

Creating a naturalized buffer strip to separate a pond from turf areas can deter Canada geese. Bridgehampton Golf Club, Long Island, New York.

CANADA GEESE — Definitely No "Birdie"

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HROUGHOUT much of the country, populations of Canada geese have been increasing exponentially on golf courses and park lands over the past 20 years. This increase has resulted in turf damage, pond eutrophication, and generally unsightly messes. The sources of these problems are what wildlife biologists have termed "resi-

dent" Canada geese. These birds have adapted to urban and suburban areas because of the availability of large expanses of well-manicured turf, interspersed with bodies of water that provide all of their basic necessities — food, water, and cover. These areas also provide protection from predators and sport hunting.

Canada geese traditionally have been a source of recreation and food to hunters and are managed by federal and state wildlife management agencies for that purpose. Before 1935, migrating geese were attracted to hunting clubs with captive live decoy geese. When this practice was no longer allowed, many of these decoy birds were

released and remained in the area to produce "resident" goose flocks.

Legal Status

Canada geese are protected by the Migratory Bird Treaty Act. Under this law, Canada geese cannot be captured, moved, or killed without a permit allowing these activities. No permit is required, however, to scare or harass geese.

Animal Damage Control (ADC) is the federal agency responsible for providing technical assistance to persons with wildlife problems, and they should be contacted before beginning any goose control program. There is an office in every state. ADC can assist in setting up a Canada goose management program specific to your property, which may include obtaining a permit from the U.S. Fish and Wildlife Service. Problems with Canada geese do not occur overnight, so be aware that solving a goose problem may take several years. Eliminating them completely from the property is probably not possible.

Control Methods

Effectively managing resident populations of Canada geese requires an integrated management approach utilizing a variety of tools. These include habitat modification, exclusion methods, harassment techniques, and population reduction. This article discusses tactics that have a scientific basis for reducing problems with geese. Any other methods should be discussed with ADC wildlife biologists to assess their legality and effectiveness.

Habitat Modification

Canada geese need grass for food, water for protection, and protected areas for nesting sites. If these basic necessities are eliminated, geese will be less likely to remain in an area.

1. Stop supplemental feeding of any waterfowl by well-intentioned golfers and the public. Human food is nutritionally unhealthy for wildlife and will concentrate birds, making them more susceptible to

disease. You may be able to work with the town in drafting ordinances that forbid wildlife feeding.

- Develop habitat buffer strips around ponds and other plantings to break up large turf areas. These provide physical and visual barriers that make geese less comfortable in an area.
- Construct permanent decorative walls of stone or timber to separate ponds from heavily used turf areas.

Barriers and Exclusion

During the late spring and summer, geese prefer to walk between the areas that they inhabit. The goslings are flightless at this time, as the adult geese often are during their annual molt. Temporary fencing can be installed during this period to keep geese away from areas of play.

Canada geese also have been prevented from entering even large ponds by using a wire, kevlar, or monofilament line grid over water. Stainless steel wire or heavy 80-100 lb. test monofilament line is suspended 10-18

Canada geese in great numbers affect maintenance activities and create areas that are a nuisance to play through.



inches above the water in a 10-15-foot grid pattern. The grid prevents access to the water, making the geese less likely to remain in the area.

Harassment Techniques

Harassment is a convenient and relatively inexpensive means to frighten geese off golf courses. Canada geese, like any other animal, will adapt and become accustomed to repetitious harassment programs when they realize there is no danger involved. Following are several points to remember when establishing an effective harassment program:

- Initiate the harassment program early in the season, prior to nesting or the establishment of feeding patterns. Extra attention should be paid during periods of sunrise and sunset and during inclement weather.
- Do not allow even one goose to remain, as it will attract other birds.
- Be persistent, especially early in the season when birds are looking for nesting sites. Often it requires days to break longestablished feeding patterns.
- Use a variety of harassment methods to prevent acclimation. Usually, no one method will work by itself.

The use of dogs has become a popular tool for goose harassment. Specially trained herding dogs, retrievers, flushing breeds, and even energetic mongrels have proven up to the task of chasing geese, serving as a very effective deterrent. Again, harassment with dogs should start prior to nesting.

The use of pyrotechnics such as shell-crackers, whistle bombs, noise bombs, and screamer/banger rockets can also be used against depredating Canada geese. These should be fired to explode in the air just above the birds. It is a good idea to contact local authorities prior to using these devices, as special noise ordinances may exist.

Visual frightening methods also can provide some success for deterring geese, especially when used in conjunction with other harassment methods. Important components of a good visual frightening device are movement, light reflection, certain colors, and shapes that might resemble natural enemies or predators. Scarecrows, large-diameter helium balloons with eyespots, or flags of mylar or colored plastic have been somewhat effective. Both real and artificial swans have also been used but often provide only short-term deterrence to geese.

Another interesting and apparently successful method of deterrence utilizes a radiocontrolled boat that chases the birds on the water. Other superintendents have reported success in startling the birds with the automatic irrigation system. It is obvious that a



A German shepherd is used successfully to harass geese at Gnome Hollow Golf Course in New Jersey.

good imagination and persistence is required to outwit the Canada goose.

Repellents

One of the most recent developments for deterring geese involves the use of the feeding deterrent methyl anthranilate (ReJex-iT AG-36). This product is a feeding deterrent that is sprayed onto vulnerable turf areas. The geese show an immediate response to the treated grass and quickly move to another feeding site. The effectiveness of any repellent depends on its residual life. Stickers can be added to extend the life of the repellent, but repeat application will be required for heavily irrigated and frequently mowed turf.

Population Control

The Canada goose is a migratory game bird and as such is managed through careful population assessment and hunting seasons set by waterfowl biologists. Hunting and removal of Canada geese is a very effective means of reducing the resident geese problem. Your local state conservation department can provide information regarding licensing season dates and bag limits. Several states have requested and obtained extensions to the regular hunting season to better target resident populations. These seasons are opened prior to and following the dates when truly migratory birds move through the area. The extended seasons have been most effective in managing resident goose numbers.

Depredation Permits

Together with the State Conservation Department, the U.S. Fish and Wildlife Service issues depredation permits when geese are not responding to harassment measures or any other methods. The two types of permits most commonly issued are for addling eggs in nests or shooting adults outside of hunting season. A permit also would be required for relocating geese, but this is seldom approved as locations where the birds will be accepted are rare. Permits are issued only when other methods are not possible and only as a reinforcement to harassment techniques. These permits are not issued for population control.

Summary

Canada geese are and will continue to be a common bird species on golf courses and park lands that provide suitable and safe habitat. However, an integrated management approach, utilizing cultural practices, habitat modification, harassment, and population control, can reduce the numbers of geese to levels that do not create a nuisance or damage turf. Work with your regional ADC staff and State Conservation Department to help with this problem. Finally, educate golfers about Canada goose biology, natural history, and available control strategies. Communicate your plans to your golfers, and be realistic about your expectations. It is possible to strike a balance between resident Canada geese and golf.