

# U.S. Agriculture is Vulnerable to Weeds, Diseases,

# Insects and Other Pest Threats

*Ongoing Investment  
in Integrated Pest  
Management Safeguards  
America's Agricultural  
Industry and Food Supply*

The COVID pandemic illuminated many truths about the U.S. economy but few more important than this: Agriculture is a vital American industry. That was driven home by empty store shelves, rationed quantities of food staples, and panic buying of food. In 2020, for the first time in most Americans' lives, there was no guarantee the food they wanted would be available. Agriculture, food and related industries contributed \$1.05 trillion to U.S. gross domestic product in 2017. In addition, 22 million jobs were related to agricultural and food sectors in 2018 — 11 percent of total U.S. employment. These facts reveal that American agriculture is absolutely vital to the fabric of U.S. livelihoods, yet uncomfortably fragile.

## **Pests are a constant threat to U.S. agriculture — Especially invasive species**

Pests are endemic to agriculture and American farmers spent \$9 billion on crop-protecting chemical pesticides — herbicides, insecticides and fungicides — in 2019 alone. That figure does not include the costs of pesticide application, nor does it capture all the other ways growers manage pests. In the U.S., growers lose an estimated 10 to 35 percent of their crops to pests. When an invasive insect, disease or weed is introduced, the economic impact and ecological disruptions can be extreme.

## **The long-term solution to pest challenges — Integrated Pest Management**

The science of IPM can prevent resistant pest populations from emerging. As the name implies, IPM integrates multiple pest management tactics across seasons to protect crops. Because a number of different strategies and technologies are alternated and combined, no individual control method is overused and pest resistance is slowed or even stopped.

## **Integrated Pest Management infrastructure, funding and the regional IPM centers**

The U.S. Department of Agriculture's National Institute of Food and Agriculture is the major funder of IPM research in the U.S. Because IPM is used in so many different arenas, IPM research is supported through a variety of federal programs: Specialty Crop Research Initiative grants, Agriculture and Food Research Initiative grants, Organic Research and Extension Initiative grants and the Sustainable Agriculture program.

IPM is most directly supported through the federal Crop Protection and Pest Management grant program, which was formed when several budget lines were consolidated in 2014. Funding for IPM took dramatic cuts — more than \$63 million — during that consolidation and has remained static for many years.

***COVID was a wake-up call to the importance and fragility of American agriculture, but the development of vaccines within a single year is also an incredible testament of the power of directed science to solve important problems.*** IPM is a direct application of scientific research into the nation's important pest management problems, and funding IPM Infrastructure and the Regional IPM Centers are vital for protecting US. agricultural production.

The National Integrated Pest Management Coordinating Committee is a committee of the Experiment Station Committee on Organization and Policy and the Extension Committee on Organization and Policy within the Association of Public and Land-grant Universities governing structure. It assists in development of reports and strategic plans on pest management issues and pursues activities that facilitate coordination and collaboration nationally among and between IPM research and extension at the land-grant universities, and between the land-grants and federal agencies involved in IPM. Learn more at:

<https://tinyurl.com/d7yx9ny6>

