ABSTRACT

In aggregate hydroponics, the suitability of a particular medium is often guided by its physical properties.

However these may not provide adequate evaluation. By growing a crop, the growth characteristics can also be

used to guide medium preparation and selection. Tomatoes (Anna F1 variety) were grown in containers under a

greenhouse and provided with equal amount of nutrient solution. The expanded black cotton soil was prepared

by mixing with rice husk at a ratio of 90:10, fired at 750 ^{o}C for 30 minutes and size reduced to various textures.

The crops planted in the expanded clay aggregates performed better than the black cotton soil both in terms of

stem elongation and enlargement due to improved drainage, nutrient flow and aeration conditions. The root

length density was 25654 m m^{-3} in black cotton soil, being the highest and lowest in the coarse aggregates which

had 9433 m m^{-3}.

Keywords: hydroponic medium, stem growth, root length density