



# Methods Of Bird Control: Advantages And Disadvantages

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## General

This standard identifies different types of bird deterrent systems available and includes a brief description of how each system is intended to work by outlining their advantages and limitations.

All of the methods described here have limited effectiveness (see advantages and limitations below) making the selection of a suitable bird deterrent system difficult. Issues of aesthetics and ethics limit the choices even further.

Important factors to consider when selecting a bird deterrent system for a particular building include the following:

- Bird species (including size, behavior and habits)
- Location of building
- Climatic conditions
- Time of year
- Time of day

## Types of Bird Deterrent Systems

### Anti-Roosting Wire System, "Pin and Wire" or "Trip Wire":

- Used primarily for deterring pigeons.
- Consists of a series of parallel wires supported by narrow pins and held under tension by small springs. The spacing between the wires is intended to prevent pigeons from gaining a strong foothold on ledges.
- The wires are sometimes installed at differing heights in order to come in contact with the bird's wings, making comfortable roosting difficult.

### **Advantages:**

1. Causes minimal damage to building. The narrow stainless steel pins used for support are small enough to be drilled into the mortar joints. If and when the pins need to be removed, the holes made can be refilled with mortar, avoiding any further damages to the masonry or stone. In places where this method can not be applied directly to the building, Plexiglas may be used to provide a means of contact.
2. Can last up to 10 years
3. Environmentally safe

### **Limitations:**

1. Limited to use on ledges
2. Not effective with all species of birds (mostly an anti-pigeon method)

## **Plastic Netting Systems or "Chicken Wire":**

- An old method developed initially for agricultural use, the netting system has been adapted for the protection of buildings.
- This system is intended to eliminate the bird control problem by exclusion, preventing birds from nesting in recessed portions of the building, in light wells, or under eaves.
- Two fibers: Polyethylene or Polypropaline are recommended to make the netting. Unlike other fibers, both of these materials withstand tension without stretching. Both fibers can hold up to 30 lbs of tension and should be installed holding at least 20 lbs to prevent sags. Sagging speeds up deterioration and makes the system more noticeable. Netting to match building colors is available and, if hung correctly, can be fairly inconspicuous. See 10296-01-R for installation guidance.

### **Advantages:**

- Suitable for large areas
- Environmentally safe
- Effective against most species of birds
- Can last up to 15 years

### **Limitations:**

- Ineffective if there are gaps or holes in the netting. Birds can easily fly through them.
- Limited in its protection to certain portions of the building.
- Accurate installation is very difficult, time consuming and expensive
- Obscures some architectural elements

## **Rows of Metal Spires or "Porcupine Wire":**

- A physical barrier repellent consisting of rows of needles or spikes pointing vertically upwards. These spikes are intended to make it difficult for larger birds such as pigeons to land.
- This product is generally used on horizontal surfaces such as ledges and window sills, where birds are known to roost or nest. See 10296-02-R for installation guidance.

#### **Advantages:**

- Easy to install
- Long life-span
- Environmentally safe

#### **Limitations:**

- Tend to collect debris between the spikes such as bird droppings, feathers and nesting material.
- For better effectiveness persistent cleaning is required.
- Ineffective against smaller birds such as starlings whose size allows it to use the spaces in between the spikes as a nesting site.

#### **Ultrasonics:**

- Marketed for hearing ranges above 20K Hz; Used to produce high frequency sounds as a means of deterring birds from roosting or nesting in certain locations (i.e. on buildings)

#### **Advantages:**

- None.

#### **Limitations:**

- Not effective on the hearing range of birds (which is roughly the same as humans).

#### **Distress Signal Call Systems:**

- Birds naturally warn other birds of potential danger. This system intends to mimic this idea by producing sounds that will signal to surrounding birds the danger of coming near a particular building.
- Its effectiveness depends upon the type of technology. Birds can differentiate between a real distress call and a tape recording of one. One company, however, has been successful with a digitized version.

