

THE WILLIAM D. RUCKELSHAUS CENTER

UNIVERSITY OF WASHINGTON

Agricultural Pilots Project

Interim Report

April 2009



The William D. Ruckelshaus Center

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Introduction

The dual goals of the Agricultural Pilots Project are to “promote innovative ways to enhance farm income” while at the same time “improve natural resource protection”.¹ The Project also seeks to build bridges among the agriculture and environmental communities.

The Agriculture Pilots Project draws upon the practical problem solving skills, imagination, commitment, and collaborative capabilities of Washington State agricultural producers, members of the environmental community and others. At the same time, the Project draws upon well established agricultural and environmental research in order to help translate innovative ideas into reality by evaluating their feasibility, effectiveness and potential for dissemination.

In 2007, the Governor and Legislature provided \$500,000 for a proof of concept phase for the Agricultural Pilots Project. The funding was provided to fund and evaluate four pilots that best demonstrate the dual goals of the Project.

Purpose of Interim Report

The purpose of this report is to provide an update on the status of the Project. The report will also:

- Discuss the overall pilot evaluation and timeline.
- Furnish a progress update on each of the four selected pilot projects.

This is the third interim report required by the interagency agreement between the Washington State Office of Financial Management (OFM), and Washington State University (WSU). The final report will be issued on June 30th, 2009. If you wish a copy of the first interim report (August 2008), or the second interim report (December 2008), they are available from the William D. Ruckelshaus Center.

The Ag Pilots

At the request of the Governor’s Office, the Ruckelshaus Center developed the Agriculture Pilots Project to encourage innovative demonstration projects that promote a vital agricultural economy as well as produce benefits for the environment. The four pilots are: ***Beefing Up the Palouse – an Alternative to the Conservation Reserve Program (CRP)***. This pilot seeks to test the feasibility and replicability of converting land coming out of the Conservation Reserve Program (CRP) into a vertically integrated grass-fed beef production system. The ***Direct Seed Mentor Program***, seeks to increase the use of direct seeding methods in Spokane County through the use of mentors and side-by-side on-farm demonstrations. ***Farming for Wildlife***; an effort that seeks to support wildlife and agriculture in the Skagit Delta through a voluntary, science based, conservation strategy that includes creating farmland habitat for shorebirds. ***Transition of Insect Pest Management to New Pest Control Technology***, a pilot that seeks to enhance understanding and encourage the wider adoption of environmentally friendly integrated pest management strategies while maintaining acceptable crop protection and profitability, and increasing worker safety.

Agriculture Pilot Evaluation Process

The Center is responsible for the evaluation of the pilots and an overall assessment of the value of the Ag Pilots Project. To meet these responsibilities the Center has employed Dr. William Budd and Kara Whitman, Research Assistant.

Each pilot proposal was required to put forward an evaluation approach. The proposed evaluation methods were reviewed by Center staff and technical experts for “appropriateness and feasibility” as part of the pilot selection process. While these evaluations will measure the success of each individual pilot, further evaluation is needed to discern the success of the Ag Pilots Project as a whole and to make recommendations for the future of the project.

Methodology for Assessing the Overall Value of the Ag Pilot Project

To evaluate the success, value, and overall merits of the Ag Pilots Project, a *cluster evaluation* will be used. Cluster evaluations or knowledge-generating evaluations, are used when there are multiple projects or programs, of similar scope that have been implemented in varied ways; in order to “identify general patterns of effectiveness.” A cluster evaluation groups projects of similar intent into ‘clusters’ and synthesizes the findings from each. Cluster evaluation has been extensively used in the evaluation of grant programs.

The project selection criteria will be used to assess the overall success of the Ag Pilots Project. The evaluation will be a combination of the reviews of pilot update meetings, interviews, surveys (see appendix), and a synthesis of each pilots’ outcomes. The interviews and surveys will look at the less tangible outcomes of the Ag Pilots Project, including: sustainability beyond the pilot stage, pilot replicability to other places in Washington State, and conditions by which trust, collaborative relationships, synergy, and leadership are fostered and whether those conditions exist in the Ag Pilot Projects and its link, if any, to project outcomes.

