Sweet Whey as a Nutrient Source for *Phanerochaete chrysosporium* in Bioremediation

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Many human activities result in release of toxins into the environment, increasing health risks for humans and damaging the environment. The expense to transport polluted soil and the risk of transferring toxins to other environments increases the desirability of *in-situ* bioremediation techniques. The white-rot fungus, *Phanerochaete chrysosporium*, breaks down nonylphenols, xenobiotics, and other persistent organic pollutants in soil. Fungal microfactory technology uses the cheese byproduct whey as a nutrient source to potentially enhance mycelial growth and enzyme production in *P. chrysosporium* for bioremediation purposes. We grew *P. chrysosporium* on cracked corn augmented with varying concentrations of sweet whey to determine how the whey influenced fungal growth and spore production. The fungus grew and produced spores on the corn substrate even in the absence of whey. A concentration of 0.016% sweet whey significantly enhanced spore production. Further research is needed to evaluate the relationship between the C:N of the sweet whey resource and production of either mycelia or enzymes, particularly in nutrient limited environments, such as soil. Positive results from our experiments could increase the viability of this fungus as an option for inexpensive *in situ* remediation while also using a widely available waste product.