

Taking a leaf from the book of ancient, time-tested practices



Effective solution: The formulations can be easily prepared and no big investment is required

Well before modern science had invented crop growing strategies and pest control measures, Indian farmers were growing crops successfully and at the same time were able to control crop infestations using traditional methods which were handed down to successive generations by word of mouth.

Though the traditional methods may vary from place to place, their efficiency in terms of pest control has been proven and accepted by those who use them. For example in Kozhikottu pothai, a small village in Kanyakumari district, Tamil Nadu, several farmers are using one or more of the traditional formulations for managing pest menace to their crops.

Effective remedies

“These preparations can serve as a quick remedy to temporarily stop the increasing incidence of crop pests and also help farmers to phase out their dependence on chemical pesticides, which in turn will prevent them from sinking into debts,” said Mr. S. Aravindan, Social scientist, Vivekananda Kendra-Natural Resources Development Project, Kanyakumari.

Easy availability

The main reason for their popularity among farmers is that the items necessary for making them are easily available, not much investment is required to prepare them and lastly they have been found effective, he explained.

Farmers use a pest repellent made from papaya leaves. It is made by soaking about one kg of papaya leaves in water (the entire leaves should be submerged) overnight. The leaves are then ground and mixed in a litre of water and sprayed over the crops. Pungamia extract (*Pungam* in Tamil) can be made by four different methods. The first is by soaking one kg of Pungamia overnight in water. It is then ground and mixed in about 5 litres of water and sprayed. The second is by grinding about 50 gms of Pungamia seeds and soaking them in a bucket of water overnight.

About one litre of water is added to it later and used. In the third method, take about 100 gm of Pungamia oil cake and soak it in water for some time and then add about 1 litre water to it and then spray. In the last method about 1 kg of Pungamia oil cake and neem oil cake each are mixed. Half a litre of aloe vera juice and 3 litres of cow-urine are added to it. The mixture is soaked in 15 litres of water overnight. About 6 litres of this mixture is filtered and diluted in 60 litres of water and sprayed. Tulsi leaves are also commonly used by the farmers to protect their crops from pest and infestations.

About 100 gm of Tulsi leaves are soaked in water overnight. Next day, about 2 litres of water is added to it and the concoction sprayed. Similarly, about 1 kg of turmeric tubers are soaked in about 10 litres of cow's urine overnight. Next day the turmeric tubers are ground and mixed with 30 litres of water and sprayed.

Similarly neem extract is made by three different methods. In the first method about 6 kg of neem leaves are soaked overnight in water. The next day the leaves are ground and added to about 60 litres of water and sprayed. In the second method about 3 kg of neem seeds is soaked in water overnight. It is ground into a paste the next day and mixed in about 60 litres of water and sprayed over the crops.

In the third method, about 6 kg of neem oil cake is ground well and soaked overnight and mixed in 60 litres of water and then used as a spray. Another common leaf based extract made by the farmers is *moodru ilai karaisal* (three leaf formulation) It is made by soaking about 3 kg each of Calotropis (*Yerukku* in Tamil), Neem (*Vembu* in Tamil) and Vitex (*Nochi* in Tamil) in about 3 litres of cow's urine diluted in 2 litres water overnight. Next day this solution is filtered and diluted in about 60 litres of water and sprayed. Usually the leaf extracts are filtered with a clean cotton cloth and about 4 gm Khadhi soap solution are added per litre of the solution and then sprayed.

Traditional knowledge

"Though these formulations have been proven to be effective by the farmers who use them, it should be remembered that all these formulations are not scientifically validated. Their use is mainly based on traditional knowledge which is prevalent in that particular area or region and can vary from place to place and pest to pest."

All the above leaf based extracts have been found effective in controlling stem borer, aswini, leaf roller, cotton bollworms, ear head bugs and thrips, according to Mr. Aravindan.

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