



**KRISHI
RAKSHAK**



YOUR PROBLEMS

Farmers often face crop loss because animals like cows, dogs, birds, and wild animals enter fields and damage crops such as coffee, corn, sugarcane, and rice. This leads to financial loss and constant stress for farmers

ABOUT US

Our Product the Auto Ultrasonic Animal Repellent System, is designed to help farmers protect their crops from animals using smart sensing and automated sound-based deterrence. The system combines camera detection, ultrasonic sensing, and an automated air-gun sound mechanism to scare away animals without harming them. This project represents our effort to create an effective, low-cost, and practical solution that supports farmers in preventing crop damage and increasing productivity



OUR VISION

Our vision is to provide farmers with an affordable, automated device that protects crops, increases yield, and improves financial stability. We aim to enhance the system further with better shelters for sensors and louder sound mechanisms

OUR SOLUTIONS

- Senses animal/bird movement using a camera and ultrasonic sensor
- Triggers an air-gun sound automatically to scare away animals
- Uses Arduino-based automation
- Powered by battery + power bank



BENEFITS FOR FARMERS

- Protects crops from animal attacks
- Works automatically without human presence
- Ensures maximum crop output
- Helps improve farmers' financial condition.



WHY CHOOSE US

This approach is effective, automated, and easy to maintain. It uses simple, available components and delivers reliable results. The updated selling price of the device is ₹6999, making it suitable for long-term use with great value. Flexible rental and insurance options further support farmers who may not want to purchase the product outright.



MAJOR IMPORTANT FEATURES

- Camera-based sensing
- Ultrasonic sensor integration
- Arduino-powered automation
- Air-gun sound mechanism for deterrence
- Battery + power bank powered
- Successfully tested on various animals
- Development involves jumper wires, indicators, coding cable.



FUTURE IMPROVEMENTS

We plan to enhance the system further by adding an internal power switch to make everyday operation easier, and by building a protective shelter for the ultrasonic sensor to keep it safe from rain, wind, and other harsh weather conditions. We also aim to upgrade the sound mechanism by creating a louder, handmade unit that can scare animals from a greater distance, improving overall field coverage. Additionally, we will strengthen the system's durability using better casing materials to ensure long-term outdoor performance. Another major improvement is upgrading the device's movement through a pulley-based mechanism, allowing the system to rotate smoothly and cover a wider area, making detection and deterrence far more effective in real farm environments.

CUSTOMER HELPLINE : +91 99864 44449

TARGET USER

- Farmers (small & large scale)
- Agricultural institutions
- National parks
- NGOs
- Government agricultural boards

INSTALLATION PROCESS

1. Place the Device at the edge of the farm facing the crop area for maximum coverage.
2. Mount the Camera & Sensor securely on a pole or stand at an appropriate height to detect approaching animals.
3. Connect the Power Source by attaching the rechargeable battery or power bank to the system.
4. Position the Sound Mechanism (air-gun unit) so that the sound spreads across the field.
5. Turn ON the System using the switch and wait for the indicator to confirm activation.
6. Test the Detection by walking in front of the sensor to ensure the sound triggers properly.



ENVIRONMENTAL BENEFITS

Our system is eco-friendly because it protects crops without using chemicals or harming animals. It uses sound instead of traps or electric fencing, helping maintain natural wildlife balance. With rechargeable power, it also reduces waste and supports sustainable farming.