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Synthetic soil aggregates as a potting medium for ornamental plant production

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Four different types of Synthetic aggregates (SA) were developed from low productive acidic soil and paper waste with adding three different types of compost namely cattle manure compost, chicken manure compost, and leaf manure compost. Popular ornamental plant French marigold (*Tagetes patula*) was used to evaluate the suitability of these SA as a growth medium. Developed SA showed satisfactory physical and chemical parameters compared to commercial zeolite media. Moreover, plants grown in SA media showed better growth and had better elemental composition compared to plants grown in zeolite media. The plant height, number of flowers per plant, shoot fresh weight, shoot dry weight, root length, root fresh weight and root dry weight obtained from three different compost based SA were increased by in the ranges of 8-14%, 6-9%, 26-31%, 9-16%, 6-9%, 2-8% and 9-17%, respectively compared to zeolite control.