Western Dairy News
for the West, about the West, from the West
June 2005
Volume 5, No. 6

Got starlings? – Bird control options for dairies

By Charles D. Lee
Extension Specialist, Wildlife
Dept. of Animal Sciences & Industry
Kansas State University

STARLINGS and blackbirds can come into conflict with dairies as a consequence of their roosting, feeding and nesting activities. They are generally unwelcome because of the potential for economic damage from direct feed consumption and human and/or herd health concerns. It is estimated that overall bird populations cause a loss of $100 million per year to U.S. agriculture.

Birds can have a negative impact on the profitability of a dairy. Starlings consume about 1.8 pounds of feed per month, one pound of which comes directly out of the feed bunk. They often consume more expensive components in the ration such as protein pellets or grain.

Another concern is the potential for disease transmission. Since birds travel easily from dairy to dairy, they pose a biosecurity threat. According to a recent study, birds can carry diseases such as *Salmonella*, but are not considered important reservoirs of *Salmonella* organisms on the dairy. Perhaps of more importance is *Cryptococcosis*, a fungal disease spread by pigeons and starlings to livestock that may result in chronic and usually fatal meningitis.

Laws and Regulations

Federal and state regulations protect most blackbirds and other migratory birds. A federal permit is required to take, possess or transport migratory birds for depredation control purposes. But no permit is required to scare or herd these birds, except federally listed threatened or endangered species. A standing depredation order exists for blackbirds, cowbirds, grackles, crows and magpies. No federal permit is required and control measures, including lethal methods, may be taken when these species are "found committing or about to commit depredation," or when they "constitute a health hazard or other nuisance."

Contact your state wildlife agency to determine if permits are necessary for lethal control of unprotected species such as feral pigeons, English sparrows or starlings, which are not protected by state or federal law. All uses of pesticides must be registered by appropriate state and/or federal agencies before they can be sold, distributed or applied.

Controlling Damage

The key to successfully managing pest bird problems is to stop them before they become a major issue. Methods that improve success include: start early before birds form a strong attraction to the site; be persistent until the problem is solved; use a variety of techniques. Control techniques include live trapping, bird-proofing, habitat modification, frightening, repellents, shooting, and toxicants.

Live trapping. Trapping and removing starlings can be successful at locations where small static populations are causing damage. Decoy traps plans are available at http://wildlifedamage.unl.edu/handbook/handbook/allPDF/bir_e109.pdf.

To be successful the trap should be placed where starlings like to congregate and should be maintained regularly. Use of a few live birds as a decoy in the trap will enable one to catch 100 or more starlings a day, which then can be euthanized. Keep decoy birds as comfortable as possible with roosting perches, shade, fresh water and feed. Their feeding behavior and calls will attract other starlings that are nearby.

Larger size traps are usually better when large numbers of birds are present. Non-target species of birds should be released unharmed. Large numbers of birds can be euthanized by herding them into a barrel and using CO_2 gas.

Exclusion and bird-proofing. Where starlings are a problem inside buildings, close all openings greater than 1" with bird-proof netting, welded wire or plastic strips. Roof vents can be screened in such a manner that frost does not build up and block the vent. If curtains are closed and plastic strips placed over doors, extra ventilation fans may be required.

Potential perch sites should be modified or protected by changing the angle to prevent roosting. Porcupine wires are also available for preventing roosting on purlins or beams. This is the best long-term solution, but one few producers are willing to undertake. Design of new buildings should include consideration of reducing or eliminating bird access and roosting sites.

Habitat Modification. Limit access to feed and water by covering and using exclusion methods where animals eat. Make sure water levels in waterers are low

Western Dairy News is a collaborative effort of Dairy Specialists from:

Utah State University Extension
Cooperative Extension Washington State University
OSU Oregon State University Extension Service
NDSU Extension Service North Dakota State University
New Mexico State University
Colorado State University Knowledge to Go Places
K-State Research & Extension Kansas State University
University of California Davis
University of Idaho Cooperative Extension System
Texas Cooperative Extension The Texas A&M University System
The University of Arizona Cooperative Extension College of Agriculture and Life Sciences

Production effort for Western Dairy News is generously sponsored by Monsanto Dairy Business

enough so birds can't perch on the edge to drink. Clean up spilled grain. Reduce areas of open water or even cover waste lagoons with netting if birds are a persistent problem. Open water is often the main attractant at dairies.

Frightening. It is rare when a roosting situation cannot be resolved with frightening techniques. Start when a problem begins to develop; don't wait until bird numbers are excessive. Dedicate enough staff time to properly conduct the frightening program. Frightening birds must be the priority. Vary the location, intensity and types of scare devices, notifying local police and neighbors if necessary. Examples include distress or alarm calls, noise makers, exploders, propane cannons, bright objects, laser beams, eye spot balloons, hawk kites, and mylar tape.

Persistence and the use of multiple techniques applied for short periods of time just as birds begin roosting in the building are keys. Cattle are seldom frightened by application of frightening devices.

Shooting. Shotguns or air rifles can be selectively used for target species. Shooting helps reinforce bird harassment and scaring efforts and can be a very effective population control for small numbers of birds. Safety and misuse can be a concern. Notify authorities and neighbors if necessary.