Timeline:

- April 2009 – June 2009: Conduct interviews and surveys, and synthesize results of individual evaluations.
- May 2009: Meeting with OFM, Ruckelshaus Center, and State Representatives to evaluate potential future prospects for Ag. Pilots Program (date still to be set)
- June 2009: Ag. Pilot Presentations to Oversight Committee (date still to be set)
- June 30, 2009: Produce Final Report

The Pilots

The Agriculture Pilots Project has been in progress since the allocation of the initial funds in June of 2008. The pilots have made significant progress and are currently in the implementation stage of the overall Project. Below is an update on each pilot.

1. Beefing Up the Palouse – an Alternative to the Conservation Reserve Program (CRP)

Pilot Description

The Beefing Up the Palouse pilot is exploring several aspects of converting land managed in the Conservation Reserve Program (CRP) to a holistically managed resource using livestock as the principle tool to move towards sustainability. Many lands will be coming out of the CRP program in the next few years, and how these lands are managed will have severe impacts on farming as well as on environmental concerns such as erosion and habitat protection. While no land enrolled in the CRP program was grazed in this study, property adjacent to CRP land with similar biologic communities was used to duplicate the affects of grazing and rest. Some CRP land was used to test different fertilizer affects and inter-seeding techniques. This pilot “seeks to test this holistic management with the implementation of the profitable production of vertically integrated value-added natural or organic, grass-fed beef by becoming part of a production chain based on cooperation of the segments from conception to consumption”¹. This pilot also seeks to assess the economic feasibility as well as the environmental benefits and or impacts of utilizing land that is coming out of the CRP programs. This is a highly collaborative pilot including partners from production to consumption in the grass-fed beef industry as well as partnerships with WSU Extension and the WSU BIOAg program.

Pilot Progress

Project expansion and funding

On March 3, 2009 a Letter of Intent was submitted to the USDA/CSREES Agriculture and Food Research Initiative (AFRI) seeking an invitation to submit a full project proposal to the AFRI Managed Ecosystems program. The proposed project is a continuation and expansion of the Ag Pilots Beefing Up the Palouse pilot. This resulted in an invitation to submit a full proposal by the June 2, 2009 deadline. Projects in this program can be funded up to \$500,000 for a period of 1-4 years. Project budget will include a 26% WSU overhead (Facilities and Administration) charge.

On April 10, a meeting was held at WSU Pullman to work on developing the full proposal to the AFRI Managed Ecosystems program. A meeting took place on April 28 at G & L Farms to develop the experimental design, determine plot sizes, locations etc. for the AFRI project proposal. Those involved in proposal development are:

- (1) Gregg Beckley, owner G & L Farms; Ag Pilots project co-manager
- (2) Dick Coon, owner Bar U Ranch; Washington Cattlemen’s Assn. President, Ag Pilots project cattle manager
- (3) Maurice Robinette, owner Lazy R Ranch; Ag Pilots project co-manager
- (4) Steve Van Vleet, WSU Whitman County Extension Educator
- (5) Steve Fransen, WSU Extension Forage Agronomist
- (6) Bob Kent, Wildlife Biologist (retired), Washington Dept. of Fish and Wildlife
- (7) Kent Keller, Groundwater Geochemist, WSU School of Earth and Environmental Sciences
- (8) Lynne Carpenter-Boggs, BIOAg Program Coordinator, WSU Center for Sustaining Agriculture and Natural Resources
- (9) Tabitha Brown, Research Associate, WSU Department of Crop and Soil Sciences
- (10) Mark Swanson, Forest Ecosystem Analyst, WSU Department of Natural Resource Sciences

(11)Lisa Shipley, Wildlife Ecologist, WSU
Department of Natural Resource Sciences
(12)Shannon Neibergs, Extension Economist,
WSU School of Economic Sciences

(13)Don Nelson, Director, Ag Pilots Project; WSU
Extension Beef Specialist

Pilot Outreach

On May 19-20, 2009 there will be a 2-day conference in Richland, WA entitled, How to Survive and Be Profitable in the Beef Business: Planned Grazing and Grass-fed Beef Production. This conference is being co-sponsored by the Ag Pilots-Beefing Up the Palouse pilot and the Extension Grass-fed Beef Team. Nationally known speakers, along with Washington ranchers and WSU researchers, will share their knowledge and experience, including the Ag Pilots project (www.capps.wsu.edu/grazing)

Terry Gompert, who will be one of the speakers at the Planned Grazing/Grass-fed Beef conference on May 19-20, will accompany Don Nelson on a trip to G & L Farms on May 21 to meet with Ag Pilots project team members to collaborate on developing planned grazing strategies for the AFRI Managed Ecosystems proposal. Terry is an Extension Specialist at the University of Nebraska who works in the areas of planned grazing (e.g., ultra high stock density grazing) and grass-fed beef production. He is also a Certified Holistic Management Educator.

