

Farm Structures FACTSHEET

STARLINGS AND LIVESTOCK FARMS



Starlings were brought to North America from Europe in the late 1890s. Since that time, they have greatly increased in number and spread across most of the continent.

2,000 birds can consume 1 to 2 tonnes of feed in a month and contaminate or spoil an additional 500 to 1,000 kg of feed. Worse still, starlings may selectively eat the high-protein portion of protein-supplemented livestock feed.

Starlings can also transfer many diseases between livestock animals, particularly swine.

BIOLOGY AND LIFE HISTORY

Adult starlings are chunky birds the size of robins. In summer their plumage is glossy purple-green with numerous white markings; the bill is yellow. During the winter, the back feathers are much darker and edged in light brown. The bill also darkens to bluish-black. Colour is identical for both sexes. The starling's most prominent feature is an unusually short tail. Favourite foods include fruits and seeds, both wild and cultivated. Insects and other invertebrates make up about half the diet, especially during the spring breeding season. Wintering flocks often concentrate in great numbers at feedlots and livestock shelters.

Starlings are very adaptable nesting in holes or cavities almost anywhere, including trees, birdhouses, buildings or rock piles. Females lay 4 to 7 eggs, which hatch after 11 to 13 days of incubation. Young birds leave the nest when they are about 3 weeks old. Both parents build the nest and care for the eggs and hatchlings. Two broods each season are not uncommon.

DAMAGE

Starlings can be a nuisance to livestock producers. They consume and contaminate livestock feed and water, and "whitewash" buildings, facilities and animals with their droppings. In winter, flocks of up to

CONTROL OF DAMAGE

Starlings are attracted to livestock operations by available food, water and shelter for nesting and roosting. Prevention can dramatically reduce or eliminate problems with starlings. Prevention in feeding areas includes:

1. Clean up spilled grain.
2. Use bird-proof facilities for storing and feeding grain and other attractive feed commodities (properly sealed bins, flip-top feeders, heavy plastic or rubber strips).
3. Drain or fill unnecessary water pools and puddles. (Starlings are especially attracted to water). Make

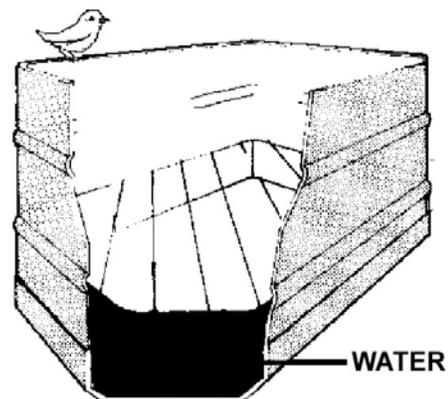


Figure 1

livestock waterers unavailable or less attractive to starlings where feasible. Lower the water level so the birds cannot drink when perched or standing on the waterer (see figure 1).

4. Use feed forms that starlings cannot swallow, such as cubes or blocks greater than ½ inch (13 mm) in diameter. Minimize use of 3/16-inch (5 mm) pellets; starlings consume these six times faster than granular meal. Discuss potential changes with your nutritionist.
5. When feeding protein supplements with other rations, such as silage, mix them well to limit starling access to the supplements.
6. Encouragement of natural predators e.g. barn owls.

EXCLUSION

Where starlings are a problem inside buildings, wherever possible close all openings with a diameter larger than 1 inch (25 mm). Where livestock or equipment must have continuous access, use heavy plastic or rubber strips hung in the open doorway. The strips should be about 10 inches (250 mm) wide hung with about 2 inches (50 mm) gaps between them. These strips might also be useful for protecting feed bunks and commodity bins. The same strips are useful for people or machinery doorways for which automatic, powered doors or manual doors are not an option.

Openings for ventilation should be covered with nylon or plastic netting. Coverings must eliminate any holes over 1 inch (25 mm) to be effective. Netting applied to the undersides of trusses would exclude starlings from the many roosting spots in most farm buildings. Exclusion is a permanent solution to problems inside the structure.

Where starlings are roosting or nesting on the ledge of a building place cover (board etc) over the ledge at a 45° angle to prevent use (see figure 2).

