

***NIGROSPORA
SPHAERICA*** HAS THE
POTENTIAL OF A
BIOHERBICIDE FOR
TURFGRASS WEEDS.

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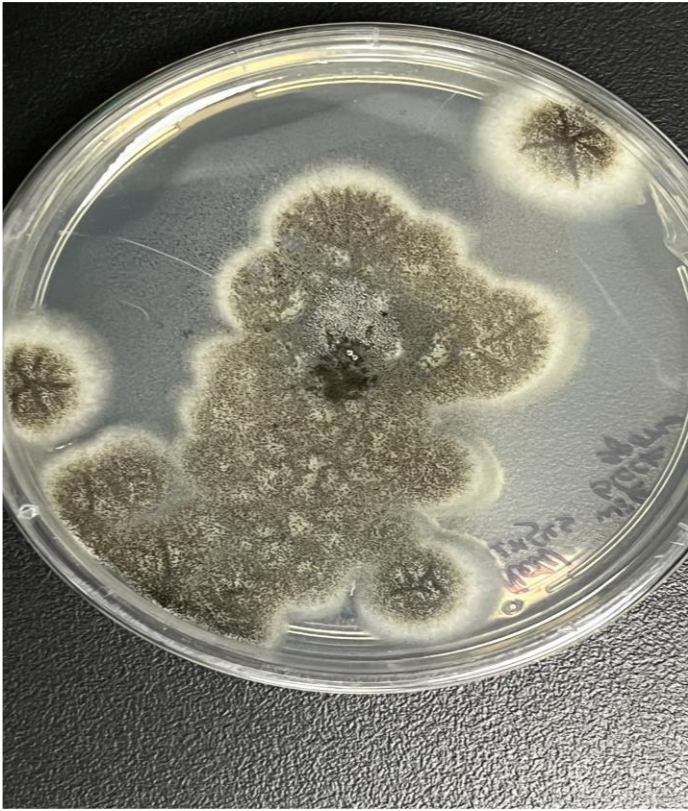
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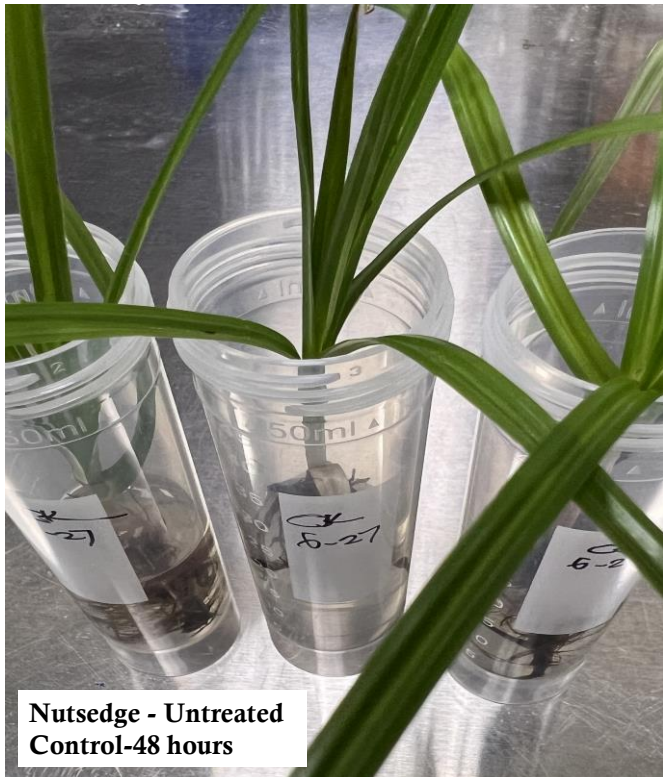
ABSTRACT



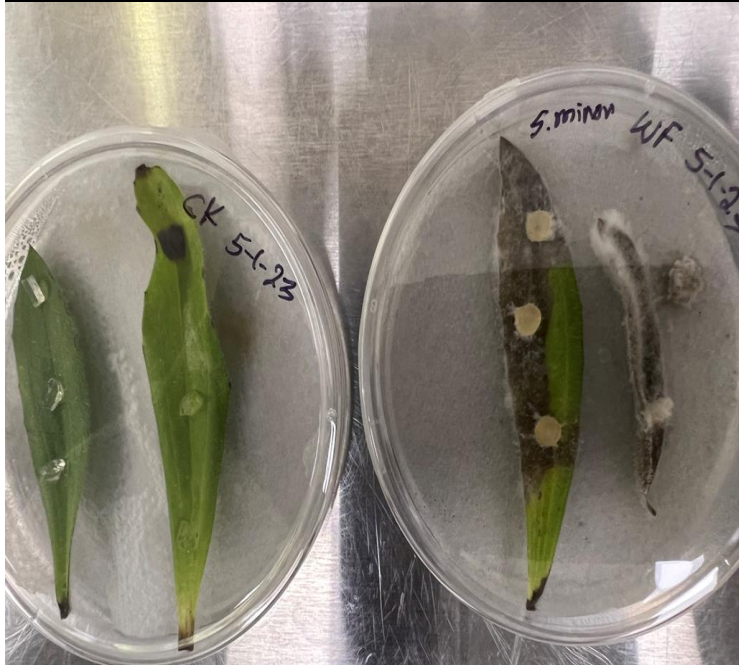
We initiated a program to identify potential fungi that have bioherbicidal activity. Fungi were isolated from dead or killed dandelion tissue patches from turf areas in North Texas. Fungal isolates that grew rapidly were carried over to detached leaf assays in the laboratory under sterile conditions. We tested their herbicidal effects on common weeds found in turf including dandelion (*Taraxacum officinale*), crabgrass (*Digitaria sanguinalis*), common ragweed (*Ambrosia* sp.), nutsedge (*Cyperus* sp.), and pigweed (*Amaranthus retroflexus* L). We found one candidate fungus that grew rapidly and caused extensive rotting on all tested plants compared to control tissues, which received no inoculation. By sequencing the internal transcribed spacers (ITS), the fungus was identified as *Nigrospora sphaerica*. This is the first time it is being reported to have the potential of a bioherbicide for broadleaf, grassy, and sedge weeds in turfgrass.



Front and back view of *Nigrospora sphaerica*



DETACHED LEAF ASSAYS ON DANDELION AND COMMON RAGWEED



Common ragweed seedlings wilted when placed in a dilute solution of the biohermicide (Right) in 24-48h.



NUTDSEGE-*NIGROSPORA* *SPHAERICA*

UNTREATED CONTROL



TREATED PLOT



CONCLUSION

Nigrospora sphaerica is shown to have the potential of a bioherbicide that is effective for broadleaf, grassy, and sedge weeds in turfgrass.