Grazing

Dick Coon received 304 hd. of stocker cattle weighing an average of 681 lbs. from Para Cattle Company in Othello, WA (i.e., 3 truckloads on April 13 and 1 truckload on April 15). These cattle are being grazed at G & L Farms on \$.34/lb. of gain contract basis and will be there until the first week in July. The approximately 500 acres of grass/legume pasture will be divided into about twenty paddocks with an average size of 25 acres. Within the 500 acres of pasture, various size and shaped areas will be left un-grazed as wildlife habitat and to monitor the effects of rest on pasture plants.

Analysis

Interpretation of soil sample analysis: There are many different soil types on G & L Farms with Walla Walla Silt Loam being one of the most productive. According to 2009 soil tests, organic matter (OM) in the CRP pastures ranged from 1.58% to 1.74%, while OM in the grass/alfalfa mix pasture was 1.82%. There is no significant difference between these values, but an assumption can be made that a 2-year alfalfa/grass pasture generates the same amount of OM as CRP lands in 10 or more years of rest. The nitrate and ammonium content are at the minimal levels within the analyzed soils, and no conclusions can be drawn from this soil analysis data. Normally, there is a hardpan layer in the soil 3 feet below the surface. The soil samples taken at the 3-foot level from the grass/alfalfa mix site showed virtually no hardpan, and the soil moisture was higher than at the other sampling sites. The alfalfa root system was still evident at a depth of 6 feet.

Grass/legume seeding study: Multiple plots within the 2006-08 grass/legume variety seeding study had very little to no establishment. During the second week of March 2009, 81 plots were tilled and prepared for seeding. On March 17, 2009, ten varieties of cool season grass and two varieties of alfalfa were combined into 27 possible

combinations. Three replicates were made of each combination, then randomized and seeded in the 81 available plots the same day. After seeding, over an inch of rain fell on the seeded plots. Evaluations of stand establishment will continue throughout the 2009-growing season.

Other Activities

- Gregg Beckley installed a used 9,000-gallon polypropylene tank on hilltop of Section 21. Ran 2,800 feet of 1½ inch HDPE pipe from existing standpipe to tank location. Installed 1,400 feet of 1 inch HDPE pipe from tank to 1,000-gallon water trough. These both can be moved to different locations. This installation includes a new 1 HP booster pump that will be used to pump water 200 feet uphill. Organic certification was completed on the 486.4 acres of grass/alfalfa pasture.
- A visit to Adams County Farm Services Agency on April 16, determined that, due to prior government errors, they were recalculating acreages under CRP contract. Original CRP contracts on two sections that were scheduled to expire in fall 2010 now have been reduced to 307.7 acres under contract that will expire in fall 2010.
- Shannon Neibergs met with Gregg Beckley and did a financial update on the 2008 year for G & L Farms. Reviewed income and expenses and discussed financial plan for utilizing CRP when contracts expire in 2010.
- An article on the Ag Pilots Beefing Up the Palouse pilot entitled, Expiring CRP Contracts and Grass-fed Beef, will be published in the Lewiston Tribune newspaper during April 2009.
- Baseline soil samples were taken from the four G&L Farms Land EKG sites as part of a network of BIOAg Learning sites to provide estimates of agricultural management effects on soil C sequestration rates. Land EKG soil samples were obtained in November 2008 for soil organic C content and soil inorganic C content. Soil bulk density and moisture content were also determined. A CRP stand and fertilized CRP plots (50 and 100 lbs N ac⁻¹) were sampled for soil organic C in the March of 2009. Sampling locations were georeferenced using GPS software. Copies of test results will be sent to Steve Van Vleet, G & L Farms and Maurice Robinette.

Outcomes

- The pilot has demonstrated every component of sustainable agriculture: environmental, economic, and social. Very few projects in agriculture can make this claim; fewer still can verify it. That is exactly what is happening in Adams County, two miles from the Palouse River in dry land wheat country with annual rainfall of less than twelve inches
- The success of this pilot is linked to the way decisions are made using Holistic Management (HM), a forty-year-old technique used to make decisions based on defined values and how actions affect the ecosystem. HM uses extensive planning, implementing and controlling a plan, and the ability to monitor and

adjust the plan when conditions change. This occurs at all levels including financial, ecological, and social.

