

# Identification of crop and weed species as possible hosts to the pathogens causing Phomopsis Stem Canker on sunflower

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**Figure 1.** Phomopsis stem canker symptoms on annual marsh elder, *Iva annua* L. var. *Annua*, leaves (A) and stems (B). *Diaporthe helianthi* presence was confirmed by qPCR assays.



**Figure 2.** Lodged annual marsh elder in North Dakota sunflower field.



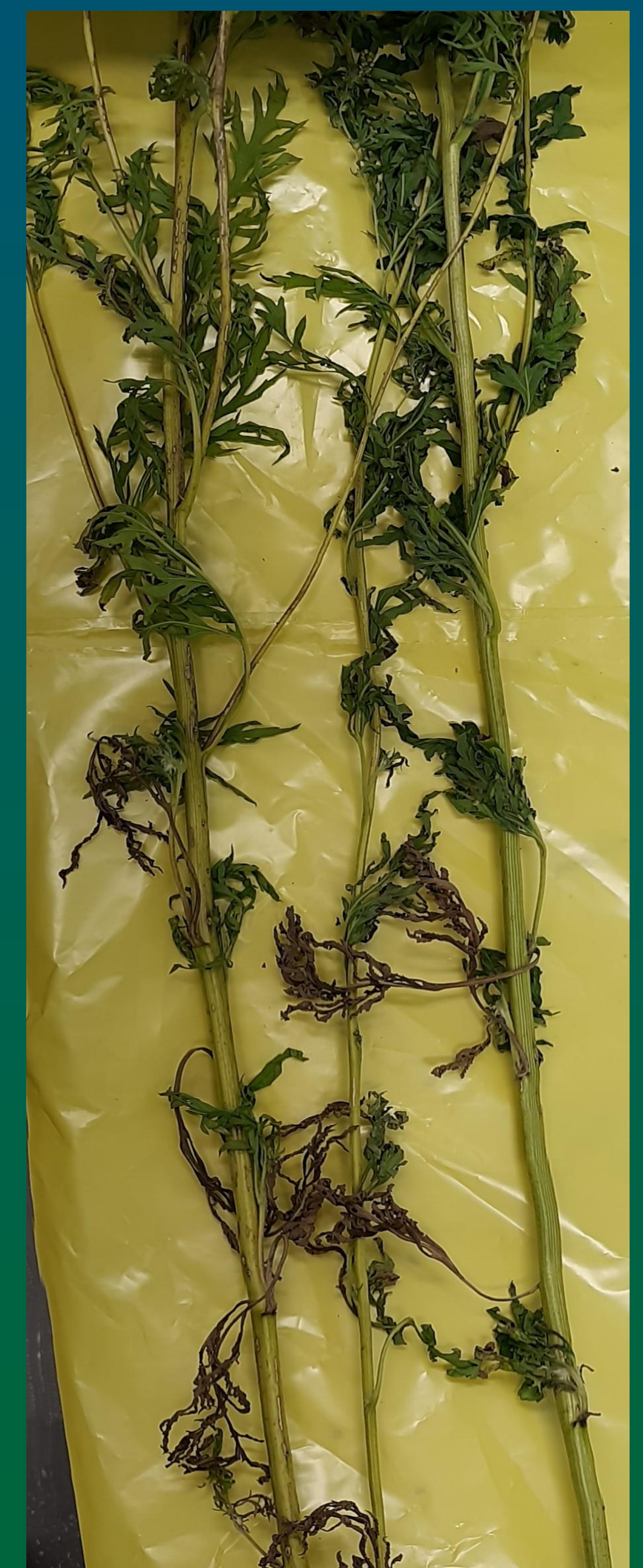
**Figure 3.** North Dakota sunflower field where annual marsh elder samples positive for *Diaporthe helianthi* were obtained.



**Figure 4.** *Diaporthe gulyae* causing pod blight of soybean, *Glycine max*, in South Dakota as confirmed by morphology and quantitative polymerase chain reaction (qPCR) assays.



**Figure 5.** *Diaporthe helianthi* was present in South Dakota common annual sunflower, *Helianthus annuus*, samples as confirmed by DNA sequencing.



**Figure 7.** *Diaporthe helianthi* present in ragweed in North Dakota as confirmed by qPCR assays.



**Figure 6.** North Dakota sunflower field where Ragweed, *Ambrosia artemisiifolia* L., samples positive for *Diaporthe helianthi* were obtained.

