

ABSTRACT:

**Impacts of the Regional Integrated
Pest Management Competitive Grants
Program in the Western United States**

James J. Farrar, Ph.D
Matthew E. Baur, Ph.D
Steve Elliott

JULY 2015

Executive Summary

The Regional IPM competitive grant program promoted scientific advances in integrated pest management to reduce risks of pest and pest management practices. From 2003 to 2014, the Western IPM Center organized the grant review panel, which selected projects based in part on regional priority needs. The RIPM program, as it was known, was discontinued in 2014 and its funding combined into a new program administered nationally.

The impacts highlighted here were generated by 66 research and extension projects funded from 2003 to 2012. They involved 83 project directors and 107 collaborators in 15 universities across all 13 Western states. Six projects in 2012 and 2013 are ongoing and not included.

New Pest Management Tools

The 66 Western RIPM projects developed six weather-based pest development models, five information-technology tools, 42 pest-management tools, six pest-monitoring and scouting procedures, four diagnostic tools, two pest-management economic models and one mosquito adulticide dispersal model.

Two of those projects contributed to the development and continual upgrading of the weather decision-support tools online at uspest.org. In 2013 alone, growers and pest managers used uspest.org

to view 45,000 degree-day models tracking pest development, 57,000 hourly plant-disease forecasts, and 43,000 map views of pest development – nearly 400 uses every day just for those three resources. In addition, users have conducted 1,893 runs of the hop downy mildew forecasting model and 5,234 runs of the orange tortrix degree-day development model tracking the development of this caneberry pest.

Three Western RIPM projects also contributed to developing the High Plains IPM site, which growers searched 34,000 times for wheat pests and homeowners searched 9,000 times for woody ornamental pests.

Pesticide Reductions and Economic Benefits

Based on outreach supported by Western RIPM projects, growers adopted new IPM practices to manage pests in caneberries, chiles, cotton, eggs, grapes, hops, lettuce, pear, poplar, potato, spinach seed, timothy grass hay and wheat.

In Arizona, two RIPM projects promoted adoption of IPM practices that have saved cotton growers a cumulative \$451 million in pesticide costs and reduced the amount of insecticide used by 21 million pounds. Currently, 20% of cotton acreage in Arizona is not sprayed for insects. In California, IPM adoption supported by the RIPM program eliminated the use of about 1,000 pounds of mala-

It Started with...

\$6.1 million
in NIFA funding *plus*

83 Project Directors *and*

107 Collaborators *at*

15 Universities *in*

13 Western states

Which Created...

57 pest-management tools
and models

149 scientific papers and
175 scientific presentations

497 grower-training
publications and **316**
presentations to growers

4 new pest-management
products

thion each year by timothy grass hay growers.

In Washington and Oregon, RIPM-supported IPM practices allow spinach-seed growers to continue to produce on ground that would otherwise be unsuitable because it was contaminated with the Fusarium wilt of spinach pathogen, and also in the Pacific Northwest, changing sulfur application programs in hops reduced mite pressure and allowed a reduction in miticide use.

Advanced Scientific Knowledge

Western RIPM projects created new scientific knowledge that researchers continue to build on. The 66 projects generated 175 scientific presentations and 149 peer-reviewed scientific articles, which to date have been cited in other peer-reviewed scientific articles a whopping 2,292 times.

New Pest Management Products

Western RIPM projects supported the development of four pest management products now available or in commercial development. These are Prionus beetle pheromone traps to control a major pest of hops and fruit orchards; a diagnostic assay used by at least two states to test for fireblight in pears; and a bacterium and fungus in development as bio-pesticides.

Expanded IPM Knowledge

The 66 projects expanded IPM information available to growers and pest managers by creating 497 extension publications, 26 trade publications and 316 oral presentations to growers and

others that reached an audience of at least 8,000. The trade publications, oral presentations and audience numbers were not consistently reported and are likely significantly under-stated.

