INTISARI

POTENSI PENURUNAN HASIL PANEN AKIBAT PENYAKIT KERDIL PADA VARIETAS INPARI 32 PADA DUA MUSIM TANAM BERURUTAN DI WILAYAH KLATEN, JAWA TENGAH

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Penyakit kerdil padi yang disebabkan oleh *Rice grassy stunt virus* (RGSV) dan *Rice ragged stunt virus* (RRSV) saat ini semakin banyak ditemukan di Indonesia. Penyakit ditularkan wereng batang coklat (WBC) secara presisten. Tanaman yang terserang menjadi kerdil sehingga berpotensi dapat menurunkan produksi bahkan dapat menyebabkan gagal panen. Penelitian ini bertujuan untuk mengetahui pengaruh keberadaan WBC terhadap perkembangan penyakit kerdil dan hasil panen selama dua kali musim tanam secara berurutan pada varietas Inpari 32 di Klaten, Jawa Tengah. Parameter yang diamati yaitu tinggi tanaman, jumlah anakan, jumlah malai, jumah cabang malai, panjang malai, berat basah, berat kering, berat 100 butir berat total, populasi WBC, musuh alaminya, insidensi dan intensitas penyakit dan kehilangan hasil panen. Hasil penelitian menunjukkan pertumbuhan tanaman pada musim kemarau lebih baik dibandingkan pada musim penghujan. Populasi WBC pada musim kemarau berjumlah 0,2-4 ekor/rumpun atau lebih rendah dibanding pada musim penghujan yang berjumlah 0,43-4,4 ekor/rumpun. Pada musim kemarau insidensi dan intensitas penyakit kerdil mencapai 76,67% dan 39,58% lebih rendah dibandingkan musim penghujan yang mencapai 81% dan 40,83%. Terdapat perbedaan jumlah malai, panjang malai, jumlah cabang malai, jumlah butir per malai, berat basah butir bernas, berat kering butir bernas, berat basah butir hampa, berat kering butir hampa, berat 100 butir dan berat total panen pada tingkat keparahan gejala penyakit yang ditimbulkan. Analisis regresi linier menunjukkan terjadi penurunan hasil panen pada tingkat keparahan yang berbeda selama dua musim tanam. Kehilangan hasil pada musim tanam 2 atau penghujan lebih tingggi dibandingkan musim tanam 1 atau kemarau. Pada musim kemarau tampak hubungan linier $y = -0,3743x + 1,5723$; $R^2 = 0,9679$ untuk kehilangan hasil pada tingkat serangan ringan 18,84%, sedang 32,81%, berat 74,25% dan puso 97,10%. Sedangkan pada musim penghujan tampak hubungan linier $y = -0,3193x + 1,3779$; $R^2 = 0,9378$ untuk kehilangan hasil pada tingkat serangan ringan 20,11%, sedang 33,09%, berat 75,27% dan puso 97,42% sehingga tinggi tingkat keparahan penyakit semakin tinggi kehilangan hasil yang ditimbulkan. Pada musim tanam kedua atau musim penghujan terjadi penurunan hasil gabah kering panen sekitar 10,95% dan gabah kering giling sekitar 10,81%.

Kata Kunci: Inpari 32, kehilangan hasil, hasil panen, penyakit kerdil, keparahan penyakit, WBC

ABSTRACT

POTENTIAL OF DECREASING YIELDS DUE TO DWARF DISEASE IN INPARI 32 VARIETY IN TWO SEQUENTIAL GROWING SEASONS IN THE KLATEN REGION, CENTRAL JAVA

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Rice dwarf disease caused by Rice grassy stunt virus (RGSV) and Rice ragged stunt virus (RRSV) is now increasingly being found in Indonesia. The Infectious disease of brown planthopper (BPH) is persistent. Affected plants become stunted so which can reduce production and even cause crop failure. This study aims to determine the effect of the presence of BPH on the development of dwarf disease and yields during two consecutive growing seasons on the Inpari 32 variety in Klaten, Central Java. Parameters observed were plant height, number of tillers, number of panicles, number of panicle branches, panicle length, wet weight, dry weight, the total weight of 100 grains, BPH population, natural enemies, incidence, and intensity of the disease, and yield loss. The results showed that plant growth in the dry season was better than in the rainy season. The population of WBC in the dry season reached 0.2-4 individual/hill or lower than in the rainy season which reached 0.43-4.4 individual/hill. In the dry season, the incidence and intensity of dwarf disease reached 76.67% and 39.58% lower than in the rainy season which reached 81% and 40.83%, respectively. There were differences in the number of panicles, panicle length, number of panicle branches, number of grains per panicle, wet weight of pithy grains, dry weight of pithy grains, dry weight of hollow grains, dry weight of grains, the weight of 100 grains and a total weight of harvest on the severity of disease symptoms caused. Linear regression analysis showed a decrease in crop yields at different severity during the two growing seasons. Yield loss in planting season 2 or rainy season is higher than in planting season 1 or dry season. In the dry season, there is a linear relationship $y = -0.3743x + 1.5723$; $R^2 = 0.9679$ for yield loss at mild attack rate of 18.84%, moderate 32.81%, severe 74.25% and crop failure 97.10%. Meanwhile, in the rainy season, there is a linear relationship with $y = -0.3193x + 1.3779$; $R^2 = 0.9378$ for yield loss at the level of mild attack 20.11%, moderate 33.09%, severe 75.27%, and crop failure 97.42% so the higher the severity of the resulting loss. In the second planting season or rainy season, there was a decrease in dry harvest yields of about 10.95% and milled dry yields of around 10.81%.

Keywords: *Inpari 32, yield loss, crop yield, dwarf disease, disease severity, BPH*