- Formed a strong management team, well trained in the techniques of Holistic Management, which is making decisions using a shared vision. All key decision makers want to see this pilot become an environmental gemstone.
- This pilot's use of monitoring of ecological impacts in a quantifiable and comprehensive way using the Land EKG system, which resembles a slightly modified version of the NRCS system, has gone beyond NRCS to make recommendations on how to manage the ecosystem using the tools available.
- Actual soil carbon sampling is occurring at the ecosystem monitoring sites. This is the first time this has ever happened under university supervision with planned grazing. Planned grazing is a technique of using large animals at the right place, at the right time, for the right reasons. This should not be confused with management intensive grazing or rotational grazing.
- Carbon credits are being sold.
- Wildlife habitat is being improved.
- Soil erosion caused by both water and wind is being eliminated.
- The use of fossil fuel has been reduced by over ninety percent.
- Multiple alternative grass mixes are being tested.
- Multiple techniques of inter-seeding alfalfa are being tested.
- Nearly 1,000 acres are now certified organic, as either cropland or pasture.
- All ecosystem processes are improving according to our monitoring.

Contact Information:

Donald Nelson, WSU Extension Beef Specialist

nelsond@wsu.edu

2. Direct Seed Mentor: Spokane County Conservation District

Pilot Description

The Direct Seed Mentor pilot seeks to increase the adoption of direct seeding management practices throughout Spokane and Whitman Counties. The pilot plans to accomplish this through a mentoring program and side-by-side on-farm demonstration of direct seeding compared to conventional farming. Direct seeding is a farming method that puts the seed and the fertilizer directly into the ground without the use of conventional tilling. Direct seeding has been shown to increase soil fertility over time, increase water retention capacity, decrease the need for fertilizers and reduce operating

costs. Conventional farming generally uses over 8 gallons of fuel per acre, compared to direct seeding that uses approximately 3 gallons of fuel per acre.² While direct seeding appears to have many benefits, adoptions of these practices are low. This pilot seeks to help growers see the benefits of direct seeding without the fear of the high up front cost of direct seeding equipment, through the use of mentors that practice direct seeding and have equipment and the expertise to guide the pilot sites.

The goals of the Direct Seed Mentor pilot are threefold:

1. Increase adoption of direct seed operations through the use of a mentoring program.
2. On-farm demonstrations of direct seeding.
3. Case study of side-by-side comparison of direct seeded ground with conventionally tilled ground.

Pilot Progress

The mentoring pilot has been a success so far this spring. The pilot team put in a tremendous amount of time advertising and educating producers throughout the region on the benefits of the mentoring pilot. Four direct seed breakfast meetings were held this winter directly related to the mentoring program with an average attendance of 30-40 farmers. We also took 8 individuals to the Pacific Northwest Direct Seed Association Annual convention in Kennewick, WA to learn about direct seed concepts as well as to hear presentations made by producers that have been performing custom seeding for several years.

Dr. Hans Kok, Russ Evans, and Ty Meyer spent considerable time working with producers during these meetings and as part of our daily work to get the program some notoriety and to solicit participants for the program.

Mentor-Producer Teams:

Eight teams of mentors and producers are taking part in the mentoring pilot this spring 2009. The teams are as follows:

Blake Wolf – Mike Faerber
Mark Richter – Darrel Bafus
Jason Huntley – Glen Smick
St. John Grange – Gil White
Ron Kile – Dave Swannack
Lonnie Green – Ken Keno
Lonnie Green – Al Anderberg
Jason Eckelberger – Anthony Wicks

Dennis Roe, also a pilot participant working with Dr. Kok, has begun the interview process with the mentors outlining the economics of each operation. As spring work winds down in May, Dennis will be meeting with each producer to gather the economic data on their operations.

All of the economic data is being compiled by Kate Painter, an Ag Economist at the University of Idaho, for analysis that will ultimately be combined into the final report for the project.

To date, one team has completed their custom seeding and others are well under way. It is anticipated that the pilot to be a great success and hoped to have some accurate economic data to present based on the wide variety of operations that have been included in the program.

For additional information contact Ty Meyer at (509) 535-7274.

