Preventing Waterfowl Crop Damage

Cooperative Extension South Dakota State University

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South Dakota Cooperative Extension Service
How seriously you regard crop damage by waterfowl depends as much on your attitude toward wildlife and your bank account as it does on the location of your grain fields and the number of birds in them.

Some farmers, recognizing they are among the nation's caretakers of wildlife, are able to shrug off a certain amount of loss. Others, on the "economic edge", cannot afford to lose any grain. Most are willing to solve their own problem if someone provides them with necessary information.

If it's your grain field that a flock of ducks or geese has selected for heavy feeding, you may not care too much that you are the "caretaker of a public resource." Depending on the stage of your crop, the weather, and the number of birds attracted to your field, you could sustain a sizable economic loss.

On the other hand, a farmer can often only estimate the damage that waterfowl have done to his crops. Nevertheless, airing his troubles may bring a helpful response from neighbors, hunters, or the authorities. Sometimes group efforts are the most effective.

However great the damage, you are not free to do anything that comes to mind to rid your fields of ducks and geese. But you do have an arsenal of proven legal methods, and you will be able to create more.

The key is prevention.

(You may first need an overview of crop damage by waterfowl in the U.S. and Canada. Read Fact Sheet 836, "Understanding Waterfowl Crop Damage," for a discussion of the problem.)

If you determine that you must do something, you have two choices: you can either scare the birds off as they arrive or you can change your cropping practices, either to make your fields unattractive to them in the first place or to coax them to some spot where you'd rather have them.

**Scare methods and devices**

Ducks scare easily; hunters who use blinds, decoys, and calls know that. But hunger and habit will override fear. Once a feeding pattern has been established (it takes just a few days), you will have a hard time breaking the birds of the habit.

Techniques you can use to reduce waterfowl depredations include patrols and scarecrows; the sounds from firearms, propane exploders, and rockets; or herding birds by aircraft. A one-time fly-over or a one-time blast from a shotgun probably will accomplish a one-time mass exodus, but the next morning your field may be full of ducks again. And if the birds found your field before you began scare tactics, they will surely be back.

**Herding and hazing**

One tactic is to herd or haze the birds back into the marshes or away from the grain fields. All you may accomplish, in many cases, is to drive them from one farm to another. There often is no suitable marsh habitat for them to escape to.
Where there is wild habitat available, herding or hazing by aircraft has been successful. One plane can protect 10,000 to 13,000 acres. But hazing is expensive and risky, and state laws differ. Check with your state or federal game warden before taking off.

Scarecrows

A scarecrow of almost any description has been used with success, according to research trials at the J. Clark Salyer National Wildlife Refuge in North Dakota. No damage was reported in fields where the scarecrows were put up before the ducks arrived in the area. You can use your imagination: cans on stakes, farm machinery, newspapers, straw-stuffed overalls. The poorest excuse for a scarecrow will usually work as well as an artistic one.

A design for a scarecrow can be as simple as a rectangular piece of black plastic attached to a lath stake. Several per field proved very effective, and the method has been readily accepted by grain growers.

More elaborate is the “pop-up” scarecrow—a human-like scarecrow that “pops up” and fires off a double propane exploder. One of these kept blackbirds out of 4 to 6 acres of sunflowers. The device hasn’t been tested on waterfowl in swathed grain fields, but ducks and geese frightened much easier than blackbirds. Fewer pop-ups should be effective on more acres for waterfowl.

Streamers and reflectors

Streamers and reflectors have had varied successes, either alone or in combination. Three or four “spirulum whirlers” (the metal strips used by gas stations to attract business) or a tin “flasher” (use an aluminum foil pie pan) attached to the top of a pole might be worth a try.

A rotating flashing beacon has been used successfully in both North Dakota and California when ducks tried to stay in fields at night.

Gun blasts and shell crackers

Gunfire alone will deter waterfowl but works better in combination with visual devices. If you are using scarecrows, reinforce them with gunfire, particularly toward sunset. Direct the shooting toward the ducks since the sound is most effective in a 30 degree arc from the muzzle. The first round usually causes the birds to take flight, but repeated shots will keep them going. A .22 rimfire rifle works as well as, if not better than, a shotgun.

You will, of course, handle all firearms with care. A rifle should never be fired skyward. And there’s a fine line between shooting “at” and “toward” the flock.

Federal regulations provide that a depredation permit is required before any person may take (kill), possess, or transport migrating birds for depredation control purposes. No permit is required to merely scare or herd depredating migratory birds other than endangered or threatened species or bald and golden eagles.

The exploding shotgun shell or “shell cracker” is sometimes effective, as are pistol bombs, whistle bombs, small exploding rockets, and rope crackers. They are expensive and require an operator with time to visit the field. Check with conservation officers; these devices may not be legal in your state.

Auto-exploders

The automatic acetylene exploder (or cannon), became a popular control device in the western U.S. during the late 1950s.

Today’s exploders are very simple to operate. They use bottled propane gas and produce a sound similar to that of a shotgun. The noise can be intensified by directing the firing through a hole in the end of a small steel drum from which the opposite end has been removed. The exploder is relatively small, and it can be used for years if given proper maintenance.

In Saskatchewan, acetylene exploders, operating at a rate of one explosion a minute for an average of 15 days per field, reduced duck damage without spreading the losses to other farmers. Fields were planted to barley, wheat, and oats, and varied from 20 to 220 acres in size. Ducks were allowed to feed undisturbed in stubble or lightly cultivated fields nearby.

