Increasing the Efficacy of Plant-Based Treatments on Sclerotium cepivorum

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Sclerotium cepivorum, White rot fungus, plagues onion and garlic crops around the world. It’s particularly detrimental because of its unique reproductive cycle. It does not reproduce through spores, like most fungi, but through sclerotia that can remain dormant in the soil for over twenty years. To combat this problem, we hope to find a natural plant-based solution that will stimulate or suppress sclerotia germination. To determine this we have created petri dishes with media infused from ten different plant based juices. Our hypothesis is that we will be able to both stimulate and inhibit the germination of sclerotia through the application of these juices. We were able to successfully stimulate the growth of White Rot fungus through onion, garlic, jalapeño and grapefruit; however, we were not able to inhibit the germination of the sclerotia.

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