Contaminated food kills more than 3000 people each year in the United States and sickens more than 48 million, and recalls can cost the food industry many millions of dollars. A major food safety bill signed into law this month gives the U.S. Food and Drug Administration (FDA) new powers and aims to shift the focus from response to prevention of food-borne illness. “It’s a big step forward,” says Marion Nestle of New York University. But achieving the goals of the law is going to be a stretch for FDA scientists, who are already spread thin.

The law, called the Food Safety Modernization Act, calls for science-based guidance to help farmers and food processors prevent contamination, and it moves FDA toward a risk-based approach to monitoring the food supply. But FDA research is underfunded, lacks needed expertise, and faces serious hurdles in gathering data to meet these targets, according to recent reviews by the FDA’s science advisory board and the National Academies. “They’re not in a great position to do what this act requires them to do,” says Douglas Archer of the University of Florida, Gainesville. Operations that sell less than $500,000 worth of food are exempt. And midsize operations may need to turn to outside experts for help assessing risk. “It’s going to require fairly massive input,” says Glenn Morris of the University of Florida, Gainesville. Operations that sell less than $500,000 worth of food are exempt.

There will also be more work for the roughly 170 FDA scientists. For fruits and vegetables, FDA must create safety standards for farmers intended to prevent contamination from microbes or environmental pollutants. In 2006, for example, *Escherichia coli* in California spinach killed three people, prompting FDA to issue a nationwide warning not to eat bagged spinach. Investigators suspect that the microbes came from wild pigs wandering into the fields or irrigation water contaminated by cattle feces.

It’s a big job to create safety standards for all types of fruits and vegetables. Scientists will have to evaluate a range of questions, such as whether different water quality will be required for various crops; standards may vary depending on the type of irrigation used, for example. FDA must start its rulemaking process for these safety standards within 9 months, but it will likely take several years to complete. (Again, small farms are exempt.)

Every 2 years, FDA scientists will have to rank the greatest risks to food safety and offer suggestions to industry on prevention. This will mean developing ways to compare the relative risk of various hazards—*Salmonella* in tomatoes versus hepatitis A in green onions, for example. “This is going to be a very steep learning curve,” says Robert Buchanan of the University of Maryland, College Park, who was a science adviser at CFSAN from 1999 to 2008.

A larger problem is obtaining the data to evaluate risks. Information technology at FDA has critical shortcomings, Archer says: “They’ll need a huge overhaul.” The computer systems used by FDA to track problems with the food supply, for example, aren’t compatible with those of USDA’s food safety investigators or those of the U.S. Centers for Disease Control and Prevention, which keeps tabs on food-borne illness in humans. Unlike most nations, the United States doesn’t have a comprehensive surveillance system to monitor food safety nationally, Morris says—because it is the only industrialized country that splits its food safety regulatory authority among agencies. Nor does FDA have the necessary expertise in epidemiology, statistics, and mathematical modeling.

Perhaps the biggest hurdle will be funding the new mandates—estimated to cost an additional $1.4 billion over 5 years—given a new Congress intent on cutting budgets. Representative Jack Kingston (R–GA), who will head the agriculture appropriations subcommittee, which is responsible for FDA, told *The Washington Post* last month that “the case for a $1.4 billion expenditure isn’t there.”

FDA Commissioner Margaret Hamburg said in a press conference last week that FDA will be able to partner with industry and states to accomplish some of the goals. “There’s a lot that we can do both quickly and meaningfully” she said, pointing to progress in developing new standards for fruits and vegetables. But this will be just piecemeal progress unless Congress ponies up, Buchanan says: “If they don’t give them the resources to do this, they’re putting FDA in a totally untenable situation.”

**New leaf.** Science-based standards will help farmers prevent food-borne disease.