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**Abstract**

This study explores consumer acceptance and valuation of a genetically modified (GM) staple food crop in a developing country prior to its commercialization. We focus on the hypothetical introduction of a disease-resistant GM banana variety in Uganda, where bananas are among the most important staple crops. A choice experiment is used to investigate consumer preferences for various banana attributes (bunch size, technology, producer benefit and price), and examine their opinions on GM foodstuff. Choice data come from 421 banana-consuming households randomly selected from three regions of Uganda. A latent class model is used to investigate the heterogeneity in consumers’ preferences for banana attributes and to profile consumers who are more or less likely to accept GM bananas. Our results reveal that there is significant heterogeneity in consumer preferences across our sample. GM bananas are valued the most by poorer households located in the rural areas of the Eastern region. These food-insecure households would experience the highest benefits (i.e., welfare gains) from the commercial release of GM bananas. In contrast, urban consumers are less accepting of GM bananas, and they would experience significant welfare losses if GM banana is released. According to our welfare estimates, both the total welfare benefits acquired by the gainers, and the total welfare losses borne by the losers of this technology are significant and large. These results suggest the need for further investigation of the overall welfare effects of the introduction of GM bananas on the Ugandan society as a whole.