

## CHAPTER 8

## Protecting Heritage Turkeys from Predators

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Predator management on the farm is as integral to a farm's success as good animal husbandry. Losses to predators can be substantial, so an integrated predator exclusion and control program needs to be planned and instituted prior to the arrival of the first poul on the farm. Diligence and thoughtful planning are the best preventatives.

Effective predator management is guided by two fundamental facts: *Predators need a place to live*; and *they need a source of food*. Eliminating these will significantly reduce the number of predators, making the farm a safe place for poultry.

### Common Predators of Poults and Adult Turkeys

There are numerous potential predators of turkeys. In the brooding house rats, snakes, skunks, and weasels all pose potential risks for young turkeys. Once the turkeys move to pasture, the variety of potential predators expands to include foxes, bobcats, coyotes, crows, dogs, cats, and raptors such as owls, hawks, and eagles. Many predators, such as raptors and some of the carnivorous species, are protected by federal law and may not be harmed, trapped, or killed. Check with local and federal authorities before implementing any predator control program on the farm.

Being vigilant for signs of predators in the vicinity of the flock and taking immediate precautionary steps will help ensure the safety of the turkey flock. Footprints or scat are valuable clues of the presence of predators. Learn the territorial signs, such as scratched trees, and look for these as well.

If stock is killed, the condition of the carcass may give clues that will identify the culprit. Here are a few examples of some of the more common predators and the clues they leave behind:

**Bobcats** – Bobcats are nocturnal predators. They bite the skull, throat, and neck of their prey and will often leave claw marks on larger carcasses. Bobcats leave clean cut-edges on bone or tissue. They may eat the en-

tire carcass of a smaller turkey in one night. For larger kills, they may return over several nights and continue to feed on the kill.

**Cats** – Domestic cats, especially feral ones, will carry poults off after a kill so it will be difficult to identify their “handiwork.” They can kill during both day and night. It is unlikely that cats will kill larger birds, but they may cause some injury in the form of abrasions in an attempt. Footprints and observation will be the best means of identification.

**Coyotes** – Coyotes will kill poults and older birds. They typically kill by grabbing the neck of their victim and often crush the skull and spine, although inexperienced coyotes may bite the bird all over. On larger carcasses their feeding leaves ragged edges on muscle tissue and tendons. At the feeding site, coyotes often rub and roll after feeding. They may also urinate and defecate soon after feeding, and usually scratch the ground with their feet after defecation much like dogs. Coyotes are predominantly nocturnal predators.

**Dogs** – Dogs and coyotes leave similar signs and may be hard to distinguish from each other. Domestic dogs are fairly indiscriminate in the way they kill an animal and may attack and bite many parts of the body. Dogs



*Domestic cat on the prowl. Photo by Jeannette*

favor the hindquarters and viscera. They kill day or night. Domestic dogs often kill several animals as if they were viciously playing but will rarely eat much, if any, of the kill. Feral dogs, on the other hand, are more adept and may kill like experienced coyotes do, by attacking the throat of the victim. Since feral dogs rely on their kills as a food source, they will consume the whole carcass.

**Foxes** – Foxes are typically nocturnal hunters but when caring for kits, they may hunt before dusk. Foxes, like cats, leave few clues, making them difficult to identify. Foxes will often carry the carcass to their den or bury uneaten body parts. They rarely crush the skull and spine. Foxes prefer to eat the viscera and begin feeding through an entry behind the ribs.

**Eagles, Hawks, and Owls** – Hawks and eagles are some of the few daytime predators of turkeys; owls hunt at night. These three birds of prey leave behind a lot of feathers at the feed site, as they do not like to eat feathers – plucking most of them while they feed. Birds of prey have been known to take the heads off of poultry if given the chance to snatch them through fencing.

**Opossums** – Opossums are primarily egg eaters but will kill and consume young poults. When opossums eat eggs, the shells are chewed into many small pieces. Poults are typically mauled in the rear end. Opossums are nocturnal predators.

