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Funding Source: CAFNR On Campus Research Internship

Wine-cap stropharia: A new mushroom for Missouri mycophiles and agroforestry

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With its rich burgundy color and fine nutty flavor, the Wine-Cap Stropharia (*Stropharia rugoso-annulata*) is popular among backyard mushroom cultivators in temperate climates, especially in Europe and China. This mushroom has great untapped potential in the United States. Simple and inexpensive to grow, "Wine-Caps" could be ideal for Missouri mycophiles to cultivate in their own backyards for food and as a secondary source of income. We established 18 experimental blocks each consisting of four 1 m² beds inoculated with *Stropharia* spawn. The beds were set up on a northwest-facing, hardwood-shaded slope at the Horticulture and Agroforestry Research Center outside New Franklin, Missouri. We tested the effects of three variables on *Stropharia* production: inoculation date, straw versus a mixture of wood-chips and soil as substrate, and the presence or absence of weed barrier fabric beneath the substrate. Experiment 1 consisted of eight blocks inoculated on July 19, 2006. Experiment 2 consisted of ten blocks inoculated on August 30, 2006. Experiment 1 began fruiting on September 15, after 58 days, and had produced 90% of its total number of mushrooms by Day 83. Experiment 2 began fruiting on October 13, after 44 days, and had produced 90% of its total number of mushrooms by Day 61. Experiment 2 produced 3.1 times as many mushrooms as Experiment 1 above the median mushroom mass (33.72 g) for the entire study. Straw beds produced a greater total number, mean mass and total mass of mushrooms than wood-chip beds in Experiment 1. These relationships hold in Experiment 2, except for mean mass. Untarped beds produced a greater number and total mass of mushrooms than tarped beds in Experiment 1, but the effect of tarping was insignificant in Experiment 2. We look forward to evaluating further production by these initial experiments during spring 2007.

This project was completed to fulfill a Capstone requirement.