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Results of a Bird Damage Survey of Kansas Feedlots¹

Charles Lee²

Abstract.--A mail survey was conducted in the Fall of 1986 of 196 licensed Kansas feedlots to get a better idea of the extent as well as kinds of wildlife damage they experience. The results of this survey are being used in designing a research project to help feedlot operators cope with bird damage.

INTRODUCTION

Kansas currently ranks third behind Texas and Nebraska with annual fed cattle marketing exceeding 4 million cattle (Laudert 1987).

The Kansas feedlot industry is large, diverse and rapidly growing. Unfortunately, feedlots with open bunks with continuously available feed also provide starlings (*Sturnus vulgaris*) and several species of blackbirds (*Icteridae*) with an abundance of winter food. Feedlot operators report large populations of starlings from October through February. Starlings consume livestock rations, contaminate feed and water and may spread disease.

There is a need for effective and acceptable methods for dealing with these large flocks of birds so that feedlots can stay competitive with areas that do not experience bird problems.

METHODS

The Kansas Cooperative Extension Service sent a questionnaire to 196 licensed feedlots in Kansas in the Fall of 1986. Feedlots surveyed included cattle, sheep and hog operations with a one-time capacity of at least 1000 head. Feedlot operators were asked 10 questions about bird damage problems they experienced. Most questions required single, short answers, but too many allowed longer, more involved responses. This survey design has too many variables to allow statistical

analysis. The results of this survey provide descriptions of current bird problems experienced by Kansas feedlots. Eighty questionnaires were returned.

RESULTS

Locations Involved

Feedlots ranging in size from 2000 to 100,000 head marketed 96.4% of the 4.2 million cattle finished in Kansas in 1986 (Laudert 1987). The 80 feedlots that responded to this survey were primarily in the southwestern and south-central sections of Kansas (fig. 1). The capacity of the feedlots responding to this survey ranged in size from 1,000 to 100,000 head (fig. 2). Bird damage is a problem for large and small feedlots. Problems with birds were reported at 83.5% of the feedlots that responded to this survey.

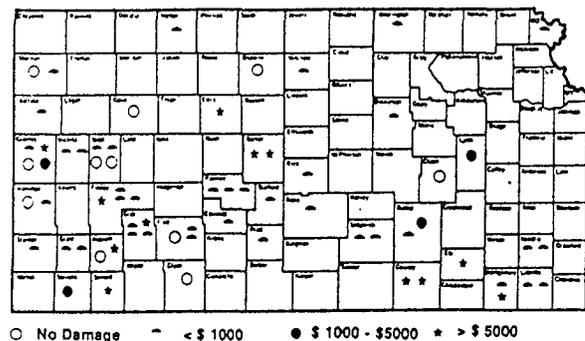


Figure 1.--Locations of feedlots responding to 1986 survey and amount of damage reported.

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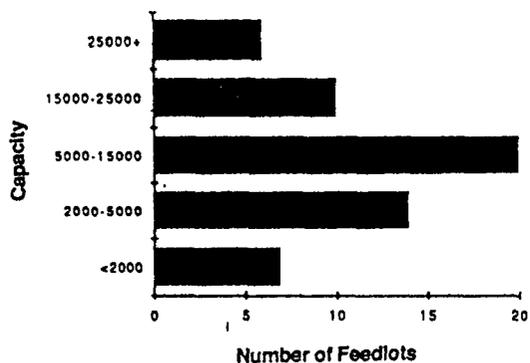


Figure 2.--Capacity of feedlots in Kansas responding to 1986 bird damage survey.

Species Involved

Approximately 86% of the respondents who had bird problems reportedly had starling problems. Other problem birds reported were blackbird, sparrow (*Passer domesticus*) and pigeon (*Columba livia*) (fig. 3). About 41% experienced problems during the winter, and 35% had problems in the fall. Twenty feedlots reported bird problems the year around.

Specific Location of Bird Damage

Of the feedlots responding, 44% had bird problems both inside and outside buildings. Thirty-eight percent had problems outside with only 3.8% reporting problems inside buildings.

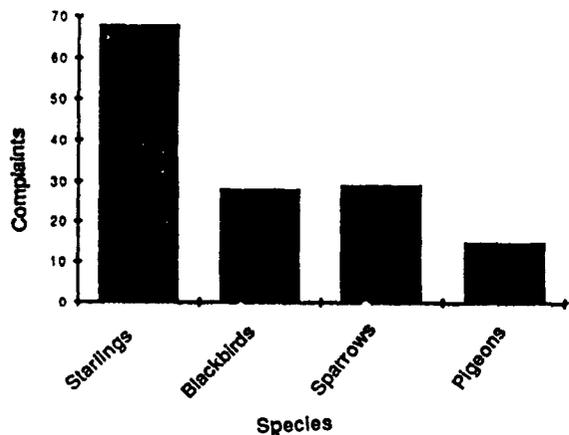


Figure 3.--Species involved in feedlot damage.

Major Problem Reported

Most feedlots (64%) cited feed loss as the major problem. This was actual feed consumption and feed that was contaminated that was removed. Over 21% were concerned about the birds spreading disease. Starlings have been associated with 17 diseases (Weber 1979). More information is needed that definitely links birds with the spread of disease in livestock. Other problems included building damage and the general mess associated with bird droppings. Some feedlots report having men clean livestock waterers daily to remove accumulated bird droppings.

Bird Activity in Years

Most of the feedlots report bird problems every year, with 41% reporting that some years were worse than others.

Control Methods

Control methods that have been tried include poison bait, shooting, frightening devices and poison perches (fig. 4). Approximately 66% said control methods were not always effective in reducing the amount of damage due to birds.

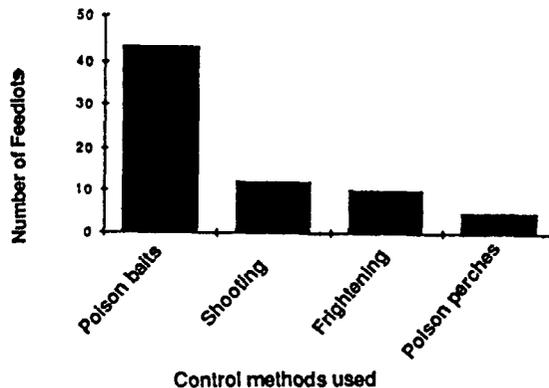


Figure 4.--Methods used by Kansas feedlots to control birds.

Estimated Dollar Amount

Only 20 feedlots reported a dollar amount on the cost of bird problems. This total loss reported was \$246,800. Many feedlots reported economic loss but did not know how to estimate this loss. The average loss incurred by the feedlots responding was \$12,340. The average expense in trying to control bird problems

of those feedlots answering this question was \$1,873. More feedlots knew the expense of control efforts than the economic loss they incurred.

Other Wildlife Problems

Eighty-seven percent of the feedlots reported other kinds of wild animal problems. In order of importance, they were rats and mice, raccoons, coyotes, badgers and skunks.

As the feedlot industry becomes more stressed, operators are looking for ways to maximize productivity. A reliable and accurate means of measuring damage, with training in how to apply the methods and justify current control technologies is needed.

We are not going to say to anyone that we are going to solve the bird problems that feedlot operators are experiencing. We should be able to quantify damage loss and determine why current technology is not effective in reducing losses due to birds 66% of the time.

We intend to conduct research and Extension demonstrations during 1987 and 1988 on one promising idea to reduce or even prevent the loss due to birds. We will test the use of live Harris hawks (*Parabuteo unicinctus*) to scare off birds. The Air Force uses falcons to kill and scare birds away from airports in Britain and Canada (Blokpoel 1976). This method would be acceptable to environmentalists and may provide employment for some of our citizens.

Another idea that will be researched is the control of starlings by electrocution. This idea has been suggested in the past (Jacob 1965). The behavior of starlings liking to land on wires would seem to make this idea feasible.

We also plan to continue the evaluation of dimethyl anthranilate as a nontoxic starling repellent that can be mixed in the cattle ration (Mason 1983).

Financial support for these studies is being provided by the Kansas Livestock Association Cattle Feeders Council and individual feedlot operators. Research and Extension work will be guided by Kansas State University Department of Animal Sciences and Industry in the College of Agriculture.

SUMMARY

The response from the feedlot industry in Kansas indicates a need for effective control methods for bird problems around feedlots. The wildlife damage control Extension staff will evaluate current control methods and test some new ideas to prevent or reduce the economic loss associated with birds. The resulting recommendations will be written in the form of a manual for feedlot operators relating to animal damage control at feedlots. The project will be completed in the fall of 1988.

I would appreciate any suggestions or comments on this proposed research.

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