

HOUSE BILL 3364

Context and supporting data
April 4th, 2013

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State IPM Coordinator, OSU

With reference to a survey of state agencies and a presentation to the
Environment and Water Committee, December 4th 2010 by Lisa
DeBruyckere and Paul Jepson

Summary

- How is IPM coordinated between federal agencies at the national scale, and does it work?
- Are there good, local examples of legislative actions that enabled greater cooperation and progress in IPM?
- What does the IPM Bill set out to do?
- What kind of educational and IPM resources might be mobilized by OSU – just one of the partners?
- Does OSU support this, and might it invest resources in success?

National IPM coordination

- National IPM Committee purpose - status of IPM at national and state levels, review programs, respond to IPM issues
- Representatives of IPM coordinators, Regional IPM Programs, federal agencies, government departments, funding agencies
- Improvements in impacts, efficiency, effectiveness, resources – agriculture & natural resources, built environment, sensitive sub-populations, regulatory affairs etc....
- Goals and metrics set by National Roadmap for IPM – very wide stakeholder input, listening sessions, transparency, reporting
- Now – 1 meeting a year
- *HB 3364 establishes an analogous forum and process in Oregon*

A good local example of IPM partnerships

Oregon School IPM law

Need became far more apparent after Bill passed than
before

Success depends upon effective partnerships across many
agencies and associations

All timelines met or exceeded, metrics developed

School IPM becoming a reality now, rather than just a
theory, or a box that was ticked

Shows that we were right to expect more than: *“We are
already doing IPM, and the Bill is not needed”*



IPM in Schools

Asthma: 4.8 million kids - U.S., estimated \$8 billion cost, #1 cause of absenteeism

(mice - common asthma trigger, cause other unrecognized illnesses)

2010 OSU Online Survey Results: 93% response rate (184 out of 197 districts)

-Most frequently reported indoor pest: Mice 53%

-Top reported cause of problem: Don't know

-Districts having/using IPM plan: 7 (4%)



Comprehensive Assistance to School Districts:

-IPM Coordinator training **2012: 182 out of 197 school districts' trained (1,270 of Oregon's 1,295 public schools)**

-Model IPM Plans, educational materials

2013 survey in process: 75% use OSU plan



Collaboration with multiple entities:

-OSFMA, OSBA, PACE, OESDA, OPCA, ODA, NCAP, OSSOA, OSNA, OHA, OEC, DOE, COSA, OASBO, OEA, OEHA



HB 3364

Responds to specific needs within agencies

Coordinates response as a collaborative inter-agency activity

Develops comparable metrics and integrates results across a number of agencies and statutes

Establishes mechanism for capacity building, resourcing

Enables exchanges of ideas and professional expertise, and accesses other relevant networks, working groups and resources

Enables recognition of excellence where it exists

Acknowledges that pest management technologies, capacities and approaches are constantly evolving and that we all need regular re-treads

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Photo by Paul Jepson

2013 Planning and Implementing Sustainable IPM Systems

August 11-24, 2013
CH2M HILL Alumni Center
Oregon State University



[Registration Now Open!](#)

[Agenda Coming Soon](#)

August 11-24, 2013

CH2M HILL Alumni Center
Oregon State University

[View Map](#)

Accommodations

ILLC Building
Oregon State University
Arrival: Saturday, August 10
Departure: Sunday, August 25
Registration Fees cover your stay at the ILLC Building Dormitories.

Transportation

HUT Shuttle to/from PDX
This shuttle will take you from Portland International Airport (PDX)

2013 Planning and Implementing Sustainable IPM Systems at Oregon State University

Announcement

A residential course on the planning and implementation of sustainable IPM extension programs in uncertain times

Over two weeks of seminars, discussions and case studies, participants will build their capacities to work with farmers to plan and implement sustainable integrated pest management (IPM) programs. The course will employ innovative teaching and learning methods that maximize participation and engagement, and draw upon data and experiences with real farms and farmers.

Attendees will specifically address the challenges of implementing IPM in systems that are subject to novel, invasive pests and systems experiencing the increasing uncertainties associated with climate change. All the case studies will consider the challenges associated with sustainable production intensification and the role that IPM can play in meeting this global imperative.

