

**KARAKTER FISILOGI DAN HASIL KACANG HIJAU (*Vigna radiata* (L).
R. Wilczek) PADA TINGKAT NAUNGAN BERBEDA DI LAHAN PASIR
PANTAI BUGEL, KULON PROGO**

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Penelitian ini bertujuan untuk mempelajari pengaruh naungan terhadap fisiologi dan hasil dari empat kultivar kacang hijau (*Vigna radiata* L. Wilczek) yang ditanam di lahan pasir pantai. Penelitian ini dilakukan di daerah Bugel, Kecamatan Panjatan, Kabupaten Kulon Progo, Yogyakarta. Penelitian menggunakan Rancangan petak terbagi dimana naungan paranet sebagai perlakuan petak utama dengan tingkat naungan 0%, 25%, dan 50%, serta kultivar kacang hijau sebagai perlakuan anak petak dengan macam kultivar Kenari, Lokal Wonosari, Kutilang, dan Vima-1. Hasil penelitian menunjukkan peningkatan intensitas naungan menurunkan persentase cahaya yang disekap oleh daun tanaman kacang hijau, suhu udara, kecepatan angin serta intensitas cahaya matahari, dan meningkatkan kelembaban udara, tetapi tidak mempengaruhi kadar lengas dan suhu tanah di lahan pasir pantai Bugel. Peningkatan intensitas naungan menurunkan kandungan CO₂ daun, kandungan H₂O daun, lebar bukaan stomata, kandungan klorofil a, luas daun, dan bobot daun khas yang berakibat pada penurunan indeks luas daun, laju fotosintesis, bobot kering tanaman, laju pertumbuhan tanaman indeks panen, komponen hasil, dan hasil tanaman kacang hijau di lahan pasir pantai Bugel. Kultivar Vima-1 memiliki panjang akar utama, bobot segar daun, bobot daun khas, indeks panen, jumlah dan persentase polong hampa, serta jumlah biji per polong paling tinggi. Kultivar Lokal Wonosari memiliki tinggi tanaman, bobot segar batang, bobot kering batang, laju pertumbuhan tanaman, laju asimilasi bersih, persentase polong isi paling tinggi. Kultivar Kutilang memiliki kandungan klorofil a, klorofil b, serta klorofil total paling tinggi. Peningkatan intensitas naungan 25% dan 50% mengakibatkan penurunan hasil biji kacang hijau sebesar 34,05% dan 43,75%, dengan persamaan regresi $Y = -0,0162x + 1,7722$.

Kata kunci : Kacang hijau, naungan, fisiologi, pasir pantai

PHYSIOLOGICAL CHARACTER AND YIELD OF MUNG BEAN (*Vigna radiata* (L). R Wilczek) AT DIFFERENT SHADE LEVELS IN COASTAL SAND BUGEL, KULON PROGO

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This research aims to study the effect of shade on the physiology and yield of four cultivars of mung bean (*Vigna radiata* L. Wilczek) grown in coastal sand. The research was conducted in Bugel, Panjatan, Kulonprogo, Yogyakarta. This research use split plot design with the shade level as main treatments, i.e. of 0%, 25%, and 50%, and cultivar of mung bean as the sub treatments, consisting of Kenari, Lokal Wonosari, Kutilang, and Vima-1. The results showed the highest intensity of the shade the lower percentage of light captured, air temperature, wind speed and intensity of sunlight, and increase the air moisture, but does not affect the soil moisture content and temperature. Increasing the intensity of the shade decreased the CO₂ content of leaves, H₂O content of leaves, stomatal aperture width, chlorophyll a of leaves, leaf area, and leaf weight that affected decrease in leaf area index, rate of photosynthesis, plant dry weight, harvest index, plant growth rate, yield components, and yield of the green bean in coastal sand bugel. Cultivars Vima-1 had highest primary root length, leaf fresh weight, specific leaf weight, harvest index, number and percentage of empty pods, and the number of seeds per pod. Local Wonosari cultivars had the highest plant height, stem fresh weight, dry weight of stem, plant growth rate, net assimilation rate, percentage of pods. Kutilang cultivars contain chlorophyll a, chlorophyll b, and total chlorophyll highest. Increasing the intensity of the shade 25% and 50% resulted in a decrease in grain yield of green beans to 34.05% and 43.75%, with the regression equation $Y = -0,0162x + 1.7722$.

Keywords : mung bean, shade, physiology, coastal sand