NRCS & IPM Working Group: Grower Incentives for IPM

Chloe L. Nelson, Thomas A. Green, Peter Werts, Mark Steinbuck, Leigh Presley and Katherine Mumm
IPM Institute of North America, Madison WI

Introduction

Integrated Pest Management (IPM) benefits producers and the public by reducing economic risk and mitigating environmental and human health impacts. The Natural Resources Conservation Service (NRCS) provides technical and financial assistance to private landowners including farmers and ranchers to implement conservation practices that help protect natural resources. The NRCS and IPM Working Group provides outreach and program support to growers and encourages their participation in NRCS programs for IPM. In this project we evaluated grower participation in Environmental Quality Incentives Program (EQIP) IPM options over multiple years, documented a steep recent decline and developed recommendations for improvement.

Environmental Quality Incentives Program

NRCS supports IPM primarily through the EQIP 595 Practice Standard, which provides financial and technical assistance to help growers implement cutting edge conservation practices for IPM. Growers apply for, and if selected, sign a multi-year contract to develop and implement a site-specific IPM plan. Growers work with a qualified crop advisor to complete the plan and annual updates which are reviewed by NRCS.

The objective is to prevent or mitigate off-site pesticide risks to water quality, soil, air, plants, and animals due to leaching, runoff, drift and volatilization.

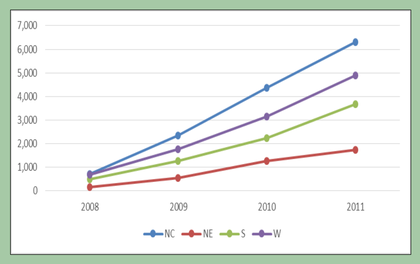
Regionally, NRCS establishes eligible practices and financial assistance payment rates to support IPM and other best management practices for multiple sets of cropping systems, e.g., row crops, hay/pastureland, small fruit, tree fruits, vegetable production, etc.

NRCS' IPM Conservation Activity Plan 114 is a one-year contract for development of an IPM plan. NRCS' Conservation Stewardship Program also provides financial and technical assistance to improve and enhance existing IPM programs.

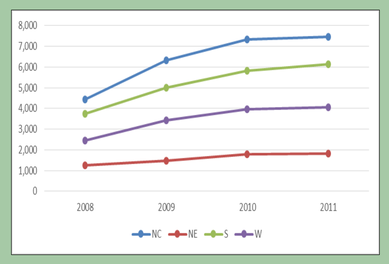
Initial Success

NRCS and IPM professionals opened up EQIP opportunities for specialty crop producers in Pennsylvania, New England, North Central States, Florida, California through stakeholder meetings with NRCS, aggressive outreach, IPM education.

Cumulative planned 595 contracts (number x year)



Cumulative applied 595 contracts (number x year)



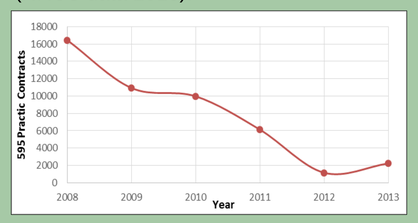
More IPM Needed

Crop pests generate billions in economic losses annually. Two new pests, brown marmorated stink bug, and spotted wing drosophila, account for more than $1 billion in losses each year. Pesticide contamination of surface water is ubiquitous, with more than 60% of samples over the past decade exceeding levels of concern for aquatic organisms. Pesticide resistance is rampant due to overreliance in pesticides in multiple crops. Despite well-documented benefits, USDA Conservation Effects Assessment Program (CEAP) surveys reported limited cropland acreage under high-level IPM in the latter half of the last decade:

- 5% in the Ohio-Tennessee River Basin,
- 5% in the Arkansas White-Red River Basin,
- 6% in the Great Lakes Region, and
- 7% in the Missouri River Basin.

Declines in Grower Contracts for IPM (contracts/year)

595 IPM contract change, 2008 to 2013 (NRCS data 2013).



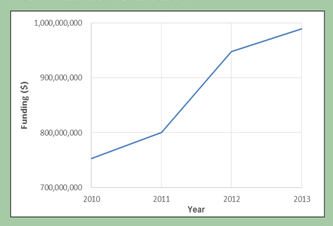
Conservation Stewardship Program contract change, 2010 to 2013 (Farm Bill Report 2014).

Top six crop-specific 595 IPM contracts and overall total from 2008 to 2012 (NRCS data 2013).