Leveraged Additional Funding

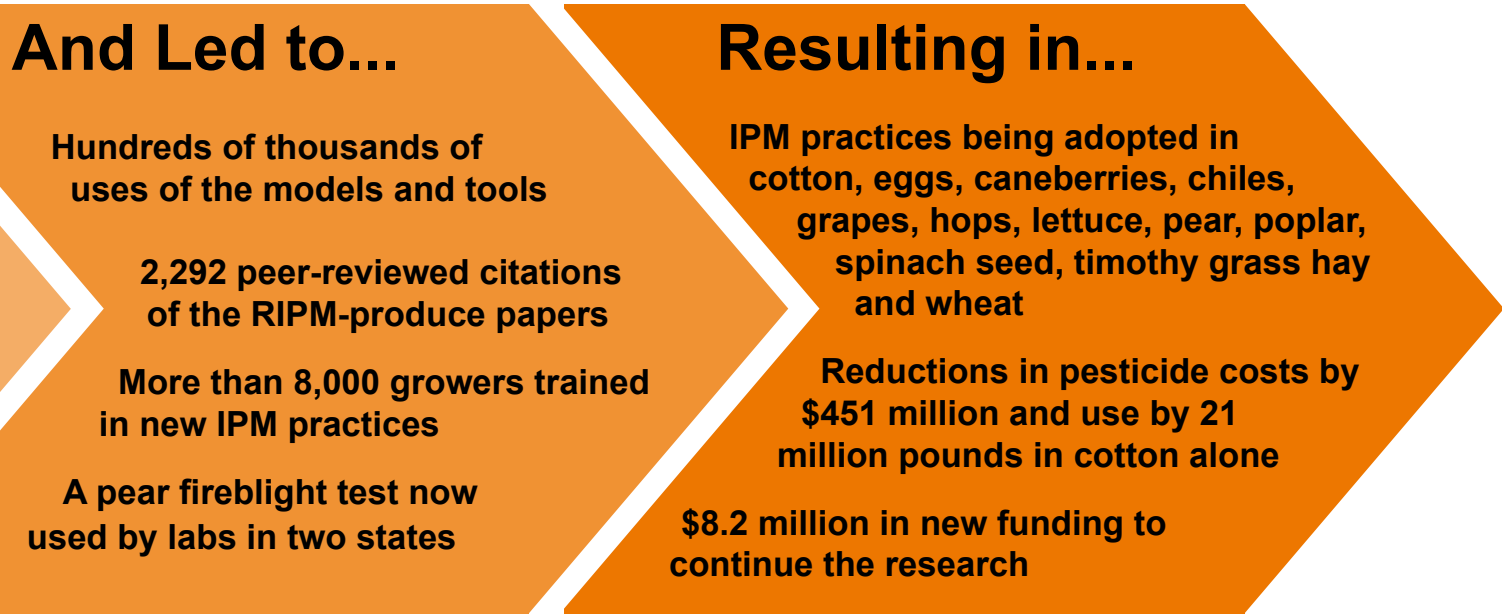
The 66 projects received a total of \$6.1 million in RIPM funding, and then leveraged at least an additional \$8.2 million in funding through 37 other grants. These figures are low, as not all project directors reported their leveraged grants or amounts.

Conclusion

The Regional IPM program contributed significantly to the expansion of available IPM tools and practices for Western agriculture, and growers used those tools to manage pests in ways that reduced risks to people and the environment while protecting their economic bottom line. The \$6.1 million invested into the project leveraged at least an addition \$8.2 million in funding, and resulted in an undoubtedly much larger overall economic benefit to Western growers and consumers.

Continued investment in integrated pest management research and extension, particularly projects that address regional priority needs, is clearly a sound investment that benefits the people, environment and economy of the United States.

**Download the full report at
www.westernipm.org
or scan the code.**



Impacts of the Regional Integrated Pest Management Competitive Grants Program in the Western United States



A publication of the Western IPM Center
UC ANR Building
2801 Second Street
Davis, CA 95618
www.westernipm.org

James J. Farrar, Matthew E. Baur, Steve Elliott
July 2015



This material is based upon work that is supported by the National Institute of Food and Agriculture, U.S. Department of Agriculture, under award number 2013-34103-21478.

Any opinions, findings, conclusions, or recommendations expressed in this publication are those of the authors and do not necessarily reflect the view of the U.S. Department of Agriculture.