

Student Profile



Eric Dery

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Eric Dery is from Ghana and is currently a post-graduate student with Kwame Nkrumah University of Science and Technology, working on functional properties of locally-bred sweetpotato varieties through his Food Science and Technology program. Eric wants to find out the effect of infrared drying equipment on sweetpotato flour quality.

Eric studied Biological Sciences at the undergraduate level and then proceeded to Food Science Technology, a program which started only a few years ago at KNUST. After one of his lectures, Eric met Dr. Edward Carey, of CIP West Africa, who talked to him about sweetpotato post-harvest technologies. Now, with a year of classroom work under his belt, Dery has decided to carry out research on sweetpotato. Dr. Carey brought him the infrared drying technologies needed for his research. Eric comments, "It has been wonderful working with Dr. Carey, he has been very supportive. Without him, my whole project would have been a sunk mess. The manner in which our lectures go during the first year are cumbersome. But working with him was a welcome relief, he makes everything available."

The first part of Eric's research involved researching browning reactions in sweetpotato. Whereas previous research has employed sulfite or sulfite-related agents to solve the problem, Eric chose to use more natural agents, pectin, papain (an enzyme from dried papaya latex) and ascorbic acid and test which of the three would best prevent browning in sweetpotato. Using Naspot sweetpotato varieties, Eric's research has already found that 0.1% of ascorbic acid concentration works best.

The second part of his research entails exploring how infrared drying affects the production of sweetpotato flour. Infrared drying is thought to be more efficient and effective at maintaining sweetpotato nutrient levels. Eric hopes to understand the effect of infrared drying through analysis of the flour's water binding capacity, swelling power, solubility index, and pasting characteristics.

When asked about the impact of the research, he says, "It's going to help people in my area. It's long overdue, in a country like mine, we find it very difficult to produce wheat. And we want food security and need to export from the outside less. If I am able to prove that using an infrared dryer on sweetpotato will help improve the flour quality such that we can substitute sweetpotato flour instead of wheat flour, which we import... It's going to help us since... we can produce our own. We tend to think of only boiling sweetpotato, and our thinking lacks diversity. This is going to help raise the level of awareness of sweetpotato. It's high time to use under-utilized crops for food security and poverty alleviation."

Eric remembers his favorite part of his program to date as being when he had to make a trip out to a farm to collect his samples. He recalls, "First, I thought it would be difficult, but I ended up enjoying it. When you're from up here [in the city], you think that farming is a dirty job. You think that when you are a farmer, you are poor. If you are an academic, you don't want to associate yourself with that. When I got to the farm, my perspective changed and I grew to appreciate the hard work that goes into farming."