

**Efek Pemberian Nitrogen dan Molibdenum terhadap Pertumbuhan, Hasil dan Kandungan Antosianin Jagung Ungu (*Zea mays L. var. ceratina Kulesh*)**

Oleh Novita Rahayu  
Dibimbing oleh Bambang Supriyanta dan Alif Waluyo

**ABSTRAK**

Tujuan dari penelitian ini adalah mendapatkan taraf optimum nitrogen dan molibdenum terhadap pertumbuhan, hasil dan kandungan antosianin jagung ungu. Penelitian dilaksanakan di Kebun Percobaan Wedomartani, Fakultas Pertanian Universitas Pembangunan Nasional “Veteran” Yogyakarta pada bulan Januari - April 2019. Penelitian menggunakan Rancangan Acak Kelompok Lengkap (RAKL) dengan dua faktor (3x3)+1 dan tiga ulangan. Faktor pertama adalah dosis nitrogen (Urea) 207 kg/ha, 230 kg/ha dan 253 kg/ha. Faktor kedua yaitu dosis molibdenum (Natrium molibdat) 175,5 g/ha, 234 g/ha dan 292,5 g/ha. Parameter yang diukur meliputi parameter pertumbuhan (tinggi tanaman, diameter batang, berat kering tanaman, rasio tajuk akar), parameter hasil (panjang tongkol, diameter tongkol, bobot tongkol, hasil jagung per hektar) dan kandungan antosianin. Data pengamatan dianalisis keragaman pada taraf  $\alpha = 5\%$ . Untuk mengetahui perbedaan rata-rata perlakuan digunakan Uji Jarak Berganda Duncan atau *Duncan's Multiple Range Test* (DMRT) pada taraf  $\alpha = 5\%$ , untuk mengetahui perbedaan kontrol dan perlakuan digunakan uji Kontras Orthogonal. Hasil penelitian menunjukkan bahwa tidak ada interaksi antara dosis nitrogen dan dosis molibdenum. Pertumbuhan dan kandungan antosianin jagung ungu berbeda nyata pada taraf nitrogen. Dosis nitrogen 230 kg/ha optimal dalam meningkatkan pertumbuhan, dosis nitrogen 207 kg/ha optimal dalam meningkatkan kandungan antosianin dan dosis nitrogen belum memberikan pengaruh nyata terhadap hasil.

**Kata Kunci :** Jagung Ungu, Nitrogen, Molibdenum, Antosianin

**Effect of Nitrogen and Molybdenum on Growth, Yield and Anthocyanin  
Content of Purple Corn (*Zea mays L. var. ceratina Kulesh*)**

By Novita Rahayu  
Supervised by Bambang Supriyanta and Alif Waluyo

**ABSTRACT**

The aim of this research was to determine the optimum level of nitrogen and molybdenum on growth, yield and anthocyanin content of purple corn. The research was conducted in Experimental Garden Wedomartani, Faculty of Agriculture Universitas Pembangunan Nasional “Veteran” of Yogyakarta in January until April 2019. The research used a Randomized Completely Randomized Block Design (RAKL) with two factors (3x3)+1 and three replications. The first factor was the dosage of nitrogen (Urea) 207 kg/ha, 230 kg/ha and 253 kg/ha. The second factor was the dosage of molybdenum (Natrium Molibdat) 175,5 g/ha, 234 g/ha and 292,5 g/ha. The measured parameters including growth parameters (plant height, stem diameter, dry weight of plant, shoot root ratio), yield parameters (cob length, cob diameter, cob weight, yield per hectare) and anthocyanin content. Observational data were analyzed for diversity at  $\alpha = 5\%$ . To know the difference of treatment average used Duncan Multiple Range Test (DMRT)  $\alpha = 5\%$ , to know the difference of control and treatment used Orthogonal Contrast Test. The results showed that there was no interaction between the dosage of nitrogen and molybdenum. The growth and anthocyanin content of purple corn were significantly different at the nitrogen level. The dosage of nitrogen 230 kg/ha was optimal in increasing the growth, the dosage of nitrogen 207 kg/ha was optimal in increasing the anthocyanin content and the dosage of nitrogen has not had a significant effect on the yield.

**Keywords** : Purple Corn, Nitrogen, Molybdenum, Anthocyanin