

Coyotes

Wildlife management series for Midwestern farmers



Adult coyote.

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Common and Latin name: Coyote (*Canis latrans*)

Commonly impacted crops: Coyotes prey on small or young livestock like poultry, sheep and calves, and occasionally damage fruit crops, irrigation lines and maple sap tubing.

Relevant regulatory agency: State level department of natural resources.

Species overview

Physical description of animal: Coyotes appear dog-like with erect pointed ears, a slender muzzle and bushy tail. Coyotes are predominantly brownish-gray with a light gray to cream-colored belly. Color varies greatly, however, from nearly black to red or nearly white in some individuals. Their fur is dense and thick, often making them appear larger than they are. Most have dark or black guard hairs over their back and tail. When running, coyotes carry their bushy, black-tipped tail down usually below the level of their back. In the East, many coyotes are larger than their western counterparts, with males averaging about 45 pounds and females about 30 pounds.

Coyote scat looks very similar to dog droppings, sometimes tapering at one end, and often will have small bones, fur or vegetable matter visible. Coyote scat are often deposited along trails and roadsides. Their tracks can be difficult to distinguish from medium-sized dog tracks, but are typically more oval than dog tracks.

Habitat and range description: Once found in the Great Plains and the West, coyotes are now found throughout the country. Coyotes have adapted to exist in virtually every type of habitat, arctic to tropic, in North America, including urban and suburban locations.

Behavior including food habits: Coyotes are active day and night, but most active around sunrise and sunset. The coyote diet can include many items depending on what is available, such as rodents, rabbits, deer, carrion, insects and fruit. Coyotes eat mostly meat during winter and spring. In late summer and fall, more than half of their diet may consist of plant material.

Identification of damage: Since coyotes will scavenge on livestock carcasses, the mere presence of coyote tracks or droppings near a carcass is not sufficient evidence of predation.

Coyotes typically attack sheep at the throat, but young or inexperienced coyotes may attack any part of the body. Coyotes usually kill calves by eating into the anus or abdominal area. Coyotes commonly feed on a carcass at the flanks or behind the ribs and first consume the liver, heart, lungs and other viscera. By contrast, dogs generally do not kill sheep or calves for food and are relatively indiscriminate in how and



Coyote tracks in the mud.

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Jackie Citriniti, Albany Pine Bush Preserve

Coyote scat.

where they attack. Generally, dogs attack and rip the flanks, hind quarters and head, and may chew the ears.

Coyotes may damage fruit crops like watermelons by biting through the rind and consuming the flesh. Small fruit and berries can be consumed whole, and coyotes will also eat fallen or rotting fruit. Damage to plastic tubing used for irrigation lines or maple sap collection has also been reported.

Management and strategies

Legal status: Coyotes are protected furbearers in most of the Midwest. Check with your state to learn what regulations apply to controlling coyotes.

To address coyote damage, use a variety of control methods since no single method is effective in every situation. Success usually involves an integrated approach, combining good husbandry practices with effective control methods for short periods of time. Regardless of the means used to stop damage, focus on damage prevention and control rather than eliminating coyotes.

Exclusion: There are a variety of fence types that can limit access by coyotes to livestock or crops. This is particularly true for smaller pastures and fields versus larger areas. An effective fence should be at least 5.5 feet high and needs to be very snug against the ground or buried because coyotes readily dig under fences. There are many designs to consider, but generally an electric fence is better protection although they require more maintenance. Portable electric fences can be adapted to different husbandry and exclusion needs. Fences can be topped with a section set at an outward angle or with rollers to prevent coyotes from scaling the fence. Rollers along the bottom will prevent them from digging under the fence.

Harassment: Frightening devices are useful for reducing losses during short periods or until

predators are removed. The devices should not be used for long periods of time when predation is not a problem. Increase the degree and duration of effectiveness by varying the position, appearance, duration or frequency of the frightening stimuli, or by using them in various combinations. Human activity and electronic devices have been shown to reduce coyote damage in some cases. Lights, whether left on constantly or automated to turn on when motion is detected or at random intervals, are most effective. Loud sounds produced by sirens, propane cannons and pyrotechnics will also disperse coyotes. Active harassment using paint balls, sling shots, water jets, etc. may also deter them.

Husbandry: Keeping livestock continuously confined in pens may prevent predation, but may not be practical. Corraling livestock only at night, however, may be more feasible and is also effective in reducing losses because many predators, such as coyotes, often hunt at night. Lighting the corral can further reduce predation. Properly dispose of dead livestock since coyotes will scavenge on carcasses and may be attracted to the remaining livestock, possibly increasing depredation. Some state departments of agriculture or natural resources offer depredation reimbursement for losses of livestock to coyotes.

Spring lambing and calving coincides with coyote birthing and can lead to higher predation because coyotes need to feed their pups. To counteract this threat, producers can use shed birthing. Before ewes or cows give birth, move them indoors to a confined space where they can remain with their young for several weeks. In addition to protecting against predators, shed birthing can also reduce newborn losses due to inclement weather.

