

Goals

- Reduce the Alternate Hosts of Fruit Pests
- Reduce External Pest Pressure on Orchards
- Perform Research to measure pest movement in response to this habitat manipulation
- Evaluate this strategy through time; thus meeting the needs of commercial orchards

Background

Tree fruit is a large economic contributor to Central Washington, and provides employment and income to thousands of people. Fruit from Washington is rightfully Famous worldwide. With increasing demand and production, it is critical to control pests that have the potential to disrupt the sales of fruit in new and established markets.

Methods

- Collaborative Research and Implementation
- Removal of Feral Apple and Black Hawthorn within 1/2 mile radius of test orchards
- Three year project to demonstrate strategy
- Duplicated in Yakima and Chelan Counties



Prepared April 2014

Anticipated Outcomes

- Reduced Pest Population
- Reduced Spray Applications
- Reduced Apple Maggot Detections
- Increased Profitability
- Attain/Maintain “Pest Free Status”

Why?

Each year the cost of controlling “Invasive Pests” continues to rise.

The current management strategy for these Pests is effective yet costly.

Reducing Alternative Hosts is a better method of pest management

Cost of this strategy is high initially. After **5 years** is less costly than sprays.

Habitat Manipulation is an effective and more ecologically sound method of pest management.

What is Needed

Letters of Support!

Not Money! You Have Already Paid

Contact

Mike Bush PhD —WSU Extension
2403 South 18th Street, Suite 100
Union Gap, WA 98903
509 574 1600

Jeff Upton—Yakima County Hort Pest & Disease
2403 South 18th Street, Suite 100
Union Gap, WA 98903
509 574 1600, 509 952 1737

WSDA Specialty Crop Block Grant Proposal 2014 “Apple Maggot Host Reduction”



NORTH YAKIMA
CONSERVATION DISTRICT

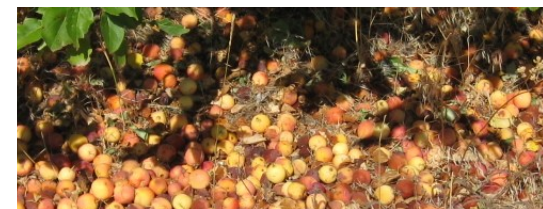


During the Growing Season, a preliminary project was performed in multiple locations within Yakima and Chelan Counties.

Potential Hosts surrounding fruit orchards were sampled for insect pests by trapping and fruit collection.

Fruit samples were taken from Black Hawthorn and Feral Apples.

From the Trapping and Fruit Sampling, multiple pests were found within a 1/2 mile radius of commercial orchards.



West Valley Area of Yakima County



WSDA

Leavenworth Area of Chelan Coun-



WSDA

- These are the areas where the preliminary project took place in the “unmanaged areas” surrounding orchards
- The traps are placed in black hawthorn and feral apple in a “high density” array
- Data is collected weekly and all pests are identified

Trapping - took place from early June through mid October.

Host Fruit – harvested during July, August, and September. Pests collected and identified.



Henry Vander Houwen

Black Hawthorn with fruit. This is just prior to being harvested for evaluation

Project Purpose

- Seeking out alternate hosts for pests
- Identifying and documenting the pests present
- Mapping of Alternate Hosts relative to orchards
- Movement of Pests

What We Found:

Western Cherry Fruit Fly



Henry Vander Houwen

Spotted Wing Drosophila



Mike Bush

Feral Apple Trees



Jeff Upton

Codling Moth Adult on Feral Apple



Mike Bush

Stink Bug eggs



Henry Vander Houwen

Grant Proposal 2014

Unique Cooperation of Multiple Agencies
To Perform a Large Scale Research and
Implementation Project
Benefitting
Commercial Orchardists

- *Elimination of feral fruit trees*
- *Removal and Replacement of Black Hawthorn within 1/2 mile of Orchards*
- *A Complementary Approach by Research Agencies and Implementation Agencies*
- *Best Practices of Integrated Pest Management*
 - *Removal of Host Reduces Pest Pressure*
 - *Reductions of Inputs by Growers*
- *No Additional Costs to Implement*
 - *Seeking funding from Washington Specialty Crop Block Grant, Sustainable Agriculture and Research Grants, and Regional Integrated Pest Management Grants.*
 - *Bringing Funding Home to Washington Fruit Growers*

Grower Benefits

Reduced Pest Numbers
Reduced Inputs/Sprays
Increased Profitability
Increased Marketability