The **Integrated Plant Protection Center (IPPC)** at OSU will host the course. The IPPC



Photo by Paul Jepson

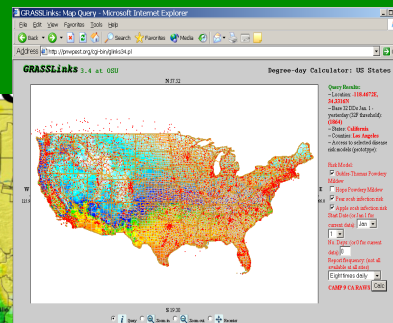
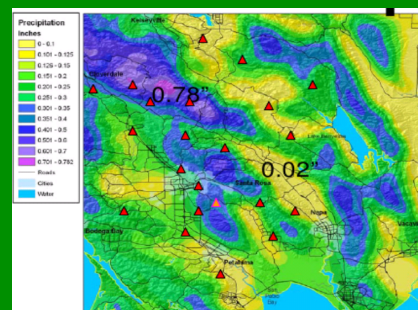
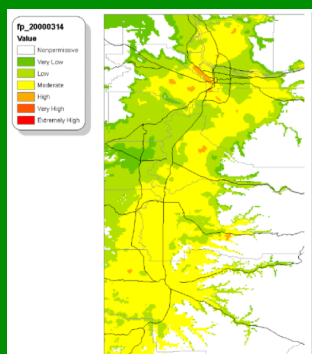
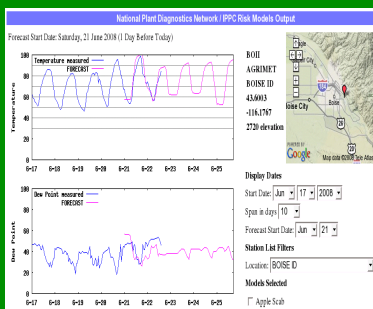


<http://oregonstate.edu/conferences/event/ipmplanning/>

NEW EDUCATIONAL RESOURCES ARE UNDER DEVELOPMENT AT OSU

Automated mesoscale pest risk forecast maps for potential plant biosecurity threats: the new world of IPM

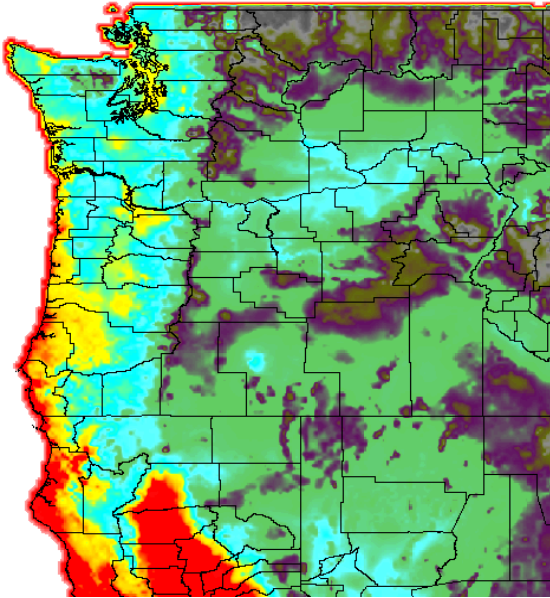
Having IPPC partner with state agencies engages other, important and relevant networks



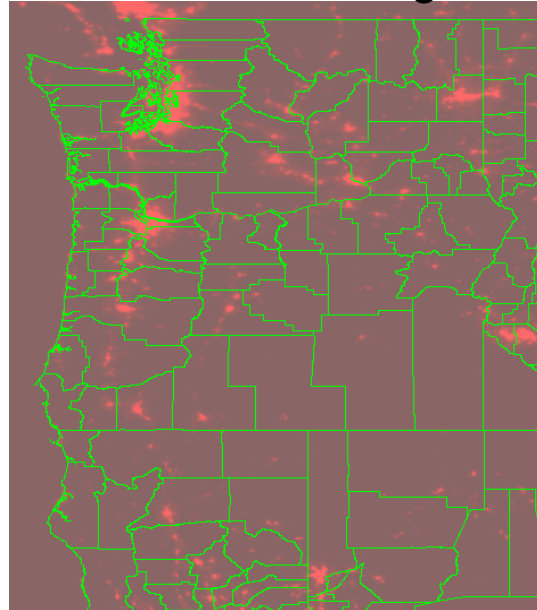
Spotted Wing Drosophila – Model of Overwintering Mortality

