

Indian Wild Boar: An Unwelcome Visitor to Groundnut Fields

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Groundnut cultivation in India is mainly influenced by biotic and abiotic factors to a greater extent. Recently, wild boars have been causing extensive damage to groundnut fields. The wild boar (*Sus scrofa* L.) is also known as wild pig. It is characterized by a larger, pointed head, but small, pointed ears, compared to the European wild boar. It is found in the southern Himalayas as far as central India. *Sus scrofa cristatus* is native to southern India. Wild boars have become a regular threat to farmers and cause enormous damage to major crops (Tisdell, 1982). The wild boars are very vicious in self-defence and cause serious damage by destroying fields and vegetation. They are often encountered with unprovoked aggression because they adapt to all ecological conditions and can eat anything available to them (Mayer and Brisbin, 2009).

Nature of damage by wild boar

Wild boar damage is particularly pronounced in cereal fields adjacent to wooded areas. Wild boars are a major problem for crops in many parts of India. They raid crops and use the agro-ecosystem for food and shelter. The damage to *Zea mays*, *Arachis hypogea*, *Sorghum vulgare*, *Oryza sativa*, some pulses and vegetable crops ranged from 10-75%, 5-56%, 5-30%, 10-35%, 5-20% and 10-30% respectively in the southern areas of Telangana (Vasudeva Rao et al., 2015). Wild boars not only directly damage crops, but can also damage infrastructure such as fences, irrigation ditches, roads and other structures. Wild boars are protected under the Wildlife (Protection) Act, 1972. They cause damage to guar (25%), oilseeds (17%), cereals (5-14%) and pulses (13%) in the cultivated areas adjacent to the forest areas. Groundnut is one of the most important *kharif* crops and is heavily affected by wild boar damage

Proposed management measures to protect crops from wild boar damage:

1. Spraying dung solution of local pigs: The dung solution of local pigs confuses the wild boars with the



Fig. 1: Indian wild boars

(Photo credit: <https://indiabiodiversity.org>)

false assumption that they are entering the territory of other pigs, and their movements are prevented to avoid territorial conflicts.

2. Human hair as a deterrent: Human hair collected in local hairdressing salons and spread along the wild boar's movement routes is sucked through the nostrils and causes severe respiratory irritation. This causes the wild boars to become completely confused and lose their trail, making distress calls that discourage other wild boars from entering the harvested area and reducing or relocating their habitat. On the other hand, Sodeikat and Pohlmeier (2003) found that wild boars temporarily flee an area during intensive hunting, but often return to their original territory.

3. Erection of used colored sarees: This method is also a farmer's innovation that has a behavioral background as far as wild boars are concerned. If you put up used sarees of different colors around the crop, the wild boars will assume that there are humans in the area and will not prefer to enter such areas. Although this is not feasible in all situations, it has some benefit in areas where people are moving around. In this way, the extent of damage caused by wild boar can be reduced to 30-55%. This practice is most prevalent among farmers in Telangana.

4. Burning dried dung cakes of local pig: The dried cakes of local pig dung are burned in earthen pots.



Fig. 2: Groundnut crop damaged by wild boars

This ensures a slow smoke development and spread during twilight. The smoke combined with the smell of local pig dung helps to sensitize the wild boars to the presence of pigs. To avoid territorial conflicts, wild boars therefore prefer not to stay in such areas.

5. Three rows of “NIWAR” soaked in kerosene: The NIWAR should be soaked in kerosene solution for about 2 hours and is arranged in 3 rows around the plant with the help of wooden stakes, keeping a distance of 1 foot between the rows. Care should be taken to ensure that excess kerosene drains away. The prevailing smell of kerosene makes it impossible for wild boars to detect the crop.

6. Coconut ropes soaked in a mixture of sulphur and pig oil: Arrange the coconut ropes in three rows around the plant, keeping a distance of 1 foot between the rows with the help of wooden poles. A solution with a sufficient amount of sulphur is mixed with domestic pork fat oil and this mixture is spread on the arranged coconut ropes. This mixture produces the typical odour that discourages wild boars from entering the cultivated area.

7. Planting of thorny bushes and xerophytes around the crop: Different xerophytic species like Cacti sp (*Euphorbia caducifolia*, *E. meriifolia*), *Opuntia* spp. (*Opuntia elatior*, *O. dillenii*), *Zizipus* spp. (*Ziziphus oenopolia*, *Z. mauritiana*), and *Agave* spp. (*Agave americana*) can be planted on the bunds around the crop which will not allow the wild boars due to their thorny in nature. The wild boars after unsuccessful trail of entry get injuries and making alarming calls, which makes the other animals to flee.

8. Use sounds and light: Scaring away the wild boars from damaging their crops farmer’s employ methods such as using fire crackers, making sounds through local drums, empty tins, making born fires and shouting.

9. Use of local dogs: In endemic areas of wild boar attacks farmers do follow using of trained dogs on a community basis to scare away the approaching wild boars. In selected cases this method proved to be effective and sustainable.



Fig. 3: Management of wild boars. (A) Human hairs spread in groundnut crop; and (B) Fixing used coloured sarees around the field.

10. Solar/Battery charged power fencing/ Jatka trap:

Solar charged or battery charged electricity fencing was found as a good deterrent to keep away the wild animals from the agriculture areas. Gopakumar *et al.*, (2012) stated that the electrical (solar-powered too) fencing was an ultimate successful deterrent for wild boars in and around Aravalli in Rajasthan

11. White-colored plastic sheet fences: In the rubber plantations of central Kerala, white-colored plastic sheet fences create panic in the herds of Wild boars. (Gopakumar *et al.*, 2012).

Monitoring: Field patrolling' by farmer groups on a regular rotation basis can also be a successful crop protection strategy. (Gopakumar *et al.*, 2012).

Reference

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