conducting the research.

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