The hotter the color, the greater the survival

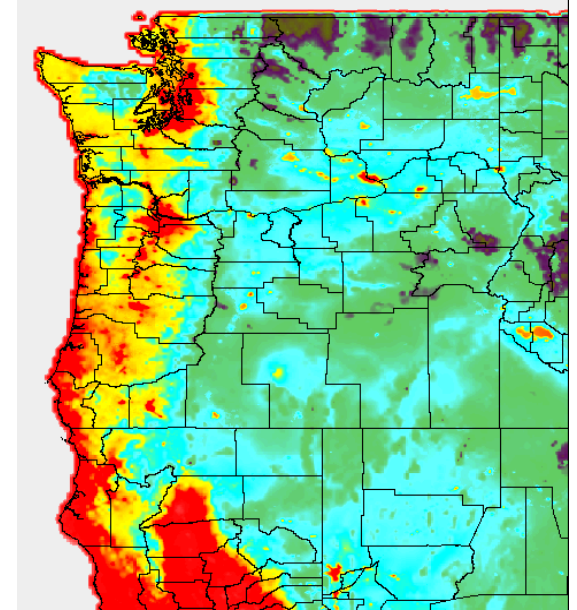
Chilling DDs (<53F)



Refuge Factor (Rf) 15% to 60%
Reduction in chilling DDs



Combined Model



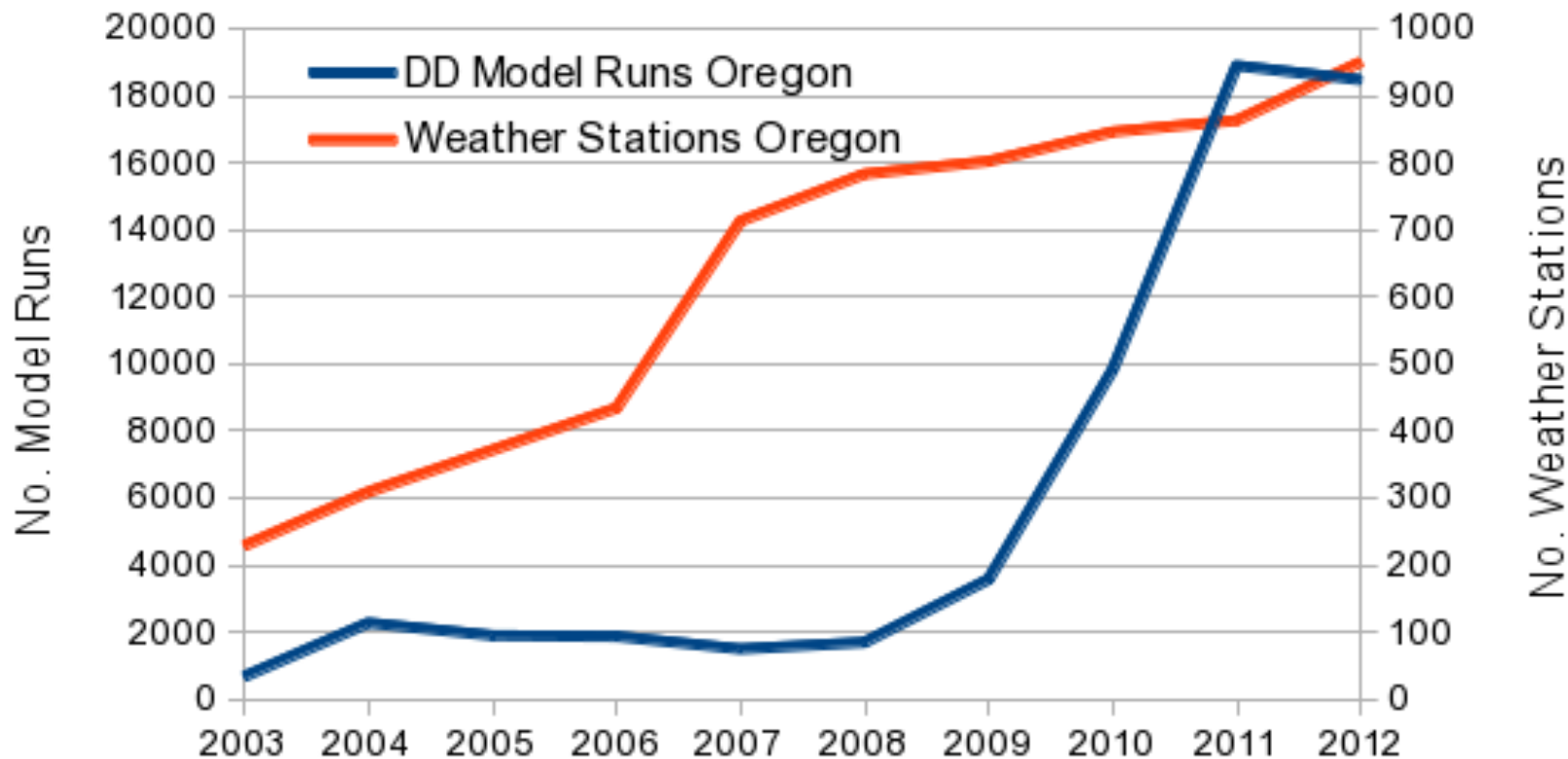
E.g. Warmer patches in the Valley enable greater over-wintering survival of noxious pests – this affects timing and placement of traps, interpretation of monitoring data, prediction of future problems, management tactics.

