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# Effect of synthetıc insectıcıdes and botanıcal extract agaınst whıtefly, *Bemısıa tabacı (*Gennadıus*)* (Hemıptera: Aleyrodıdae) in dıfferent okra varıetıes

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## Abstract

The whitefly, *Bemisia tabaci*, is a major pest of okra (*Abelmoschus esculentus*), causing significant yield losses. Therefore this study was designed to evaluate the population dynamics of *B. tabaci* and the efficacy of synthetic insecticides and neem seed extract in different okra varieties during 2024. In the first experiment, the population trend of *B. tabaci* was monitored in five okra varieties: Marvi, Viraj, Sabz Pari, Green Finger, and Advanta. In this experiment, the infestation started in late May, peaked in late July (6.21 whiteflies per leaf), and declined by early September. Green Finger exhibited the lowest infestation (2.08 whiteflies per leaf), while Viraj had the highest (4.05 whiteflies per leaf). Green Finger also recorded the highest yield (6064.4 kg/ha), whereas Viraj had the lowest (1834.8 kg/ha). In the second experiment, synthetic insecticides (Cypermethrin and Acetamiprid) and neem seed extract were evaluated. Acetamiprid was the most effective, reducing *B. tabaci* populations to 1.58 and 1.56 whiteflies per leaf after the first and second sprays, respectively. Neem seed extract also suppressed whitefly populations (4.79 and 4.84 whiteflies per leaf). Acetamiprid resulted in the highest yield (2984 kg/ha) and cost-benefit ratio (26.52), followed by Cypermethrin (22.26) and neem seed extract (19.69). Green Finger showed higher resistance to *B. tabaci*, while Acetamiprid and neem seed extract effectively reduced infestation. The study concluded that these treatments should be integrated into pest management strategies to improve okra productivity.

*Key Words: Bemisia tabaci, Okra, Insecticides, Neem seed extract, Pest management*