

CWSF 2017 - Regina, Saskatchewan



Amber Barkhouse

When In Drought: Polymers Help Out

Challenge: Innovation

Category: Intermediate

Region: South Shore

City: Mahone Bay, NS

School: Bayview Community School

Abstract: Global warming is contributing to more widespread droughts. Severe drought in Nova Scotia last summer caused many residents to run out of water. Two experiments were conducted to see if polyacrylamide water beads would retain more water in a well than a well without water beads. Combined experiments resulted in 68% more water retained in the wells containing polyacrylamide water beads.

Biography

My name is Amber Barkhouse and I am a grade 9 student at Bayview Community School in Mahone Bay, Nova Scotia. I am currently in training for a position on the Wrestling Nova Scotia Team competing at the 2017 Canada Games in Winnipeg. My other passion is animals and more specifically horses. I have been taking horseback riding lessons since I was 6 years old. I also enjoy gardening, which is how I first used polyacrylamide water beads in a seed germination experiment. My inspiration for conserving well water came as a result of the severe drought in my community during the summer of 2016. Dry wells caused great expense and disrupted daily living. I applied my knowledge of polyacrylamide water beads to experiment how they could help retain water in a dug well during a drought. It is my hope that a polyacrylamide product will be used in the construction of dug water wells around the world to help provide more water for human consumption and agricultural lands. My advice to other students interested in science fairs would be to find a problem that affects quality of life for people or animals and creatively find a solution.