Opportunities for state-of-the-science tools, developed first with our farmer partners, to be deployed by state agencies??

Use of state-of-the-science climate and weather-based epidemiological tools is exploding among farming audiences, transforming IPM

USPEST.ORG Degree-Day Models - Oregon

DD Model Runs (partial accounting) and No. Weather Stations



Farmers are already using these tools: IPM in 2013 is completely different to IPM in 2003, or 1993

<http://pnwpest.org/MF/>

TABLE OF ONLINE IPM WEATHER DATA
For agricultural and pest management decision making in the US

Online current and historical weather data/degree-days:
Oregon USA Weather Data and Pest Models
 Walla Walla ViEW (Valley IPPC WeatherNet) Program

Other network tables include: [All Networks](#), [AGRIMET](#), [COOP](#), [METAR](#), [APRSWXNET](#), [ODOT](#), [PDTWFO](#), [RAWS](#), [Weather Underground](#),
 see also: [Oregon \(past data\)](#), [Medford OR grower network](#), [Hood River OR grower network](#), [Alaska](#), [Hawaii](#), [NW USA](#), [SW USA](#), [NE USA](#), [SE USA](#), [South Central USA](#), [North Central USA](#), [Great Lakes Central USA](#), and [Canada](#)

GRASSLinks interactive GIS interface:
 (select region, size and click GO)

DD Calculator Map Shortcut:
 Region
 Mapsize pixels

DD Models Map Shortcut:

[Daily and Interactive Degree-Day Maps: OR](#)

Degree-day & Phenology Model Calculator

Also try the [full-featured calculator/DD model](#) (NW states only)

To calculate degree-days: Select model or enter thresholds, calc. method, optional [NWS forecast](#) zone, and click radio button for location/year in the table.

Select model:
 Thresholds: lower: °F upper: °F (or celsius °C:) Calc. method:
 Start (biofix) date: End date:
 Forecast zipcode or city, state: and

[Fireblight/Cougarblight \(test version - use with caution\)](#)

