

# Utjecaj gnojidbe dušikom na sadržaj nitrata u gomolju krumpira

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## Sažetak

Pravilna ishrana biljke krumpira je jako važna sa stajališta željenog prinosa i kvalitete, te sprječavanja zagađenja okoline. Dušik se uglavnom primjenjuje u proljeće. Ipak, može se reći da oprezno rukovanje sa hranjivima u proizvodnji usjeva, zahtjeva primjenu N u najmanje 2 aplikacije (Vos i Struik, 1992). Optimizacija opskrbe N zahtjeva primjenu određene tehnologije i metoda za utvrđivanje njegovog statusa kako u samom usjevu, tako i u tlu, tijekom vegetacijskog perioda. U istraživanju provedenom u Jasenici, (BiH), sa 3 sorte krumpira (Adora, Cleopatra, Liseta) i tri doze gnojidbe (N100, 200, 300), uključujući kontrolu, N0, korišten je Cardy ion metar za određivanje statusa nitrata u gomolju krumpira. Dobivene koncentracije nitrata su uspoređene sa referentnim vrijednostima ukupnog statusa N u gomolju. Između koncentracije nitrata i ukupnog % dušika u gomolju krumpira ustanovljena je slaba korelacija ( $r=0,37^*$ ). Usporedba rezultata dobivenih mjerenjem klorofilmetrom (HNT) u listu (65, 75, 85 i 95 dana nakon sadnje) i koncentracije nitrata u gomolju krumpira, pokazuje slabe korelacije (0,31, 0,14, 0,33, 0,28). Rezultati ANOVA testa pokazuju da, na povećanje prinosa krumpira značajno utječe izbor sorte, te gnojidbeni tretman, dok njihova interakcija nije značajna.

Ključne riječi: dušik, dijagnostičke metode, nitrati, rani krumpir

## Effects of nitrogen nutrition on nitrate content in potato tubers

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## Abstract

Properly side-dressing potato crop with nitrogen is important from point of view of getting desirable yield and quality production and keeping environmental pollution. Nitrogen nutrition is usually applied in early spring. Yet, we can say that careful management with nutrients in crop production requires split nitrogen applications (Vos and Struik, 1992). Optimization N supply demands application of certain technology and methods for establishing N status at crop as well as in soil, during vegetation. Trial field with three potato varieties was carrying out in Jasenica (BiH), with three treatments (N100, N200 and N300, N0-control). Cardy-ion meter ( $\text{NO}_3$ ) was used for estimation of nitrates status in tuber of potato crop. Attain nitrates concentrations were compared with referent values total N in tuber. A weak correlation was established ( $r=0.37^*$ ) between nitrate concentration and total %N in tuber of potato crop. Chlorophyll meter (HNT) readings (65, 75, 85 and 95 days after sowing DAS) in compression with nitrate concentration in tuber of potato obtain weak correlation (0.31, 0.14, 0.33, 0.28). Results of ANOVA test show that significant increase of yield is accomplished by selection of variety and fertilization treatment, while interaction is not significant.

Key words: diagnostic tool, nitrogen, nitrates, potato