**Pack rats** – Pack rats are another nocturnal predator of small poults. They can kill numerous young birds in one night. One account tells of 46 poults disappearing from the brooder. The poults were found by the producer by following their chirping sounds. The pack rat had eaten their legs and stuffed the live birds (minus their legs) in a hole to be eaten later.

**Raccoons** – Raccoons feed on both eggs and young turkeys. Raccoons will open one end of an egg and eat its contents without crushing the shell. These nocturnal

predators are highly skilled with their front paws and can reach through the mesh of an enclosure to pull body parts off of a bird, most typically at night. They usually bite the head off, turn the bird over and eat the breast meat, leaving the wings and legs. When the adult raccoons are teaching hunting skills to their young, they have been known to kill, but not eat, turkeys.

**Rats** – Rats steal and kill young poults, most typically at night. They eat small portions, then drag the carcass into a hole or other concealed location. Droppings are a clear indicator of rat activity.

**Skunks** – Skunks eat both eggs and young turkeys. They usually eat the head and neck of the bird and particularly like the entrails and blood. Skunks often leave an obvious odiferous “calling card” in areas where they have been active. Skunks are nocturnal predators.

**Snakes** – Large snakes eat eggs and very young poults. When poults are consumed, some feathers, but no blood, are left behind from the struggle. Occasionally a snake’s appetite is bigger than its mouth and it will attempt to eat a bird that is too large to swallow. In this instance, trying to eat the bird head-first, the snake will suffocate the bird and then release it. Eggs are swallowed whole and the shell regurgitated in a secluded location. Snakes feed both day and night.

**Vultures** – Both the Black vulture and the Turkey vulture feed on dead birds. The Black vulture – not the Turkey vulture – is known to occasionally attack live poultry and livestock. The Black vulture begins feeding on young or sick poults by pecking the eyes and nose, navel, and anal areas. Vultures have been known to blind animals by pecking out eyes, even when they do not kill the animals they have attacked. The Black vulture is a daytime predator.

**Weasels and Mink** – Weasels and mink eat both young poults and eggs. Both typically kill the birds by biting them through the skull or neck, but have been known to attack the vent area. Weasels and mink feed on the blood of their kills. Closely spaced pairs of canine tooth marks are a sign of a kill by these animals. They have been known to kill much more than they can eat; this is known as “surplus killing.” This generally occurs when these predators find an abundance of food, such as a house filled with young poults. Weasels and mink may place many dead poults neatly in a pile. When feeding on eggs, they completely crush the shells in order to eat them, similar to the opossum. Weasels

\*Note – Some predator species are protected under federal law and may not be harmed, trapped, or killed. There are several sources of information listed in the resource section that offer additional guidance in accurate predator identification and control. Regulations may vary from state to state or seasonally. Check with local authorities before implementing a predator control program.



*Skunk in a humane trap. Photo by Mike Walters.*

and mink are nocturnal predators.

**Wolves** – Although it is rare, wolves have been known to prey on free-range poultry, especially turkeys. Wolves typically kill birds with a single bite over the back leaving large canine tooth holes in the carcass. Wolf predation almost always involves surplus killing. One wolf is capable of killing 50 to 100 birds in a single night. Larger kills of 200 or more birds are accomplished by two or more wolves. In both cases, only a few birds will be eaten. Wolves often return every few nights to prey on the flock again.

### Risk Assessment

There is no one plan that will work for every farm. Producers need to understand the risks unique to their farms, and be adaptable and flexible in designing – and redesigning – strategies for excluding predators.

Predators can often be detected before they begin killing. A first step in a risk assessment might be a call to the local extension agent to learn of predator risks in the region and become familiar with their calling cards.

Remember the key to predator management is eliminating their resources: living quarters and food.

Smaller predators present the greatest challenge for the producer brooding poults, so carefully assess the brooding area. Check the coop to ensure that all windows and doors close completely and remain secure. If the brooder is not in a predator-proofed structure then the brooder itself should be secured. It should have openings no larger than a half inch square. Remember that snakes and weasels can enter openings the size of a U.S.

quarter coin. Build brooders with 12-gauge or stronger wire metal mesh. Firmly secure the mesh to the brooder framework to prevent large predators, like raccoons, from gaining easy entry to the brooder. Regularly check for holes that could provide an entry point and immediately seal off any that are found.