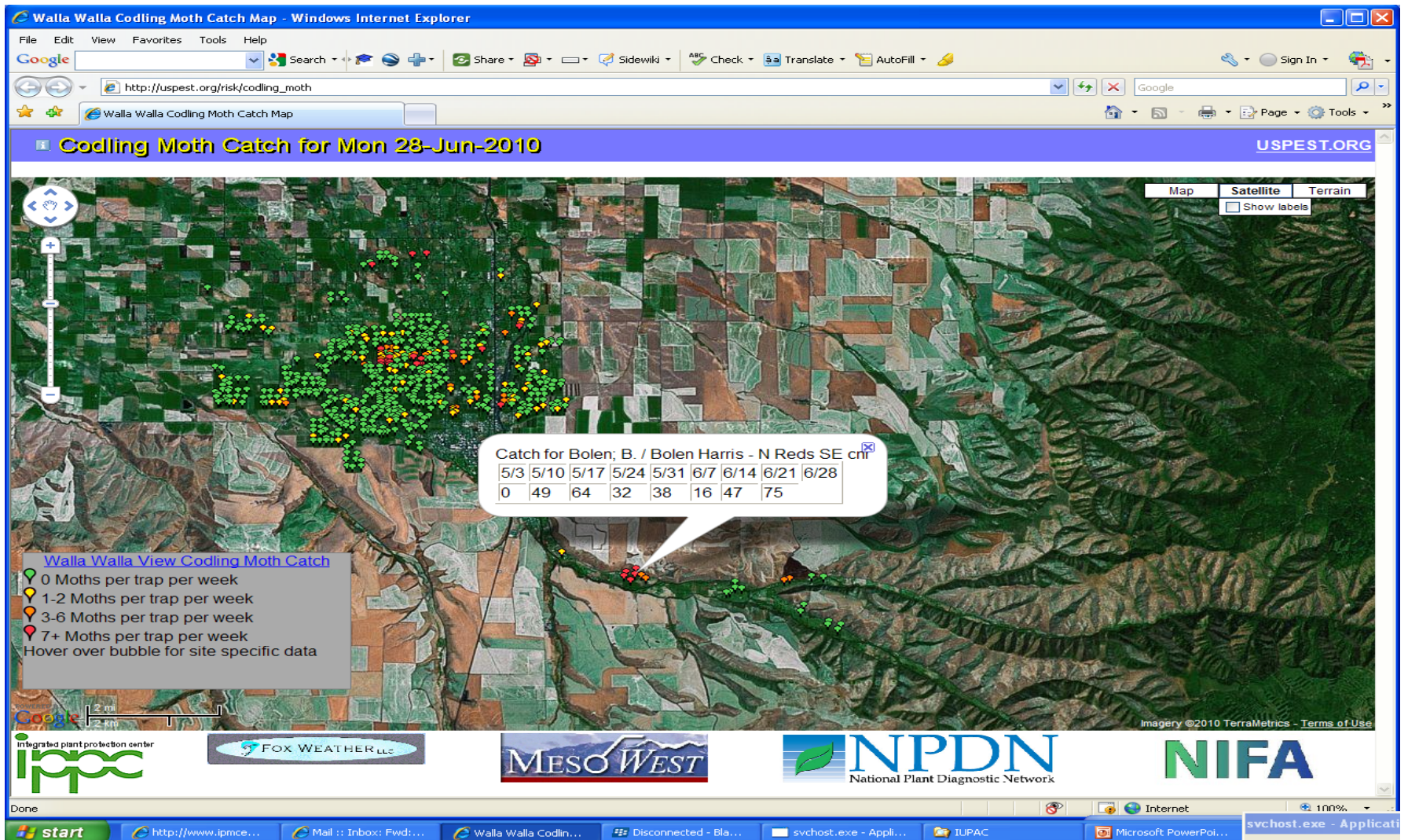
Oregon USA Walla Walla ViEW Network weather station table **NEW** (click on most headers to SORT table)