Only one exploder was required in fields that were 70 acres or smaller in size, while two or more exploders were needed in the larger fields. The approximate capital investment per 70-acre field was $100, with average

Combination of dwindling areas of natural foods and proliferating practices of swathing small grain (conveniently, for the birds, just at flocking and migration) has increased waterfowl depredation. Damage is by no means widespread, but is sometimes serious in local areas.
annual operating costs of $8 per field. These costs were considerably less than damage losses claimed by farmers in the area during the 2 previous years.

Another time, 70% of 201 grain fields were protected with one exploder each.

The most recent development in exploders is the “double-banger,” two exploders stacked on top of each other or facing in opposite directions on a rotating crossbar. Firing intervals between the two exploders can be varied and the interval from one series of explosions to the next can be adjusted up to about 30 minutes. Those who’ve tried it say one device per 80 to 100 acres of barley works well.

Other devices

There are other, less effective devices—air raid sirens, an acetylene flash gun that combines a loud sound with flashing lights, smoke bombs, and fog making machines.

For your situation, anything might work. Whatever you use, get the drop on the birds by being in the field before flocks move into your vicinity, and stay legal.

Manipulating farming practices

The widespread practice of draining wetlands concentrates ducks and geese on the remaining wetlands. The widespread practice of swathing grain attracts waterfowl to farmers’ fields. The combination of concentrated birds and swathed grain invites crop depredation problems.

Study some alternative farming practices. Can you remove temptation?

Straight combining of standing grain eliminates swathing. However, straight combining requires that the grain be evenly ripe at the time of harvest. That means the crop has to stand longer and may be exposed to rain, hail, wind, and frost. However, in the last 5 to 10 years, newer wheat varieties have minimized some of these problems, and straight combining is becoming more common.

Grain dryers complement straight combining. Not only do they help reduce crop losses from natural and mechanical causes, but they allow the crop to be harvested earlier at a higher moisture content and before waterfowl arrive. Dryers are expensive. You will have to examine your farming operation to see if this is the way you want to go.

There are also earlier maturing varieties and crops that are less susceptible to damage. You can move planting dates forward. Winter wheat may be an excellent alternative and allow harvest prior to waterfowl concentrations in the late summer.

There’s certainly no problem if the birds feed in stubble after you’ve harvested. But if the stubble is plowed immediately after harvest, the birds will be forced to fields where the grain is still swathed. A several-week delay in plowing will minimize crop predation in the area, particularly during periods of inclement weather. A delay till spring may also help other wildlife species and reduce your soil erosion losses during winter.

Combined tactics

Several well-proven tactics work much better if you combine your efforts with neighbors or with sportsmen, conservationists, or other interested groups. These are methods that give additional positive benefits for the effort expended.

Lure crops

A lure crop is a grain field that is either set aside and left undisturbed in an area where a waterfowl feeding pattern has been established or it is a field purposely planted in a strategic location to attract and hold birds to prevent them from damaging commercial crops. It is generally a cereal grain that has been either swathed or flooded.

Lure crops, both permanent and temporary, are the mainstay of the Canadian Wildlife Service depredations program. Significant lure crop studies have been conducted in the U.S.; one concerned sandhill cranes. Another, begun in 1975 in three counties in North Dakota, was later expanded to include the entire state.

Lure crops of barley and wheat (mostly durum), averaging 30 acres, were highly effective in reducing damage in several areas where complaints were highest. The studies showed that 10,000 ducks in an area would cause losses of approximately four times the cost of a lure crop.
If you suspect you will have the following situation this fall, consider lure crops now: (1) The birds will be the kind that can be hazed quickly and easily from field to field. (2) Birds will be in large concentrations (about 2,500 birds at a minimum). (3) They will arrive just when your crop is most vulnerable. (4) Harvest may be delayed or the birds come early so that there is the potential for a long damage season (30 days).

**Bait stations**

When you use bait stations, you save the birds the effort of harvesting in your field. The grain is simply spread out or put in piles near natural feeding or loafing areas.

One researcher had difficulty herding birds from commercial fields. But after he spread bait in "safe" areas and when the birds learned where the undisturbed baited food was, 35% of the flock came willingly within 5 days. Up to 90% of the flock was using the bait in 35 days. The baiting did not increase the overall waterfowl population in the general area.

Hunting over baited areas is illegal. Stubble baited with small grains can attract sizable numbers of birds and hold them for up to 30 days. As many as 6,000 ducks, 1,000 geese, and 50 sandhill cranes fed in one field for several days in a 1981 North Dakota project of this type.

In 2 or 3 days—or less—waterfowl will establish a feeding pattern. Timing is critical; get that bait out early.

**Chemicals**

No chemical repellents are presently registered to prevent duck damage to unharvested grains. Chemical repellents, if approved, probably would not cause the birds to react fast enough to prevent the decoying of new flocks, and the high levels of application required would not be cost effective.

But a desiccant, or ripening agent, might be worth a try in critical damage areas. A standing crop could then be straight combined, rather than swathed. This would allow an early harvest, hopefully prior to the arrival of the waterfowl.

One of the first things you have to decide about waterfowl crop damage is your feeling toward wildlife. Then consider your crop losses: are they as serious as they first appear to be?

Then, if you want to take action, you have options. You can try a scaring device or change your cropping patterns. You can go it alone, but there are other people who share your concern. Visit with local sportsmen and conservation groups, who might cooperate in setting up bait stations or planting lure crops.

For immediate help on depredation problems, contact your local county Extension agent, animal damage control agent, or conservation officer.

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