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Field evaluation for bio-efficacy of fenpyroximate 5 EC against leaf hopper and spider mite infesting cotton and their safety to natural enemies

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ABSTRACT : Fenpyroximate 5 EC at two different doses *viz.*, 25 and 37.5 g a.i. /ha along with imidacloprid 17.8 SL (20 g a.i. / ha) and dicofol 18.5 EC (500 g a.i. /ha) as standard checks for leaf hoppers and spider mites, respectively, were evaluated for bio-efficacy under field condition during *Kharif* 2012-13 and 2013-14. After three rounds of spraying initiating at ETL of leaf hopper (> 6 / 3 leaves) at 15 days interval, fenpyroximate 5 EC at both the doses @ 25 g a.i. /ha and 37.5 g a.i. / ha were found as effective as standard check imidacloprid 17.8 SL in leaf hopper control. For spider mites, fenpyroximate @ 37.5 g a.i. / ha was found as effective as standard check dicofol 18.5 EC sprayed twice at 15 days interval when mite populations was moderate (>10 mites/ leaf) during later stage of the crop. Between the two doses of fenpyroximate, lower dose (25 g a.i. / ha) was better for predator populations. Maximum seed cotton yield was obtained in fenpyroximate 5 EC @ 25 g a.i. / ha. No phytotoxicity symptoms were formed at higher dose *viz.*, 37.5, 75 and 150 g a.i. /ha.

Key **W**ords : Cotton, Fenpyroximate, Imidacloprid, Dicofol, Leafhoppers, Spider mites, Predators

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