Inhibiting Fungi Growth With Iodine, Sodium Thiosulfate, and Vitamin C

Curtis, Savannah (School: Northwestern High School)

The purpose of this project is to inhibit the growth of pioppini mushrooms via one- and ten-percent solutions of iodine, sodium thiosulfate, and vitamin C, with a combination solution of each one-percent being the most effective; and to also create a safer fungicide alternative to what is commercially available. If one- and ten-percent solutions of iodine, sodium thiosulfate, and vitamin C are periodically applied to pioppini mushrooms, then the growth will be inhibited; a combination solution of each one-percent solution will be the best inhibitor. The best inhibitor was the ten-percent sodium thiosulfate solution, inhibiting sixty-eight percent of the control height. The ten-percent vitamin C solution was the second best and inhibited sixty percent. The combination solution was the third and inhibited forty-four percent. The hypothesis was partially correct; the combination solution was not the best, but did perform well. However, considering that the one-percent solution of vitamin C was not statistically significant, it can be hypothesized that a solution of a higher percent may be more effective. Future applications of this project would be to test if iodine, sodium thiosulfate, and vitamin C could be an effective way to inhibit fungi found on field crops.

Awards Won: