

Birds

(George M. Linz and Jim Hanzel)

Sunflower, due to the easy accessibility and high nutritional value of its seed, is particularly vulnerable to damage by birds (Figure 80). Seeds are exposed and the large head serves as a perch during feeding. Sunflower seed is a preferred bird food because the seed contains many proteins and fats essential to their growth, molt, fat storage and weight maintenance processes. Although many species of birds feed in maturing sunflower fields, the greatest losses are caused by migrating flocks of red-winged blackbirds (Figure 81), yellow-headed blackbirds and common grackles. Significant losses occur in fields located near cattail marshes.

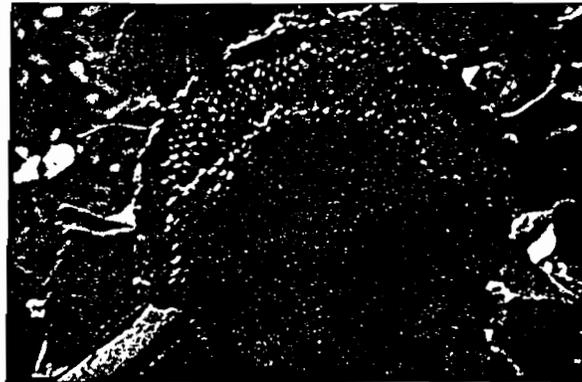


Figure 80. Sunflower may be depredated by birds. Birds perch on the sunflower heads and pluck the seeds.

Migrating and Feeding Habits of Blackbirds: The adult male blackbird is the first of his species to arrive in the spring. He establishes a territory and awaits the arrival of the females. As females arrive, they disperse to the males' territories and breeding takes place. Each female produces a clutch of three or four eggs. Nests are built in dense vegetation, most often in cattails, where there is an abundant food supply. Their diet throughout the nesting season includes insects and weed seeds.

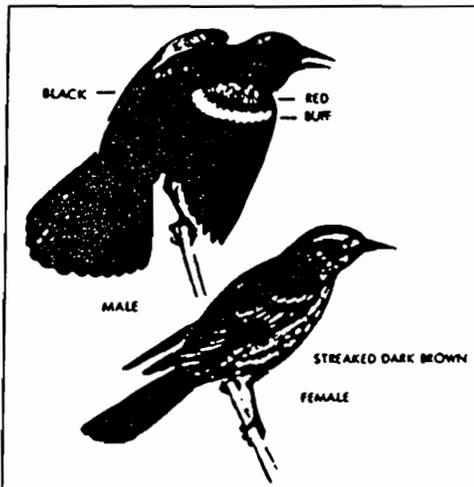


Figure 81. The red-winged blackbird is the most serious bird-pest of sunflower in the northern production area.

Following nesting, blackbirds form large flocks. Peak concentrations of blackbirds occur in mid September in the northern growing area (Figure 82). This period coincides with the time that sunflower has matured. Most often, the birds roost in the cattail marshes at night and move to the field for feeding during the day.

Blackbirds feed on insects and weed seeds in small grain, corn, or sunflower fields before these crops are vulnerable to damage. They become used to feeding in a certain location and include sunflower seeds in their diets as the crop matures. Efforts made by the producer to move birds from a field are often unsuccessful because they are in a habit of feeding there.



Figure 82. Blackbirds cause most damage in August and early September before the seed is mature.

Management

Blackbirds are protected under the Migratory Bird Treaty Act. However, Section 21.43, Title 50 CFR, provides: "A Federal permit shall not be required to control yellow-headed, red-winged, tri-colored red-winged, and Brewer's blackbirds, cowbirds, all grackles, crows, and magpies when found committing or about to commit depredations upon ornamental or shade trees, agricultural crops.. ."

Cultural practices in combination with mechanical and chemical harassment practices should be used to control blackbirds.

Cultural Control: A combination of cultural practices may be used to reduce the risk of bird damage to sunflowers. Sunflower should not be planted near cattail marshes or woodlots. Access trails should be left every 200 to 300 feet in large fields to aid in scaring birds from the center of the field. Blank rows or strips left for placement of bee hives can be used for this purpose. Planting should be done at the same time as neighbors because earlier and later ripening fields take more damage.

Weed control should begin early. Weeds in the crop are often an attractive food source for blackbirds before the crop reaches a susceptible stage. Once blackbirds have developed patterns in weedy fields, they will begin to include the maturing cultivated crops in their diet. The plow-down of harvest stubble should be delayed until after sunflower harvest. Crop stubble serves as an alternate feeding area for harassed birds. Lure or trap crops may be planted on diverted acres in areas of high bird risk to keep birds out of susceptible crops. Sunflower should be harvested as early as possible to avoid prolonged exposure to bird damage. Desiccation to advance harvest will reduce exposure to birds.

Bird-resistant hybrids should soon be available for use in high-risk depredation areas. The seed of these hybrids is protected by morphological traits, i.e., concave-shaped heads, horizontally-oriented heads, and long head-to-stem distance (Figure 83). Hybrids possessing the traits need to be planted in north-south rows to avoid overlapping of plants after flowering and subsequent sacrifice of bird-resistance characteristics.

Dense cattail marshes serving as roosting sites for blackbirds can be managed with a registered aquatic herbicide (Rodeo[®]) to remove cattails used by these birds (Figure 84). Generally, cattails must be treated one year before sunflower are planted in the vicinity of the marsh to allow time for the cattails to decompose. The herbicide should be applied in August to at least 70 percent of the marsh with an agriculture spray plane (Figure 85). Use 2.0 to 2.5 qts of herbicide per acre. Managing these marshes reduces blackbird use and improves the habitat for other more desirable animals, such as waterfowl. Animal Damage Control and the U.S. Fish and Wildlife Service (Bismarck, North Dakota; telephone 701-250-4403) operate cattail marsh management programs in North Dakota and South Dakota.

Birds are kept out of sunflower fields most successfully by starting methods to frighten them as soon as the birds are seen in the vicinity, regardless of their diet. Various ways of moving birds mechanically are listed.



Figure 83. Bird-resistant sunflower plant with morphological traits that protect the seeds.

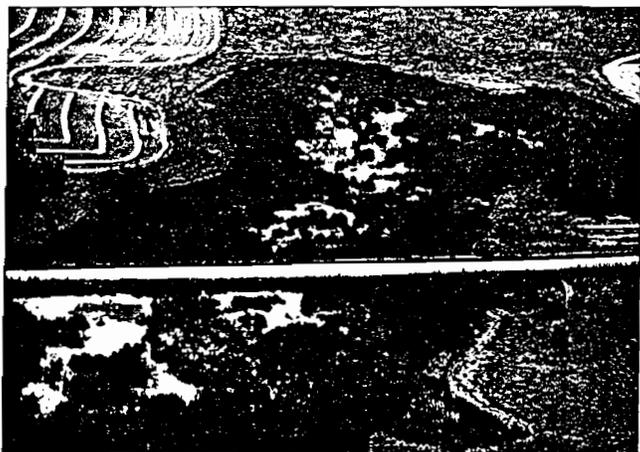


Figure 84. Cattails used by roosting blackbirds can be removed by the aquatic herbicide, Rodeo®.

USE OF .22 RIFLE. This method should be used only where legal and safe. One rifleman can protect 100 acres by firing from a high position into the midst of settling birds. Several more rounds fired into the lifting flock will often send them on their way. Extreme care must be taken with the use of rifles since the bullet may carry a mile or more. Good results can be obtained with this method.

AUTOMATIC EXPLODERS (Figure 86). Automatic exploders or bird-scaring cannons automatically detonate a gas to produce an extremely loud explosion. These devices range from relatively simple mechanisms to deluxe models with photo-electric regulators and programmable firing sequences. The device should be operated before birds begin to arrive from their roosting area at sunrise and continued as long as birds are in the field. It should be shut off at night and when not needed. The exploder should be placed on a stand above the crop. It should be adjusted to fire slowly, approximately every four to five minutes. The exploder should be moved every two or three days as birds may become accustomed to the noise if operated in the same location day after day. One exploder can protect 10-20 acres, especially if used with other mechanical devices.

ELECTRONIC FRIGHTENING DEVICES. Devices that broadcast distress calls of blackbirds are quite effective, but their application is somewhat limited because of their high cost and limited broadcast range. Furthermore, because they make extensive use of batteries, sophisticated electronic equipment and loud speakers, they are subject to vandalism.



Figure 85. Rodeo should be applied with an agriculture spray plane.



Figure 86. Gas exploder, when properly located and moved within the field every 2 to 3 days, can reduce bird damage.

PYROTECHNIC DEVICES. These include cracker-shells, flares, whistlers (fired or pistol launched) and firecrackers. Most of these products are effective in startling birds and are commonly used by many growers. These devices, however, may threaten personal safety. They also may be a fire hazard during dry periods. Safety glasses and hearing protectors are strongly recommended since these devices occasionally detonate prematurely.

SHOTGUN. This tool is costly and ineffective because of the short noise range. Killing the few birds involved has little if any effect on the rest of the flock.

AIRPLANE HAZING: Harassing feeding blackbirds with airplanes sometimes can be an effective method of chasing flocks from sunflower fields (Figure 85). This technique is especially effective if combined with other mechanical methods, such as shotguns and pyrotechnic devices. The U.S. Department of Agriculture's Animal Damage Control personnel located in Bismarck, North Dakota operate a blackbird control program that includes providing an airplane and pilot to chase birds from sunflower fields. Growers can contact ADC by telephone (701) - 250-4405.

Best results are obtained by using a combination of harassment devices. Any device used must be operated when the birds are in the field.