Guard animals: Livestock producers can use guard animals in their pastures and on open ranges to prevent predator attacks. Guard animals include dogs, donkeys, llamas and mules. Livestock guard dogs are working dogs that stay with or near livestock most of the time with the purpose of aggressively repelling predators. Some of the more well-known and utilized breeds in the United States include Great Pyrenees, Anatolian shepherds, komondors and maremmas. It is critical that guard dogs be properly trained to behaviorally bond with livestock to be effective.

Trapping: Trapping or snaring can be helpful tools to limit coyote predation, especially when combined with fencing. Trapping and snaring equipment is not expensive, but trapping and snaring requires considerable skill and experience to be effective and safe. Producers may find it advantageous to hire a skilled trapper to remove damaging coyotes. Each state regulates the use of traps and snares, so it is important to understand applicable laws.

Shooting: Shooting is a good option for control because it is selective and rather inexpensive. It does require skill to be effective and safe. It can be time-consuming since coyotes have a well-earned reputation for being adaptive and persistent. There are regulations in each state and perhaps local jurisdictions that describe what restrictions and conditions apply for lethal control of coyotes.

Considerations

Before pursuing an ambitious coyote management plan, consider the benefits of coyotes in suppressing rodent populations. It is unrealistic to eliminate coyotes from a farm or property for very long; coyotes are too numerous and adaptable for that. A well-conceived management plan would give serious consideration to sound husbandry practices and exclusion. Then, just before livestock are at a vulnerable stage, for example lambing or calving, might be the most strategic time to intervene with trapping, snaring or shooting. Any coyote management plan will be enhanced by good surveillance of coyote activity in the area, such as finding tracks and scat.

Acknowledgments

Green, Jeffrey S., Henderson, F. Robert and Mark D. Collinge. "Coyotes." *Prevention and Control of Wildlife Damage*. Editors, Scott E. Hygnstrom, Robert M. Timm, Gary E. Larson. 1994. University of Nebraska-Lincoln. 2 vols. <http://icwdm.org/handbook/carnivor/Coyotes.asp>



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The color of a coyote's fur can vary greatly.

Michigan Department of Natural Resources. "Coyote." 2009. https://www.michigan.gov/dnr/0,4570,7-350-79135_79218_79619_81482---,00.html

United States Department of Agriculture, Animal and Plant Health Inspection Service "Wildlife Services: Helping Producers Manage Predation." 2002. Program Aid No. 1722 https://www.aphis.usda.gov/wildlife_damage/nwrc/downloads/prodguide.pdf.

Additional resources

Visit our Wildlife Management website for additional fact sheets on managing other wildlife and for more resources: bit.ly/wildlife-mge

U.S. Fish and Wildlife Service <https://www.fws.gov/offices/>

Your state's Department of Natural Resources or similar agency.

Wildlife Services. "Livestock Protection Dogs." Fact Sheet. 2010. https://www.aphis.usda.gov/publications/wildlife_damage/content/printable_version/fs_livestock_protection.pdf



Terry Spivey, USDA Forest Service, Bugwood.org

Guard dogs are used to repel predators from livestock or cropping areas.

Midwest directory of wildlife management agencies

Information from February 2019.

Illinois

Department of Natural Resources: (618) 435-8138
www.dnr.illinois.gov
USDA APHIS Wildlife Services: (217) 241-6700

Indiana

Department of Natural Resources: (317) 232-4102
www.in.gov/dnr
USDA APHIS Wildlife Services: (765) 494-6229

Iowa

Department of Natural Resources: (515) 725-8200
www.iowadnr.gov
USDA APHIS Wildlife Services: (573) 449-3033

Kansas

Department of Wildlife, Parks and Tourism:
(620) 672-5911 www.ksoutdoors.com
USDA APHIS Wildlife Services: (785) 537-6855

Michigan

Department of Natural Resources: (517) 284-6057
www.michigan.gov/dnr
USDA APHIS Wildlife Services: (517) 336-1928

Minnesota

Department of Natural Resources: (651) 296-6157
www.dnr.state.mn.us
USDA APHIS Wildlife Services: (651) 224-6027

Missouri

Department of Natural Resources: (800) 361-4827
www.dnr.mo.gov
USDA APHIS Wildlife Services: (573) 449-3033

Nebraska

Department of Natural Resources: (402) 471-2363
www.dnr.nebraska.gov
USDA APHIS Wildlife Services: (402) 434-2340

North Dakota

Game and Fish Department: (701) 328-6300
www.gf.nd.gov
USDA APHIS Wildlife Services: (701) 355-3300

Ohio

Department of Natural Resources: (800) 945-3543
www.ohiodnr.gov
USDA APHIS Wildlife Services: (614) 993-3444

South Dakota

Game Fish and Parks: (605) 223-7660 www.gfp.sd.gov
USDA APHIS Wildlife Services: (701) 355-3300

Wisconsin

Department of Natural Resources: (888) 936-7463
www.dnr.wi.gov
USDA APHIS Wildlife Services: (608) 837-2727



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