

عنوان مقاله:

Evaluating sustainable and environment friendly substrates for quality production of potted Caladium

محل انتشار:

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خلاصه مقاله:

Purpose Effect of various combinations of potting substrates was assessed to enhance vegetative growth, plant productivity and mineral composition of Caladium bicolor. Methods Different substrates like leaf compost, farmyard manure, coconut compost, compost and perlite were used in different combinations with silt. Bulbs were sown in pots filled with different combinations of potting substrates, which were arranged under completely randomized design (CRD), with three replications, and totally there were ten treatment combinations. Results Application of different treatments of growing media either alone or in combinations led to considerable improvement in plant growth characteristics as compared to respective control. However, response differed according to the type of media manipulation. The highest stimulatory effect with maximum plant growth in terms of early sprouting, plant height, leaf area, chlorophyll contents, fresh and dry weights of tubers was observed in plants treated with silt leaf compost perlite combination; this combination significantly enhanced plant growth (30-150%) as compared to control. In case of NPK and protein contents, treatment combination of silt leaf compost coconut compost was greatly affected which lowered the pH, increased available organic matter and consequently maximized nutrient uptake by the plants. Conclusions The best selection of conventional organic and inorganic potting media is the key to successful mass propagation of containerized plants. Generally, it could be concluded that application of potting mixes with silt, perlite, leaf composts and coco-based residues is a good cultural practice to improve the crop productivity and provide a better growing environment for plants.

کلمات کلیدی:

Foliage plants Organic Inorganic substrates Potting medium Caladium

لینک ثابت مقاله در پایگاه سیویلیکا:

