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Unearthing the potentials of underutilized legumes for food and nutrition security: A case study of African yam bean (*Sphenostylis stenocarpa*)

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Poverty, malnutrition and food insecurity are burning issues affecting the developing world especially in sub Saharan Africa where most of the populace cannot afford a square meal a day. Overdependence on a few staple crops have led to the near extinction of other crops which though with great potentials for food, protein, and nutrition security, remain neglected and underutilized. Climate change is drastically reducing the yield of most staple crops due to their inability to withstand the continuous environmental changes as a result of global warming such as droughts and extreme temperatures. Underutilized legumes are climate-resilient crops with much economic benefits but have received little or no research focus. Some underutilized legumes produce both edible seeds and tubers with immense essential minerals and amino acids and rich cultural values. African yam bean is one of such crops. Despite its rich nutritional content, it has not received the much needed attention for its genetic improvement and wide-scale cultivation and utilization. Most of the genetic resources of this noble legume remains in the hands of resource poor farmers who cultivate them for sustenance of their families especially during the lean periods of the year. The hidden potentials in this dual food crop is discussed as well as the challenges facing its cultivation and future prospects suggested for its better acceptance and utilization using advanced technologies.

Keywords: climate change, food security, omic technologies, speed breeding, *sphenostylis stenocarpa*, underutilized legume

Biography:

Dr. Omena Ojuederie is a Senior Lecturer in the Department of Biological Sciences, at Kings University, Nigeria, an extraordinary Senior Lecturer of the Food Security and Safety Niche Area of the North-West University South Africa and a Part-Time Lecturer at the Pan African University Institute of Life Sciences, including Health and Agriculture, Ibadan. He holds a B.Sc. Hons in Microbiology from the University of Benin Nigeria, while his M.Sc. in Environmental Biology and Ph.D. in Plant genetics were obtained from the University of Ibadan. He is a recipient of the International Foundation for Science (IFS)