

ABSTRACT

Studies of improved seed adoption in developing countries are almost always based on household surveys and are premised on the assumption that farmers can accurately self-report their use of improved seed varieties. However, recent studies suggest that farmers' reports of seed varieties planted, or even whether the seed is local or improved, are sometimes inconsistent with the DNA fingerprinting results of those crops. We use household survey data from Tanzania to test the alignment between farmer-reported and DNA-identified maize seed types planted. In the sample, 70% of maize seed observations are correctly reported as local or improved, while 16% are type I errors (falsely reported as improved) and 14% are type II errors (falsely reported as local). Type I errors are more likely to have been sourced from other farmers, rather than formal channels. An analysis of input use, including seed, fertiliser, and labour allocations, reveals that farmers tend to treat improved maize differently, depending on whether they correctly perceive it as improved. This suggests that errors in farmers' seed type awareness may translate into suboptimal management practices. The average yield of seed that is correctly identified as improved is almost 700 kg per hectare greater than that of type I errors. This indicates that investments in farmers' access to information, seed labelling, and seed system oversight are needed to complement investments in seed variety development.