

# A Survey of Sunflower Producers' Perceptions of Blackbird Damage and Current Management Techniques in North Dakota



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## Background

- Sunflower producers in North Dakota face millions (\$) worth of crop losses due to depredation caused by large flocks of blackbirds in the fall. [1]
- Producers implicate blackbirds as a main source of damage to agriculture in the Great Plains, and are often cited as the main reason producers will remove sunflower from their rotation. [2]
- Crops damage estimates are typically assessed by trained professionals, but take significant time and money.
- Producer surveys can encompass larger areas with greater detail, but unknown biases and accuracy of producer damage estimates needs to be investigated. [3]

## Objectives

In an effort to understand a variety of factors that impact the conflict between birds and agriculture, we will administer a written and online survey.

Our specific objectives we wish to accomplish are:

- (1) Assess producers' estimates of blackbird damage in their sunflower crop in 2020 and compare it to biologist-led field surveys in the same year.
- (2) Evaluate producers' perceptions of the effectiveness of current damage control techniques and willingness to employ new technologies (Unmanned Aircraft Systems).
- (3) Understand producer's opinions on blackbirds and what factors are believed to effect bird damage in a given year.

## Significance

- Last comprehensive sunflower producer survey was administered in 1977. [4]
- Blackbird damage is not uniform across the USA (or North Dakota) and producers have unique experiences that have not been examined this extensively before.
- This is a chance for producers to let their voice be heard and direct future blackbird damage research to improve sunflower production.



Figure 1. Blackbirds and their damage to sunflower crop in North Dakota

## Bird Damage to Sunflower Crops

*A Survey of Sunflower Producers in North Dakota*



Research Conducted by:

North Dakota State University Department of Biological Sciences



Figure 2. QR code for the blackbird damage survey.

The survey can be found at the following link:

[https://ndstate.co1.qualtrics.com/jfe/form/SV\\_1UoXI3SKIKGW8PH](https://ndstate.co1.qualtrics.com/jfe/form/SV_1UoXI3SKIKGW8PH)

## Methods

- Paper surveys will be mailed to sunflower producers in North Dakota through the National Sunflower Association's (NSA) mailing list (n = 7,350) in January of 2021.
- An online version is available through Qualtrics. [https://ndstate.co1.qualtrics.com/jfe/form/SV\\_1UoXI3SKIKGW8PH](https://ndstate.co1.qualtrics.com/jfe/form/SV_1UoXI3SKIKGW8PH)
- The survey will take approximately 15 minutes to complete.
- 38 questions cover sections titled:
  - Your Farm and Farming Experience
  - Your Opinion on Blackbirds and Blackbird Damage
  - Your Damage Control Techniques
  - Demographics

## Call To Action!

- To reach our participants, we are requesting for the following sources to share the online survey link with sunflower producers:
  - 'The Sunflower' magazine (NSA)
  - NDSU agriculture extension agents
  - Seed companies
  - Other agricultural media
- Our goal is to reach sunflower producers extensively in North Dakota, as well as across North America
- Email Morgan Donaldson ([morgan.donaldson@ndsu.edu](mailto:morgan.donaldson@ndsu.edu)) or Mallory Gyovai White ([mallory.g.white@ndsu.edu](mailto:mallory.g.white@ndsu.edu)) if you are willing to forward this survey onto potential participants

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- [4] <https://www.sunflowernsa.com/uploads/3/1997-sunflower-grower-survey.pdf>