INTERNATIONAL FOOD POLICY RESEARCH INSTITUTE
IFPRI

PROJECT NOTE MARCH 2023

Impact of Information on Demand for Safe Food

Vivian Hoffmann, Sarah Kariuki, Mike Murphy, Boaz Ndisio, Ibrahim Ochenje, Sheila Okoth

What was the goal of the research?

Problems caused by eating unsafe food are a major health issue in many countries. Contamination by bacteria or toxins can cause these health risks, particularly for young children whose bodies are still developing. It can be difficult to know which foods are risky because you usually cannot tell by looking if food is contaminated. The goal of this research was to see whether giving consumers in Kenya information about one of these contamination risks would make them choose to purchase different products.

What did we do?

We focused our study on aflatoxin, a common food safety hazard in Kenya. Consuming foods very high in aflatoxin can cause liver disease and even death. Over time, lower levels of exposure to aflatoxin increase the risk of liver cancer and may have negative effects on children's immune system function and growth.

Aflatoxin surveillance in maize flour

For one year, we purchased different types of maize flour every two months at different locations in Kenya. We found that throughout the year, posho flour – whether from the consumer's own farm, the miller's supply, or purchased grain – was much more likely to be contaminated above the regulatory limit of 10 parts per billion than packaged unga. Extra-sifted posho flour was about as safe as packaged unga. During processing of both packaged unga and extra-sifted posho, the parts of the grain where aflatoxin tends to be concentrated are mostly removed. Unfortunately, these are also the components of the grain that contain most of the fibre, vitamins and minerals in maize.

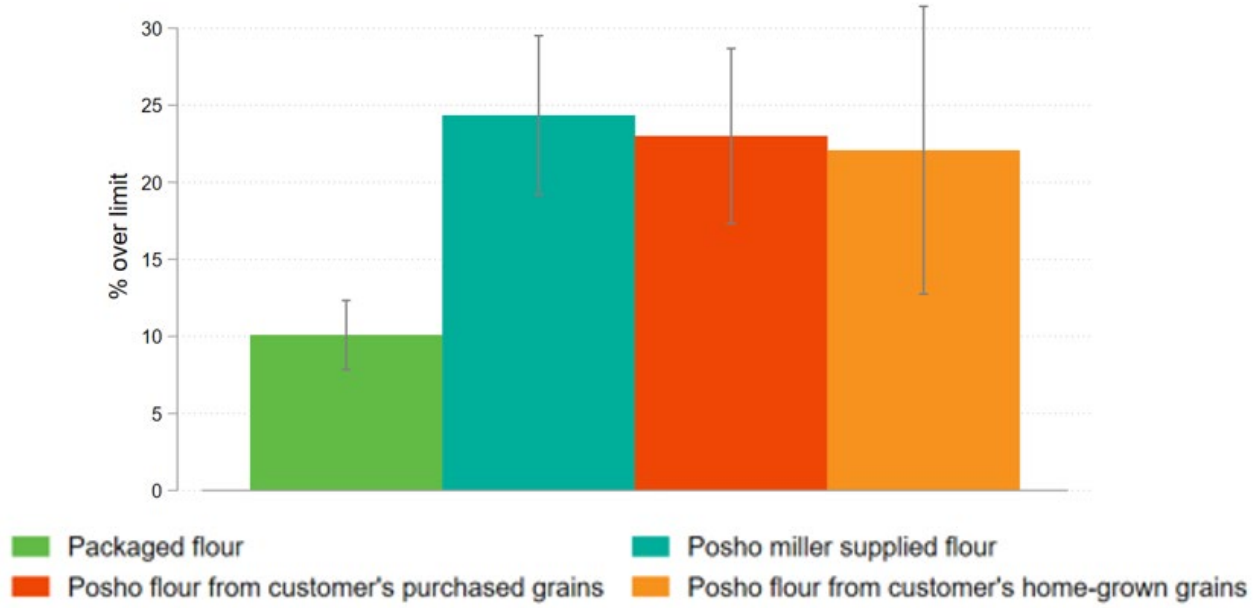

Figure 1: Aflatoxin contamination of branded unga and posho flour in 2021 (N=1255)

Our calculations using data on fortification levels reported by the Ministry of Health indicate that even though compliance with mandatory fortification of unga remains incomplete, average levels of key micro-nutrients are higher in packaged unga than what would be expected in whole grain posho flour.[1,2] Extra-sifted posho flour, on the other hand, is not fortified.

Information intervention

We interviewed members of 1450 households in low-income neighbourhoods of Nairobi and Athi River to get information about how consumers think about food safety risks and about the types of foods they consume. We randomly chose some of these households and provided them with information about the higher aflatoxin risk of posho flour at the end of the interview. We also gave these households a poster with the information on it as a reminder. We came back to do another interview two months later to see if households who got the information changed the type of maize flour they purchased, compared to households in the control group, who did not receive this information.

Figure 2: The poster given to randomly selected households

What did we learn?