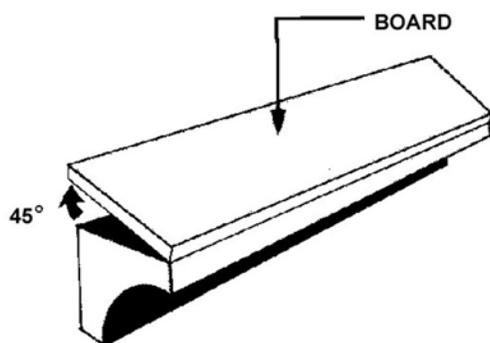


Figure 2

REPELLENTS

Repellents like *Tanglefoot*, *Buzz Off*, *Bird-X Bird Proof* and *TJ Eaton 4 The Birds* paste applied to clean surfaces will keep starlings from roosting or perching on ledges and rafters. One advantage to these soft paste-like materials is that they can be used almost anywhere, although they do not work well in dusty areas. *Bird Proof* and *4 The Birds* are also available as liquid sprays for clean dry surfaces. "Porcupine Quills," consisting of several parallel rows of 7.5 cm (3 inch) stiff wire attached to a base, can be tacked or taped to ledges and rafters (see figure 3). Starlings only need a 2.5cm (1 inch) space to roost or perch so careful placement is needed to achieve satisfactory results.

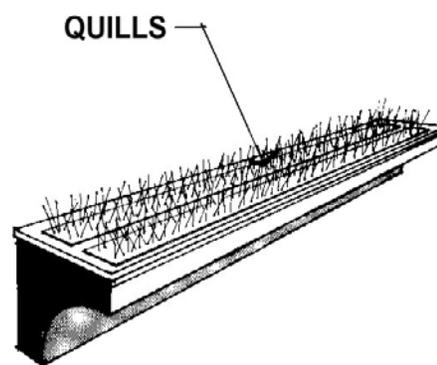


Figure 3

BIRD SCARING DEVICES

Frightening birds on livestock farms will be easier in warmer climates where birds have a plentiful alternative food supply. In colder climates with snow or frozen ground conditions, natural sources of food are often very limited and the starlings are more determined to feed on livestock feed regardless of any frightening devices. At this time, baiting and other techniques are generally more effective than frightening. Frightening programs should be started when birds first start to feed. After the birds become habituated to the feeding site, they will become more difficult to scare away.

There are many frightening or scaring devices available. Some work well under certain conditions but most are costly, time-consuming and of questionable benefit if used as the only method of control. Available devices include:

- recorded bird distress or alarm calls,
- gas-operated exploders (propane cannons),
- battery-operated electronic noise makers,

- shooting directly into or over a flock,
- lights and,
- glittering objects.

Propane cannons have been used for many years to protect fruit crops from damage from starlings. Propane cannons must be used together with other scare techniques to be effective. The noise made by the cannons often generates complaints from surrounding neighbours and on livestock farms will be disturbing to both the livestock and the starlings. In fruit crops, propane cannons have generally been restricted to operation between 6:00 a.m. and 8:00 p.m. or during daylight hours, whichever is of lesser duration. Starlings only feed during daylight hours. Propane cannons must be moved regularly to maximize their effectiveness.

Shooting at the birds is a good way to reinforce other bird scaring techniques. Shooting a .22 calibre bullet directly into or over a flock (if safety and local bylaws permit) may be effective. The report of the bullet may be sufficient to drive birds away. "Bird shot" and "dust-load" are safe and effective .22 caliber cartridges. Twelve gauge exploding shells (shell crackers) for shot guns and "banger" and "screamer" shells for orchard pistols are also available for scaring birds. Noises up in the air near the birds are more effective than noises at the ground from regular shells. Be sure to direct all shots onto your own property and away from neighbouring properties.

INTEGRATED APPROACH

Using a variety of different bird scaring techniques at the same time gives the best results. Reliance upon one technique will quickly become ineffective as starlings soon adapt to a single technique. An integrated approach is critical to be successful in scaring starlings.

USING PESTICIDES

Other than the chemical bird repellents already mentioned, there are no other pesticides currently registered in Canada for starling control around buildings. *Avitrol* is available for bird scaring in standing fields of corn and sunflowers. The avicide *Fenthion* which is a contact poison causing death in birds is no longer registered.

REMOVAL WITH TRAPS

Trapping and removing starlings can be successful at locations where the birds are a year-round problem, or few in number, or where other techniques are ineffective or cannot be used.

Food-baited funnel traps (see figure 4 on next page) are designed to capture starlings alive. A pre-bait offer of grain or other food placed outside but near the trap for four to six days will condition the birds to the trap.

After a week place the bait inside the trap with a supply of water. Funnel traps work best in feedlots, livestock shelters or grain storage areas. Place traps in an open area at least three metres from farm buildings or areas of human activity. Place birds to be killed in a pail of carbon dioxide (available from welding supply stores). A flexible cover with a slit in it will reduce loss of carbon dioxide. Alternatively, covering the trap with a tarp and using the exhaust from a gasoline engine will also work. Placing the birds in a barrel before gassing with engine exhaust will speed up the procedure.

