



## Chapter 8

# Reducing Bird and Other Wildlife Damage in Strawberries

### Birds

Birds can cause serious damage to small fruit crops, including strawberries. Growers may experience destruction of up to 30% of a crop within a few days of birds feeding. Large flocks of birds can consume large quantities of fruit over a 10-day period. It has been observed that mid-season ripening strawberries may have several fruit either fully or partially pecked. Robins, starlings, finches, orioles, and cedar waxwings have been observed feeding in ripening fruit crops throughout the Midwest. Bird populations are increasing due to changes in weather and migration patterns and the overall availability of fruit being produced in the Midwest.

Bird damage patterns can vary from year to year and can be localized, depending on the source. Birds can fly 10 to 15 miles from a resting site to feed. It is difficult to stop birds from feeding once they start. They can establish their home territory in late April and May and remain until the crop ripens. Crops near resting areas, wooded lots, and ponds are most vulnerable. Birds generally feed approximately 30 minutes before sunrise and generally conclude feeding about 30 minutes after sunset. Complete bird control is very difficult to attain even with the best managed bird scare devices. Birds are creatures of habit and can sense after a few days that a scare device is of no real threat.

Large flocks of birds can be persuaded to scare out of a field of strawberries much easier than a few group feeders. Feeding will occur on the first available fruit that ripens, and then other birds will fly in from a roosting site as far away as 12 miles. In some cases, birds begin feeding two weeks before harvest by investigating the strawberry fruit to determine if it is mature enough to feed on. Once the birds detect that the fruit is adequately ripe, larger flocks of birds will be attracted to the same field to begin feeding.

### Types of Bird Repellent

#### Physical Barrier

Netting, either plastic or rope (known as tobacco netting), can be used; however, it takes a lot of labor to put in place, and birds can get under or eat through it. Nets offer nearly 100% protection, particularly in high-value crops. Placing the netting over the crop is best. Netting may be effective, but it is not typically used for strawberries except on a very small scale.

#### Sound Devices

##### *Propane Cannons*

These cannons give unexpected blasts and should be set at intervals greater than one blast per three minutes. Fully electronic, randomized, rotating multi-shot units are most effective since timing and direction of the blast keep birds off balance. However, neighbors who work early or late shifts and rest during the day may become angry if these are used. Timers can be used to provide flexibility and turn off the cannon during the off feeding periods.

When using propane field cannons, the following is suggested:

- Set intervals greater than three minutes.
- Time cannons to start 30 minutes before sunrise and to shut off 30 minutes after sunset.
- Operate on no more than five acres.
- Ensure propane tank valves do not leak.
- Move units around.
- Use electronic timers to shut off automatically.

##### *Electronic Sound Devices*

Some devices simply disrupt bird communications. Other devices use digital

electronic sound to produce distress calls. Several “chips” of different calls are available on one device. Some reports say that these devices can attract hawks, and hawks scare birds away. These devices discourage birds from nesting in nearby trees in the spring. They tend to be less objectionable to neighbors.

### *Pistol Cartridges and Other Sound Devices*

Special cartridges, launched from handguns, which explode high in the air near birds, can quickly clear a field or wooded lot and can be an effective manual scare device. Shotguns are often used but are generally ineffective. In some cases, protected species can be harmed.

### *Visual Repellents*

Aluminum pie plates and Mylar humming lines may work for a few days and are best just before harvest. The same is true of artificial hawks, stuffed owls, or snakes.

### *Use an Integrated Approach*

One deterrent system usually does not work; therefore, use a combination of methods. Creating random unexpected noise, positioning devices near perimeters and flight patterns, using scare devices near the fruit planting, and encouraging predators can be effective.

Here are some tips:

1. Start bird control methods 10 to 30 days before the crop ripens. Watch and be aware of the birds’ habits and their reaction.
2. Change the method of control. Move devices once per week and change the type of noise.
3. Control birds 30 minutes before sunrise to early morning and into late afternoon to 30 minutes after sunset.
4. Consider the amount of fruit loss compared to the cost of equipment or material and labor to control birds.

