INTISARI

POLA PEWARISAN KETAHANAN TANAMAN CABAI (*Capsicum annuum* L.)
DARI PERSILANGAN BISI HP 17627 DAN BISI HP 17628
TERHADAP *BEGOMOVIRUS* PepYLCIV

Penggunaan varietas cabai yang tahan terhadap penyakit akibat PepYLCIV merupakan salah satu cara pengendalian penyakit virus kuning keriting yang efektif. Perakitan varietas cabai tahan virus memerlukan informasi genetik mengenai sifat ketahanan. Penelitian ini bertujuan untuk mengetahui tingkat keparahan penyakit, besaran nilai potensi rasio (hp), pola pewarisan, interaksi gen, dan nilai duga heritabilitas arti sempit (h^2_{ns}) pada sifat ketahanan tanaman cabai terhadap infeksi *Begomovirus* spesies PepYLCIV. Masing-masing populasi P1, P2, dan F1 ditanam sebanyak 90 tanaman, F1 Resiprok sebanyak 50 tanaman, BCP1 dan BCP2 sebanyak 188 tanaman dan F2 sebanyak 426 tanaman. Hasil penelitian menunjukkan bahwa populasi P1 termasuk ke dalam kategori ketahanan imun (*immune*) dengan nilai keparahan penyakit 0 %. Populasi P2 termasuk ke dalam kategori rentan (*susceptible*) dengan nilai keparahan penyakit 32,01%. Persilangan galur P1 dengan P2 menghasilkan 2 kultivar F1 dengan nilai keparahan penyakit 29,26% dan F1 Resiprok dengan nilai keparahan penyakit 28,57% yang masuk ke dalam kategori rentan (*susceptible*). Nilai potensi rasio populasi F1 sebesar 0,83 dengan aksi gen rentan yang bersifat dominan tidak sempurna. Pola pewarisan gen ketahanan menghasilkan nisbah 1 tahan : 3 rentan sehingga sifat tahan dikendalikan gen resesif. Nilai dugaan heritabilitas arti sempit pada populasi uji sebesar 0,77 termasuk ke dalam kategori heritabilitas tinggi.

Kata kunci: PepYLCV, pola pewarisan, heritabilitas arti sempit, ketahanan.

Abstract

INHERITANCE PATTERN OF CHILI PEPPER (Capsicum annuum L.) CROSS BETWEEN BISI HP 17627 AND BISI HP 17628 ON BEGOMOVIRUS PepYLCIV RESISTANCE

The use of chili varieties with resistance to diseases caused by PepYLCIV is a way to effectively control yellow leaf curl virus disease. Assembling viruses resistant variety requires genetic information on resistance traits. This study aims to determine the severity of disease, the value of the potential ratio (hp), inheritance patterns, gene interactions, and the estimated value of narrow sense heritability (h^2_{ns}) in the trait of chili resistance to Begomovirus species PepYLCIV. Each population P1, P2, and F1 was planted with 90 plants, F1 Reciprocal was planted with 50 plants, BCP1 and BCP2 with 188 plants and F2 with 426 plants. The results showed that the P1 population was included in the immune category with a disease severity value of 0%. The P2 population was included in the susceptible category with a disease severity value of 32,01%. The crossbreeding between P1 and P2 produced F1 and F1 Reciprocal offspring with disease severity values of 29,26% and 28,57% are included in the susceptible category. The potential ratio value of F1 population is 0,83 with incomplete dominant gene action. The inheritance pattern of resistance genes produced a ratio of 1 resistant : 3 susceptible, where the resistance trait is controlled by a recessive gene. The estimated value of narrow sense heritability in the test population 0,77 included in the high heritability category.

Key words: PepYLCV, inheritance pattern, narrow sense heritability, resistance.