

Paul D. Curtis, *Dealing with Wildlife Pests: Bird and Mammal Damage to Sweet Corn*

Summary:

In New York State, wildlife negatively impact a variety of fruit, vegetable, and ornamental crops. Based on a grower survey, deer damage to agriculture has been estimated at about \$59 million dollars annually in NYS, and damage to vegetable crops likely exceeds \$6 million. Deer, birds, and raccoons are the wildlife species most often responsible for sweet corn losses. However, as black bear populations expand across the Southern Tier, reports of bear damage to corn are increasing.

Localized deer damage may be reduced by increasing the harvest of female deer on and near farms. Growers should encourage hunters on their land to take female deer with Deer Management Program (DMP) tags (regular doe tags issued to hunters in parts of NYS) during the regular NYSDEC big game season. If the damage levels are still not tolerable, landowners can obtain Deer Management Assistance Program (DMAP) permits from NYSDEC for taking additional antlerless deer during the regular hunting season. However, sometimes deer damage is severe outside the hunting season. For this situation, NYSDEC will often issue Deer Damage Permits (DDPs) for taking antlerless deer on specific farm lands. DDPs are not hunting tags, and program participants can use methods that would not be legal during hunting season. For example, DDPs may allow the use of lights after dark, baiting deer into safe shooting zones, and possibly the use of rifles in shotgun zones. All local laws and statewide firearms restrictions apply, so lethal deer removal may not be possible on all farms.

Fencing is another way to reduce deer damage during the growing season. Given the acreage and crop value for most sweet corn farms, 8-foot-high deer exclusion fencing is seldom practical. Woven-wire barrier fences used to protect apple orchards or nursery crops often costs \$6.00 - \$8.00 per linear foot. Electric polytape or polywire fencing on fiberglass poles with insulators 30 inches above ground have protected sweet corn and other vegetables from deer damage on fields 5 to 8 acres in size. If the area is 10 acres or more, often the effectiveness of the fences will decline. A high-voltage charger designed for deer is needed, and make sure it is well-grounded. Baiting the electric fence with attractants (peanut butter on aluminum foil tabs) or repellents (egg-based deer repellent sprayed on cloth strips) will increase the effectiveness of the fence. The total package for fencing 5+ acres should be <\$400, and most of the cost will be for the fence charger. Such a fence should cost about \$1.50- \$2.00 per linear foot. With electric fencing, if woodchucks are also a problem, you can easily add a second strand of polytape about 6 inches above ground to exclude them.

Raccoons take sweet corn during the milk stage, usually just a few days before harvest. A two-wire electric polytape fence with strands 5 and 10 inches above ground can exclude raccoons from sweet corn. If deer are also a problem, add a third electric wire about 30 inches above ground as noted above. Trapping can also be used to remove raccoons causing damage. There are foot-encapsulating traps (e.g., Duffer, Li'l Griz) that are designed only to catch raccoons, and will not trap or harm non-target wildlife or pets. Raccoons are rabies-vector species in NYS,

and anyone trapping raccoons should have rabies pre-exposure immunization. Under NYS Environmental Conservation Law, raccoons and other wildlife causing damage cannot be transported off of your property. The animals must be humanely euthanized and buried on site, or released alive.

Several species of birds may cause damage to ripening sweet corn. The most common are red-winged blackbirds and crows in field settings. Starlings and cowbirds are more likely to damage stored field corn or other grains. Several auditory and visual scare devices can reduce bird damage for short periods of time (days to a few weeks). However, birds are smart, and can quickly learn to identify real danger from non-lethal scaring methods. Scare devices eventually fail, but may provide growers with sufficient time to harvest a block of corn. Tips for increasing the efficacy of scare devices include moving them every few days, presenting sounds at random intervals, and reinforcing scare methods with real danger (occasionally shooting birds with a shotgun).

Lethal control of birds depends on the species and specific regulations. Shooting birds usually does not remove many individuals, but it can be effective for reinforcing other bird-scaring methods such as exploders. European starlings are non-native and have no federal or state protection. They can be killed at any time with any legal control method (trapping or shooting). Other bird species causing damage to corn are native and have both federal and state protection. Regulations for protecting crops from damage vary by species. Crows are considered a game bird in NYS, and there is an open crow season from September 1 to March 31, during Friday through Monday each week. In addition, Environmental Conservation law § 11-0523 – 1 states that, “Owners and lessees and members of their immediate families actually occupying or cultivating lands, and persons authorized in writing and actually employed by them in cultivating such lands, may take (a) unprotected wildlife other than birds and (b) starlings, common crows and, subject to section 11-0513, pigeons, when such wildlife is injuring their property or has become a nuisance thereon.” So if starlings and crows are causing corn damage, landowners can trap or shoot them.

Regulations are different for blackbirds. Environmental Conservation law § 11-0523 – 3 states that, “Red-winged blackbirds, common grackles and cowbirds destroying any crop may be killed during the months of June, July, August, September and October by the owner of the crop or property on which it is growing or by any person in his employ.” So these bird species can be shot or trapped if they are causing sweet corn damage during the growing season. All local laws and statewide firearms restrictions apply (e.g., 500-foot discharge requirement), so lethal bird removal may not be possible on all farms.