Contact: Spokane County Conservation District. Ty Meyer, Production Ag Program Manager email Ty-meyer@sccd.org

3. Farming for Wildlife, Skagit Delta: The Nature Conservancy

Pilot Description

The Farming for Wildlife (FfW) pilot is investigating the ecological, economic, and agronomic effects of three farm management practices: flooding, sod harvest, and grazing. The primary goal of this pilot is to determine whether certain crop rotation practices may benefit soils and farmers while also providing temporary wetland habitat for shorebirds and other wetland dependent species. Experimental treatments have been implemented on over 200 acres at three privately owned farms in the Skagit Delta: the Hedlin Farm, the Mesman Farm, and the Thulen Farm. Baseline monitoring was completed in the spring of 2007, and the habitat rotation (flooding) and the two crop rotations (sod harvest and grazing) were applied beginning in June 2007.



Figure 1 Thein farm 2nd year of the wetland rotation, winter 2009.

Pilot Progress

- Shorebird, invertebrate, soil and vegetation sampling were completed for the Winter 2008 sampling period
- Assisted NRCS in developing a special project funding scenario for wetland rotations under the Wildlife Habitat Enhancement Program (WHIP)
- Contracted with Hector Saez, WSU Resource Economist to conduct economic feasibility assessment for wetland rotations
- Hector Saez interviewed Skagit farmers and developed an Enterprise budget for potato production that will be used to assess economic feasibility of wetland rotations for potato growers
- Graduate student supervised by Dr. Debbie Inglis, WSU began in January 2009 to examine the effects of soil saturation on potato pathogens
- Presentation of preliminary results at the Western Washington Potato Conference at WSU Northwestern Washington Research and Extension Center in February 2009

- Presentation of preliminary results at the Western Hemisphere Shorebird Meeting in Mazatlan, Mexico in March, 2009



Figure 2 Mesman Farm Flooded site August 2007.



Mesman Farm flooded Site August 2008.

Known Outcomes to Date:

- Flooded fields have provided significantly more habitat for shorebirds during the migration periods than either grazed or harvest fields
- Species of conservation concern commonly seen using the flooded fields include Greater and Lesser Yellowlegs, Long-billed Dowitchers, and Western Sandpipers
- Substantially fewer shorebirds used the flooded sites during fall migration in 2008 compared to fall 2007
- Total Nitrogen has increased at a faster rate on flooded fields than either grazed or harvest fields
- pH and soil microbiology does not appear to be negatively impacted by the flooded treatments

Future Work

In May 2009, following the spring migration of shorebirds, experimental treatments will be completed and farms will return to production. Plans have been developed to determine what crops and the timing of planting that might best maximize the productivity of the sites following the experimental treatments. Soil fertility and microbiology, and weed abundance will continue to be monitored through the 2010 growing season.

The economic feasibility analysis of habitat rotations will be completed in June 2009. This research will include enterprise budgets for three rotations, namely, flooding, a typical sod cover crop, and potatoes. In addition, this research will evaluate the net benefits of land conservation tools and a system of payments for ecological services that could support habitat rotation efforts.

Timeline:

- Spring 2009 monitoring of shorebirds, vegetation, soils, and invertebrates will begin April 20, 2009
- A thorough analysis of the pilot data will begin after the final sampling period is completed in May
- Fields will be returned to production in May 2009
- Potato pathology greenhouse and field experiments will be ongoing through December 2011
- New wetland rotation sites will be implemented in 2009 with farmers contracting with NRCS through the WHIP project



Figure 3 Above Left Picture: Researchers measure the growth of cattails in flooded agricultural fields. Above Right Picture: Yellowlegs and dowitchers are the most common shorebirds on the flooded agricultural fields during fall migration.



Figure 4 Increases in Nitrogen observed in the soils at the flooded sites may be a result of the extensive cattails (a nitrogen fixing plant). It is anticipated the cattail biomass and algae blooms will provide substantial amounts of nutrients and organic matter to the soil once the wetland site is reclaimed and returned to production.

