

Do improved drying and storage practices reduce aflatoxin contamination in stored maize Experimental evidence from smallholders in southern Senegal

Stacy Prieto, Jonathan Bauchet, Jacob Ricker-Gilbert
stacy.prieto@crs.org
Purdue University FTF Food Processing Innovation Lab

Abstract: Consuming food infected with Aflatoxins, a class of fungi, has negative consequences on the health and economic productivity of millions of people in developing countries. We design a randomized control trial with nearly 2,000 smallholder farm households in southern Senegal to see which interventions can reduce the incidence and accumulation of aflatoxins in maize, the local staple crop. The interventions include training on recommended post-harvest practices, providing tarps to reduce maize drying on the ground, providing low-cost moisture meters to detect when maize is dry enough for safe storage, and providing a hermetic bag to store maize after it has been dried. We find that households use the provided inputs, but training and hermetic bags were the only interventions that significantly reduce aflatoxins levels in maize after 3-4 months of storage. This suggests that smallholder farmers connect grain drying and storing directly, and aflatoxins-reducing strategies need to address drying and storage issues in a comprehensive manner