

## Mitigating Wild Animal Issues in Agriculture: Strategies for Coexistence

**Dr. Shelke P. P.<sup>1</sup> and Dr. Murai Atul. M<sup>2</sup>**

<sup>1</sup>Senior Scientist and Head, Krishi Vigyan Kendra, Tondapur Tal. Kalamnuri Dist.  
Hingoli. 431701 (M.S.)

<sup>2</sup>Subject Matter Specialist (Agricultural Extension), Krishi Vigyan Kendra, Tondapur Tal.  
Kalamnuri Dist. Hingoli. 431701 (M.S.)

**ARTICLE ID: 31**

### **Introduction**

Agriculture plays a vital role in sustaining human life, providing food, and supporting economies worldwide. However, the coexistence of agriculture and wildlife often poses challenges, as wild animals may cause damage to crops, leading to economic losses for farmers. Balancing the needs of agriculture with wildlife conservation is crucial for maintaining biodiversity and ensuring sustainable food production. This article explores the problems associated with wild animals in agriculture and proposes solutions to foster harmonious coexistence.

### **Challenges To Agriculture**

While agriculture is essential for food production, the interaction between wild animals and agricultural activities can lead to various problems. Some of the key issues include:

- 1. Crop Damage:** -Wild animals, including deer, rabbits, rodents, and birds, are known to damage crops by feeding on them or trampling through fields. This can result in significant yield losses for farmers, impacting both their livelihoods and the global food supply.
- 2. Disease Transmission:** - Wild animals can serve as carriers of diseases that affect crops or livestock. For example, certain insects and birds can transmit plant pathogens, leading to the spread of diseases among crops. This poses a threat to agricultural productivity and food safety.
- 3. Predation on Livestock:** - In regions where agriculture and wildlife habitats overlap, predators such as wolves, coyotes, and big cats may pose a threat to livestock. This creates a challenge for farmers who must protect their animals while respecting the conservation needs of these wild species.

4. **Habitat Fragmentation:** - Expansion of agriculture often results in habitat loss and fragmentation, isolating wildlife populations. This can disrupt ecological balance and biodiversity, potentially leading to population declines or even local extinctions.
5. **Biodiversity Impact:** - Intensive agriculture practices, including the use of pesticides and habitat destruction, can negatively impact the natural habitats of wild animals. This can contribute to a decline in biodiversity, disrupting ecosystems and potentially causing long-term ecological imbalances.
6. **Crop-Eating Insects:** - Insects, both wild and domesticated, can have a significant impact on crop yields. While some insects are beneficial for pollination, others can be destructive pests that damage crops and reduce agricultural productivity.
7. **Human-Wildlife Conflict:** - As agriculture expands into natural habitats, conflicts between humans and wildlife may increase. Animals may venture into farmland in search of food, leading to confrontations, property damage, and safety concerns for both farmers and the public.
8. **Pollution and Habitat Destruction:** - Agricultural practices can result in habitat destruction and pollution, affecting the quality of water, air, and soil. This can have indirect consequences on the health and survival of wild animal populations.

Addressing these challenges requires a balance between agricultural productivity and conservation efforts. Sustainable farming practices, habitat preservation, and responsible wildlife management can contribute to mitigating the conflicts between wild animals and modern agriculture. Additionally, the development of innovative technologies and alternative farming methods may offer solutions to reduce the negative impact of wild animals on agricultural activities.

#### **Solutions for Coexistence:**

1. **Habitat Management:** -Implementing habitat management practices, such as creating wildlife corridors and buffer zones, can help mitigate the impact of agriculture on natural habitats. These measures provide spaces for wild animals to thrive while minimizing conflicts with agricultural activities.
2. **Fencing and Deterrents:** - Installing sturdy fences around crop fields can deter larger animals like deer and rabbits. Additionally, employing non-lethal deterrents such as noise devices, motion-activated lights, and scent repellents can help keep wildlife away from cultivated areas.

