Intisari

Cabai merah mengalami fluktuasi produksi terutama pada saat musim hujan. Hal tersebut disebabkan oleh lingkungan yang tidak mendukung pertumbuhan optimal berupa kelembaban udara yang tinggi sehingga jamur penyebab antraknosa berkembang. Penelitian ini bertujuan menentukan dosis *pyraclostrobin* dan *fluxapyroxad* yang tepat untuk meningkatkan pertumbuhan dan hasil tanaman cabai (*Capsicum annum* L.) saat musim hujan. Rancangan yang digunakan adalah Rancangan Acak Kelompok Lengkap (RAKL) terdiri dari 6 perlakuan berupa *pyraclostrobin* dan *fluxapyroxad* dosis 150 ml/ha, *pyraclostrobin* dan *fluxapyroxad* dosis 200 ml/ha, *pyraclostrobin* dan *fluxapyroxad* dosis 250 ml/ha, *azoksistrobin* 250 ml/ha, *mankozeb* 1,5 kg/ha, dan kontrol. Terdapat 3 blok sebagai ulangan yang berukuran 14,5 m^2/petak. Aplikasi dilakukan sebanyak 4 kali pada saat fase vegetatif. Variabel pengamatan meliputi tinggi tajuk, lebar tajuk, jumlah cabang, kadar air nisbi, nilai kehijauan daun, kandungan klorofil, kadar Cl, Aktivitas Nitrat Reduktase (ANR), luas daun, Indeks Luas Daun (ILD), Laju Asimilasi Bersih (LAB), Laju Pertumbuhan Tanaman (LPT), bobot kering tanaman, jumlah bunga dan buah, Indeks Panen (IP), bobot dan jumlah buah tiap panen, produktivitas, persentase buah terkena antraknosa, dan susut bobot buah. Data dianalisis dengan analisis varians dengan α = 5%, apabila berbeda nyata antar rerata perlakuan, dilakukan uji lanjut menggunakan HSD-Tukey α = 5%. Hasil penelitian menunjukkan aplikasi *pyraclostrobin* dan *fluxapyroxad* dosis 250 ml/ha pada fase vegetatif meningkatkan LPT 4-8 mst dan LPT 8-12 mst sehingga meningkatkan percepatan tumbuh tinggi tajuk dan lebar tajuk, luas daun 12 mst, ILD 12 mst, bobot kering akar 8 mst, bobot kering tajuk dan bobot kering total 12 mst. Tidak terdapat perbedaan yang signifikan pada kadar klorofil, nilai kehijauan daun, ANR, kadar Cl, LAB, IP, jumlah bunga dan buah, bobot buah dan jumlah buah tiap panen, produktivitas, persentase buah yang terkena antraknosa antar perlakuan. Meskipun demikian, terdapat peningkatan produktivitas sebesar 28,19% dibandingkan kontrol. Kesimpulan dari hasil tersebut adalah aplikasi *pyraclostrobin* dan *fluxapyroxad* dosis 250 ml/ha berpengaruh positif terhadap pertumbuhan tanaman dan meningkatkan produktivitas cabai merah 28,19% terhadap kontrol.

Kata kunci: *pyraclostrobin*, *fluxapyroxad*, *Capsicum annum*, antraknosa.

Abstract

Red-chilli (*Capsicum annum L.*) production was fluctuating in the rainy season because of unfavorable environment such as high humidity. The high air humidity can promote growth of *Colletotrichum capsici* as anthracnose pathogen. This research was conducted to determine the dose of pyraclostrobin and fluxapyroxad which enhance plant growth and yield of red-chilli (*Capsicum annum* L.) in rainy season. Randomized Complete Block Design (RCBD) was used for experimental design with 6 treatments which consist of pyraclostrobin and fluxapyroxad 150 ml/ha, pyraclostrobin and fluxapyroxad 200 ml/ha, pyraclostrobin and fluxapyroxad 250 ml/ha, azoxystrobin 250 ml/ha, mancozeb 1,5 kg/ha and control treatment. Each treatment was replicated in 3 blocks and each plot of 14,5 m^2. The variables observed were plant height, shoot width, number of branches, relative water content, chlorophyll content, chlorine content, Nitrate Reductase Activity (NRA), leaf area, Leaf Area Index (LAI), Net Assimilation Rate (NAR), Crop Growth Rate (CGR), dry weight, number of flowers and fruits, Harvest Index (HI), fresh weight and number of fruits, yield, the percentage of anthracnose-rotten fruits, and fruit weight loss. Statistical analysis of variance was performed on the collected data. Honest Significant Difference (HSD-Tukey) test was used at 0,05 level of probability to test the difference between treatments means. The results showed that pyraclostrobin and fluxapyroxad 250 ml/ha treatment was able to promote CGR that increase plant height, shoot width, leaf area, LAI, produce a high dry weight of root at 8 weeks after planting (wap), shoot dry weight and total dry weight at 12 wap. However, there were no significant differences among treatments in chlorophyll content, relative water content, chlorine content, NRA, NAR, HI, the number of flowers and fruits, fresh weight of fruit and number of fruit every harvest, yield, and the percentage of anthracnose-rotten fruits, but increase fruit weight loss. Nevertheless, the yield could increase approximately 28,19% compared to control. In conclusion, pyraclostrobin and fluxapyroxad 250 ml/ha treatment promoted plant growth and increased the yield of red-chilli compared to control.

Keywords: pyraclostrobin, fluxapyroxad, *Capsicum annum*, anthracnose.