KETAHANAN TANAMAN MELON (*Cucumis melo* L. 'Hikapel') TERHADAP *BEGOMOVIRUS* PADA MUSIM KEMARAU BASAH

Ibnu Sina
11/312659/BI/08578

INTISARI

Fakultas Biologi Universitas Gadjah Mada telah mengembangkan kultivar melon baru bernama 'Hikapel' yang merupakan hasil penelitian lebih lanjut dari Gama Melon Parfum. Tantangan dalam produksi melon antara lain infeksi virus tanaman, salah satunya adalah *Begomovirus*. Persebaran kutu kebul (*Bemisia tabaci*) sebagai vektor *Begomovirus* umumnya lebih menonjol selama transisi menuju musim kemarau. Pada awal tahun 2016, Badan Meteorologi, Klimatologi, dan Geofisika (BMKG) melaporkan fenomena '*La Nina*' moderat yang ditandai dengan adanya kenaikan suhu rerata, kelembaban, dan curah hujan selama musim kemarau. Penelitian ini bertujuan untuk mempelajari dampak dari '*La Nina'* yang mempengaruhi kondisi mikroklimat saat penanaman terhadap ketahanan melon 'Hikapel' dari serangan *Begomovirus*. Penelitian dilakukan di lahan B2, B5, C2, dan C5 Blok I Pusat Inovasi Agro Teknologi (PIAT) UGM, Berbah, Sleman,D.I. Yogyakarta selama bulan April-Agustus 2016. Pengamatan dilakukan terhadap jumlah tanaman yang terindikasi mengalami infeksi *Begomovirus* berat dan sedang, diperkuat dengan analisis aspek morfologis kuantitatif dan jumlah total DNA yang diperoleh dari massa jaringan daun yang sama. Hasilnya, terdapat kenaikan jumlah total tanaman melon Hikapel yang terinfeksi *Begomovirus* secara signifikan; dari yang sebelumnya hanya 20,94% dari jumlah tanaman di lahan B2 yang ditanam pada bulan April 2016 menjadi 57,06% pada lahan C2 yang ditanam bulan Juni 2016.

Kata kunci : Melon, Hikapel, Kemarau basah, *La Nina*, *Begomovirus*.

RESISTANCE OF MELON (*Cucumis melo* L.'Hikapel') AGAINST *BEGOMOVIRUS* AT WET DROUGHT SEASON

Ibnu Sina
11/312659/BI/08578

ABSTRACT

Faculty of Biology Universitas Gadjah Mada had developed a new cultivated variety of melon named 'Hikapel', result of further studies of 'Gama Melon perfume' breeding. One of those challenges in melon production is plant viruses attacks, such as *Begomovirus*. Distribution of *Bemisia tabaci* as vector of *Begomovirus* generally more prevalent during transition towards dry season. In early 2016, Indonesian Beaureau of Meteorology, Climatology, and Geophysics (BMKG) reported that moderate '*La Nina*' will be happen throughout the year in Indonesia, characterized by increased number in average temperatures, relative humidity, and rainfall during dry season. This research studied the impact of '*La Nina*' phenomenon that affect microclimate condition on 'Hikapel' melon cultivation and its resistance against *Begomovirus*. Research was conducted in the area B2, B5, C2 and C5 of Block I at Agro Technology Innovation Center (PIAT) UGM, Sleman, Indonesia from April-August 2016. Observations were conducted on the plants which indicated experiencing severe and moderate *Begomovirus* infection to determine the susceptibility of *Begomovirus* among the sites, ascertained by quantitative assesment of morphological aspects and the number of total DNA obtained within the same amount of leaf tissue. Result shown that there is a significant rise in the total nu mber of infected melon plants; of which were found previously only 20.94% of the number of plants grown at area B2 in April 2016 became 57.06% at area C2 planted in June 2016.

Key words : Melon, Hikapel, *La Nina*, Wet Drought Season,Begomovirus.