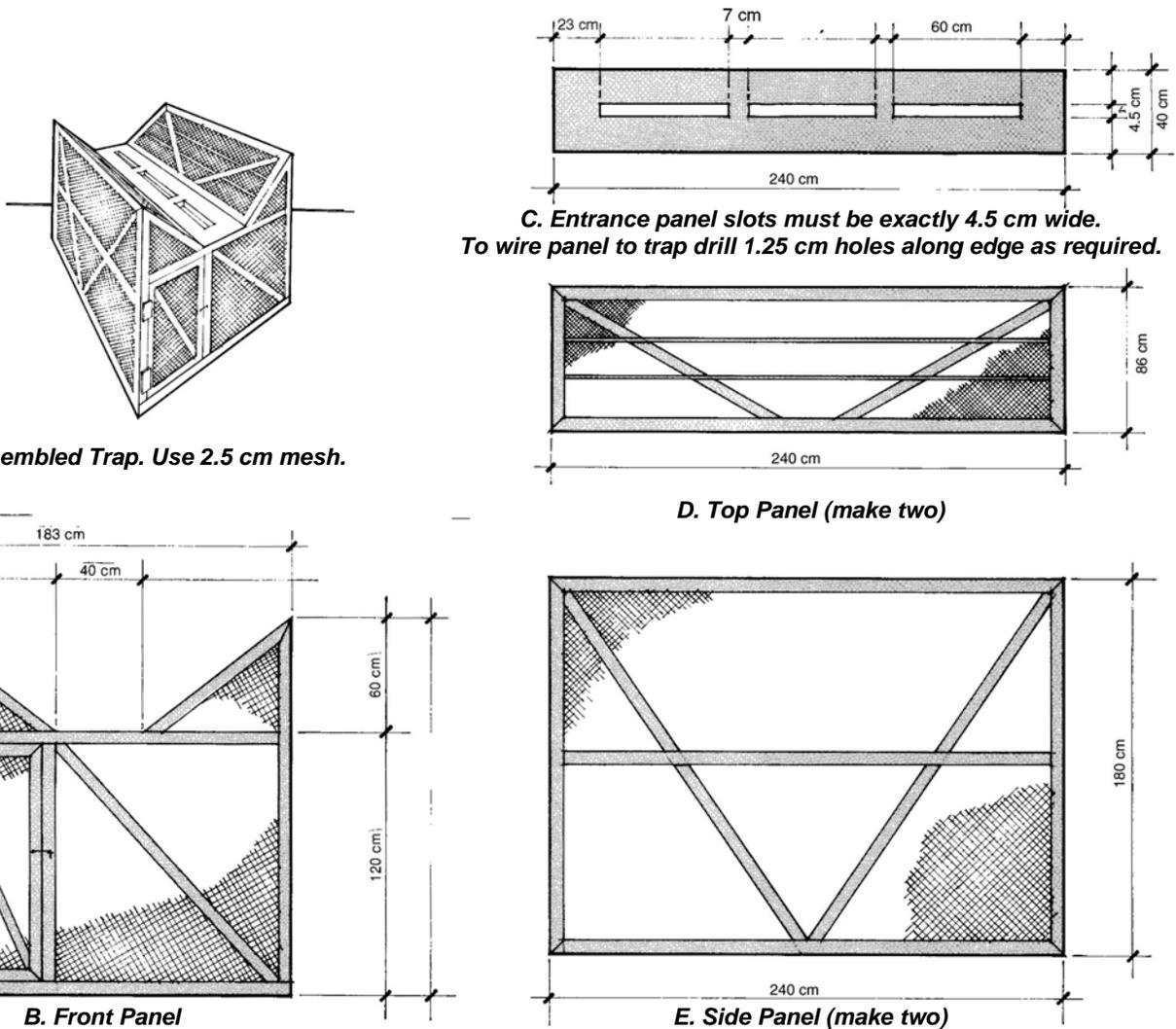


Figure 4: Starling Trap

FURTHER READING

1. Ron J. Johnson and James F. Glahn. *European Starlings*. In Prevention and Control of Wildlife Damage - 1994. Cooperative Extension Division, Institute of Agriculture and Natural Resources, University of Nebraska - Lincoln. Pages E-109-120.
2. Thurman W. Booth. *Bird Dispersal Techniques*. In Prevention and Control of Wildlife Damage - 1994. Cooperative Extension Division, Institute of Agriculture and Natural Resources, University of Nebraska - Lincoln. Pages E-19-23.
3. Nebraska Co-operative Extension NCR 451, *Starling Management in Agriculture*
4. *North American Breeding Bird Survey*, USGS Patuxent Wildlife Research Centre
5. *Starlings and their Control*, Alberta Agriculture, Food and Rural Development

This factsheet adapted from Alberta Agriculture's "Starlings and Their Control"
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