

عنوان مقاله:

.Bio-Inoculants and Organics Influence on Mineral Nutrition and Productivity in Calendula officinalis L

محل انتشار:

مجله گیاهان دارویی و محصولات فرعی, دوره 9, شماره 1 (سال: 1399)

تعداد صفحات اصل مقاله: 8

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خلاصه مقاله:

It is important to investigate and develop the strategies and methodologies to maintain the sustainability of plant production. A two-year field study was performed to evaluate calendula response to individual form and also mixtures of selected bio organic fertilizers. The effects of co-inoculation of two plant growth promoting rhizobacteria (PGPR), humic acid (HA), vermicompost (VC), and combinations of these bio organics were investigated in two calendula cultivars, Isfahan multi petalled (MP) and single petalled (SP). The experimental design was a factorial randomized complete block with three replicates. Based on the combined analysis of two years, mean flower yield was highest for the MP cultivar treated by VC + PGPR. Flower essential oil was higher in the MP cultivar than the SP cultivar and did not vary with fertilizers. The highest harvest index of flowers obtained from the MP cultivar treated by HA + PGPR. Furthermore, nutrient contents of leaves increased by fertilizers and combined application of bio organics gave the highest values of nitrogen, phosphorus and potassium contents in calendula leaves. The present results indicate that the selected bio organic fertilizers can be used to obtain higher levels of quality and yield in sustainable agricultural .practices

کلمات کلیدی:

biofertilizers, humic acid, Leaf nutrients, Vermicompost, yield

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https://civilica.com/doc/1834241

