To Wash, or Not to Wash - That is the Question

Don Mercer Associate Professor, Department of Food Science University of Guelph

Over the years, I've fielded many questions about safety and sanitation aspects of food processing, as well as about general food preparation procedures. We always try to stress the importance of having clean work surfaces and avoiding potential cross-contamination of the finished product by incoming raw materials. However, sometimes there is resistance or skepticism when it comes to the need for washing food.

I clearly remember a student saying that she didn't need to worry about washing her fruits and vegetables since she only ate organic foods. This has made me wonder how many others shared her views, and has prompted me to write this gentle reminder.

Allow me to say at the outset that I have absolutely nothing against organic food products. That is definitely not an issue. My concern is with the apparent lack of awareness of the risks involved in consuming any foods without the appropriate due diligence to overall sanitation. There are many examples on-line and in the news about E. coli and other undesirable microorganisms in both organic and non-organic fruits and vegetables. These can cause food-borne diseases if proper precautions are not taken.

We really need to look at the route foods take to get to us, as well as the situations they face along the way.

Typically, crops are fertilized as they are grown. One totally acceptable option is to use natural fertilizers such as animal manure that can be spread on fields or in vegetable gardens. By its very nature, animal manure will contain fecal microorganisms. While leafy greens and other produce grow, rain drops or water from overhead irrigation/sprinkler systems will create puddles on the ground. Additional droplets can then splash this somewhat "muddy" water up onto the plants. When the water dries, it can leave behind residual soil material and any microorganisms it contained. Keeping this in mind, I'd certainly be washing my produce carefully.

We also must think about fruits, such as apples, for example. Windfall apples that drop from the trees can come in contact with contaminants on the ground. This is especially true if animals have been grazing in the area. Even if growers don't pick up windfalls in their orchards, birds may leave their business cards on apples still on the trees. This happens whether the apples are organic or not. Once again, it just makes good sense to wash the fruit before eating it.

When travelling in the tropics, I often wash fruit with hand sanitizer, and then give it a thorough wash with potable water. That usually means using bottled water for this task.

One source of information that I read stated that there were lots of nutrients and microorganisms in organic soils that could be beneficial to us. Based on this, the author claimed that eating a bit of soil wouldn't be all that harmful – in fact it might even be a good thing. We've also seen fads during the past year that have people paying exorbitant amounts of money for bottles of "raw water", which has not been treated in any way. Sorry, but it's the potentially harmful microorganisms in the soil and in this raw water that worry me and many recognized experts in the field of food safety.

There are numerous other examples we could cite, but the important thing is to recognize the need to thoroughly wash fruits and vegetables in potable water. You also need to properly sanitize counter-tops and cutting boards where microorganisms can linger in readiness to jump onto the next batch of food that comes along.

There is really no need for us to become overly alarmed. We just need to be realistic about how we approach things. The key is to maximize the enjoyment of your food and minimize the risks. Fortunately, the precautions we need to take are fairly simple, and relatively easy to do.



Leafy greens such as lettuce need to be thoroughly washed before being consumed.