



## **Alton Johnson, PhD (1956-Present)**

**Professor of Soil Physics  
Prairie View A&M University**

**Director  
Mississippi River Research Center**

### **Overview**

Alton Johnson is the director of the Mississippi River Research Center and an associate professor of soil physics at Alcorn State University in Mississippi. Johnson was born and raised in Monrovia, Liberia, one of thirteen children born to parents Robert and Bonyee. He describes the neighborhood in which he grew up as a slum, an environment that had some influence on what would be his future decision to help people produce food. Dr. Johnson completed a great deal of research, which includes the following works:

- Johnson, Alton B., Dennis E. Rowe, and Teferi Tsegaye. 2011. Adsorption and Degradation of Metolachlor in Alluvial Soils: Effect of Poultry Litter. *Journal of Sustainable Watershed Science & Management*. Vol.1 (1):31-35.
- Tsegaye, Teferi, Alton Johnson, Wendi Mersie and Karnita Golson. 2007. Transport of atrazine through soil columns with or without switchgrass roots. *J. of Food, Agriculture and Environment*. Vol. 5 (2):345-350.
- Tsegaye, T., D. Sheppard, K. R. Islam, A. Johnson, W. Tadesse, A. Atalay, and L. Marzen. 2006. Development of chemical index as a measure of in-stream water quality in response to land-use and land cover changes. *J. of Water, Air and Soil Pollution*. 174 (1) 161-179.
- Ampim, P., A. B. Johnson, J. H. Massey and T. Tsegaye. 2004. Spatial modeling of soil hydraulic properties. *Proceedings of the Mississippi Water Resources Conference*. p. 8-15. Johnson, A. B. 2001. Saturated transport of atrazine under two tillage systems.
- D. E. Stott, R. H. Mohtar and G. C. Steinhardt (ed). *Sustaining the global farm. Selected papers from the 10th International Soil Conservation Organization*. p. 283-287.

Johnson, A. B. 2001. Adsorption and degradation of metolachlor and metribuzin in a no-till system under three winter crop covers. *J. of Soil and Sediment Contamination*. 10(5):525- 527.

*This interview was conducted in 2015.*

## **Early Life**

Johnson received his bachelor's degree in general agriculture from the University of Liberia; it was here that he made the decision to pursue a career in the environmental field. After working with people in farming, Johnson felt that he needed to get more involved in order to help people in understanding the methodologies involved in farming systems. Teaching farmers to save and conserve water, for example, might improve the overall quality of the farm and the resulting harvest. Johnson left Liberia to come to the United States in the early 1980s, and went on to get his master's degree in agronomy with a concentration in soil and water management and conservation from Mississippi State. After living in the South for a while, Johnson saw just how much the communities there depended on the groundwater for drinking, and developed an interest in understanding more about the water transport principles and processes, again so that he might help the locals make the most out of their environment. Johnson continued his studies at the University of Arkansas at Fayetteville, where he received a doctorate in Soil Physics.

Johnson found his first job in the environmental field right after college as a lecturer in Soils Science at Cuttington University in Liberia. He was soon appointed the assistant director of Technology Conservation; in this position, Johnson collected information from various research stations around the country, and synthesized data that would help farmers farm more economically while conserving soil and natural resources and protecting the environment. Later, Johnson would be promoted to deputy director of Technology Transfer.

After moving to the U.S. and finishing his graduate studies, Johnson did his post-doctoral research in contaminant modeling at the University of Arkansas. Following his post-doc, he was employed for a short time by the University of Arkansas at Pinebluff, where he wrote funding proposals for the dean of the agricultural school. Johnson came to Alcorn State in 1994. As the director of the Mississippi River Research Center, Johnson researches the physical principles and processes of soil as well as the movement and transport of contaminants and heat as influenced by soil properties.

## **Education**

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## **Importance of Mentorship to Career**

Throughout the years, Johnson has enjoyed the assistance of several mentors, who have provided him with advice and guidance. Johnson mentions Dr. H. Don Scott, a soil physicist at the University of Arkansas, who helped to guide him into the environmental arena. Dr. Birl Lowery, from the University of Wisconsin-Madison, was an important role model in part because he too was an African American soil physicist. Lowery provided Johnson with many suggestions for how he might succeed in his career, and has given him a lot of advice in terms of how to work within the system and be successful.

