Crows and ravens

Wildlife management series for Midwestern farmers

Terry L Spivey, Terry Spivey Photography, Bugwood.org

Common raven (left) and American crow. The raven is a larger bird.

Common and Latin name: Crows and ravens (*Corvus* spp)

Commonly impacted crops: Crow and raven damage to agriculture includes feeding on corn and other grains, damage to fruit such as cherries, apples or melons, and injury of newborn livestock (ravens only).

Relevant regulatory agency: U.S. Fish and Wildlife Service, State Department of Natural Resources

Species overview

Physical description of animal: Crows are among the most widespread and recognizable birds in North America. There are three species of crows in North America, but only the American crow and Common raven are found in the Midwest. Ravens are very similar in appearance to crows but can be distinguished by a slightly larger size, a wedge-shaped tail and a call that is a hoarse croak compared to the well-known "caw" of a crow.

Habitat and range description: American crows are widely distributed over much of North America. They breed from Newfoundland and Manitoba southward to Florida and Texas, and throughout the West, except in the drier southwestern portions. During fall, crows in the northern parts of their range of North America migrate southward and generally winter south of the Canada-U.S. border. Ravens are limited to the more northern latitudes of Michigan, Wisconsin and Minnesota.

Behavior, including food habits: Crows are commonly observed in treetops, fields and roadsides, and in habitats ranging from open woods and empty beaches to town centers. They participate in flocking behavior with large flocks gathering in winter feeding and overnight roosting areas. They usually feed on the ground and eat almost anything—most commonly earthworms, insects and other small animals, seeds and fruit but also garbage, carrion and chicks they rob from nests.

Identification of damage: Crows peck larger fruit such as melons and apples, consuming small portions of multiple fruits often leaving them unsaleable. Crows consume small fruits like cherries and blueberries whole, often knocking additional fruit to the ground during feeding.

Damage to grain crops commonly occurs in the seedling stage or during ripening. Crows will pull sprouting corn or small grains from the soil to consume the seed, but other bird species such as sandhill cranes are a more common cause of such damage. Crows will also feed on ripening corn, sunflowers or sorghum, although it can be difficult to distinguish from damage caused by red-winged blackbirds.

Catherine Lindell Lab, Michigan State University

Bird feeding damage to apples.

North Central IPM Center

MICHIGAN STATE UNIVERSITY | Extension

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Ravens will occasionally injure very young livestock during or shortly after birth, pecking at exposed tissue around the face or hindquarters, which can cause serious wounds or death. However, it can be difficult to determine if raven depredation is the primary cause of livestock injury versus ravens feeding on previously sick, injured or dead animals.

Ron Goldy, MSU Extension

Crow damage on a tomato.

Management

Legal status: Crows are a protected species under the federal Migratory Bird Treaty Act. However, there is a provision in the Act stating crows can be trapped or killed "when found committing or about to commit depredations upon ornamental or shade trees, agricultural crops, livestock or wildlife, or when concentrated in such numbers and manner as to constitute a health hazard or other nuisance." For this reason, no federal permit is required to mitigate crow damage. Note that ravens are **not** included in this provision and do require a permit. There is also *no permit required to harass* crows or ravens.

States may require permits for the hunting of crows not causing damage. Consult the relevant state wildlife agency for more information.

Strategies: No single management method to prevent crow damage works all the time or in all settings. Generally, multiple management methods should be combined so that one method enhances the effects of another.

Exclusion: Exclusion by netting may be advisable in protecting high-value crops like apples, especially if the trees are a dwarf variety with existing trellis to support netting. Plastic mesh netting can be draped over the trees or trellis as the crop ripens and becomes more attractive to crows. While the initial outlay for materials may be high, it does offer the advantage of working, if properly installed, without continuous surveillance.

