

INTISARI

Kapsaisin memiliki peran penting di bidang farmasi atau medis selain sebagai bumbu masak. Kandungan kapsaisin dipengaruhi genotip dan lingkungan pertumbuhan. Penelitian bertujuan untuk mengetahui pengaruh genotip, lingkungan pertumbuhan serta cekaman kekeringan terhadap pertumbuhan, hasil per tanaman, kadar kapsaisin dan aktivitas enzim peroksidase. Percobaan menggunakan rancangan *complete random design* (CRD) faktorial dengan empat kultivar dan tiga lingkungan pertumbuhan dengan empat ulangan. Analisis data menggunakan ANOVA, dilanjutkan dengan kontras ortogonal, dan GGE biplot. Terdapat interaksi antara lingkungan pertumbuhan dan kultivar pada variabel tinggi tanaman, persentase buah jadi (*fruitset*), panjang buah, bobot satu buah, bobot buah per tanaman dan kadar kapsaisin. Kultivar Gada memiliki panjang buah, rerata bobot per buah dan bobot buah per tanaman paling tinggi. Kaliurang merupakan lingkungan pertumbuhan terbaik bagi pertumbuhan dan hasil per tanaman semua kultivar. Pelita memiliki kadar kapsaisin yang lebih rendah daripada kultivar Sona, namun lebih stabil pada tiga lingkungan pertumbuhan. Cekaman kekeringan tidak selalu berdampak pada peningkatan kadar kapsaisin. Tidak terdapat korelasi negatif antara kadar kapsaisin dengan enzim peroksidase pada umur panen buah 80 hari setelah pembungaan (masak fisiologis).

Kata kunci: kadar kapsaisin, cekaman kekeringan, lingkungan pertumbuhan, aktivitas enzim peroksidase

ABSTRACT

Capsaicin had important role in the pharmaceutical or medical field, besides as a food. The content of capsaicin influenced by genotype and environmental growth. This experiment aimed to determine the effect of cultivars, growing environment and drought stress on the growth, yield per plants, capsaisin content and peroxidase activities. Complete random design factorial was used on four cultivars and three environmental growth with four replications. Analysis data was done using ANOVA continued by contrast ortogonal, and GGE biplot. There was an interaction between the growing environment and cultivars on variables plant height, fruitset, fruit's length, weight of the fruit, fruit weight per plant and contents of capsaicin. Gada cultivar had the highest fruit's length, the heaviest average weight of fruit, and fruit weight per plant. Kaliurang was the suitable location for the growth and yield per plant of all cultivars. Although the capsaicin content Pelita was lower comparing than Sona cultivar, Pelita had stable capsaicin on three growing environment. Drought stress was not always resulting in increased contents of capsaicin. There was no negative correlation between the levels of capsaicin and peroxidase activity at the age of 80 days after flowering.

Keywords: capsaicin contents, drought stress, growing environment, peroxidase activity