

Improving Pest Management Makes American Agriculture More Environmentally Sound and Socially Just

American agriculture is an amazing success.

Our farmers and ranchers produce an incredible bounty of healthy, low-cost food that feeds our nation and helps feed the world.

But, like any industry, the agricultural industry can have negative impacts, damaging the environment and harming people who live or work in agricultural production areas. And, like most other industries, these negative impacts disproportionately affect people of color and members of low-income communities who work on farms or live in rural, ag-intensive areas.

Chemical pesticides have historically caused some of the unintended harm associated with agriculture, so improving pest-management practices on American farms directly improves environmental and social justice.

And there's a proven way to do it, called **Integrated Pest Management**.

A Better Way to Protect Our Crops and Farming Communities

Integrated Pest Management is the science of managing pests safely and sustainably. It uses a suite of tactics – rather than just chemical pesticides – to manage insects, diseases, weeds and other pests on farms and ranches, in rangelands and forests, and in schools and communities.

Integrated Pest Management, or IPM, favors preventing and avoiding pests over suppressing out-of-control pest populations. It promotes conservation, smart farming practices and biological control as safer, more ecological approaches than chemical control. IPM doesn't arbitrarily prohibit the use of chemical pesticides; instead, it teaches growers and pest managers how to use pesticides as one part of a broader strategy to manage pests in the safest, most sustainable way possible.

For instance, an IPM-trained grower can make an early season application of a targeted insect growth regulator – a type of chemical pesticide that only affects specific pest species. That one spray can reduce the target pest population while allowing beneficial insects to flourish and provide ongoing biological control of many types of crop pests through the rest of the season.

Or an IPM-trained grower can plant disease-resistant varieties of crops as a way to avoid the need for costly and dangerous chemical fumigation of their fields. Using IPM principles, growers select crop varieties that can be harvested before weeds produce seed or insect pest populations explode. They use cultural practices from pruning to plowing to row spacing as ways to reduce their pest pressures and need for chemical pesticides. They rotate crops and preserve natural enemies and think of pest management as an ecological process not a chemical problem.



The North Central IPM Center provided early funding for the Iowa Pest Resistance Management Program, which has launched two community teams and has promoted

Pest Resistance Management

with 16 videos, six field days, over 45 presentations and 50 media articles, 12 handouts, three surveys, a field recorder scorecard and a

statewide resistance-management plan.



A Western IPM Center-funded pesticide safety education work group in the

Pacific Islands

identified critical needs to protect island agricultural workers and leveraged resources to train dozens of educators and create crop- and culture-specific pesticide safety resources in

Mandarin, Ilocano, Laotian and Thai.

IPM Also Protects Access to Fresh and Healthy Food for Everyone

Adopted widely, IPM reduces the risk of pesticides and protects America's farmers, farmworkers and rural communities. One example: a 2015 study by the Western IPM Center found that in California in 1995, growers applied over eight pounds of pesticide to grow \$1,000 worth of food. By 2012, they'd cut that in half, to under four pounds for every \$1,000 worth of food produced.

Some critics, however, say IPM doesn't go far enough. They advocate banning chemical pesticides entirely and adopting an idealized, pre-industrial form of agriculture. While the idea may be attractive, the reality would harm many more people by making food more expensive and scarce.

Instead of romanticizing agriculture's past, the way to feed and protect vulnerable communities and all Americans is to invest in its future – in resilient plant varieties, in new technologies like robotic weeders, in research into novel pest-control tactics and in training new generations of farmers and pest managers in smart, safe and sustainable IPM approaches.

Everyone deserves access to affordable, healthy food and everyone deserves a healthy environment in which to live and work.

IPM works to make both of those ideals possible.



Northeastern IPM Center funding of a 2014 project on bringing IPM to the Hispanic workforce in the

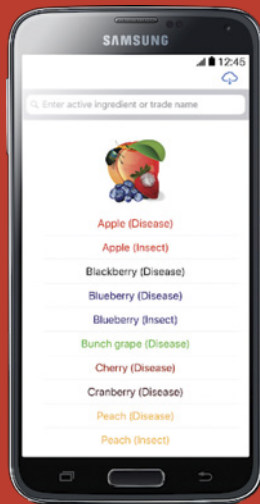
Mid-Atlantic mushroom industry

was a key contributor to the formation of the

Latinx Agricultural Network

a thriving Penn State Extension community of practice. The majority of U.S. mushroom production is in Pennsylvania, where

90% of that industry's workforce is Latino.



The Southern IPM Center supported the

MyIPM App

which has 4,000 active users in 11 states with significant use by small and tree fruit growers. Users of the app report a

25% decline in both pesticide resistance and secondary pest outbreaks.

Regional IPM Centers

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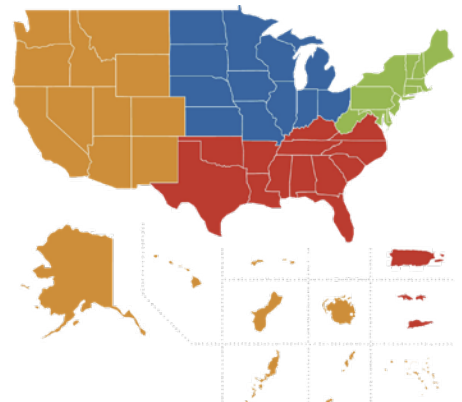
Western IPM Center

co-hosted by University of California, Oregon State University and University of Arizona

westernipm.org

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