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An Eco-Friendly Approach to Repel Away Wild Boar

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Abstract

Wild boar (*Sus scrofa* L.), is the utmost communal native species of wildlife to bring about plants injury. It may destroy to agricultural crops by crushing or eating of plants. In several dwellings, wild boars are deliberated a pest species for the reason that these harm to crops and even spread infections to livestock and human. The incidence of damage was very high in crop fields adjacent to forest areas. Hence, attempts were made at Agriculture Research Station, Virinjipuram, Vellore district and identified the compounds that repel the wild boar from crop zone. Thus, the herbal product developed has reached almost all the districts of Tamil Nadu and also gaining its importance in adjacent states viz., Telangana, Andhra Pradesh and Kerala. Hence, the spread of this herbal product throughout Tamil Nadu and area protected for wild boar for a period of one year 2020 in Tamil Nadu was investigated.

Introduction

Agricultural production in India is mainly affected by insect pests, plant diseases and weed plants to a greater extent. In the recent times fauna mainly consisting of mammals with special reference to rodents, wild boars and monkeys started gaining pest status and in certain cases a huge damage is being encountered due to some of these vertebrate pests. Among them, nowadays wild boar has become regular menace for farmers in various crops viz., Maize (*Zea mays*), Groundnut (*Arachis hypogea*), Sorghum (*Sorghum vulgare*), Rice (*Oryza sativa*), pulses and vegetable crops and damaged between 10-75%, 5-56%, 5-30%, 10-35%, 5-20%, 10-30%, respectively. Over 400 species of plants have been recorded in the wild boar's diet among which 40 species are crop plants and causes damage right from seedling to crop maturity stage (Muhammad Sarwar, 2019). It destroys agricultural crops by crushing or eating of plants, causes injury to plant roots and form holes and grooves that harm farm equipment and endanger operations. There is lot of indigenous traditional knowledge (ITK) available to combat wild boar damage (Figure 1). Vasudeva Rao *et al.* (2015) reported various ITK viz., creation of sound and light, spraying of local pig dung solution, use of human air as a deterrant, erection of used colour sarees, burning of dried dung cake, planting of thorny bushes, arrangement of coconut ropes and spraying of sulphur along with pig oil and use of dogs.

Popularization of Bio-repellant

In Tamil Nadu, Vellore district alone, around twelve thousand hectare crops of rice, sugarcane, ragi and groundnut suffered damage and farmers addressed their grievances. As a result, intensive research was made at Agriculture Research Station, Virinjipuram during 2014-

2017 on various bio-products and identified the compounds that repel the wild boar from crop zone. Later the identified compounds were tested in farm lands and in various crops viz., Rice, Ragi, Sunflower, Groundnut, Sugarcane, Papaya and Banana fields in sixty acres in two different seasons and gave protection against Wild boar. The bio-product was found to be effective up to one to eight months period. The effectiveness of the product varied based on the prevailing climatic conditions.



Figure 1: Wild boar and crop damage

Use of Wild Boar in Farm and Its Distribution Status in Tamil Nadu

- A fence should be laid outside the cropping area using 2.5 feet wooden sticks at a spacing of 10 feet. In 2.5 feet wooden stick, iron binding wire has to be placed at 1.5 feet height.
- Around the fencing region, at least for 2 feet area should be free from weeds.
- A small plastic container of 2 cm diameter @ 100 containers per acre is required to cover one acre area. Four small holes have to be made just below the neck region of the container.
- The holes provided in the container have to be united and

should be tied with upper lid using thick thread. A quantity of 5 ml is required per container (Figure 2).



Figure 2: Method of use of bio-repellant in field

- With the help of excess thread in the lid, it has to be tied in the middle of two wooden stakes laid in the fence in an upright position in order to avoid leakage of the product.
- The product will give protection at least till 3 months and it varies based on their climatic condition prevailing in their locations.
- Bio-repellant @ 500 ml is required to cover one acre.

During the year 2020, this eco-friendly, bio-repellant finds its place in all the districts of Tamil Nadu. Mostly Vellore and Tiruvannamalai district, farmers were benefitted with the use of bio-repellant (Figure 3). Almost it covered 32 major districts of Tamil Nadu and reached adjacent states viz., Andhra Pradesh and Kerala farmers. This trend shows the wide spread due to its higher efficiency in repelling the wild boar in almost all major agricultural and horticultural crops in their locality especially in Rice, groundnut, sugarcane, turmeric and tuber crops etc. and protected against wild boar in 2000 acres of crop cultivation (Figure 4).

