

CWSF 2012 - Charlottetown, Prince Edward Island



Naima Raza

Optimization of Newspaper Biodegradation by Fungal Co-Inoculation

Challenge: Energy

Category: Intermediate

Region: Lambton County

City: Sarnia, ON

School: Northern C.I. & V.S.

Abstract: Newspaper biodegradation was optimized by co-inoculating Basidiomycetes and Ascomycetes fungal strains. Computer software was used to simulate fungal interaction and biodegradation, and simulations suggested immense sensitivity to initial conditions. Samples of newspaper with no fungi, white-rot, brown-rot, soft-rot and co-inoculated fungi were tested. Visual observations and testing suggested that indicated that newspaper was degraded, therefore newspaper may not be suitable for fungal biodegradation.

Biography

My project was continued from last year's project, where I was inspired from a HowStuffWorks article on Cellulosic Ethanol and further literature searches, and I plan to continue my research with a mentor and to investigate fungal co-culturing. I would advise other students thinking about doing a project to identify a field of science that they are genuinely passionate about and read several articles in that field to find their interest! Scientific research is my biggest hobby and I enjoy doing original projects in biology that have environmental applications. In fact, this May I participated in the international I-SWEEEP fair in Houston, Texas. I was also an ambassador for the Science Expo and was awarded the "Best Ambassador" award. Additionally, I passionately volunteer for a local non-profit organization called the Bluewater Sustainability Initiative. I also love creative writing, participate in several contests and won two Gold Keys and an Honourable Mention in the 2012 Scholastic Art and Writing Awards. Lastly, I love playing sports including badminton - I was on my school team and play with my local club. In the future, I would like to pursue a biological science and PhD in university and become a scientist!