Repellents. This includes the use of sticky products on ledges or beams to discourage roosting. Several products that include the active ingredient methyl anthranilate (a nonlethal human food additive found in grape flavoring) are now being used as coatings on roosting areas or as aerosol sprays in areas that are not too porous. Seldom do I see adequate control with only the use of repellents.

Toxicants. Avitrol, Starlicide Complete, and DRC-1339 are products currently approved for use in some states. Prebaiting in areas starlings like to congregate is the key to getting good control. A pre-bait process should be used for all toxicants. This process simply makes an attractive bait available to starlings for several days in order to establish a feeding pattern.

Toxicants work best when applied in cold weather with snow cover that limits access to other food sources. A suitable site may have to be prepared with a tractor and blade to remove snow. For best results select a site that is protected from wind and is in full sun. For at least three days or until good prebait acceptance occurs, untreated pre-bait is placed in a carefully selected place, safe from consumption by other animals. After acceptance of the prebait is established and no non-target birds are present, the toxicant is added.

Make sure your prebait is on a feed substance that is very similar in texture, size and makeup as the formulation of your toxicant. Use of a liquid fat on the prebait and toxicant can increase consumption of the bait and increase success.

Depending on the toxicant used, treated birds will usually die within 24-36 hours. Toxicants must not be applied in such a manner that livestock have access to the bait. Dead birds can be disposed of in the trash, manure pit, buried, or incinerated if it complies with local regulations. Make sure neighbors and appropriate local authorities are notified, because many of the birds will die off-site.

Use of toxicants is usually regulated by the appropriate State Department of Agriculture. Questions regarding labeling, registration status, and pesticide applicator licensing should be directed to them.

Avitrol. Avitrol (4-aminopyridine) is a restricted use pesticide used as a frightening agent for starlings, blackbirds, grackles and cowbirds. It is available as a prepared grain bait mixture or as a powder. It is formulated in such a way that ratios of treated baits to untreated baits are no greater than 1:9. Since only a small portion of the bait is treated, only a few birds will die.

If they are to succeed, bird control programs must be a dairy priority, not an afterthought. Understanding bird biology and movement patterns, and implementing several control techniques, will improve success.

The intent of this product is not to kill many birds, but to act as a frightening agent. Affected birds act in an erratic manner and emit distress calls that frighten other birds from the area. Birds that consume treated bait will die. Avitrol is readily broken down or metabolized into compounds excreted in urine in the target species, so little of the chemical remains in birds killed with Avitrol to present a hazard to humans, pets or scavengers.

DRC-1339. USDA/Wildlife Services has a new program in some states to utilize a bait treated with the active ingredient (0.1% 3-chloro p-toluidine hydrochloride) or commonly known as Starlicide Technical. The product is lethal to many species of birds such as crows, pigeons, blackbirds and starlings, but English sparrows and mammals are generally resistant to the toxic effects. The product usually kills birds within 12-36 hours and they often die on the roost. The mode of action is irreversible kidney and heart damage.

The toxicant is metabolized and excreted from all animals quickly (90 percent is lost in two hours), thus eliminating the potential for secondary poisoning. It is presented in a technical form and can be mixed with different baits at different strengths. The advantage is the technical formula can be mixed on feed the birds are accustomed to eating, thus bait acceptance is improved.

It is important to know that this toxicant is registered for use only by USDA-WS personnel trained in the use of bird control, or persons under their direct on-site supervision. It is also available only in situations where the problem cannot be solved with the use of the commercially available product Starlicide Complete.

This program may need to be repeated in future years because is not 100 percent effective. The product degrades rapidly when exposed to sunlight or heat but generally if the bait is being consumed the birds are dying. To reduce any potential hazard, poisoned birds should be burned or buried whenever possible.

USDA Wildlife Services is a Federal agency that requires reimbursement for program costs, which vary according to mileage, time, materials and the number of birds present. It is possible for neighboring farmers to request service at the same time, thus cutting down on mileage and time expenses.

Starlicide Complete. This is a restricted use pesticide whose toxicant is pre-packaged on bait and can only be ordered through a firm with a pesticide dealers license. The active ingredient is the same as DRC 1339 (0.1% 3-chloro p-toluidine hydrochloride). This product is registered for the control of starlings and blackbirds around livestock and poultry operations.

Fresh product must be used for it to be effective. Poisoned birds usually die within 24 to 36 hours, often at their roosting site – which is potentially not on the dairy. Although dead birds are not dangerous to predators, they should be burned or buried to prevent spread of diseases they may carry, and for good sanitation.

Summary

The purpose of a bird control program is to prevent and minimize economic loss and reduce bird populations to tolerable levels. Such programs must be a dairy priority, not an afterthought, if they are to succeed. Since starlings slowly migrate through an area, population reduction efforts may not be successful in the long term. Understanding bird biology and movement patterns, and implementation of a multitude of control techniques, will improve success.

If this information is not adequate to resolve bird control problems, contact your

Western Dairy News is published as a service to people interested in the health and welfare of the Western dairy industry. Archives of this publication may be found at:
http://animalscience-extension.tamu.edu/dairy/wdn.html

For further information contact:
Dr. Ragan Adams, Editor
ILM, CSU-VTH
300 W. Drake Road
Fort Collins, CO 80523
970-297-0371
radams@lamar.colostate.edu