When the research team revisited the same households two months later, half of households who received information were now consuming safer packaged maize flour, compared to one in three people who were not given information. Those given information also showed more understanding of food safety risks. We also found some evidence that people had shared information with their neighbours.

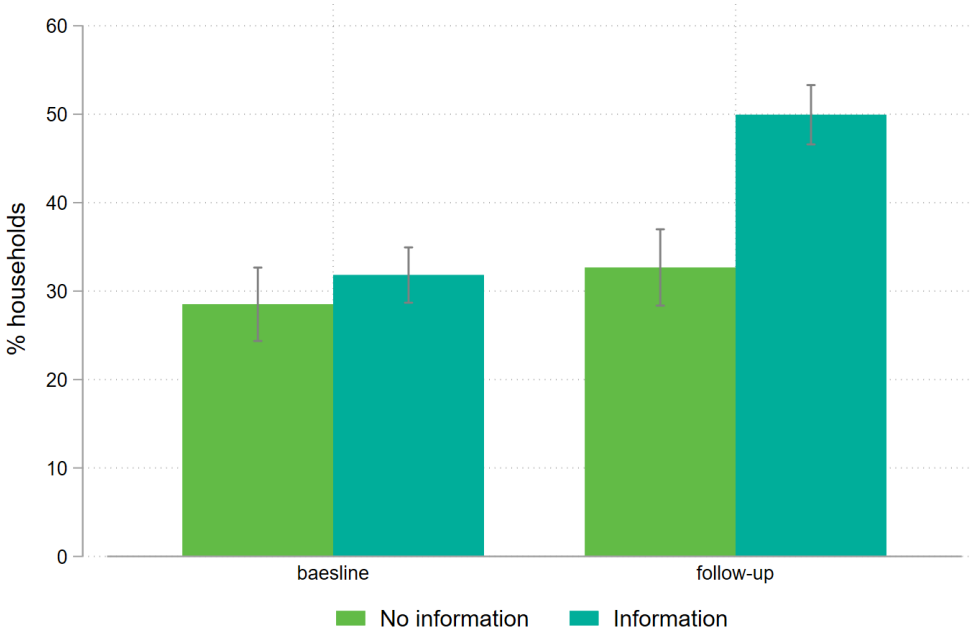

Figure 3: Households with packaged maize flour in the home, by round and treatment group (N=1,311)

What are the policy implications?

Simply providing consumers with information led them to make safer food choices. Conducting regular food safety surveillance, and then providing the public with information about relatively safer versus riskier foods, can have a big impact on food choices. This approach has the potential to help consumers avoid risky foods. By expanding the market share of food businesses providing safer options, provision of this type of information can also increase the average safety of the food supply and create incentives for businesses to invest in food safety.

For more information about this study, please contact Dr. Sarah Kariuki at s.w.kariuki@cgiar.org or Michael Murphy at m.murphy@cgiar.org.

ABOUT THE AUTHORS

Vivian Hoffmann is a Senior Research Fellow in the Markets, Trade, and Institutions Division at IFPRI, and Associate Professor of Economics and Public Policy at Carleton University in Ottawa, Canada.

Sarah Kariuki is a market and value chain specialist with CIMMYT's Sustainable Agrifood Systems (SAS) program in Kenya.

Mike Murphy is a Senior Research Analyst in the Markets, Trade and Institutions Division at IFPRI, based in Washington, DC.

Boaz Ndisio is Technical Director of Asperlabs Ltd. Aflatoxin Management Solutions. He is based in Nairobi, Kenya.

Ibrahim Ochenje is a Research Officer in the Markets, Trade and Institutions Division at IFPRI, based in Nairobi, Kenya.

Sheila Okoth is a Professor in Department of Biology, Faculty of Science and Technology, University of Nairobi.

ACKNOWLEDGMENTS

We are indebted to the data collection team and Community Health Volunteers in Kangemi, Kawangware, Kibera, and Athi River, without whose efforts this study would not have been possible.

FUNDING

Funding for this work was provided by the CGIAR Research Program on Agriculture for Nutrition and Health (A4NH) and the CGIAR One Health Initiative. This publication has not been independently peer reviewed. Any opinions expressed here belong to the author(s) and are not necessarily representative of or endorsed by IFPRI.

REFERENCES

[1] Ministry of Health, 2018. The Kenya National Food Fortification Strategic Plan: 2018-2022.

[2] Gwirtz, J.A. and Garcia-Casal, M.N., 2014. Processing maize flour and corn meal food products. *Annals of the New York Academy of Sciences*, 1312(1), pp.66-75.

INTERNATIONAL FOOD POLICY RESEARCH INSTITUTE

A world free of hunger and malnutrition

IFPRI is a CGIAR Research Center

1201 Eye Street, NW, Washington, DC 20005 USA | T. +1-202-862-5600 | F. +1-202-862-5606 | Email: ifpri@cgiar.org | www.ifpri.org | www.ifpri.info