



Impacts and Success Stories

Regional IPM Center evaluators and communicators

Common IPM Measures

- USDA-NIFA would like to collect common indicators for Crop Protection and Pest Management
 - Extension Implementation Program
 - Applied Research and Development Program
 - Regional Coordination Program

Figure 2. Crop Protection and Pest Management Program Logic Model

Situation: Emerging diseases, insects, weeds and other pests continue to negatively impact U.S. agricultural production, natural areas, and urban settings including places where people live, work, and attend school. Obtaining new science-based IPM knowledge and extending that knowledge with effective, affordable, and environmentally-sound IPM strategies at the local, state, regional and national levels are needed to address these priority IPM challenges.

Inputs	Outputs		Outcomes/Impacts		
	Participants	Activities / Products	Short Term	Medium Term	Long Term
Legislative authority	Stakeholders	Respond to Congressional authorization and appropriation	Increase knowledge and adoption of new IPM tools and tactics in integrated strategies for IPM	Innovative and diversified IPM systems are implemented on an area-wide or landscape scale	Crop protection systems are more profitable with IPM
Annual appropriation	Commodity associations	Publish RFA	Adapt existing science-based IPM knowledge to new pest scenarios and foster sound IPM solutions	Key information systems, networks, and decision-support tools are adopted for emerging and high-consequence pests and diseases. Enhanced coordination and responsiveness of IPM research, education, and extension effort for critical, priority pest management and food security challenges	Agricultural production increased through reduced pest and disease losses
USDA involvement	Public interest groups	Recruit panel managers and peer review panelists	Engage broadest possible IPM scientific, extension, and education communities in challenges faced by IPM	New stakeholders are using IPM; Stakeholders are using more advanced IPM best management practices	Cost benefit ratios of adopting IPM practices are improved
NIFA intra-agency coordination	Farmers	Conduct peer review panel meetings	Engage new stakeholder communities challenged by pest issues who could benefit from IPM	Producers and processors adopt newly developed IPM technologies and innovations	Sustainable IPM practices are implemented
Multi-state projects	Ranchers	Award funds to meritorious applications	Facilitate production of audience-appropriate information/training materials including mobile, web-based, and other digital, as well as traditional formats	Regional and national trans-disciplinary systems approaches are being used to solve IPM problems	Human health and environmental risks from managing pests are reduced
Program directors	General public	Support IPM research to address priority IPM needs	Facilitate communication among the scientific IPM community and among the research, teaching and extension communities, practitioners, stakeholders, and consumers in a proactive communication strategy	A new generation of research and extension scientists capable of and adept at working in effective, trans-disciplinary regional and national teams are in place	U.S. food producers are more competitive globally
Support staff	NGOs	Promote collaborative team-building through national and regional coordination meetings and activities and broad-based stakeholder participation	Facilitate production of original materials and collaboration with existing or new eXtension CoPs	Networks improve information flow among IPM components, among stakeholders, and among IPM research, education, and extension communities	Global capacity to meet growing food demand improved
Panel Managers	End users or consumers	Promote the development and implementation of IPM by facilitating coordination and collaboration across states, disciplines and programs		Stakeholders can document why IPM was beneficial for them and the environment	Safe, affordable and high-quality crops are widely available to consumers
Peer Review Panels	Underserved individuals or communities	Establish and maintain pest management information networks			Hunger is reduced through improved food security in vulnerable populations
Stakeholder and partner comments	Land-grant university partners	Build partnerships and address challenges and opportunities			Effective, affordable, and environmentally-sound IPM strategies are in place to reduce economic, environmental, and societal losses from pests and diseases that affect crops and livestock, human well-being and community vitality
	Cooperative Extension	Develop notable IPM training programs and foster their sustainability			Coordinated state-based, region-wide and national research, education, and extension programs function as catalysts for promoting further development and use of new IPM approaches
	Research, teaching and extension faculty	Review and evaluate impacts of IPM implementation and communicate successes			
	State agencies	Communicate positive outcomes to key stakeholders			
	Federal agencies	Manage funding resources effectively			
	USDA-NIFA	Collect program impact data			
	Other allied state and federal agencies				
	Regional IPM stakeholders				
	eXtension CoPs				
	NGOs				
	Public interest groups				

Assumptions:
Sustainability is a foundation of integrated pest management (IPM). IPM plays a significant role in U.S. agricultural production. Complementary and coordinated state, regional and national approaches are needed in obtaining increased adoption of IPM in agricultural, natural and urban settings.

External Factors:
Congressional appropriations/funding
Stakeholder input
Emerging and critical issues requiring IPM practices and technologies
New pests and pathogens

LONG-TERM IMPACTS

- Crop protection programs are more profitable with IPM
- Agricultural production increased through reduced pest and disease losses
- Cost benefit ratios of adopting IPM practices are improved
- Sustainable IPM practices are implemented
- Human health and environmental risks from managing pests are reduced
- US food producers are more competitive globally
- Global capacity to meet growing food demand improved
- Safe, affordable and high-quality crops are widely available to consumers
- Hunger is reduced through improved food security in vulnerable populations
- Effective, affordable, and environmentally sound IPM strategies are in place to reduce economic, environmental and societal losses from pests and diseases that affect crops and livestock, human well-being and community viability
- Coordinated state-based, region-wide and national research, education, and extension programs function as catalysts for promoting further development and use of new IPM approaches.

Towards common measures

You will need:

- 1) Numbers
- 2) Anecdotes

Numbers

“We funded a project that modeled disease spread in hops. A significant number of hop yards are affected in both Washington and Oregon.

Oregon growers who use the model are seeing substantial savings in disease management costs.”

Numbers

“We funded a project that modeled disease spread in hops for \$29,937. This disease impacts 34% of hop yards in Washington and Oregon.

A survey of Oregon growers showed that the reduced applications resulting from using the model resulted in minimum savings of \$80/acre.

Given the 75% adoption rate we documented, savings for Oregon amounted to \$158,406. Using the same assumptions for Washington, the total savings was \$922,263 for 2016.”

Anecdotes

“Many growers are finding that learning to use the model is straightforward, and that they save as many as 10 fungicide applications per season.”

Anecdotes

“Mary Miller, of Stone Mill Hops in Clear Lake found that learning to use the model was straightforward.

“We used to suit up and go out to spray every ten days in season. Checking the model online takes only a minute. Even if it saved me just one spray, it would be worth it.”

Numbers

Meaningful numbers:

What is the rationale for reporting these numbers rather than some other set?

What is the context?

Why is it important?

MEANINGFUL numbers

3 parts are needed:

1) There was a problem

2) You did something

3) The problem was solved as a result

Logic model

1) Situation

2) Outputs

3) Outcomes

PLAN AHEAD

Know what stories you will tell before you even start.

PLAN AHEAD

- 1) Document the problem

PLAN AHEAD

- 1) Document the problem
- 2) Set up a recording system for everything you do

Collecting numbers

PLAN AHEAD

3) Interviews

Surveys

Public statistics

PLAN AHEAD

1) Document the problem

You did this already, right?

Collecting numbers

PLAN AHEAD

2) Set up a recording system for everything you do.

Make your life easy. Create simple recording forms.

Collecting numbers

PLAN AHEAD

3) Interviews

Surveys

Public statistics