عنوان مقاله:

Influence of vermi-fortification on chickpea (Cicer arietinum L.) growth and photosynthetic pigments

محل انتشار:

مجله بین المللی بازیافت مواد آلی در کشاورزی, دوره 4, شماره 4 (سال: 1394)

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خلاصه مقاله:

Purpose The aim of this study was to investigate theeffect of different vermicomposts and their dosages onchickpea (Cicer arietinum L.) plants in pot cultureexperiment.Methods A total of five potting media were preparedcontaining soil and vermicompost. Soil fortified with 10and 20 % vermicompost was used as potting media. Thefertility status of soil and vermicomposts was quantified. Inthese potting media, growth, yield and biochemicalparameters of chickpea plants were studied up to 90 days.Results The results showed that the fortification of soilwith vermicompost significantly stimulated the chickpeaplant growth. The plant height, plant shoot biomass,number of pods and photosynthetic pigments were significantlyhigher in vermicompost-fortified experiments,whereas vermicompost fortification had no significanteffect on chickpea seed germination as it was &100 % inall experiments. Total chlorophyll content in chickpealeaves was in the range of 0.437–1.07 mg/g. Similarly,carotenoid content was minimum in control and maximumin 20 % vermicompost containing potting media.Conclusion It was concluded that if soil is fortified withappropriate quantities of vermicompost, the chickpea productionper unit area could be enhanced .significantly

کلمات کلیدی:

Chickpea Organic manures Vermicompost Chlorophyll Carotenoids Vermifortification