Most losses to predators occur once the birds are on range. Younger and smaller turkeys face the greatest risk to predation. Birds on pasture are vulnerable to predation both day and night, by land and by air. Fencing provides a first line of defense against predators but should not be relied upon as a sole means of protection. Combine multiple protective measures for the most effective strategy to protect the pastured flock. This can come in the form of fencing coupled with shelters, night houses, and/or guardian animals. (See chapter six, *Facilities, Fencing, and Shelters* for more information.)

Check the farm and surrounding area for locations that could provide a cozy home or hiding place for predators to live in or hunt from. Clear all brush and tall grass from within two to four feet of the fence line to eliminate nearby harborage from which a predator can stalk the flock. Remove other potential hiding places, including low-hanging tree branches. Make it part of the daily routine to check the coop (inside and out) and the fence lines for any gaps or weaknesses that would allow predators entrance.

Most of the common predators for turkeys are nocturnal. Enclosing the birds in predator-proof enclosures around the clock or locking free-ranging birds in a house every evening effectively reduces or eliminates losses.

Keep the farm clear of easily obtained food sources, such as the carcasses of animals in the flock that have died, garbage, spilled feed, and compost. Eliminating access to convenient food sources will force predators to look elsewhere for nourishment.

### Passive Predator Control Measures

Options for outdoor protection include wire mesh fencing, portable electric poultry mesh, and high tensile electric fences. Permanent wire mesh fencing should be four to six feet tall. Electrified wires along the bottom and top of mesh fences deter some mammalian predators. When using portable electric poultry mesh, be sure to have a large enough charger to maintain a strong electrical charge in the fencing to serve as an effective deterrent. With both portable and high tensile electric

fencing, keep the area under the fence mowed so that growing vegetation does not short circuit the fence. To reduce maintenance of the fence line for smaller pastures, consider placing a layer of weed blocking fabric under the fence line to eliminate vegetation.

The main function of fencing for turkeys is to keep predators out, as opposed to keeping turkeys in. Young birds and hens of standard turkey varieties can fly. Expect birds to occasionally escape the enclosure. If the birds have regular access to good food, are comfortable, and feel secure in an enclosed area, they are less likely to want to fly out of the enclosure.

Where raptors pose a significant threat, it is best to delay the introduction of the young birds to pasture until they are 10-12 weeks of age and large enough to be less attractive. Cover is often the bird's best defense against raptors. So make sure the birds have access to a shelter or cover plantings, such as fruit trees or shrubs well within the fence line to provide them sanctuary from attacks from above. Some producers have observed that raptors hunting poultry are often deterred if the birds are ranging with larger animals such as sheep.

To protect young poults from raptors, strands of fishing line above the pen spaced in rows every two feet will deter most flying predators. Raptors are less likely to fly into areas they cannot easily fly out of. Marking the fishing line by tying on lightweight streamers or pieces of cloth will make the barrier more visible and even less attractive to raptors.

A creative approach used by Good Shepherd Turkey



*Guardian donkey protecting turkeys. Photo by Dallas Gilbert.*

Ranch in Kansas for predator control utilizes concentric pastures that form protective layers, leaving the most vulnerable species in the center with optimal protection. An advantage of this pasturing system is that if guardian animals are used, it is not necessary to keep them in the pasture with the flock. This reduces stress the turkeys may experience and removes direct contact with guardian animals while still providing protection.

### Active Predator Control Measures

In some cases, only constant vigilance day and night will serve to protect the birds. Gather the birds in predator-proof coops at dusk. This protects them from the threat of nocturnal predators. Use a guardian livestock dog, donkey, or llama. With proper training/conditioning, a guardian animal can be an effective tool for protecting your flock and will be on duty 24 hours per day.

