

CWSF 2012 - Charlottetown, Prince Edward Island



Sarah Maccallum

Super Plants: Seed Preconditioning in Bok Choy Plants to Increase Crop Yield

Challenge: Resources

Category: Senior

Region: Chignecto East

City: Pictou, NS

School: Pictou Academy-Dr. T. McCulloch School

Abstract: This project applied the technique of seed preconditioning using carrot and orange juice to increase crop yield and germination rate by activating the seed's dormant proteins. Eight hundred and fifty seeds were tested in four different dilutions of each juice. The 25% carrot dilution increased first day germination by 72%- a statistically significant increase- and the 75% orange juice dilution increased shoot mass by 10mg.

Biography

As the top academic student in my grade for the past six years and a member of the 90s club since high school I am very involved in my school both academically and through extracurricular activities. I am the yearbook editor as well on five other committees within the school. Apart from being on school committees I am also captain of the school's basketball team and a team in my district's spring basketball league. Within the community I am a board member of the Hector Heritage Foundation, a Sunday school teacher and volunteer at the Hector Heritage Quay. My post secondary plans are to earn an honours degree in psychology then obtain a degree in medicine specializing in pediatric haematology.

Awards

Value

Excellence Award - Senior - Bronze Medal Sponsor: Nuclear Waste Management Organization	\$300
University of Ottawa Entrance Scholarship Senior Bronze Medallist - \$1000 Entrance Scholarship Sponsor: University of Ottawa	\$1 000
Western University Scholarship Bronze Medallist - \$1000 Entrance Scholarship Sponsor: Western University	\$1 000
Total	\$2 300