

INTISARI

Cucurbit aphid-borne yellows virus (CABYV) yang menginfeksi tanaman peria ditandai dengan munculnya gejala pada daun tua daun melengkung ke bawah, tulang daun menebal, dan daun mulai menguning. Gejala berlanjut dengan berubahnya hampir seluruh daun menjadi berwarna kuning dibatasi pertulangan daun yang berwarna hijau. Pada daun muda, gejala berupa daun tampak menebal disertai penebalan tulang daun. Selanjutnya diikuti oleh abnormalitas daun seperti daun mengerut, berukuran lebih kecil dan lebih tebal, serta tanaman menjadi kerdil. Penelitian ini bermaksud untuk memperoleh strategi perakitan kultivar peria tahan CABYV melalui introgresi dari sumber ketahanan BGV18024. Penelitian ini bertujuan untuk menentukan model pewarisan ketahanan ini. Populasi uji terdiri dari tetua rentan BGV18001 (P1) dan tetua tahan BGV18024 (P2), serta generasi F1, F2, BC1.1 dan BC1.2 hasil persilangan dari tetua tersebut. Penapisan ketahanan dilakukan dalam lingkungan terkendali melalui inokulasi populasi uji dengan inokulum terinfeksi tunggal CABYV. Hasil Penapisan ketahanan menunjukkan bahwa galur BGV18024 (P2) memiliki derajat ketahanan agak tahan, dan galur BGV18001 (P1) memiliki derajat ketahanan sangat rentan. Diasumsikan, genotipe P2 adalah *aabbCC* dan genotipe P1 adalah *AABBcc*. Locus C dapat dianggap sebagai “gen utama”. Populasi generasi F1 memiliki genotipe *AaBbCc*. Populasi generasi F2 bersegregasi dengan nisbah 62R:2T. Nisbah generasi F2 diperoleh melalui pengelompokan jumlah tanaman berdasarkan skor progresi. Maka diasumsikan bahwa, ketahanan BGV18024 terhadap CABYV dikendalikan oleh tiga gen, yaitu dua gen ketahanan bersifat resesif dan satu gen promoter utama yang bersifat dominan.

Kata kunci : ketahanan, peria, *Cucurbit aphid-borne yellows virus* (CABYV), pewarisan, gen

ABSTRACT

Cucurbit aphid-borne yellows virus (CABYV), which infects bitter gourd plants, is characterized by the appearance of symptoms on old leaves, the leaves curl downward, the veins thicken, and the leaves begin to turn yellow. Symptoms continue with the change of almost all the leaves to yellow, bordered by green leaf bones. On young leaves, symptoms include thickened leaves accompanied by thickening of the leaf veins. This is followed by leaf abnormalities such as shriveled leaves, smaller and thicker sizes, and plants becoming stunted. This research aims to develop a strategy for assembling CABYV-resistant bitter gourd cultivars through introgressions of the BGV18024 resistance source. This research aims to determine the inheritance model of this resilience. The test population consisted of susceptible parents BGV18001 (P1) and resistant parents BGV18024 (P2), as well as the F1, F2, BC1.1 and BC1.2 generations resulting from crosses from these parents. Resistance screening is performed in a controlled environment through inoculation of the test population with a single CABYV-infected inoculum. The results of resistance screening showed that the BGV18024 (P2) strain had a moderately resistant degree of resistance, and the BGV18001 (P1) strain had a very susceptible degree of resistance. It is assumed that the P2 genotype is *aabbCC* and the P1 genotype is *AABBcc*. The *C* locus can be considered a “main gene”. The F1 generation population has the genotype *AaBbCc*. The F2 generation population segregates with a ratio of 62R:2T. The F2 generation ratio is obtained by grouping the number of plants based on the progression score. So it is assumed that BGV18024's resistance to CABYV is controlled by three genes, namely two resistance genes which are recessive and one main promoter gene which is dominant.

Keywords : resistance, bitter gourd, *Cucurbit aphid-borne yellows virus* (CABYV), inheritance, genes