3. **Integrated Pest Management (IPM):** - Adopting Integrated Pest Management practices involve using a combination of biological, cultural, and chemical methods to control pest populations. This approach minimizes the reliance on chemical pesticides, promoting a more balanced ecosystem that includes natural predators and beneficial insects.
4. **Livestock Guardian Animals:** - Using guardian animals, such as dogs can help protect livestock from predators. These animals act as a deterrent, reducing attacks and allowing for coexistence between farming and local wildlife.
5. **Research and Technology:** -Investing in research and technology to develop innovative solutions, such as smart fencing, automated scare devices, and remote monitoring systems, can enhance the effectiveness of wildlife management in agriculture.
6. **Natural Repellents:** - Some farmers may prefer to using natural resources instead of mechanical and chemical protective practices. The way to minimize crop damage from wild animals is Beehive fencing, fish or garlic natural emulsion, smoke, castor oil etc.

### Here Are Some Common Types of Fencing Used to Protect Against Wild Animals:

Protecting crops and livestock from wild animals often requires the installation of effective fencing. Several types of fencing can be employed based on the specific needs of the agricultural setting and the types of wildlife present.

#### 1. Traditional Fencing

- **Chain Link Fencing:** Sturdy and durable, chain link fencing is effective in keeping out larger animals like deer. It allows for visibility and can be combined with other deterrents.
- **Woven Wire Fencing:** This type of fencing is versatile and comes in various mesh sizes. It can be effective against different-sized animals, including rabbits and smaller pests.

#### 2. Electric Fencing

- **Electric Netting:** Suitable for both temporary and permanent use, electric netting is often used for poultry and small animal enclosures. It delivers a mild shock to deter animals.

#### 3. Polypropylene Fencing

- **Poly Deer Fencing:** Lightweight and invisible, poly deer fencing is designed to keep out deer and other wildlife. It is durable and weather resistant.

#### 4. High-Tensile Wire Fencing

- **Smooth Wire Fencing:** High-tensile smooth wire is used for creating strong and effective barriers. It is often used in combination with other fencing materials for added strength.

#### 5. Bamboo Fencing

- **Bamboo Panels:** Bamboo fencing can be an eco-friendly option for deterring smaller animals. It is aesthetically pleasing and provides a natural look to the surroundings.

#### 6. Game Fencing

- **Heavy-Duty Wildlife Fencing:** Used in areas with a high concentration of large wildlife, such as elk or bison, heavy-duty game fencing is tall and robust to prevent animals from jumping or breaking through.

#### 7. Rope and Twine Fencing

- **Polywire and Polyrope:** These are lightweight options that are effective for temporary fencing or rotational grazing. They often have some conductivity, creating a psychological barrier.

#### 8. Wooden Fencing

- **Split Rail Fencing:** While not suitable for keeping out smaller pests, split rail fencing can be effective for marking boundaries and deterring larger animals.

#### 9. Wildlife Deterrent Fencing

- **Tilted Fencing:** This design involves angling the fence outward, creating an overhang that discourages climbing or jumping by animals.
- **Coyote Rollers:** Rotating cylinders placed on top of the fence prevent animals like coyotes from gaining traction and climbing over.

#### 10. Combination Fencing

- **Multi-Layered Fencing:** Combining several types of fencing materials, such as electric wire with traditional fencing, can provide a more effective barrier against a range of wildlife.

When selecting a fencing type, it is essential to consider the specific wildlife threats in the area, the size of the animals, and the desired level of permanence for the fence. Additionally,



regular maintenance is crucial to ensure the ongoing effectiveness of the fencing in protecting agricultural assets from wild animals.

### **Conclusion**

The coexistence of agriculture and wild animals is essential for maintaining ecological balance and ensuring sustainable food production. By implementing proactive measures like habitat management, fencing, and integrated pest management, farmers can mitigate the challenges posed by wildlife. Collaborative efforts between farmers, researchers, and policymakers are crucial to finding innovative solutions that promote harmony between agriculture and the natural world. Through responsible and sustainable practices, we can strike a balance that benefits both agricultural productivity and wildlife conservation. The government should implement scheme and subsidize on fencing for reducing wild animal attack. The forest department should conduct afforestation programme on massive scale in nearby forest area of villages to reduce attack of wild animals in farming.