

University of Nebraska - Lincoln

DigitalCommons@University of Nebraska - Lincoln

Great Plains Wildlife Damage Control Workshop
Proceedings

Wildlife Damage Management, Internet Center for

December 1975

Waterfowl Damage Control

Marvin D. Schwilling

Waterfowl Project Leader, Kansas Fish and Game Commission

Follow this and additional works at: <http://digitalcommons.unl.edu/gpwcwp>



Part of the [Environmental Health and Protection Commons](#)

Schwilling, Marvin D., "Waterfowl Damage Control" (1975). *Great Plains Wildlife Damage Control Workshop Proceedings*. 209.
<http://digitalcommons.unl.edu/gpwcwp/209>

This Article is brought to you for free and open access by the Wildlife Damage Management, Internet Center for at DigitalCommons@University of Nebraska - Lincoln. It has been accepted for inclusion in Great Plains Wildlife Damage Control Workshop Proceedings by an authorized administrator of DigitalCommons@University of Nebraska - Lincoln.

WATERFOWL DAMAGE CONTROL

Marvin D. Schwillig
Waterfowl Project Leader
Kansas Fish and Game Commission

Waterfowl damage is primarily grain crop depredation that occurs on various agricultural crops, particularly in fall and winter. Field feeding begins as birds flock up on staging areas in preparation for their move along migration routes to the wintering areas.

The problem is most serious on the Northern Prairies - particularly in Canada and is becoming more serious each year.

Most depredation on the prairies is by mallards with fewer numbers of pintails and a scattering of other dabblers. It is most severe during rainy periods in the fall when wheat and barley has been cut and left in swathes to dry for threshing. Geese also occasionally damage crops in this manner but the loss is much less and more localized.

Grain crop damage by waterfowl was recognized as a problem in the early 1940's increased losses brought further warnings of a problem that needed attention. During the last 20 years, research has been underway and programs developed to reduce the problem.

Wheat barley and oats comprise over 75 percent of all the seeded acreage in prairie Canada and receive virtually all the duck damage.

Mail surveys have shown that an average of about 1 percent of the crop is lost to feeding waterfowl with a value amounting to about \$25,000,000 in 1974.

The crop damage problem divides into two segments. First is the cost of grain lost by farmers, the cost of crop protection they must undertake, as well as the cost of compensation and control programs borne by governmental

Presented at Wildlife Damage Control Workshop, December 11, 1975. Kansas State University, Manhattan, Kansas.

agencies mostly financed by hunters. Second is the animosity of farmers caused by waterfowl that hampers programs for waterfowl habitat preservation and development and aggravates already poor farmer-hunter relations. Efforts to reduce the loss to farmers have been many and varied. One main approach allows the farmer to recover part of his loss through compensation; another is to reduce the actual damage to crops.

Payments for waterfowl damage have been made to farmers through a form of insurance in Saskatchewan since 1953 and as a form of compensation in Alberta since 1961 and in Manitoba since 1962. The programs are financed mainly by revenue from hunting licences. Farmers in Saskatchewan pay a 2 percent premium on the insured value of the crop, the maximum of which is currently \$25 an acre. Policies must be purchased by August 10th. Revenue from premiums scarcely pays for the administration costs of the program. Alberta and Manitoba farmers can claim damage compensation up to a maximum of three-quarters the crop value or \$25 an acre, whichever is less, upon payment of a \$25 adjustor's fee.

Over the years damage claims in Saskatchewan and Alberta have increased in number and mean value. In recent years of above-average damage, claims in both provinces have exceeded one-half million dollars and could not be financed from license revenue alone, and had to be subsidized with supplementary general revenue government funds. The Saskatchewan insurance program has not been entirely acceptable to farmers as evidenced by perennial recommendations to abolish premiums, raise the insurable ceiling and abolish the time limit for purchasing policies.

Manitoba's compensation program, though comparatively new shows the same trend as those in other provinces. Payments in 1972 were only \$7,660 but had increased to about \$100,000 in 1974. Annual crop damage claims in the three provinces averaged \$1,345,000 from 1972 through 1974.

The second principal method used to reduce damage is to provide grain and undisturbed feeding sites for ducks to keep them out of susceptible crops.

One technique provides threshed grain for ducks at "feeding" or "bait stations" along the shore of major resting lakes. Another supplies grain which is cut and left lying in the field to attract and feed ducks that might otherwise damage commercial crops. These fields are often called "lure crops" but the term implies more active attraction than in fact occurs. A crop may be planted, usually after retrospective analysis, in anticipation of ducks feeding on it or based on local conditions, a commercial crop may be purchased after ducks have started damaging it.

The province of Alberta experimented with feeding stations in two areas from 1970 to 1973. Crop damage was significantly reduced and the projects were economically justified. The program was accelerated in 1974 with 15 feeding stations being used.

A wide variety of techniques and devices has been used to scare ducks from fields but none has been discovered that is quick, cheap, easy to use, effective, and acceptable for the grain grower. Because crop damage on the Canadian prairies is widespread and often unpredictable, scaring frequently is attempted only after the foraging birds have been discovered. By then considerable damage may have occurred, since much of the waste grain is lost during initial feedings. For this reason, scientists stress that scaring ducks from field to field actually increases total damage if alternate non-commercial feeding sites are not available in the vicinity. Nevertheless, the success of feeding schemes often depends on a simultaneous scaring program.

At times shooting permits are issued to farmers to scare and kill troublesome ducks. In theory these permits enable farmers to enlist the help of hunters, who, as primary waterfowl users, would contribute time and money to the management program.

The practice has had some good and bad public relations value, but there is no evidence that it has substantially reduced crop damage.