#	Location, link to weather, apple scab, GT-PM, CL-PM, and Botrytis plant disease models, forecasts, and map.	Link to NWS forecast	Latitude (Decimal Degrees)	Longitude (Decimal Degrees)	Elev. (ft)	Apple model shortcuts Codling moth catch map Movie for entire season to date	Stone fruit model shortcuts	30 YR avgs	2012 data calc	2011 data calc	2010 data calc	2009 data calc	2008 data calc
1.	Ash Hollow Vineyard MF24190	forecast	46.0539	-118.7292	591	Fireblight , Codling moth , Codling moth (new) , Pandemis moth , OBLR , San Jose scale	W. Cherry Fruit Fly Oriental fruit moth Peach twig borer	AVG	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2.	Blue Mt Cherry MF22700	forecast	45.9569	-118.4367	864	Fireblight , Codling moth , Codling moth (new) , Pandemis moth , OBLR , San Jose scale	W. Cherry Fruit Fly Oriental fruit moth Peach twig borer	AVG	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3.	Brown Bixby MF23325	forecast	45.9681	-118.4325	875	Fireblight , Codling moth , Codling moth (new) , Pandemis moth , OBLR , San Jose scale	W. Cherry Fruit Fly Oriental fruit moth Peach twig borer	AVG	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4.	Brown Home MF24220	forecast	45.9581	-118.4206	883	Fireblight , Codling moth , Codling moth (new) , Pandemis moth , OBLR , San Jose scale	W. Cherry Fruit Fly Oriental fruit moth Peach twig borer	AVG	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Pest monitoring data

