

Using the Food-Vendors Food Safety App

A practical guide for exploring food safety scenarios
in small-vendor food systems



This guide explains how to use the app to explore food system scenarios and understand how small food vendors may contribute to food-borne disease risk. You do not need prior experience with simulations to use it: the app is best understood as a way to test “what if” questions and compare how different assumptions change the result.

What is the app for?

In simple terms, the app helps you compare different food retail patterns and their risks and see how they may affect food safety outcomes.

The app lets you build a food system scenario and estimate what share of all food-borne disease may be linked to purchases from small food vendors, such as market traders, kiosk owners, and small shopkeepers, rather than from modern formal retail outlets.

The estimate is best used as a directional result, not as a precise prediction. Its main value is helping you see which food system variables appear to matter more, and which changes make little difference to the final outcome.

Where can I find it?

You can access the app here: https://food-vendors.shinyapps.io/food_safety/

What can you change in the app?

The app asks you to define a scenario by adjusting a small number of inputs. Each input represents a feature of the food system that could influence food safety risk.

In the top panel, you enter where people buy different food groups. For each group, you provide the share bought from modern retail outlets and the share bought from traditional markets. The app then calculates "Other" automatically as everything that remains. These data are not widely available, so in many cases you may need to make an informed estimate. Two useful survey examples, from Kenya and India, are available here:

<https://www.gainhealth.org/resources/reports-and-publications/gain-working-paper-series-32>

You can also adjust the Food Safety Risk Score for each food group. Only three values are used: 1, 10, and 100. This setting is helpful when you believe that certain food groups account for much more risk than others in your context.

The final column shows how much of each food group an average person consumes in the scenario country, measured in kilograms per year. You can find these data here: <https://www.fao.org/faostat/en/#data/FBS>. Select "Food supply quantity" and use aggregated items to match the food groups in the app. For "Other", include both cereals and starchy roots.

The two sliders are especially important. They show how much riskier it may be to buy food from a small vendor or another non-modern outlet compared with buying the same food from a modern formal outlet. A value of 1 means there is no difference in risk. A value of 5 means the non-formal outlet is assumed to create five times more food-borne disease risk.

How to read the outputs

The app produces two Food Risk Scores. One represents the safest possible scenario, where all food is bought from modern formal outlets. The other represents the scenario you entered. These scores are not meant to be interpreted on their own as exact quantities. Instead, the app uses the difference between them to estimate the share of all food-borne disease that may be associated with purchases from non-modern outlets.