Utjecaj gnojidbe rasolom i mineralnim gnojivima na kemijska svojstva tla

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Sažetak

Provedena istraživanja imala su za cilj utvrditi utjecaj gnojidbe kupusa rasolom i mineralnim gnojivima na promjenu kemijskih svojstava tla. Gnojidbeni pokus postavljen je po slučajnom bloknom rasporedu (7 varijanti u 3 repeticije) 2013. godine, na distričnom kambisolu, na području Josipdola. Uz kontrolnu varijantu (bez gnojidbe) u istraživanja je bila uključena varijanta s mineralnom gnojidbom (1000 kg/ha NPK 7:20:30), varijanta s koncentriranim rasolom (2,5 %-tna otopina) te varijante s razrijeđenim rasolom (koncentrirani rasol razrijeđen 2, 5, 10 i 20 puta) u kombinaciji s mineralnom gnojidbom. Uzorci tla za praćenje dinamike i promjena kemijskih svojstava uzeti su u tri navrata. Prvo uzorkovanje provedeno je prije tretmana i sadnje kupusa (srpanj), drugo u kolovozu, a treće u listopadu nakon berbe kupusa. Temeljem dobivenih rezultata nije utvrđen negativni utjecaj gnojidbe rasolom na sniženje pH tla. Utjecaj rasola na povećanje električne vodljivosti tla i ukupne vodotopive soli nisu se značajnije razlikovale u odnosu na kontrolnu varijantu i gnojidbu NPK gnojivima. U odnosu na kontrolnu varijantu i varijantu gnojenu s 1000 kg/ha NPK 7:20:30 značajno veće koncentracije klorida, natrija i ukupnog mineralnog dušika utvrđene su u drugom uzorkovanju u varijantama tretiranim koncentriranim rasolom i rasolom razrijeđenim vodom u odnosu 1:2 i 1:5, što se može dovesti u svezu s klimatskim prilikama koje su vladale u tom razdoblju.

Ključne riječi: gnojidba, rasol, električna vodljivost, vodotopive soli

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Influence of fertilization of cabbage with brine and mineral fertilizers on the chemical properties of the soil

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Abstract

The research were aimed to determine the effect of fertilization of cabbage with brine and mineral fertilizers and it's influence on the chemical properties of the soil. The trial was conducted according to random block design (7 variant in 3 repetitions) 2013, on distric cambisol. A field trial was set in Josipdol, with seven types of fertilization: control (without fertilization), mineral fertilizer (1000 kg/ha of NPK 7:20:30), concentrated brine (2.5% solution) and variants with diluted brine (concentrated brine diluted 2, 5, 10 and 20 times) in combination with a mineral fertilizer. Soil samples for observing dynamics and alteration of chemical properties were took three times. First sampling is conducted before treatments and planting of cabbage (July), second was in August and third was in October, after harvest. Based on the results, negative impact of fertilizing with brine is not proven, considering decreasing soil pH. Brine impact on increasing electrical conductivity and total water soluble salts were not significantly different regards to control variant and fertilizing with NPK fertilizers. Regarding control variant and variant fertilized with 1000 kg/ha NPK 7:20:30, significantly higher concentrations of chloride, sodium and total mineral nitrogen were determined in second sampling in variants treated with concentrated brine and brine diluted with water on 1:2 and 1:5 ratio, which can be correlated with climate changes which occurred at that time.

Key words: fertilization, brine, electrical conductivity, water soluble salts

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