INTISARI

Bemisia tabaci adalah salah satu faktor pembatas usahatani cabai, karena merusak secara langsung maupun tidak langsung sebagai vektor virus *Pepper Yellow Leaf Curl Virus* (PYLCV). Penanaman tanaman jagung sebagai tanaman pembatas adalah salah satu upaya pengendalian *B. tabaci*. Secara fisik, tanaman jagung mampu menahan kehadiran *B. tabaci*, di samping menghasilkan senyawa volatil yang bersifat repelen. Penelitian ini dilakukan untuk mengetahui umur tanaman jagung yang optimal untuk mendampingi tanaman cabai dan kandungan senyawa volatil tanaman jagung yang bersifat sebagai penolak *B. tabaci*. Penelitian dilakukan di Wonokromo, Pleret, Bantul dengan menguji lima perlakuan umur jagung: 2 MST, 6 MST, 8 MST, 10 MST dan kontrol (tanpa didampingi tanaman jagung). Pengamatan populasi *B. tabaci* dilakukan setiap 5 hari sekali dengan menghitung jumlah *B. tabaci* yang tertangkap pada perangkap. Hasil penelitian menunjukkan bahwa populasi *B. tabaci* pada petak cabai yang didampingi dengan jagung lebih rendah dibandingkan pada petak kontrol, terutama pada umur jagung 6 MST. Namun, tanaman jagung tidak berpengaruh nyata pada insidensi penyakit kuning pada cabai. Hasil analisis GC-MS menunjukkan bahwa semua perlakuan umur tanaman jagung menghasilkan senyawa volatil yang dapat menolak *B. tabaci* antara lain: Methyl Alcohol, Hydrazine, Benzeneethanamine, 3-fluoro-ß,5-dihydroxy-N-methyl-, Hydrazinecarboxamide, dan 1-Pentanol, 4-amino-.

Kata Kunci: *Bemisia tabaci*, cabai merah, jagung, senyawa penolak, tanaman pembatas

ABSTRACT

Bemisia tabaci is one of the limiting factors in chili because it can cause damage both directly and indirectly as a vector for the Pepper Yellow Leaf Curl Virus (PYLCV). Planting corn as a border crop is one of the ways to control *B. tabaci*. Physically, corn plants can withstand the presence of *B. tabaci*, in addition to producing volatile compounds that are repellent to *B. tabaci*. This research was conducted to determine the optimal age of corn plants to support chili plants and the content of volatile compounds in corn plants that act as *B. tabaci* repellents. The research was conducted in Pleret District, Bantul Regency by testing five different ages of corn: 2 weeks after planting, 6 weeks after planting, 8 weeks after planting, 10 weeks after planting and control (without intercropping with corn). Observation of *B. tabaci* population was carried out every 5 days by counting the number of *B. tabaci* caught in the traps. The results showed that the population of *B. tabaci* in the chili plots accompanied by corn crops was lower than in the control plots, especially when the corn was 6 WAP. However, the intercropping of chilies and corn had no significant effect on the incidence of yellow disease in chilies. The results of the GC-MS analysis showed that all the age treatments of the corn plants produced volatile compounds that could resist *B. tabaci*, including Methyl Alcohol, Hydrazine, Benzeneethanamine, 3-fluoro-ß,5-dihydroxy-N-methyl-, Hydrazinecarboxamide, and 1 -Pentanol, 4-amino-.

Keywords: *Bemisia tabaci*, red chili, corn crop, repellent compound, planting barrier