



**SOUTH DAKOTA  
STATE UNIVERSITY**

# 2025 Red sunflower seed weevil Efficacy results from South Dakota

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## INTRODUCTION

Red sunflower seed weevils are an annual pest of sunflower in South Dakota. Red sunflower seed weevil larvae may infest up to 80% of the achenes on a head and cause yield loss. The current management strategy for this pest is foliar applied pyrethroids.

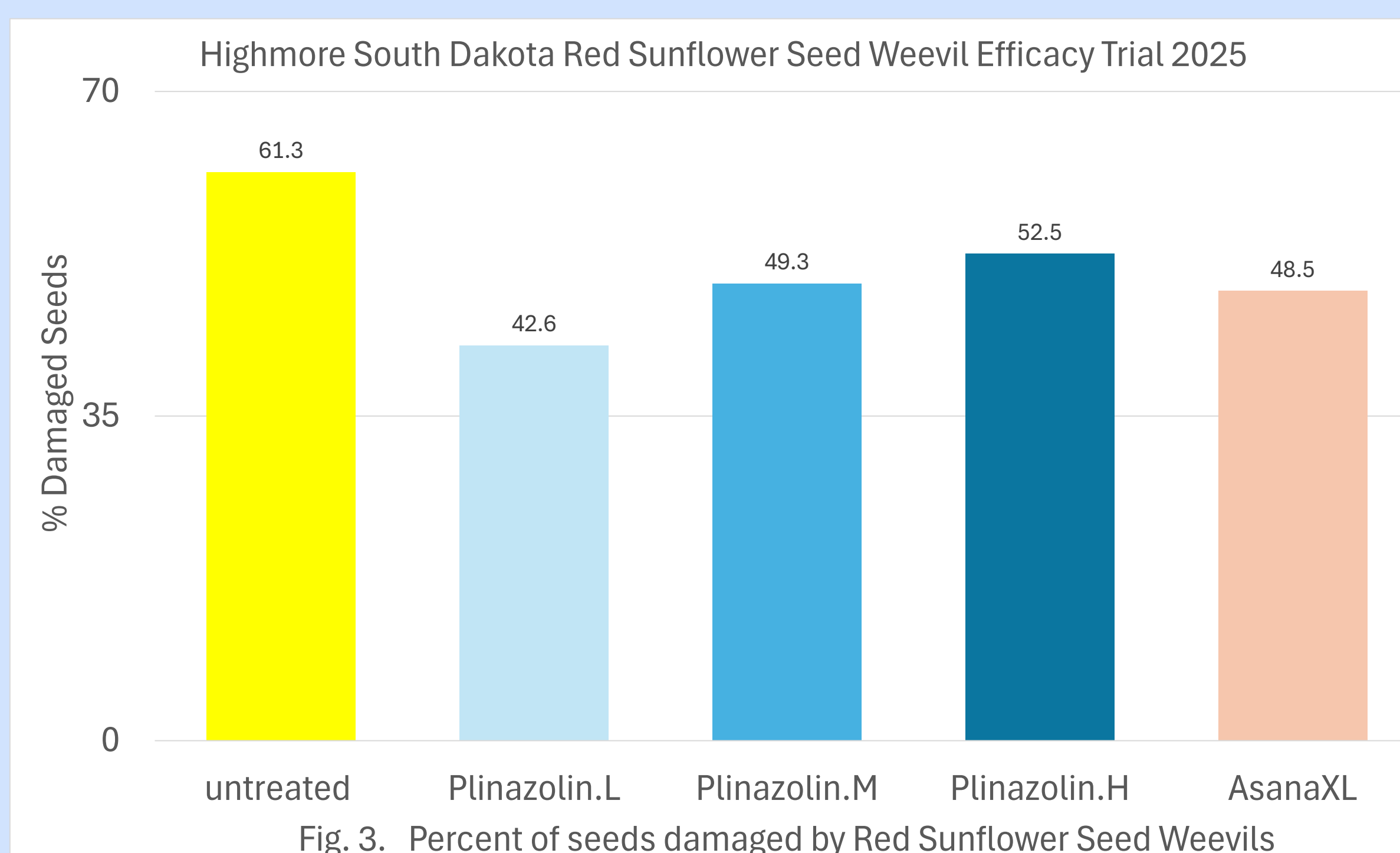
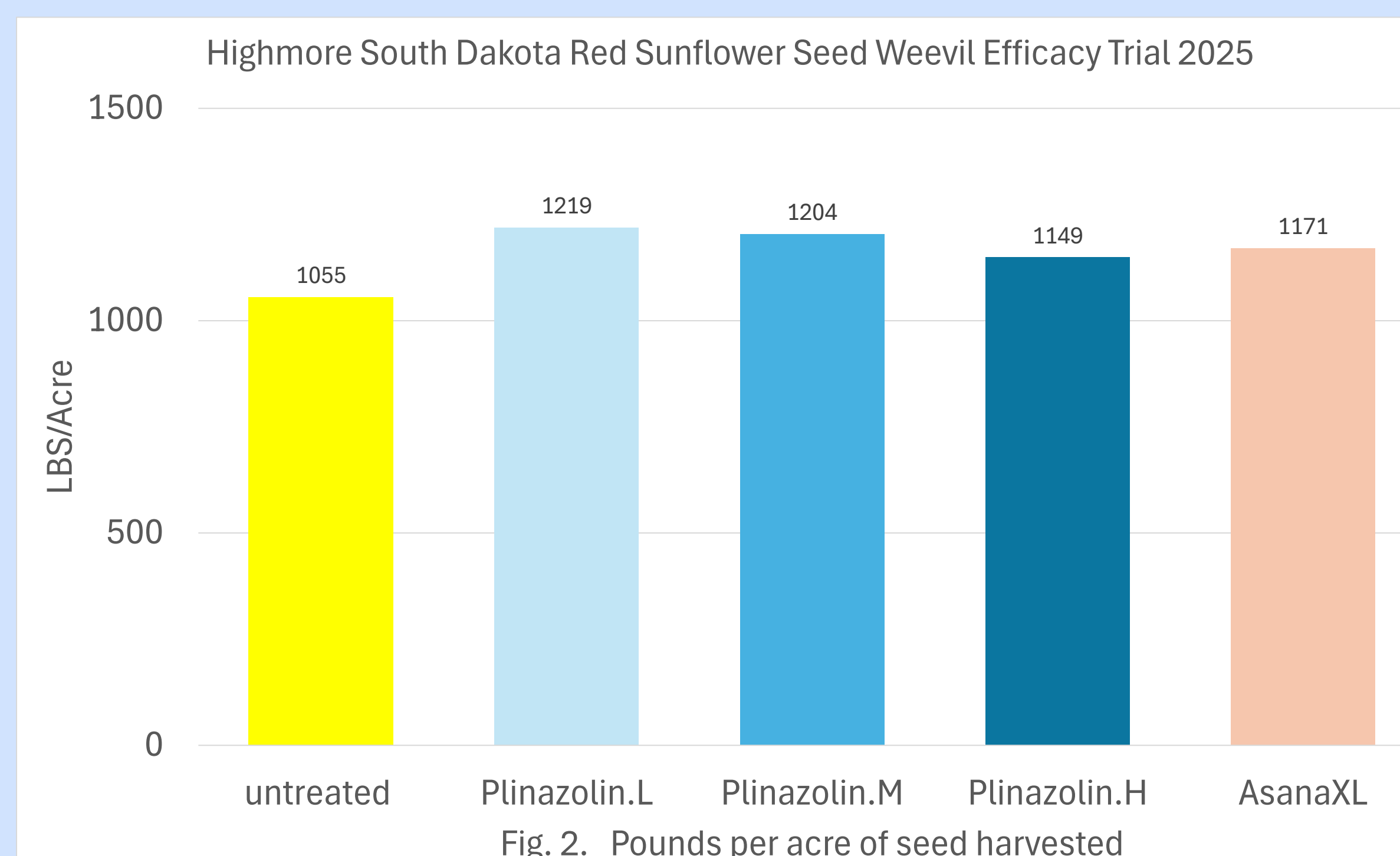
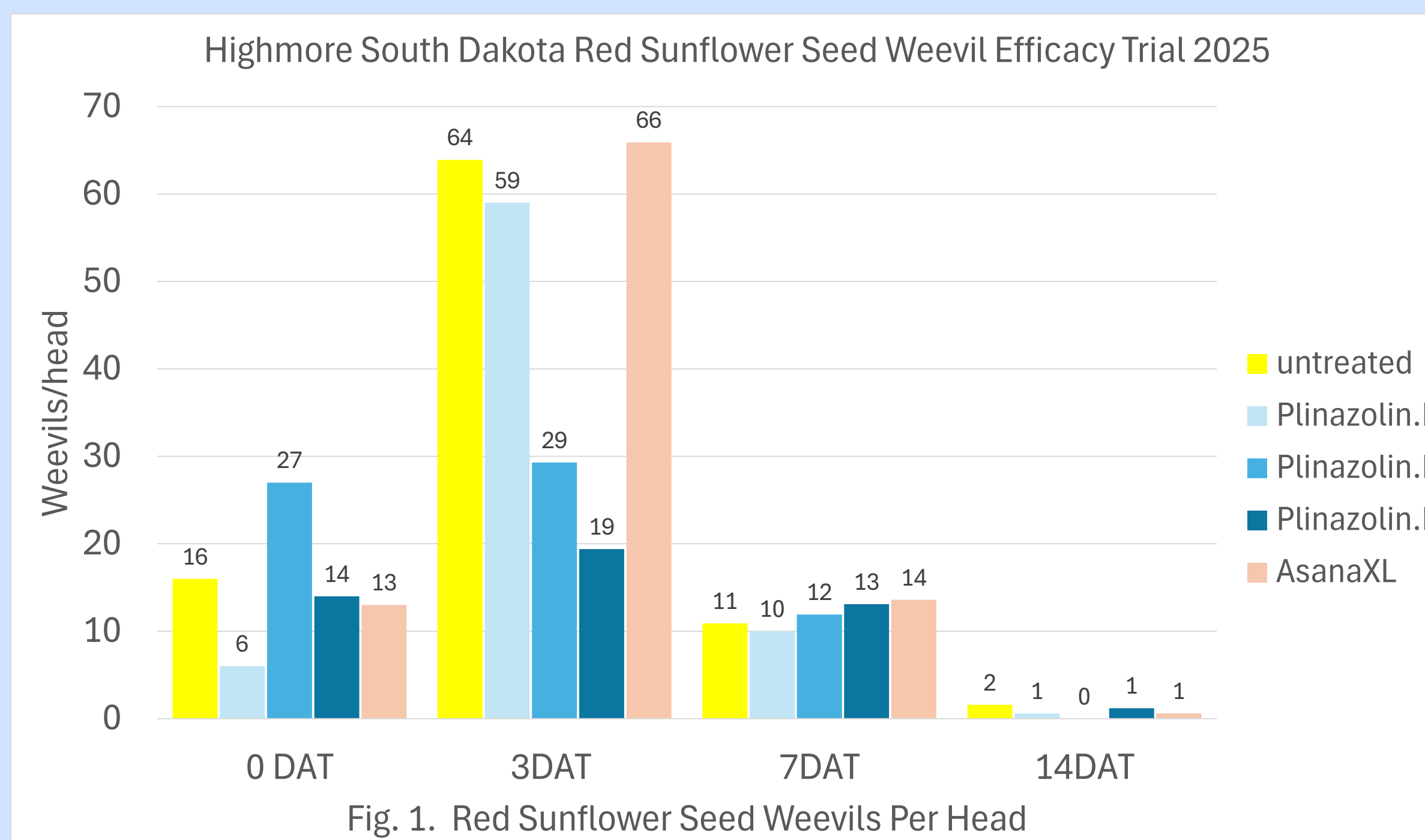


