





## Disease suppressive effects

Reagent-grade chitosan reduced disease on petunia leaves by up to 50% compared to the water control when applied at 0.4% (Figure 4). The high molecular weight reagent grade chitosan reduced disease on petunia leaves up to 89% when applied at 0.5%. For the commercial products, Tidal Grow™ applied at 0.75% reduced disease up to 31%, and ARMOUR-Zen® reduced disease by 75% when applied at 1%. We did not observe the suppression of disease on petunia flowers.

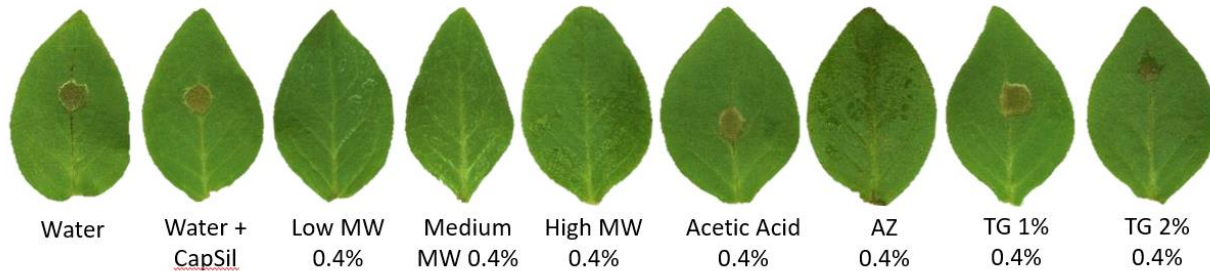


Figure 4. Petunia leaves challenged with *B. cinerea* 24 hours post chitosan/water application in a detached leaf assay. Leaves treated with chitosan exhibited smaller gray mold lesions compared to the water control.

## Takeaways

Chitosan products were effective at reducing disease severity caused by *B. cinerea* on leaves but not on flowers. Chitosan may have the potential to reduce disease on flowers indirectly by reducing foliar infections, which often spread to flowers. Our research suggests that chitosan may have potential as a new tool for growers to use as part of their IPM program. Additional research is needed to evaluate efficacy compared to fungicides and to investigate compatibility with other grower practices.

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