Contact Information: *The Nature Conservancy Kevin Morse, Skagit Delta Project Manager* kmorse@tnc.org

4. Transition of Insect Pest Management to New Pest Control Technology

Pilot Description

The Transition of Insect Pest Management to New Pest Control Technology (PMTP) pilot is an endeavor to proactively move the apple industry in the State of Washington towards new technologies that will decrease or eliminate the use of harmful substances such as the organophosphate (OP) called azinphos-methyl (AZM, which is commonly use to control the codling moth). Regulations from the EPA will phase out the use of AZM by the year 2012, increasing the need for Washington apple growers to find better ways to control the codling moth and other pests. PMTP seeks to increase use and awareness of the pest control strategy called integrated pest management (IPM). PMTP received \$500K from the legislature for the project for the FY07-09 biennium. Ag Pilots funding of \$149,296.00 was provided to enhance the pilot. The Ag Pilots funding is enhancing the pilot's capacity to engage the farm labor and environmental communities and to assess and document these efforts.



The codling moth, photo courtesy of the PMTP project

PMTP received \$500K from the legislature for the project for the FY07-09 biennium. Ag Pilots funding of \$149,296.00 was provided to enhance the pilot. The Ag Pilots funding is enhancing the pilot's capacity to engage the farm labor and environmental communities and to assess and document these efforts.

The Pest Management Transition Project (PMTP) continues to focus on three objectives:

1. To enhance understanding of new IPM technologies through educational programs and communication of research-based knowledge.
2. To increase adoption of new IPM technologies through sharing information on successes and failures and communicating with all stakeholders on pilot progress.
3. To document changes in practices, attitudes, and perceptions of growers, farm workers, and stakeholders.

Pilot Progress

Winter 'grower' meetings, sponsored by WSU extension, warehouses/packinghouses, and agricultural chemical distribution companies, are a standard means for disseminating information to the Washington State apple industry and, during the winter of 2008-09, PMTP participated in 18 industry meetings to present research-based knowledge relating to new IPM technologies and their implementation and to invite growers and decision makers to participate in PMTP through an Implementation Unit (IU). In addition, a new assessment tool, TurningPoint, was used to gather information and stimulate discussion at several winter meetings. The TurningPoint technology allows an audience to interact with, and provide anonymous feedback to, a presenter through the use of "clickers." PMTP presentations using Turning Point were made at seven Spanish-language and one English-language seminar – including three large tree fruit industry meetings, and five

separate pesticide applicator recertification classes. The use of the TurningPoint system expanded these presentations from outreach and education to incorporate data collection as well. Sessions measured pesticide applicators' knowledge of the Guthion phase-out and alternative methods of pest management. Just under 1000 participants were surveyed (note, however, that there was some overlap between session participants so unique participants probably numbered more realistically around 800).

Results showed that 70% of participants had worked with Guthion and almost 80% knew of the Guthion phase-out. In addition 20-50% had worked with new reduced-risk insecticides and almost 75% had worked with certain IPM practices (primarily mating disruption). Over 90% of respondents indicated they knew how to verify the personal protective equipment needed to spray a particular pesticide and 86% reported knowing the re-entry interval for the pesticides they were using. Thus, respondents know a good deal about the Guthion phase-out, alternative pest management, and pesticide safety, and they also reported generally knowing how to get the information they needed to work with pesticides. Nevertheless, there was room for additional knowledge and improvement, and PMTP is working with stakeholders to address some of these additional information needs.

Outreach to stakeholder groups included continued meetings with environmental groups/coalitions to discuss tools for improving agricultural sustainability, participation in farm worker pesticide education programs, and presentations at several conferences, including one for rural health care providers and one for migrant health clinic outreach workers. Aside from sharing information about the PMTP, these presentations also included opportunities for participants to comment on drafts of new informational materials (posters, etc.) being developed to increase stakeholder knowledge and awareness of pesticide safety issues. Such outreach will continue at a Latino Health Fair in Omak and a National Farm Worker Conference in Texas in May, among other venues.

Recent assessment and documentation efforts include two baseline surveys. The first survey was directed at fruit industry consultants while the second targeted growers/managers. The consultant survey, conducted via mail in June 2008, had a 55% response rate (40 questionnaires returned of 73 mailed). Results showed that consultants viewed codling moth (the primary target for Guthion) as the key pest of concern, and that most still included Guthion as part of their pest management recommendations; however, all were aware of the EPA mandated phase-out of this product. Most consultants also expressed confidence in recommending both integrated pest management tactics and new insecticides as alternatives for Guthion, and seventy-five percent (75%) indicated an interest in more training on how to use or recommend alternatives for Guthion to manage pests. While consultants were concerned that both the costs and control of codling moth would become more difficult after the Guthion phase-out, they agreed that researchers have developed good information on alternatives to Guthion, and that the PMTP is meeting a concrete need by providing training and resources to help the apple industry adopt alternative technologies.