## OBJECTIVES

- Evaluate the susceptibility of red sunflower seed weevils to insecticides
  - Plinazolin
  - Asana XL (Esfenvalerate)

## Materials and Methods

- Planted on June 3<sup>rd</sup>
- Spray trial was conducted near Highmore South Dakota on Aug 12<sup>th</sup>, 2025.
- Insecticides application
  - 15 GPA using a Lee Agri highboy sprayer with a SRES spray boom.
- Plinazolin insecticide was applied at 3 rates
  - 1.1, 1.6, 2.0 Fl oz/acre
- Asana XL at 2.0 Fl oz/acre
- 2 heads per replication were sampled for live red sunflower seed weevils at 0 days after treatment ,3, 7, and 14DAT.
- Damaged seeds: 100 Sunflower seed were randomly chosen from a subsample collected from the combine



## Results

Fig. 1. Red sunflower seed weevil counts were not significantly different for treatments at 0, 3, 7, or 14 DAT.

However, 3DAT counts were nearly significantly different for treatments  $P = 0.0553$  Plinazolin at @ 2.0 Fl oz/acre had 3.1-fold fewer weevils than the 1.1 rate and 1.5-fold less than the 1.6 of rate.

Fig. 2. Harvested pounds/acre were not significantly different by treatment.  $P = 0.8890$

Fig. 3. Seeds damaged from seed weevils were not significantly different by treatment.  $P = 0.1105$

## Conclusions

Data from 2025 indicates reduced red sunflower seed weevil susceptibility to tested insecticides.

