# Manitoba Crop Alliance

## SUNFLOWER AVIAN CONTROL

## Replicated Strip Trial Protocol

**OBJECTIVE:** The purpose of this project is to quantify the impact of Avian Control as a deterrent for Blackbirds in Sunflower. NOTE: Currently under review for emergency use approval. No sites will go forward unless approval is received.

**BRIEF SUMMARY:**

- The grower will plant either a confection or oil type sunflower hybrid.
- The grower will manage their crop as per their normal best management practices.
- 
- The grower will apply Avian Control to 4 strips for a deterrent for blackbirds, alternating with untreated strips. An example is shown on the right.
- Strips should be full length of the field (minimum 1000 ft.) and width to allow for a full "pure" pass with combine header.

| | |
|---|---|
| Rep 1 | Avian Control |
| | Untreated |
| Rep 2 | Untreated |
| | Avian Control |
| Rep 3 | Untreated |
| | Avian Control |
| Rep 4 | Avian Control |
| | Untreated |

**GROWER REQUIREMENTS:**

- Accurately record soil test results, variety, seeding date and rate, previous cropping history (rotation, fertilizer rates), tillage practices, fertilizer rates and application timing.
- Accurately record where all treatments are within the field.
- Note any significant weather events throughout the growing season, such as high winds, hail, or extreme precipitation events.
- Areas containing waterways and headlands should be avoided. All other factors in the trial area must be treated the same.
- Alert trial coordinator of expected harvest date and ensure all treatments are harvested the same day into a weigh wagon/calibrated grain cart, and that grain samples can be secured for seed moisture and seed quality analysis.
- Allow MCA to use data for research, educational and information purposes.
- ***Must be a member in good standing with the MCA.***

**MCA AND PARTNERS AGREE TO:**

- Be available during seeding and harvesting.
- Take various measurements, including stand establishment, height, lodging and crop maturity.
- Provide Avian Control product for strips to be treated.
- Provide a report analyzing the statistical and economical treatment differences.
- Keep data in a confidential manner that cannot be linked back to the individual grower by other parties.

**RESEARCH ON THE FARM COACHES:**

- Project coordinator will work with local Research On The Farm coaches to collect field observations and harvest.
- Research On The Farm coaches may be local Manitoba Agriculture staff, retail or independent agronomists.

**BENEFITS TO GROWERS:**

- Access to the latest research that can be applied to their farm.
- Determine profitability of the practices.
- Learn accepted on-farm testing procedures.

# Manitoba Crop Alliance

## SUNFLOWER FUNGICIDE TREATMENT

## Replicated Strip Trial Protocol

**Data to be collected by Contractor**

- Agronomic info (equipment size, field size, variety used, pervious crop, seeding date and soil temperature at seeding, harvest date, seeding rate, row spacing, tillage practices over the past year, fertilizer applied and application method, fungicides/pesticides/herbicides/other chemicals applied (timing and rate) including pre seeding herbicides.)
- Soil sample- Taken prior to spring fertilizer application.
- Germination sample- to be sent for analysis using seed used at planting.
- Maturity Date.

**The following will be taken per strip:**

- Plant stand (plants/acre) taken at approximately V2 Stage.
    - Counts should be done according to table below and repeated 5 times per strip.

**Table 1. Row length equivalent to 1/1000th acre at various row widths.**

| Row width | Length for 1/1000th acre |
|---|---|
| inches | feet inches |
| 7 | 74' 10" |
| 15 | 34' 10" |
| 20 | 26' 1" |
| 22 | 23' 10" |
| 30 | 17' 5" |
| 36 | 14' 6" |
| 38 | 13' 10" |
| 40 | 13' 1" |

- Yield- lbs/ac
- Harvest sample(~0.5 kg)- 1 sample/ strip taken at time of harvest to be sent to MCA
- General observations during the trial (significant disease pressure, insect issues, etc)

Note: MCA will be taking bird damage ratings for each field.

Figure 1. Stages of sunflower development. (A.A. Schneiter and J.F. Miller)
A-1145

# Stages of **Sunflower Development**

**A.A. Schneiter,** Professor
**J.F. Miller,** USDA-ARS
**D.R. Berglund,** Extension Agronomist

## Vegetative Stages

True leaf — 4 cm

V-E

V-2

V-12

V-4

## Reproductive Stages

R-1

R-2

R-2

R-3

R-3

R-3 Top View

R-4 Top View

R-5.1

R-5.5

R-5.9

R-6

R-7

R-8

R-9

NDSU
**Extension Service**
North Dakota State University
Fargo, North Dakota 58105

FEBRUARY 1998