

# CWSF 2008 - Ottawa, Ontario



## Alanna Howell

### Biodiesel's New Dry-Clean

**Division:** Engineering & Computing Sciences / Environmental Innovation

**Category:** Intermediate

**Region:** Saskatchewan Chinook

**City:** Swift Current, SK

**School:** Swift Current Comprehensive High School

**Abstract:** This project developed a new process for purifying biodiesel wherein diatomaceous earth was used as an adsorbant to remove contaminants. Current methods of biodiesel purification involve using large amounts of water, and high energy output resulting in a waste of valuable resources. The new dry-washing process was found to achieve high quality fuel, with the only waste product a small amount of nutrient-rich agricultural fertilizer.

#### Biography

I was born on December 26th, 1992 in Swift Current, Saskatchewan. With my mother and father, brothers Sean and Ian, and sister Angela, I live for on a grain farm north of Swift Current. I attended Stewart Valley School from Kindergarten to grade eight, and am currently in grade nine at the Swift Current Comprehensive High School. Here, I enjoy running with the Ardens cross-country team, and competed at Provincials last fall. Music has always had an influential role in my life, as I play both the piano and trombone, as well as sing. My favourite pastime is working with my two horses. Through being a member of 4-H for seven years, I have improved my horsemanship skills and greatly come to appreciate these wonderful equines. Some of my other interests include gardening, cooking, welding, and construction. Upon graduating from high school, I plan to attend the University of Saskatchewan. Although I am not sure which area I will specialize, I would like to obtain at least a Master's degree. Growing up on the farm is something I feel very privileged of. It has taught me that I can accomplish anything that I dedicate myself to.

#### Awards

#### Value

Honourable Mention - Earth & Environmental Science - Intermediate	\$100
Sponsor: Petro-Canada	
<b>Total</b>	<b>\$100</b>