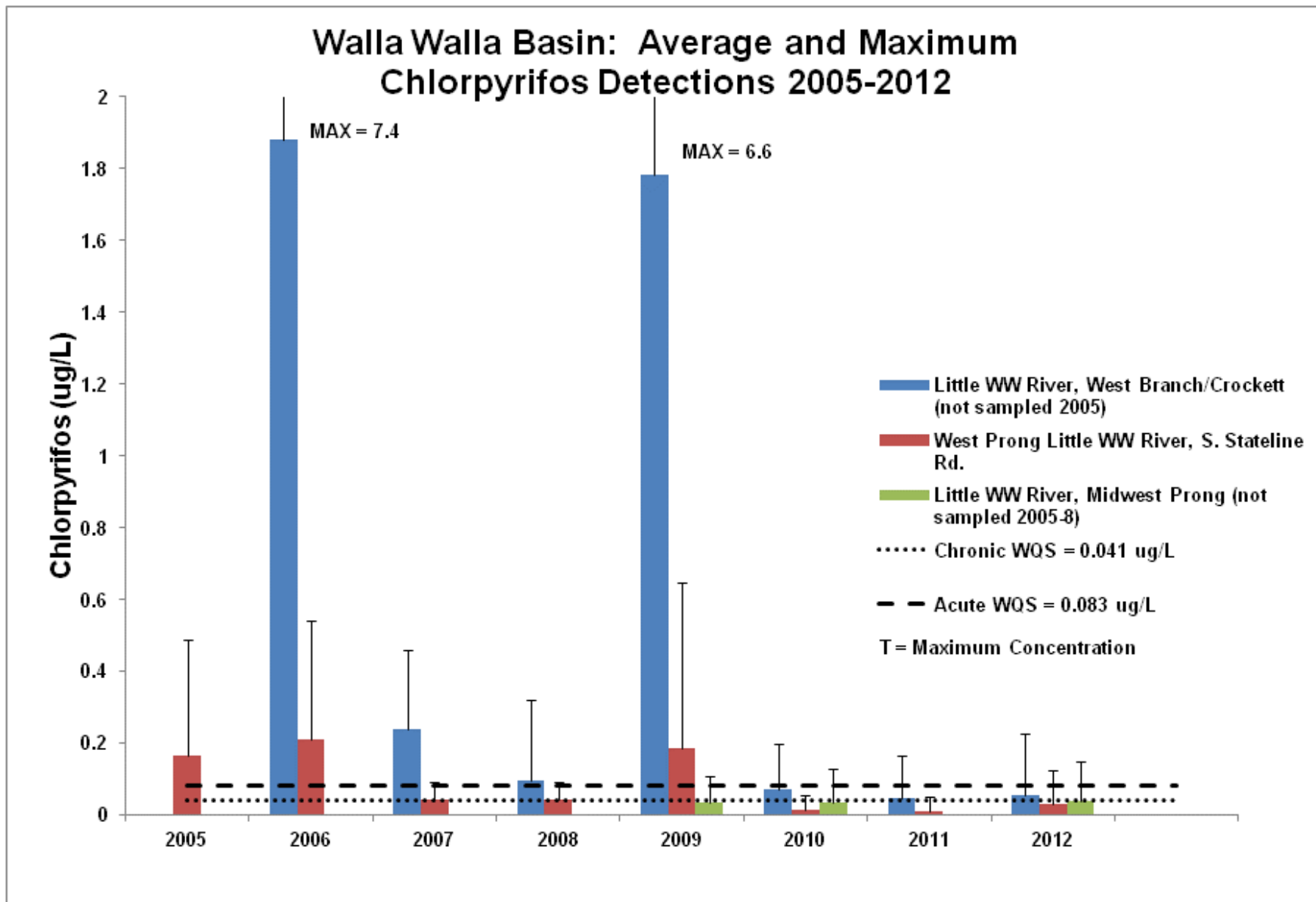
Phenology models

Real-time monitoring of pest epidemics focuses attention on field-by-field decision making



http://uspest.org/risk/codling_moth

Data from ODEQ Pesticide Stewardship Partnership, Walla Walla Basin
Use of decision support tools and BMPs enables risk reduction



We propose development of a map-based system of reporting IPM metrics similar to one that IPPC already makes available to six, West African republics

GEF FAO WEST AFRICA INFORMATION

Welcome Jepsomp ! [Log Out]

Home GefMap Stats Overview Admin Admin Locality Admin Product Admin Overview

○ Prime ○ LifeLine ○ Survey ○ Monitoring

GET LOCATION INFO

- ▶ BENIN
- ▶ GUINEA
- ▶ MALI
- ▶ MAURITANIA
- ▶ NIGER
- ▼ SENEGAL
 - ▶ AERÉ LAO
 - ▶ BOUNDUM
 - ▶ DAGANA
 - ▶ GALOYA
 - ▶ LAC DE GUIERS
 - ▼ PONT GENDARME
 - ▶ Canal de drainage

RBMonitoring

Canal de drainage
LocationID: 191
CountryName: Senegal
LocalityName: Pont Gendarme
LocalityId: 18
Description: null

ChemName	CASNr
4,4'-DDT	50-29-3
alpha-Chlordane	5103-71-9
Heptachlor	76-44-8
Hexachlorobenzene	118-74-1

Summary

- 2010 survey identified diverse pest problems, >50 statutory authorities; numerous models for IPM implementation; obsolete definitions; diverse language about IPM and performance metrics; variable frequencies, currencies and modes of review; significant expenditures; evidence for significant benefits; limited and variable training
- HB3364 will enable these to be addressed gradually, within a cost-effective resource plan
- OSU is providing 10% of the IPM Coordinator FTE and a match to the small proposed appropriation
- The IPM Coordinator seeks to double this in an application to USDA, April 16th – server, maps, databases, capacity building, cooperative, participatory processes.

Key Pest Issues That Form the Focus for agency IPM programs

	VEGETATION	INSECTS	INVASIVE SPECIES	NUISANCE SPECIES	RESEARCH & MONITORING
ODFW (Fish)	-	-	-	Predation on hatchery fish/removal of non-natives	-
ODFW (Wildlife)	Weeds damage to native plants and crops for wildlife	Pests that spread disease (mosquitoes - West Nile Virus)	Species that compete with native wildlife (feral swine)	Furbearers that burrow into dikes/water control structures	-
ODF (State and Private Forests)	Restoration	Control pests	Control pathogens	Managing damaging species	Cooperative applied research
DAS	85% on weed control in beds and lawns; 0.5% on landscape plants	0.5% on landscape insects	-	10% on rodents; 4% miscellaneous building pests	-
OPRD	-	Vector management (mosquitoes) - limited	Invasive plants	Animals that conflict with parks (bears, etc.)	-
DSL (Common School Fund)	Controlling noxious weeds	Controlling forest pests	Controlling marine organisms in estuaries	Controlling marine organisms in estuaries	Research on marine invasions
DEQ	-	-	-	Pest issues in leased buildings (occasionally)	-
ODA	Noxious weeds	Insect pests to agriculture, etc.	Invasive weeds and insects	-	Monitoring and certification
DOC		Controlling pests in corrections facilities	-	-	-
ODOT	Highway Vegetation Safety	-	-	-	-