Growth and biomass yield of rubber seedlings grown on soilless and soil-based media

ABSTRACT

The investigation assessed the performance of rubber seedlings on different soilless media and soilbased medium. The treatments consisted of three soilless media codded M1, M2, M3 and soil-based medium M4 as a control. The highest rates of seedling growth and biomass yield were recorded in the soilless medium with 10% burned rice husk (BRH), 30% peat moss and 15% vermiculite (coded as M1) with noticeable effect in root morphological traits, while the pH and EC were 6.5 and 2.3 μS/m, respectively. Nitrogen was apparent in the M1 2.59, M2 3.03, M3 2.78 while 1.82 in M4 was recorded in the soil-based medium. Similarly, the phosphorus was noticed in M1 0.23, M2 0.26, M3 0.33, and in M4 0.13. Plant roots of rubber seedlings grown in the M1 was significantly different from the seedlings grown in M2 and M3 and M4. The least amount (5%) urea-N used was used in the best medium (M1). This amount of nitrogen could be maintained to reduce fertilizer usage. These results showed that the soilless medium that contains 10% BRH with 5% urea- N could greatly increase the growth of rubber seedlings.

Keyword: Growth; Biomass yield; Rubber seedlings; Soil-based medium