

Efficacy of phytochemicals against the sucking pests of okra *Abelmoschus esculents* (L) Moench

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The field experiments conducted during 2005-06 at PAJANCOA & RI, Karaikal with Arka anamika okra variety to study the efficacy of botanicals on the sucking pests with ten treatments in three replications. In the first crop the population of aphid was less in NSKE 5 per cent (2.59), neem oil 3 per cent (3.33) and notchi leaf 5 per cent (4.53). Jassid and whitefly population was less in neem oil 3 per cent (0.25 and 0.38). Similar trend was also noticed in the second crop. The maximum yield was recorded in NSKE 5 percent (9892.12, 9325.72 kg ha⁻¹) as against in control (5800.00 and 5916.67 kg ha⁻¹) in the first and second crop, respectively. Among the botanicals the NSKE registered highest B:C ratio of 2.28 and 2.15 in the first and second crop, respectively.

Key words : Botanicals, Okra, B:C ratio.

INTRODUCTION

Okra [*Abelmoschus esculentus* (L) Moench] is the most popular vegetable crop in India is subject to the ravages of the sucking pest complex of jassids, aphids and whiteflies resulting in economic yield loss to the growers. In India, okra is cultivated in an area of 3.26 lakh ha with an annual production of 33.80 lakh tonnes (Thamburaj and Singh, 2002). In U.T. of Puducherry, it is being cultivated in an area of 144 acres with a production of 1152 tonnes (Anon, 2004). But the production and yield of this valued crop is often hampered, as it is susceptible to various insect pests from early stage to maturity. Among the wide array of insect pests infesting okra crop, the sucking pests viz., aphid (*Aphis gossypii* Glover), leafhopper (*Amrasca biguttula biguttula* Ishida) and whitefly (*Bemesia tabaci* Gennadius) are quite serious (Nair, 1976).

MATERIALS AND METHODS

Two field experiments were conducted in 2005-06. Both the trials were carried out in PAJANCOA & RI, Karaikal, U.T. of Puducherry. The experiment was laid out in a simple Randomized Block Design (RBD) with three replications and ten treatments under irrigated conditions using Arka anamika as the test variety.

The cultivation practices for raising the crop were followed as per the crop production guide on vegetable culture (Veeraragavathatham *et al.*, 1998) except for pest management practices. Four foliar spray applications of

the test treatments were given at fortnight intervals (20th, 35th, 50th and 65th days after sowing). Assessment of sucking pests viz., leafhopper, aphid and whiteflies were made on three leaves (3rd, 5th and 7th leaf from top) in each of the ten randomly selected plants per plot and expressed as number/three leaves. The data analysed statistically are presented in Table 1 and 2.

RESULTS AND DISCUSSION

The data on the efficacy of different botanicals against the sucking pests of okra are furnished in Table 1 and 2. The two experimental data revealed that the application of botanicals was found to be better in reducing the population of sucking pests in okra and increased in yield as compared to the control. In the present study the results of over all mean of four sprays were furnished along with reduction over the control. The aphid population was less in carbaryl treatment (1.86) followed by NSKE 5 per cent (2.59), neem oil 3 per cent (3.33) and notchi leaf 5 per cent (4.53). The reduction over control ranged from 49.97 to 89.33 per cent. The population density of jassids were less in neem oil 3 per cent (0.25) followed by carbaryl 0.1 per cent (0.34) and NSKE 5 per cent (0.38). They were at par with each other. The kottaikaranthai leaf 5 per cent recorded 0.51 as against 5.60 in control. The reduction over control ranged from 66.61 to 95.54. The population of whitefly was minimum in neem oil 3 per cent (0.38) followed by NSKE 5 percent (0.48) and carbaryl 0.1 per cent (0.62). The reduction over control ranged from 45.53 to 86.90.

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