Introduction

- Increased pesticide use in Sub-Saharan Africa (SSA) brings new health and safety risks to smallholder farmers.
- Farmers in developing countries seldom use complete personal protective equipment (PPE) when handling and applying pesticides, which often leaves them highly exposed to toxic chemicals.
- The high potential for exposure leads to large acute illness risks from pesticide use.
- Researchers agree that improved and targeted extension and training efforts are needed to ensure that farmers use pesticides safely; however, literature has not explored in detail the relationships between agriculture information channels and perceived pesticide health risks and safety behaviors.

Objective

- Use mean comparisons and regression analysis to identify the correlations between pest management advice sources and farmers’ accuracies in their pesticide health risk perceptions, in markets supplying two large SSA capitals.

Data Collection

- Total Sample (n=879): Random & stratified sample across capital cities in two countries
  - Mozambique (n=616): Population of 6,458 horticulture producers supplying Maputo markets
  - Zambia (n=263): Population of 427 horticulture producers supplying Lusaka markets

Pesticide Behavior Regression Result Highlights

- Education of the household head has a robust relationship with safety behaviors
- Asset ownership is significantly related to improved safety
- Pesticide safety is significantly improved by:
  - Agricultural training programs in Maputo, and
  - Pest management advice from NGOs in Lusaka

Results

- Informal pest management advice and, more specifically, pest management advice from another family member each show significantly improved pesticide toxicity accuracies for Lusaka farmers.
- We find no significant relationships between any pest management advice source or household characteristic and a farmer’s mean perceived health risk accuracy score in Maputo.

Conclusions

- The significant relationship between informal pest management advice and improved perceived health risk accuracy in Lusaka together with the fact that those same farmers trust informal sources well beyond all others suggests that we should give greater emphasis to informal information sharing amongst family members and other farmers.
- The prevalent recommendation for formal extension may miss the importance of pest management information diffusion within communities and families.