Scaring with acetylene exploders has been used considerably to reduce damage, but mainly by wildlife agencies. Although the exploder comes

closest to the ideal scaring device, it has had little acceptance by farmers experiencing crop damage.

Cultural practices to prevent damage such as delaying cultivation of harvested grain fields until nearby susceptible crops have been harvested are also used infrequently by farmers. However, postponing cultivation is often not practical in northern areas with short growing seasons or for fields with heavy straw cover.

Growing non-susceptible crops on high risk fields is another way a farmer can prevent waterfowl damage. On some farms it may not be culturally possible or economically advantageous to grow anything but wheat or barley.

In 1972, the Canadian government undertook to share costs of provincial programs to prevent damage and to pay compensation claims, on a spot loss basis. After the successful 1972 agreement a four-year agreement was negotiated in 1974 for 1973 and subsequent crop years. The agencies involved will try to deal with the compensation problem on an actuarial basis similar to the crop insurance schemes that cover other hazards. The subsidies will continue to come from imposts on hunting licences, other Canadian public revenues or any other source that can be discovered.

Despite efforts to solve it, much of the waterfowl damage remains in Canada. Part of the burden has been shifted from the farmer to a government agency and the waterfowl hunter who finances abatement programs and this has helped to reduce the antipathy of grain farmers; but the social and economic problem is largely unchanged. Compensation and insurance programs are costly but there is now no reason to believe they can be abandoned, particularly in years of excessive crop damage.

One gains the impression that the search for new and better ways to repel waterfowl from cereal grain crops in Canada died with the development of the improved acetylene exploder. Feeding schemes now seem to be the popular approach. Undoubtedly the fact that scaring often increases total damage has dampened enthusiasm in the search for better control methods.

But scaring is often a necessary adjunct to feeding projects and for this reason alone, will always have a role in damage control. Moreover feeding programs are economically feasible only in restricted areas with chronic severe damage. Elsewhere damage must be controlled by other means. Many farmers willingly devote reasonable effort to protecting their crops. Providing them with more and better techniques should help solve the crop damage problem.

The array of scaring devices that has been tried is impressive and would seemingly cover all possible stimuli that might deter waterfowl. But we believe all possibilities have not been exhausted and that further investigation of scaring methods is justified. Some devices have been suggested but have not been adequately tested. Seemingly innocuous objects might prove effective. Generally, results from a traditional approach to repel ducks chemically have been disappointing. But the success with chemicals that cause flock-disturbing behavior in other species indicates a need for parallel studies with ducks.

Scaring devices that produce loud sounds other than explosions have had little testing. Development of amplified recorded sounds might make some acoustical methods more attractive as a means of scaring waterfowl. Any mixture of sounds could be projected over large areas with suitable equipment.

Bio-acoustics, using recorded alarm and distress calls to scare birds, have shown promise in some situations, but most research has been confined to other species. Particularly fascinating is the possible use of synthetic "super signals" that may suppress habituation to the stimulus. Bio-acoustics that frighten waterfowl seem to have been dismissed as a crop protection method, probably because damage is dispersed and because traditional equipment is costly. But perhaps we have been too preoccupied with costs of tools at hand when contemplating options for crop protection research.

Field shelterbelts, useful for soil and moisture conservation and upland game bird production should be evaluated as a means of reducing crop damage

by waterfowl. It is well known that field-feeding waterfowl prefer large open fields free of tree growth.

Finally, there is a need for basic investigation of post-production ducks' behavior. Not all factors that affect duck damage or the success of control measures will be fully understood without more study on the behavior and ecology of the birds during late summer and autumn. The urgency of the problem tends to generate short-term research projects seeking quick and cheap solutions, yet some questions will be answered only after years of careful data collection or experimentation.

Stateside there has not been a concerted effort to solve the problem with the result that we know less about its magnitude or its' solution than we did several decades ago. Generally techniques for handling crop depredation have been to use scaring devices to keep the birds out of certain fields and hope that climatic conditions or time will take care of the immediate problem.

The state of North Dakota through the cooperation of agricultural and wildlife interested agencies and groups have developed a plan that they have ready for use this fall.

The plan is simple and consists of Fish and Wildlife personnel being notified of depredations as soon as they begin. These personnel will select certain fields that in their estimation can act as a lure to ducks in the area. The farmer owning the field will be notified that his field has been selected and he will be paid the market value for the crop less the harvesting costs which he naturally won't have. The County Agricultural Stabilization and Conservation Service will make the appraisal of the crop value. Upon the Fish and Wildlife Service receiving this information, they will reimburse the farmer and the ducks will be allowed to continue to feed in the field. It is thought that this method can confine the depredation problem to a limited number of fields. In addition to the crop payment program, personnel from the Northern Prairie Research Station will be in the area gathering data that could prove valuable in the future in setting up a statewide or

regional program. Everyone agrees that this approach may not solve all depredation problems but it is significant in that it is the first time that agricultural and wildlife interests have worked together to implement a positive program.

Refuge and waterfowl area game managers also have occasionally discovered devious means by which crop damage can be reduced. Near the Cheyenne Bottoms W.M.A. in central Kansas some wheat farmers now regularly pull junker cars onto their green winter wheat fields and it appears that about four such cars on 160 acres significantly reduces goose grazing damage. Also in this area farmers delay applying top dress liquid fertilizer until goose use becomes heavy. When applied, the fertilizer effectively acts as a repellent. Just how long this repellent effect lasts needs to be investigated. Also the pie tin attached to plaster laths and spaced about 100 yards apart each way in a grid pattern is in common usage.