### *Remember*

Once birds start to eat the crop, they are difficult to remove. Control is based on knowing how birds

behave. Start controls before the fruit starts to turn from green to red. Use several methods and change positions once per week.

## *Wild Turkey*

Wild turkeys are appearing with ever-increasing numbers in fruit plantings, looking for food. Unless preventive measures are taken to restrict their entry into a field, little can be done to prevent them from decimating a strawberry planting. Wild turkeys, unlike domestic turkeys, can take flight and are often seen roosting in surrounding trees and brush. As with other birds, turkeys do not like loud and/or distressing sounds.

### *Types of Wild Turkey Repellents*

- **Physical Barriers.** Standard bird netting can be used, although turkeys are more powerful and may tear the netting trying to get the fruit. High fencing can be used to turn back the turkeys.
- **Sound Repellent.** Propane cannons will have some effect in the short term, but, as with other fruit-eating birds, turkeys become accustomed to the sound and within a few days may pay little attention. Shotgun and pyrotechnic guns may provide some means of distraction to wild turkeys so they are less likely to settle in the strawberry field.

## *Deer*

Deer, like other wildlife, pose a serious threat to Midwest fruit plantings. In early spring and late fall, deer have been observed foraging on tender, succulent strawberry leaves. Food sources are scarce in early spring, and deer are naturally attracted to any green tissue that emerges. Foraging deer are attracted to the naturally evergreen strawberry leaves in late fall as green grass and tree and shrub leaves become scarce.

Deer have been observed feeding on strawberry plantings in late fall. This, normally, does not create undue stress and will usually have little effect on the overwintering capacity of the plants in matted-row production systems. Generally, adequate energy (carbohydrate) reserves are met by the first killing frost. Unless the deer have damaged the crowns of the strawberry plants while feeding on the leaves, new growth will emerge in the spring when warm weather returns.

In plasticulture plantings where the production of branch crowns is required in the fall, deer feeding can result in serious damage to the planting.

Several different kinds of approaches have been used to mitigate the damage that deer cause in fruit plantings.

- **Odor Repellents.**

Materials (human hair, dog hair, and soap) that are commonly used to deter deer are used because they smell unnatural or have the smell of a predator. These materials can be used effectively to prevent deer from entering plantings.

There is some interest in using coyote hair to create a negative environment for deer. Coyotes are the main predators of white-tail deer in the Midwest, and it has been reported that deer do not like to come near feeding areas that have been baited with coyote hair. As with the bird populations, deer can acclimate very quickly, and they can become familiar with a new odor. However, deer appear to avoid the area baited with coyote hair for several weeks, even when the bait is removed.

- **Sound Repellents.**

Deer can be startled by unfamiliar sounds, and they are less likely to stay in an area in which strange, unnatural sounds are emanating. Propane cannons and distress signals can be used to send deer to flight.

Moving the noisemakers around the inside and outside of the planting can help to dissuade the deer from entering and make the area somewhat less familiar. This should keep the deer on edge and less interested in foraging on the tender strawberry leaves.

- **Physical Barriers.**

Fencing is one of the best means of keeping deer from entering a strawberry field; however, the expense can be cost prohibitive.

Poly Tape electric fence, commonly used to keep horses and cattle in pasture, is being used to control deer around strawberry plantings. Some producers are using this in place of standard single-strand electrical fence. It has been observed that deer will not enter an area with this type of fence surrounding it.

The Poly Tape (1-1/2-in. wide) works well at a height of 5 to 6 feet, with four to five strands from top to bottom. Generally, only the first through third strands from the ground are charged. Peanut butter on aluminum foil placed on the electrical wire is used to bait the deer. T-posts are used to fasten the tape in place within the fence row.

With an electric fence, grass and weeds must be kept under control or the fence could short out. Weed whacker or burn-down herbicides can be used to keep vegetation under control.

## Wildlife Control Summary

Strawberry growers may experience one or all of these wildlife predators feeding in their fields. The best approach is to watch carefully and determine which animals are causing the damage and then address the problem. Once you have found the predator, become proactive and place physical barriers, sound devices, and other deterrents where they will do the most good. Wildlife can become accustomed to new sounds and motions so it will be imperative to continually move the devices around the field to avoid familiarity.