

Harnessing Yellow Sticky Traps: Revolutionizing Integrated Pest Management

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Sticky traps are used as one of the effective IPM strategy for different insect pests. They provide an easy method for estimation of pest population density. In monitoring program before the observation of damage to plant, sticky traps provide an early warning of pest presence which is helpful for developing an environment friendly and safer control strategy. Keeping in view the importance of sticky traps ICAR-KVK, Dharwad has started producing traps and supplying to the farmers from 2020-21.

Technological Interventions

Process: Yellow sticky traps are efficient to monitor population densities of day-flying insects that respond to the yellow color. A number of insect species (aphids, whitefly, flea beetles, Leaf hoppers, leaf minors and some moths) are attracted by yellow color. If a yellow-colored card/sheet (1.5 ft X 1.0 ft size) is placed in a crop field, these flying insects will attempt to land on it. Covering the surface with a non-drying glue or with grease will immobilize and kill these insects. They can also be used as a control measure for these insects, but that requires placing a large number of traps inside the field.

Technology: yellow sticky traps can be used as an effective method for the monitoring and control of aphids, whitefly, flea beetles, Leaf hoppers, leaf minors and some moths in the greenhouse/Playhouse and fields. A number of insect species are attracted by yellow color. These flying insects attempt to land on it

and then insect body stick on to the trap. They are unable to fly and their body parts were damaged due to stickiness of the trap. by taking into the consideration of insect counts per square meter area of the trap farmers can initiate insect management practices.

Impact of technology

The installation of yellow sticky traps as part of pest management strategies yields multifaceted benefits, significantly impacting agricultural practices and outcomes.

1. **Reduced Pesticide Usage:** Through the estimation provided by sticky traps, farmers can make informed decisions regarding pest control measures. This often leads to a reduction in pesticide application. By minimizing pesticide usage, farmers not only save on input costs but also contribute to environmental conservation and human health by decreasing exposure to harmful chemicals.
2. **Cost Savings and Worker Safety:** Less reliance on pesticides translates to reduced input costs for farmers. Moreover, with fewer pesticide applications, there is a decreased risk of workers being exposed to these chemicals, promoting safer working conditions. This is particularly crucial for farm laborers who are often at the forefront of pesticide application activities.
3. **Mitigation of Pesticide-Induced Phytotoxicity:** Excessive pesticide application can lead to phytotoxicity, negatively impacting plant health and yield. By utilizing sticky traps to monitor and manage pest populations, farmers can avoid over-application of pesticides, thus minimizing the risk of phytotoxicity and ensuring healthier crop development.
4. **Enhanced Monitoring and Detection:** Sticky traps serve as continuous monitoring tools, offering round-the-clock surveillance for crawling insects. This proactive approach enables farmers to detect pest infestations early, preventing potential crop damage and minimizing yield losses. Additionally, sticky traps are effective in detecting pests during nocturnal periods or times when human presence is minimal, enhancing pest control inspections' efficiency.

5. **Economic Affordability and Accessibility:** Yellow sticky traps are economically feasible due to their low cost and minimal requirement for technical expertise in installation and maintenance. This accessibility makes them suitable for adoption by farmers across diverse agricultural landscapes, empowering them with a practical and cost-effective pest management solution.



Horizontal Spread

In a proactive initiative, ICAR-Krishi Vigyan Kendra (KVK), Dharwad, has not only motivated but also trained over 50 farmers in the art of on-farm production of sticky traps for effective insect pest management. This pioneering endeavor, spearheaded by KVK, targeted farmers from the operational areas of Dharwad and Kalaghatagi taluks within Dharwad district.

The selected farmers predominantly cultivate fruits such as mango, flowers including chrysanthemum and aster, and a variety of vegetables like tomato, chilli, cucumber, and okra. Among the 50 trainees, seven enterprising farmers have already initiated their own trap production, utilizing them effectively in their farming operations.

Furthermore, KVK has facilitated the production and sale of over 5000 traps to farmers until the end of 2023. Notably, during the summer season of 2023-24, a collective effort by mango-producing farmers in Dharwad district led to the production of more than 1500 traps. These traps were deployed specifically to combat the menace of leaf hoppers in mango orchards, showcasing the practical application and success of the initiative.



This grassroots movement highlights a significant shift towards sustainable pest management practices, empowering farmers with the knowledge and tools necessary to mitigate pest pressures effectively. Through collaborative efforts and skill development, ICAR-KVK, Dharwad, continues to be at the forefront of fostering innovation and resilience in agricultural communities.

Economic gains: Recommended 10 traps/ acre, each trap cost is Rs. 25, which could save around Rs.350-700 when they produce at house hold level using yellow color fertilizer bag and white grease. However, additional Rs.1500/acre can be saved by reducing 1-2 application of pesticide.

Employment Generation: The family members are involved in preparing traps during free time. Preparation of traps made them tension free, gave physical exercise and satisfaction of reducing cost of cultivation and increasing the net return.

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