**How much can we trust farmer self-reported data on crop varieties? Experimental evidence using DNA fingerprinting of cassava varieties in Malawi**

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**Abstract:**

This paper empirically estimates the extent of measurement error associated with alternative approaches for collecting data on the adoption of improved varieties. A range of non-rival data collection protocols were implemented for the same sample of 1260 cassava producers in Malawi, and the accuracy and relative cost-effectiveness of these protocols are compared to a benchmark of DNA fingerprinting using the DArTSeq platform. The results show that only 35% of the farmers could correctly identify their varieties. Identification achieved through using a photo-based survey protocol of morphological attributes achieved correct identification in only 5% of cases. Farmer self-reported data overestimates adoption of improved varieties by a factor of 19. Based on these findings, we recommend that any empirical study in which crop varietal status is an important variable should make the marginal investment of approximately $25 per sample per household for including DNA fingerprinting.

JEL Classification Q12, Q16, Q18

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