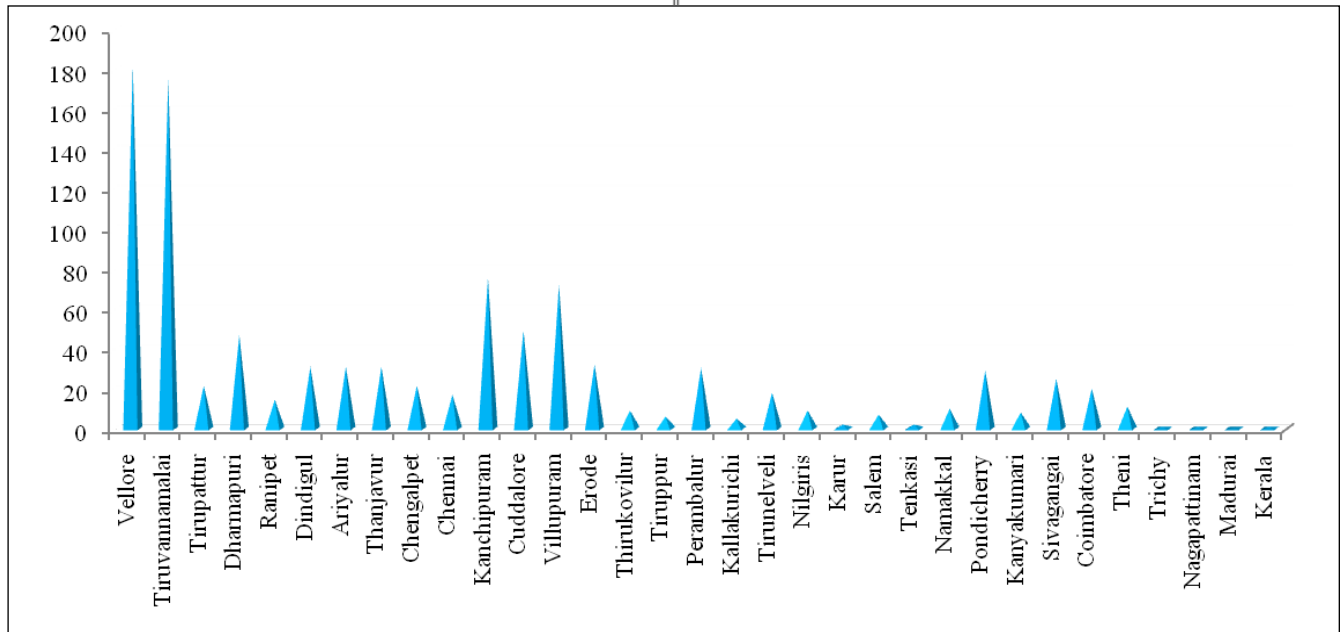


Figure 3: Distribution status of wild boar biorepellant in Tamil Nadu during 2020

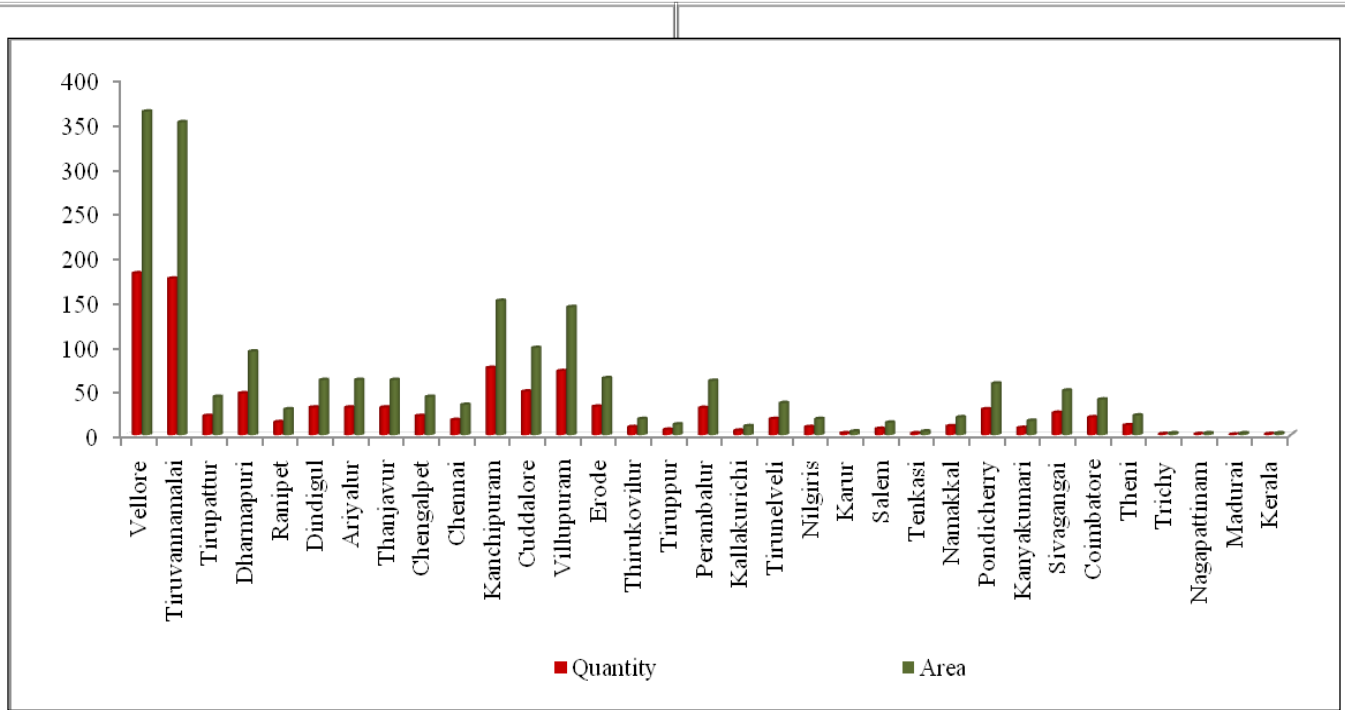


Figure 4: Protection of crop area using wild boar biorepellant in Tamil Nadu during 2020

Conclusion

The use of bio-repellant repels away wild boar effectively up to 90 percent from crop lands and gave maximum protection up to two months in favourable climatic conditions and varied in hot summer and rainy seasons. The method of application in fields is feasible, ecologically safe, environment friendly and also provides very good protection against wild boar.

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