CWSF 2018 - Ottawa, Ontario

Jasmine Rahman

Optimizing Plant Growth Efficiency by Strategically Combining Organic Waste

Challenge: Environment
Category: Intermediate
Region: Eastern Newfoundland
City: St. John's , NL
School: St. Bonaventure's College

Abstract: My study determined that the optimal combination of two processed organic wastes resulted in substantial increase in plant growth. The combination of biochar and fish hydrolysate was associated with increased soil microbial diversity. A potential mechanism for the superiority of this combination is the abundance of plant promoting rhizobacteria. I encourage you to avoid commercial fertilizers and look towards natural waste to enhance your soil.

Biography

I am a grade 9 student at St. Bonaventure's college in St. John's, Newfoundland. My favourite subjects are science and math. I am a competitive tennis player and play multiple instruments. My science project was inspired by Dr. Kelly Hawboldt. She provided me with valuable processed organic wastes called biochar and fish hydrolysate. I tried to find the optimal combination of the two wastes and and tested to see if the enhanced plant growth used in this combination was due to an increased the microbial diversity. My preliminary results are intriguing however, i need a bigger study to confirm my findings. I would also like to compare my product to a commercial fertilizer. The advice i would give to students thinking about doing a project would be to pick a topic your passionate about and be creative!

Awards	Value
Excellence Award - Intermediate - Silver Medal Sponsor: Youth Science Canada	
Western University Scholarship Silver Medallist - $2000 Entrance Scholarship Sponsor: Western University	$2 000
Total	$2 000