The effect of electrical conductivity of nutrient solution and bicarbonate on vegetative growth of watercress (*Nasturtium officinale*)

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Abstract

Nasturtium officinale L is a perennial palnt that belongs to the family Brassicaceae (١). Due to the presence of numerous and effective chemical compounds such as flavonoid quercetin, beta-carotene carotenoids, lutein and zeaxanthin and vitamin C, the antioxidant properties of Nasturtium officinale L has been emphasized (٢). For proper growth and fruit production, i.e., improved function, each plant needs strong vegetative growth and sufficient food supply. This proper growth is possible if the root absorb optimal amount of water and nutrients (٣). For the purpose of the study, a factorial and completely randomized design experiment was conducted using ٩ treatments with three replications in Shahed University. The treatments consist of EC nutrition solution at three levels (٢,١, ١,٤, ٠,٧ ds / m) and bicarbonate at three levels (٠, ٣, ٦ mEq / L). The results of ANOVA showed that the presence of these treatments affected all the properties in such a way that EC٢,١ ds/m and ٣ mA / L bicarbonate treatment had the highest effect on the plant height. Moreover, fresh and dry weight of the plants was significantly affected by the treatments (P≤٠,٠١). The highest fresh and dry weight of the plant was observed in EC ٢,١ ds / m and ٠ mEq / L bicarbonate treatment. Furthermore, the highest root fresh and dry weight was observed in EC ٢,١ ds / m and ٠ mEq / L bicarbonate. The effect of nutrient solution EC and bicarbonate on root volume were significant (P≤٠,٠١) and the highest effect was observed in EC ٢,١ ds / m and ٦ mEq / L bicarbonate.

Keywords: Medicinal plant, Herbal Nutrition, EC nutrition solution, Bicarbonate

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The Effect of Electrical Conductivity of Nutrient Solution and Bicarbonate on Vegetative Growth of Watercress (Nasturtium Officinale)

ارسال‌شده توسط

فایزه حسینی لرگانی، سید جلال طباطبایی

در هفتمین کنگره ملی گیاهان دارویی که در تاریخ ۲۲ الی ۲۴ اردیبهشت ماه سال ۱۳۹۷ توسط شبکه ملی پژوهش و فناوری گیاهان دارویی با مجوز پایگاه استنادی علوم جهان اسلام (ISC) و کد اختصاصی ۹۷۱۸-۴۲۵۰۳، در مجتمع فرهنگی، رفاهی دانشگاه شیراز برگزار گردید، به‌صورت پوستر ارائه شده است.

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