- Distress calls are best suited for use against flocking birds such as starlings which search for a winter roost. Once the designated spot has been located, the digitized distress calls are played repeatedly sometimes as long as two weeks.

**Advantages:**

- Does not obscure the building aesthetics
- Does not impact, alter or damage the building

**Limitations:**

- Noise pollution: The distress signals are generally very loud, thus disturbing the human inhabitants as well.
- There is a possibility of habituation towards the noise.
- The effects are temporary in that birds may return after the distress signal is turned off.

**Electric Wires:**

- Similar to the electric fences used for livestock. They produce an unpleasant shock when touched or landed upon.

**Advantages:**

- None.

**Limitations:**

- Ineffective. Smaller birds such as Starlings have been known to perch on these wires.
- Difficult to maintain
- Difficult to install. In many cases, installation causes more damage to the building because of complicated anchoring and connecting devices.
- Even more difficult to remove
- Unsightly

**Gel Coating Repellent:**

- Based on gels of polybutylene. The tactile property is intended to irritate the bird's feet.

**Advantages:**

None.

**Limitations:**

- Tends to absorb airborne pollutants which cause it to harden and become ineffective.
- Have a short-term effectiveness, lasting from 18 months to 2 years.
- Removal is very difficult and sometimes damaging to buildings

### **"Scarecrow" Method:**

- Rubber snakes, glass owls and other commercial devices are placed in strategic locations around the building to frighten the birds away.

### **Advantages:**

This can be a safe and unobtrusive method of bird control.

### **Limitations:**

- This system is generally not effective, because birds are able to recognize the artificiality of these devices.
- A reaction to this system is temporary at best, if there is even a reaction at all.
- The birds eventually become habituated to these devices and may use their artificial adversaries as comfortable perches.
- The effective use of this system requires significant human involvement. These devices must be frequently and repeatedly moved from one location to another

### **Poisoned Food:**

- There are a variety of chemicals available (listed below). These chemicals are generally discretely sold to specific job locations separate from residential areas.  
Avitrol or 4-Aminopyridine: A bird distress inducing chemical. The affected birds give distress calls that scare other birds away. There is a small percentage of mortality.
- Ornitrol: A steroid based chemosterilant that has been effective under trials, but has not performed satisfactorily under field conditions. Starlicide and Strychnine: Highly toxic to birds.
- "Toxic Perches": A solid perch containing a wick soaked in liquid toxicant-usually Fenthion.

### **Advantages:**

None.

### **Limitations:**

- Potentially dangerous to those who handle the chemicals.
- Environmentally dangerous.

## **Trapping**

### **Advantages:**

- Though only temporary, this method is a humane means of relocating bothersome birds.

### **Limitations:**

Offers only short-term effectiveness and requires a substantial amount of human effort.

### **Shooting:**

- Advantages: None.
- Shooting Limitations: Inhumane, unethical and dangerous.

## **Areas for Future Research in Bird Control**

### **Homing:**

Research has shown that birds use a variety of cues to locate their homes. Such cues range from using smell, sound and sight to employing abilities for detecting barometric pressure and gravitational forces.

Electromagnetics:

Studies have shown that birds are able to perceive the earth's magnetic field. Research indicates that birds tend to fly toward the acute angle made between the earth's magnetic field and the surface of the earth. Some research has revealed that this phenomenon may be due to a tiny magnetic crystal substance lodged between the pigeon's skull and brain that allows the bird to detect the magnetic field.

How can electromagnetics, then, be used to influence the homing patterns of pigeons to guide them away from particular buildings?

### **Subsonics (or low frequency sounds):**

According to scientists, birds can detect low frequency sounds of .06 Hz using their inner ear. To put this in perspective, humans cannot detect sounds below 10 Hz.

Is there a way of transmitting low frequency sounds at high intensity as a means of deterring birds from roosting without causing destruction to the building or disturbing humans?