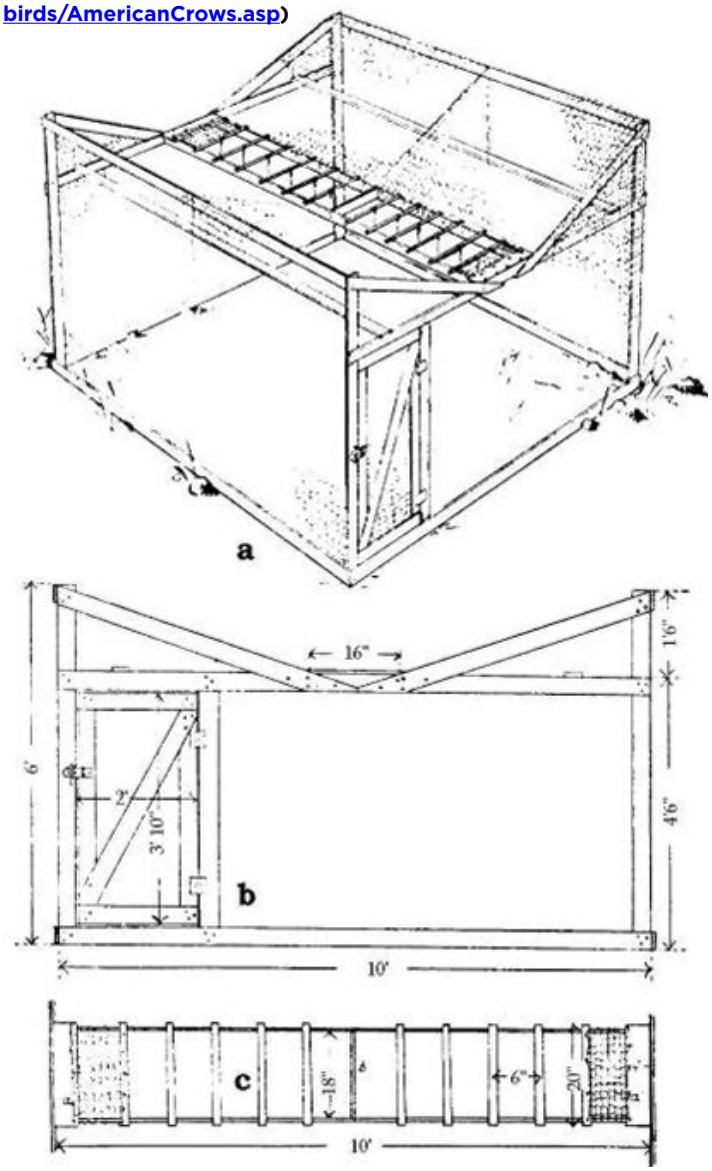
Another technique used to exclude crows is stretching monofilament line or fine wire at intervals across the field at heights about 6 to 8 feet above the ground. Aluminum foil strips or mylar tape can be tied to the wires to create an additional deterrence. Information concerning the spacing of the overhead wires varies from 10 to 20 feet. This is more practical over small areas such as a garden.

Repellents: Anthraquinone (AQ) is a product that can be used to repel crows from planted agricultural seeds. AQ causes distress in the gut of birds that ingest treated seed, which leads to an aversion to the food. Registered as Avipel, AQ can be applied as a powder or liquid to seeds. Currently, it is only registered for use as a repellent to protect corn.

Trapping: Trapping and removing crows can be a successful method of control at locations where a small resident population is causing damage or where other techniques cannot be used.

The most commonly used trap for crows is the Australian Crow Trap, which is a type of decoy trap. These traps are most successful if used during winter when food is scarce. Australian crow traps should be at least 8 to 10 feet square and 5 to 6 feet high. If desired, construct the sides and top panels to facilitate transportation and storage. Place the trap where crows are likely to congregate. The most attractive bait is meat such as roadkill or eggs.

Plans for the construction of an Australian crow trap. Prevention and Control of Wildlife Damage (http://icwdm.org/handbook/birds/AmericanCrows.asp)



Harassment: Propane cannons and pyrotechnics have been used to disperse crows from crop fields. Use them as soon as crows appear to prevent them from developing a pattern of feeding in a particular field. These are effective when the individual crows that encounter them are naïve to the devices. However, crows are intelligent and may become habituated to noise threats.

Shooting: Shooting crows can reinforce the effectiveness of harassment methods such as pyrotechnics. Crows are very intelligent and can quickly learn to avoid humans. Owl effigies and crow distress calls will improve efficacy. Persistence is important to successfully deter crows through shooting.

Using dead crow effigies (carcasses or artificial) as frightening devices have been studied and show much promise as a frightening technique in both preventing crop damage and in roost dispersal. Studies indicate that crows respond to effigies with alarm, especially when used with other frightening techniques, such as distress alarm calls or other lethal means of control such as shooting. To prevent crop damage, dead crow effigies should be hung throughout the area to be protected.

Most states allow the hunting of crows which will help condition crows to avoid certain locations. Consult your state wildlife agency for pertinent regulations.

Protecting livestock: Young livestock can be protected from ravens by ensuring birthing occurs in a protected area away from crow habitat whenever possible. Properly disposing of afterbirth and dead animals by completely burying or composting them may also help prevent ravens from engaging in livestock depredation.

Considerations

Crows are intelligent and will adapt when facing management actions. Integrating multiple management strategies and persistence are required to increase chances of success.

Although crows cause a variety of damage problems, many of these are more commonly associated with other wildlife species. Before any damage management, especially lethal control, is attempted, confirm what the offending species is.

On the positive side, the crow diet includes large numbers of insects considered harmful to agriculture, as well as mice and carrion. In addition, they consume waste grain left in fields and may help prevent undesirable volunteer corn in the following year's crop.

Acknowledgments

Avipel Bird Repellent Seed Treatment. http://www.arkionls.com/avipel.html.

Cornell Lab of Ornithology. "American Crow." *All About Birds*. Cornell University. 2017. https://www.allaboutbirds.org/guide/

Johnson, Ron J. "American Crows." *Prevention and Control of Wildlife Damage.* Editors, Scott E. Hygnstrom, Robert M. Timm, Gary E. Larson. University of Nebraska-Lincoln. 2 vols. 1994. http://icwdm.org/handbook/birds/AmericanCrows.asp

Minnesota Department of Natural Resources. Undated. "American Crow Damage Management". *Living with Wildlife.* https://www.dnr.state.mn.us/livingwith_wildlife/crows/index.html.

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

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.gove/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

United States Department of Agriculture National Institute of Food and Agriculture

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