

Utjecaj vremena primjene dušika na prinos kukuruza

Milan MESIĆ¹, Igor BOGUNOVIĆ¹, Aleksandra PERČIN¹, Ljiljana MALIĆ²,
Marija VUČKOVIĆ², Željka ZGORELEC¹

¹Sveučilište u Zagrebu, Agronomski fakultet, Svetošimunska cesta 25, 10000 Zagreb, Hrvatska, (e-mail: mmesic@agr.hr)

²Belje d.d. Industrijska zona 1, Mece, 31326 Darda, Hrvatska

Sažetak

Cilj istraživanja bio je utvrditi učinak vremena primjene mineralnog dušika u uzgoju kukuruza. Poljski pokus proveden je u dvije godine, 2014. i 2015. na površini od 10.000 m², a sastojao se od 4 tretmana u slučajnom bloknom rasporedu u 4 ponavljanja. Veličina svake parcele bila je 25 x 25 m, a ukupno je pokusom obuhvaćeno 16 parcela. Tretmane čine različiti režimi gnojidbe dušičnim gnojivima (KAN – 17% N, Urea 46% N), odnosno različito vrijeme primjene dušičnih gnojiva: 1. U jesen 180 kg N (Urea), 2. Predsjetveno, 180 kg N (Urea), 3. U jesen 70 kg dušika (Urea), predsjetveno 110 kg N (Urea) i 4. U jesen 70 kg dušika (Urea), predsjetveno 70 kg N (Urea), u prihranjivanju 40 kg N (150 kg KAN). Pokus, prema visini prinosa kukuruza nije bio statistički opravdan niti u jednoj od dvije istraživane godine. Prve godine istraživanja, 2014. prinos zrna varirao je u vrlo uskom rasponu od 16,2 do 16,9 t/ha. Najniži prinos ostvaren je u tretmanu br. 4., s gnojidbom od 70 kg dušika u jesen + predsjetveno 70 kg N + prihranjivanje 40 kg N, a najviši u varijanti 1 s gnojidbom u jesen 180 kg N. Druge godine istraživanja, 2015., najviši prinos od 8,6 t/ha ostvaren je u varijanti 3. - u jesen 70 kg dušika (Urea), predsjetveno 110 kg N (Urea), dok je kod svih ostalih varijanti zabilježen isti prinos – 8,1 t/ha.

Ključne riječi: kukuruz, dušik, prinos, vrijeme primjene dušika

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The effect of time of application of nitrogen on maize yield

Milan MESIĆ¹, Igor BOGUNOVIĆ¹, Aleksandra PERČIN¹, Ljiljana MALIĆ²,
Marija VUČKOVIĆ², Željka ZGORELEC¹

¹University of Zagreb, Faculty of Agriculture, Svetošimunska cesta 25, 10000 Zagreb, Croatia, (e-mail: mmesic@agr.hr)

²Belje d.d. Industrijska zona 1, Mece, 31326 Darda, Croatia

Abstract

The aim of this study was to determine the different time of mineral nitrogen application on maize yields. A field experiment was carried out in two years, 2014 and 2015 on an area of 10,000 m². Experiment consisted of four treatments in four repetitions in randomize block design scheme. The size of each plot was 25 x 25 m and experiment included sixteen plots in total. Treatments differ in type of nitrogen fertilizers (KAN – 17% N, Urea 46% N) or different times of application: 1) all 180 kg N (urea) in autumn; 2) pre-sowing 180 kg N (urea); 3. in autumn 70 kg nitrogen (urea), pre-sowing 110 kg N (urea); and 4) in the autumn 70 kg N (urea), pre-sowing 70 kg N (urea) and 40 kg N (150 kg KAN) as a sidedress. According to the maize yields experiment was not statistically justified in any of the two years of investigation. The first years of research, in 2014 maize yield varied in a narrow range from 16.2 to 16.9 t/ha. The lowest yield was obtained in the treatment 4 (70 kg N in fall followed with pre-sowing 70 kg N (urea) and with 40 kg N (150 kg KAN) as a sidedress) while the highest maize yield was noted in treatment 1 (fertilization in the fall with 180 kg N). In the second year of research, 2015, the highest yield (8.6 t/ha) was achieved in the treatment 3 (in autumn 70 kg nitrogen (urea) followed with pre-sowing 110 kg N (urea), whereas all the other treatments recorded similar

Key words: maize, nitrogen, yield, time of nitrogen application

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