The second baseline survey was designed to assess apple *growers'* uses and perceptions of insecticides and IPM practices for the 2008 growing season was sent to growers in February 2009. Results are currently being compiled and tabulated, and will be compared to the consultant survey results and reported on in the next Ag. Pilots report. If

resources are available a second consultant survey will also be sent out in fall 2009 to track changes in fruit industry pest management practices and perceptions over time, using the first consultant survey as a baseline measurement.

IU participants were also asked to complete a brief survey at the end of the 2008 season, via TurningPoint or online, to assess their perceptions of the IU meetings and the PMTP educational efforts. Overall, 102 (53%) of the IU participants responded to the survey and most indicated a high level of satisfaction with the IU meetings and the educational materials and programs provided by PMTP. More than 80% of the IU participants indicated that PMTP had influenced their pest management decisions and 90% indicated that they would like to participate in an IU again in 2009. Most (80%) indicated that they would like to attend a PMTP field day in 2009 and 97% indicated that they would like to continue to receive the PMTP newsletter.

Many of the IUs from 2008 have continued into 2009, while others have been refocused or relocated. Eleven IUs, consisting of 135 participants representing over 90,000 Washington apple acres, began meeting in March of 2009. The IUs will meet monthly through March, April, and May to discuss planning pest management programs and again pre and post harvest to discuss successes and failures encountered as new pest management technologies are implemented. PMTP has worked with WSDA to provide pesticide license recertification credits to those who attend IU meetings in 2009. The PMTP newsletter began again in April and will continue through the 2009 growing season. PMTP field days for 2009 are currently being planned for the end of May/First of June. The PMTP website (<http://pmtip.wsu.edu>) is the best source for information about PMTP and transitioning pest management programs.

Contact Information: pilot email: pmtip.info@wsu.edu or visit the pilot website at <http://pmtip.wsu.edu/>

Keith Granger, PMTP Manager

keith_granger@wsu.edu

Challenges, Next Steps and Contact Information

Challenges

Currently, there are no challenges posed to the completion of the Ag Pilots Project. The Center continues to work with the four pilots to complete the monitoring and evaluation, as well as working with OFM to complete the final report and make recommendations.

Next Steps

The next steps in the Ag Pilot Project are as follows:

- 1.) Continue monitor and evaluate the individual pilots
- 2.) Work with the governors office to identify an “state agency home” for the Ag Pilots Project (if the Project is deemed successful)
- 3.) Provide other contract deliverables including the final report

Contact Information

The Center has assigned Dr. Rob McDaniel as the project manager for the Ag Pilots Project. He can be reached at: 520 Pike St, Suite 1101, Seattle, WA 98101; (206) 219-2426; mcdaniel@wsu.edu

Appendices

Appendix A: Summary of Agriculture Pilots Funding Allocation

| <u>Agriculture Pilots Project</u> | |
|---|---------------------|
| WSU Contract | \$65,241.00 |
| <hr/> | |
| Projects | \$409,759.00 |
| Beefing Up the Palouse – Alternative to CRP | \$81,713.00 |
| Direct Seeding Mentor Pilot | \$94,250.00 |
| Transition of Insect Pest Management | \$149,296.00 |
| Farming for wildlife | \$84,500.00 |
| <hr/> | |
| Other amount | \$25,000.00 |
| <hr/> | |
| Total | \$500,000.00 |

Appendix B: Contract Oversight and TBD Fees

| | |
|---|-----------------|
| Conservation Commission Oversight Fees | |
| The commission takes a 3% fee for handling and overseeing the Ag Pilot funding. | |
| FY 2008----- | \$4,650 |
| FY 2009----- | \$8,393 |
| <hr/> | |
| Total: | \$13,043 |
| Additional funds (TBD) | |
| These funds are to be used as a reserve in FY 2009 in case pilots need a few extra dollars to complete their pilot. | |
| FY 2008----- | \$61 |
| FY 2009----- | \$11,692 |
| <hr/> | |
| Total | \$11,753 |

