

Early Studies on the Effectiveness of Mating Disruption Technique against *Lobesia botrana* Den.-Schiff. in the Seedless Sultana Vineyards of the Aegean Region in Turkey

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The technique of Mating disruption has been applied against *Lobesia botrana* in the vineyards of Menemen District, Izmir Province in 1999, 2000 and 2001, and in a vineyard of Manisa Province in 2001. Quant Lb dispensers by BASF, Germany containing 350 mg pheromone in each were installed in 1,7 ha-Round seedless Sultana vineyard to the wires of trellising with 6 m intervals on the rows ($3,2 \text{ m} \times 6 \text{ m} \cong 20 \text{ m}^2/1$ dispenser in the center) and 2 m intervals on the borders, when the first adult captured in comparison vineyard (C₁) on 25 March 1999. *Bacillus thuringiensis* applications have been required three times due to the rapid increase of fruit infestation. Infestation rates were found as 21,6 % in MD₁ and 14 % in C₁ vineyard at the final assessment before harvest. Although the first adult was captured in C₁ vineyard on 27 March 2000, RAK 2 R dispensers by BASF could not have been installed to MD₁, MD₂ and MD₃ due to an unexpected delay in delivering. The dispensers containing 500 mg pheromone in each were installed to the shadowy parts of shoots at 6 m intervals on each three rows ($9,6 \text{ m} \times 6 \text{ m} \cong 57,6 \text{ m}^2/1$ dispenser in the center) and 2 m intervals on the borders on 17 May 2000. After two *Bacillus* applications against 1st and 2nd generations plus MD application, infestation rates were found as 0,55, 0,5 and 0,65 % in MD₁, MD₂ and MD₃ at the end of 3rd generation (31.7.2000), respectively. When compared to the rate of C₁ vineyard (2 %), the results obtained from MD technique were excellent. Because, no insecticide application was made in these vineyards against the 3rd and 4th generations of the pest. Infestation rates were found as 4,05, 3 and 3 % in MD₁, MD₂ and MD₃, and 0 % in C₁ vineyard at the final assessment before harvest on 21st of August. Isonet-L dispensers by Shin-Etsu, Japan containing 172 mg pheromone in each had been installed on March 27 at 6 m intervals on each row (1 dispenser/20 m²) and 2 m intervals on the borders, since the first adult was captured in MD₄ vineyard on the same date. In spite of the fact that no insecticide application was made against *Lobesia botrana* in MD₄ vineyard, the infestation rates of 1st, 2nd, 3rd generations and final assessment were 3, 0,8, 0,5 and 4 %, respectively. These values are found as acceptable because of they are very next to economical threshold level (1%). The first adult was captured on 26 March 2001. Accordingly, RAK 2 R dispensers were installed on 02 April 2001. Three *Bacillus thuringiensis* applications were required against 2nd, 3rd and 4th generations of EGVM in RAK 2 R vineyards. The infestation rates were found as 16,5 %, 9,5 %, 9,5 % and 15,5 % in MD₁, MD₂, MD₃ and MD₄ vineyards at the harvest, respectively. The infestation rates of MD vineyards were quite higher. Accordingly, it has been concluded that RAK 2 R dispensers is not effective on the control of EGVM as a single method. Since the first adult was captured in MD₇ vineyard in Manisa Province on March 22 and in MD₆ vineyard (coded as MD₄ in 2000) in Izmir Province on March 26, Isonet-L dispensers had been installed on the same date. No insecticide application was made against *Lobesia botrana* in MD₆ vineyard and MD₇ vineyard where Isonet-L dispensers had been installed. The infestation rates of 1st, 2nd, 3rd generations and final assessment in MD₆ were 0,35 %, 0 %, 0 % and 7,69 % in 2001, respectively. The infestation rates of 1st, 2nd, 3rd generations and final assessment in MD₇ were 0 %, 0,55 %, 0 % and 0,66 % in 2001, respectively. The infestation rates were 0 %, 1 %, 0 % and 2 % in C₂ vineyard. These values are found as acceptable because of they are very next to economical threshold level (1%). As a conclusion, Isonet-L dispensers can be used against *Lobesia botrana* as a single method in the raisin-aimed vineyards.