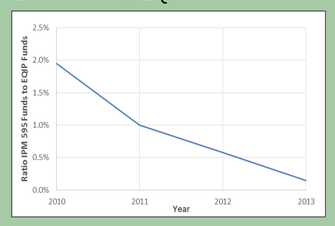
Crop	2008	2009	2010	2011	2012	Total	% of Total
Corn	2926	2010	1620	1046	232	7,834	**45.5%**
Forage/ Hay	563	721	649	283	17	2,233	**12.7%**
Wheat	708	381	377	116	32	1,614	**9.2%**
No Crops	687	627	104	179	2	1,599	**9.1%**
Trees	393	370	467	10	0	1,240	**7.0%**
Soybeans	360	222	239	116	16	953	**5.4%**
Total of all 23 crops	**6064**	**4769**	**4251**	**2084**	**439**	**17,607**	**100.0%**

Sharp IPM Funding Declines

Total funding for EQIP increased from 2010 to 2013.

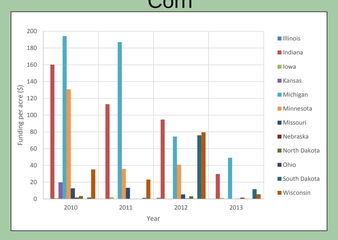


595 IPM contracts declined from 2% of overall EQIP funds to 0.5%.

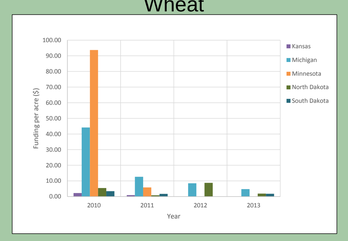


IPM Funding Declines by Crop ($/year)

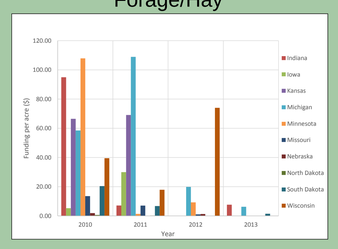
Corn



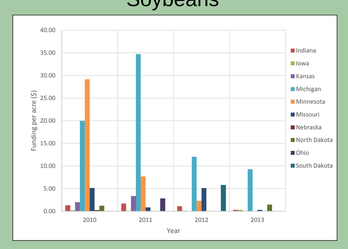
Wheat



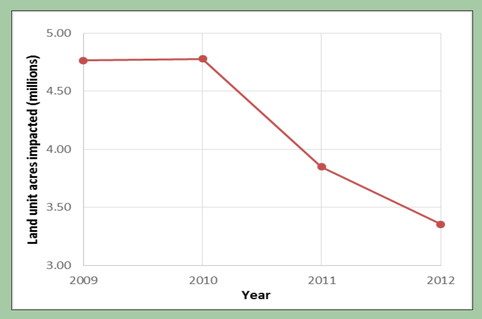
Forage/Hay



Soybeans



Declines in Acreage (acres/year)



Land unit acres impacted by EQIP 595 IPM contracts declined ~1.4 million from 2009 to 2012.

Year	Cropland Soil Quality Practices	Forest Land Conservation Practices	Grazing Land Conservation Practices	Water Quality Practices	Percentage of Total EQIP Land Unit Acres Impacted by IPM
2009	14.29	7.86	4.14	14.25	6.14
2010	13.56	9.96	3.94	15.27	5.96
2011	14.50	4.58	3.02	11.42	5.04
2012	12.86	4.46	2.42	8.97	4.12

Percentage of land unit acres under EQIP 595 IPM, 2009-2012.

Challenges and Solutions

1. Lack of outreach to potential new grower participants.
   - Low awareness of by growers with greatest opportunities to make improvements.
   - NRCS needs to partner with grower groups, other key influencers to get new growers in the door.
   - NRCS must consider grower work load, and avoid scheduling sign up periods during planting, harvest.
2. Poor communication between NRCS HQ and state and local offices.
   - Despite state-allocated funding for IPM, contract opportunities are not always available at the county level.
   - NRCS needs to state a clear, firm commitment to the need for and benefits of IPM for water and air quality, pollinator and soil health, and back it up with staff training at all levels, and quantitative expectations for participation.
3. Few NRCS-qualified crop consultants.
   - Few crop consultants take the time to become qualified to provide services under NRCS contracts due to cumbersome bureaucracy, low grower interest.
   - New streamlined approach to qualify competent crop advisors needs to be promoted, implemented.
4. Improve program consistency.
   - Annual program changes cause uncertainty for farmers and crop consultants.
   - Long lead times for program revisions from NRCS to state to county level push enrollment periods into the planting and growing season.
   - Deadlines and information distribution are inconsistent from county to county, state to state.

About the NRCS & IPM Working Group

The Working Group is a multi-stakeholder organization of university extension, state and federal offices of NRCS, state lead agencies, EPA and industry. Participation is continuously open to these stakeholders. **To learn more, contact Chloe Nelson at** cnelson@ipminstitute.org

• Our objective is to encourage adoption of IPM through participation in Natural Resources Conservation Service (NRCS) conservation programs.

• The Group has national participation, with over 140 members in 32 states.

• This work was formerly supported by the USDA National Institute of Food and Agriculture, North Central IPM Center project AG 2012-51120-20252.