Llamas were studied with various species of livestock and poultry for their protective abilities. Franklin and Druke state: "In this study, we interviewed 136 ranchers who were using 237 llamas to protect goats, cattle, and poultry in order to determine if llamas were effective guards. Llamas decreased the amount of yearly predation by 40% to 60% on poultry ranches. In 78% of cases, predation on a ranch dropped to zero after introduction of the llama. Common behaviors of llamas protecting the livestock include standing at attention, running towards the predator, chasing the predator, and alarm calling. Ranchers rated their llamas as either effective or very effective as guards in 92% of the cases involving poultry. Overall, we found that llamas were an effective, low-cost, low-maintenance, non-lethal method to reduce predation on goat, cattle, and poultry ranches."<sup>1</sup>

Livestock guardian dogs are an effective form of protection for livestock and poultry. Training and desensitization to birds must begin from the time the future guardians are puppies. Although pups can be raised in and among flocks of larger livestock species, guardian dogs are often not allowed to be with poultry until they are over their "puppy-like" behaviors – around the age of 18 months. Chasing rapidly moving objects is instinctive behavior in dogs. Over time, dogs can be taught that poultry are not prey animals. It may take a significant amount of time before it is advisable for the dogs to be left alone with birds. The turkeys must be desensitized to guardian dogs from an early age as well, so birds will not be stressed or panicked by the presence

of their guardians.

A wide variety of guardian dog breeds have been used with success. Before buying a guardian dog, carefully research breeds and breeding lines to find the best match for the farm and climate. It is advantageous to purchase the dog from a breeder who is using their dogs to guard the species you intend the new dog to protect.

Donkeys are not widely used as poultry guardians but have been successful in some instances. Donkeys do not seem to form bonds with poultry as they often do with other livestock species. But their presence and natural dislike of predators, especially dogs, does offer some protection for the birds. As with any other guardian animal, a slow and careful introductory period is a must to ensure that poultry are not harmed by their protectors.

Small flocks of geese kept in the same enclosure with smaller poultry have been used successfully to deter hawks from preying on the smaller birds. Their gregarious and often loud nature is enough to deter even bold birds such as Red-tailed hawks. The advantage of geese is that they are not as likely to harm other poultry breeds as some other guardian animals may. The disadvantage is that waterfowl may harbor diseases, such as avian influenza, which can affect land fowl.

To ensure minimal risk of conflict between birds, provide ample space in the enclosure for all of the birds along with multiple feed and water sites.

### Other Predator Control Methods

Some predators, in particular raptors, can be deterred from attacking the flock by providing visual distractions in or around the edges of the pasture. Pie-plates, balloons, spinning pinwheels, old clothes, etc. can be hung to frighten typically cautious predator species. Objects should be changed periodically as predators can become accustomed to them.

Electronic devices that emit ultrasonic sounds, flashing lights, or chemical deterrents are available for poultry and livestock protection. Manufacturers claim that the devices are offensive to predators and ward them off. There is not much hard data on the effectiveness of these devices and predators typically become accustomed to them over time. A note of caution – auditory devices *are* known to disturb guard dogs.

More aggressive forms of predator management include trapping, hunting, and poisoning. These options are not



*Great Pyrenees dog guarding poultry. Photo by Jeannette Beranger.*

to be taken lightly and must be thoroughly researched by the farmer before implementation. A number of predator species are protected by law. Considerable penalties are in store for the producer who is caught illegally trapping, hunting, or poisoning protected species. Trapping, hunting, and poisoning have limited success as a long-term solution. As long as food is available and predators can successfully hide, hunt, and live near the flocks, new predators will move into an unoccupied territory. For every animal trapped or killed, there is one or more waiting to take its place. When dealing with a large population of predators, such as rats, poisoning will solve the matter temporarily, but determining why the population boomed will help identify the most effective control strategy. Answer questions such as:

- What is the predator and can it be eliminated or its access to the birds prevented?
- Is there a food source supplying the growing predator population?
- Where are they living?
- Can living spaces and nesting materials utilized by the predators be reduced or eliminated?

Finding the answers to these questions will help provide a long-term solution to predator problems.

Predators are opportunists and will not waste effort if there is no advantage to be gained. Don't offer "free room and board" to local predators and you will be on your way to having a safer poultry flock. Prevention is the best solution to a predator problem.

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