Because Johnson is the only soil physicist at a small university, he has had to seek guidance from mentors at other universities. When Johnson arrived at Alcorn State, he was given the responsibility of developing a research-based environmental science program. He turned to Dr. Peter Wierenge, the Department Chair of Soil and Environmental Sciences, who took him under his wing and offered his advice and experiences on how to succeed in building a comprehensive program at a small university. On many occasions, Johnson has turned to Dr. David Radcliff from the University of Georgia, who has always been there for him when times have been tough. Johnson credits Radcliff with helping him to stay on track and deal with problems, as well as providing direction with some of the complex mathematic processes involved in environmental soil physics.

Since becoming a professor, Johnson has made an effort to mentor minority students at every opportunity. Close to ten of the mentees he has had at Alcorn State have gone on to graduate school, and some are working on the PhDs. "I tend to hire many students for research apprenticeship so that my students will gain a clear understanding of the subject matter and learn to sharpen their critical thinking skills," Johnson says. "I want my students to understand that the environmental field is not a just a place to make money, but you must have a passion for the work as well."

## **Highlights and Challenging Times**

The highlight of Johnson's career thus far was when he was appointed to serve on the state of Mississippi Legislative Environmental Task Force in 1998. Johnson was able to use some of his expertise to provide guidance or consult with members of the state legislature so that they might better deal with some of the pressing environmental issues in the state of Mississippi. Unfortunately, with the highs sometimes come lows. "Sometimes when you work hard and know you are doing things to remain in the mainstream of research in your profession, there are situations where people don't recognize your wealth of experience or try to downplay your efforts so they can get ahead of you," Johnson comments. "Fortunately, the experience is short-lived, because you can see through it and just tell yourself to go on. No one said it would be easy; you just have to keep plugging away."

Johnson has remained in the environmental field because it is challenging and always evolving. "There are lots of challenges ahead, and there are so many things that you can do to help society as a whole," he

says. For example, for the past three or four months, Johnson has been working alongside farmers in the southernmost counties in Mississippi who have suffered tremendous devastation in the aftermath of Hurricanes Katrina and Rita. Johnson comments on his motivation, “I’ve been trying to help them get their lives back with respect to some of the things they haven’t been able to do because of saltwater intrusion and other environmental factors. When I see an individual that needs help and I think that I might have part of the answer, then I thank the Lord for my decision to pursue a career in this area.”

## **Mentoring Others**

Johnson considers the impact he has had on students through his mentoring opportunities to be the single most significant achievement of his career. He believes that it is extremely important that more minorities are introduced to this area, and encourages all of his students to go to graduate school. As a professor in a predominantly African American institution, Johnson feels that it is very important that he and his colleagues look at their students as individuals who can go out and fit within the larger society. One of his primary interests is in giving students exposure to other places where there is a more diverse system. “For example,” explains Johnson, “if I have a student who wants to continue for a master’s degree at a predominantly black institution, I’ll tell him or her that it would be a good idea to go to a predominantly white institution so that he or she will get to see the other side of the society that we live in. It’s important that other cultures come together to benefit society.” Johnson is currently teaching a class in Pittsburgh, Mississippi that is ninety percent Caucasian; many of his students had never had an African American professor. He feels that the interaction helps his students to make better decisions.

## **Advice to Young Professionals**

Johnson has a lot of advice for minorities who are considering a career in the environmental field. Perhaps most importantly, he believes it is a good field, but is not an easy one; students will need to remain focused and do what they plan to do to succeed. “Don’t get sidetracked,” Johnson cautions. “No one said it would be easy—just keep plugging away.” Johnson also advises students to choose what schools they attend carefully. “When you look at schools of natural sciences—especially the land grant universities—keep in mind that they are very conservative. Most haven’t dealt with minorities before—especially those who come from predominantly minority settings. It is often a situation of two cultures trying to find and understand one another, and sometimes there is a clash.”

In the event that a minority student faces racial bias, Johnson says, “Sit back and think about who really needs the education here. Is it me or is it you? Just smile and go about it. It’s a good education, and you can’t let people like that get into your way.”

## **For More Information**

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