

## ABSTRACT

Laela Herawati (1510311046) "**Morphological Characteristics and Production of Cucumber (*Cucumis sativus* L.) on Different Systems of Trimming, Trimming and Spacing**". Main Advisor Lecturer Ir. Iskandar Umarie, Mp. Advisor Lecturer Ir. Bejo Suroso, MP.

Cucumber in Indonesia is a very popular vegetable and is loved by the whole community. Most cucumber farming is still considered a side business, so the national average yield of cucumbers is still low, which is 3.5 - 4.8 tons / hectare. This study aims to determine the interaction between the effects of different flow systems, pruning and planting distance on the morphology and production of cucumber plants. This research was conducted in the Experimental Garden Faculty of Agriculture, University of Muhammadiyah Jember. The study was conducted in factorial (2x2x3) with the basic pattern of Factorial Randomized Design (RBD) Factorial consisting of three factors namely the difference in the system of rewards (L) namely: L1 = Para-para: L2 = Triangle, Pruning (P) namely: P1 = Without pruning: P2 = 21 days after planting, Spacing (J): J1 = 30 x 60 cm: J2 = 40 x 60 cm: J3 = 50 x 60 cm. Each of them was repeated 3 times. The parameters of this research observation plant length (cm), stem diameter (cm), number of branches, number of male flowers, number of female flowers, number of productive flowers, number of fruit plants, length of fruit plants (cm), diameter of fruit plants (mm), crop weight (g). The results showed that there was a significant influence on the treatment distance of plant spacing J3 (50 x 60 cm) on the parameters of plant length at 21 hst. The interaction of differences in the L1P1 level and pruning system (para-para and without pruning) significantly affects the number of fruits and fruit length. Interaction of pruning and spacing of P2J1 (pruning of 21 HST and spacing of 30 x 60 cm) significantly influence the number of branches aged 20 HST. The interaction of differences in the line system and the planting distance of L1J3 (para-para level and planting distance of 50 x 60 cm) significantly affected the diameter of the stem age 28 hst. There is a significant effect of L1J2 (para-para level and planting distance of 40 x 60 cm) on fruit length. Based on the results of the analysis it can be concluded that: there is a significant effect of LI treatment (para-para level), P1 (without pruning), P2 (21 hst), J2 (planting distance of 40 x 60 cm), and J3 (planting distance of 50 x 60 cm) to the morphology and production of cucumber plants.

**Keywords:** Differences in the Lining System, Pruning, Spacing of Cucumber Plants, Harmony.

## ABSTRAK

Laela Herawati (1510311046) “**Karakter Morfologi dan Produksi Tanaman Mentimun (*Cucumis sativus* L.) pada Perbedaan Sistem Lanjaran, Pemangkasan dan Jarak Tanam**”. Dosen Pembimbing Utama Ir. Iskandar Umarie, Mp. Dosen Pembimbing Anggota Ir. Bejo Suroso, MP.

Mentimun di Indonesia merupakan sayuran yang sangat populer dan digemari oleh seluruh masyarakat. Kebanyakan usaha tani mentimun masih dianggap sebagai usaha sampingan, sehingga rata-rata hasil mentimun secara nasional masih rendah, yakni 3,5 – 4,8 ton/hektar. Penelitian ini bertujuan untuk mengetahui interaksi antara pengaruh sistem lanjaran yang berbeda, pemangkasan dan jarak tanam terhadap morfologi dan produksi tanaman mentimun. Penelitian ini dilaksanakan di kebun Percobaan Fakultas Pertanian Universitas Muhammadiyah Jember. Penelitian dilakukan secara factorial ( $2 \times 2 \times 3$ ) dengan pola dasar Rancangan Acak Kelompok Faktorial (RAK) Faktorial yang terdiri dari tiga factor yaitu Perbedaan sistem lanjaran (L) yaitu :  $L_1 =$  Para-para;  $L_2 =$  Segitiga, Pemangkasan (P) yaitu :  $P_1 =$  Tanpa pemangkasan;  $P_2 =$  21 hst, Jarak Tanam (J) :  $J_1 = 30 \times 60$  cm;  $J_2 = 40 \times 60$  cm ;  $J_3 = 50 \times 60$  cm. Yang masing-masing ulangan diulang 3 kali. Adapun parameter pengamatan penelitian ini panjang tanaman (cm), diameter batang (cm), jumlah cabang, jumlah bunga jantan, jumlah bunga betina, jumlah bunga produktif, jumlah buah pertanaman, panjang buah pertanaman (cm), diameter buah pertanaman (mm), berat buah pertanaman (g). Hasil penelitian menunjukkan bahwa terdapat pengaruh yang nyata pada perlakuan jarak tanam J3 (50 x 60 cm) pada parameter panjang tanaman umur 21 hst. Interaksi perbedaan sistem lanjaran dan pemangkasan L1P1 (lanjaran para-para dan tanpa pemangkasan) berpengaruh nyata jumlah buah dan panjang buah. Interaksi pemangkasan dan jarak tanam P2J1 (pemangkasan 21 hst dan jarak tanam 30 x 60 cm) berpengaruh nyata pada jumlah cabang umur 20 hst. Interaksi perbedaan sistem lanjaran dan jarak tanam L1J3 (lanjaran para-para dan jarak tanam 50 x 60 cm) berpengaruh nyata pada diameter batang umur 28 hst. Terdapat pengaruh nyata L1J2 (lanjaran para-para dan jarak tanam 40 x 60 cm) pada panjang buah. Berdasarkan hasil analisis dapat disimpulkan bahwa : terdapat pengaruh yang nyata perlakuan L1 (lanjaran para-para), P1 (tanpa pemangkasan), P2 (21 hst), J2 (jarak tanam 40 x 60 cm), dan J3 (jarak tanam 50 x 60 cm) terhadap morfologi dan produksi tanaman mentimun.

**Kata Kunci** : Perbedaan Sistem Lanjaran, Pemangkasan, Jarak Tanam Tanaman Mentimun, *Harmony*.