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Have You Cleared Your Cucumis melo reticulatus?

This research was conducted to determine which cleaning agents work the most effectively in minimizing bacteria on the rind of *Cucumis melo reticulatus* (cantaloupe). Our inspiration for this project was the outbreak of listeria in 2011. This disease was caused by unclean produce and resulted in numerous fatalities.

Nine random sites on three *Cucumis melo reticulatus*' were pre-tested for bacteria with culturettes before any cleaning agents were placed on the produce. Three trials were conducted for each cleaning agent. The cleaning agents applied were tap water, a fruit wash, and a 10% bleach/90% water solution. A cleaning agent was applied to each site. Post swabs were taken after 5 minutes. Agar plates, with sheep blood, were divided in half, then labeled Pre and Post. Agar plates were then streaked and incubated at 35 degrees Celsius for 48 hours.

Preliminary results indicated that the 10% bleach solution was most effective in minimizing bacterial coverage. A common bacterial lab scale of 1 to 4 was used to measure results- 1 being the least bacterial coverage and 4 being the most. Average bacterial coverage results were as follows; Tap Water=Pre 3.0/Post 4.0, Fruit Wash=Pre 3.0/Post 3.6, Bleach Water=Pre 2.6/Post 1.6.

The conclusions indicated that produce should be cleaned prior to consumption because all pretests indicated there were numerous bacteria colonies found on all rind sites. It should be noted that posttests with fruit wash and tap water resulted in additional bacterial growth. Further testing is being conducted to determine why.