Appendix C: Pilot Budgets

| WSU Ag-Pilots Grants (Expenses Thru April 30, 2009) | | | | |
|--|--|----------------------------|-----------------------|------------------------------|
| Pilot | Recipient | Amount Awarded FY09 | Vouchered Amt. | Amount Remaining FY09 |
| Beefing up the Palouse | WA Sustainable Food & Farming Network | \$16,036.00 | \$12,084.91 | \$3,951.09 |
| <i>Notes</i> | | | | |
| Direct Seed Mentor Pilot | Spokane Conservation District | \$60,866.00 | \$5,776.025 | \$55,089.98 |
| <i>Notes</i> | | | | |
| Farming For Wildlife | The Nature Conservancy | \$42,250.00 | \$17,438.37 | \$24,811.63 |
| <i>Notes</i> | | | | |
| Insect Pest Management | WA Horticulture Association w/ WSU Tree Fruit Research Station | \$14,349.11 | \$14,349.11 | \$0.00 |
| <p><i>Note**The Washington Tree Fruit Research Commission vouchered for July 2008 and August 2008 for a total of \$14,349.11. The remaining Fiscal Year 2009 is funded directly by Washington State University for the remainder of the contract. 10/27/08</i></p> | | | | |

Appendix D: Ruckelshaus Center Expenditures, FY09

| | |
|--------------------|--------------------|
| Salaries and Wages | \$11,422.14 |
| Goods and Services | \$1,426.50 |
| Travel | \$700.58 |
| Benefits | \$3,261.37 |
| Overhead | \$3,912.71 |
| TOTAL | \$20,723.30 |
| | |

Appendix E: Pilot Survey

AGRICULTURE PILOTS PROJECT

Evaluation Survey

This is a request for participation; your responses will remain totally confidential-only researchers at Washington State University and William D. Ruckelshaus staff, who are conducting this survey as part of the evaluation of the Agriculture Pilots Project will see your answers and comments. A compilation of all survey results will appear in the Final Agriculture Pilots Report in July 2009. You may leave any questions blank that you feel uncomfortable answering. You are assured that the university and the Ruckelshaus center will maintain confidentiality of your answers and comments. If you have any questions or concerns regarding this evaluation study you may contact Kara Whitman at (509)338-5138, or Debra Akhbari at (206)219-2426, or email agpilots@u.washington.edu and if you have any questions or concerns about your rights as a participant you can call the WSU IRB at (509) 335-1585 or email to irb@wsu.edu.

Thank you in advance for your participation in the Agriculture Pilots Project. Your feedback is very important in determining the overall success and the future of the project.

Kara M. Whitman, M.S.

PhD Student, Washington State University

Research Assistant, William D. Ruckelshaus Center

Rob McDaniel, PhD

Associate Director,

William D. Ruckelshaus Center

This Survey asks questions about different aspects of your **collaborative partnership experience, pilot project outcomes, and Agriculture Pilot Project Performance**. The survey will take you about (?) minutes to complete. The survey allows you to express your opinions and provide information about your experiences. **DO NOT** write your name anywhere on the questionnaire; your name will not be attached to your responses.

By answering the questions on this survey, you will help the Agriculture Pilot team learn about the strengths and weaknesses of the project, and help identify needed changes and improvements for the future of the Agriculture Pilot Project.

There are no right or wrong answers on the questions included on the survey. Thoughtful and honest responses will be the most valuable information for the continuation and/or improvement of the Agriculture Pilot Project. Please answer every question, and please check only one answer per question unless otherwise specified.

To complete the questionnaire:

- Please use a BLUE or BLACK ink pen.
- Be sure to read all the answer choices before marking your answer.
- Answer each question by placing a legible “X” in the box to the left of your answer, Like this: [X] Extremely Well or [X] Very Poor

Please identify to which group you belong:

- Individual Agriculture Pilot Project Affiliated Partner
- Individual Agriculture Pilot Project Manager

****please answer all questions as related to the Ag. Pilot Project you are affiliated with.**

1. Leadership: (developing local leadership)

Please think about all of the people who provide either formal or informal leadership in the Agriculture Pilots Project. Please choose (to the best of your knowledge) the term that best explains the leadership effectiveness in each of the following areas:

- A. Leaders were/are _____ at taking responsibility for the partnership
- | | |
|-----------------|----------------|
| [] Outstanding | [] Fair |
| [] Very Good | [] Poor |
| [] Good | [] Don't Know |
- B. Leaders were/are _____ at inspiring or motivating people involved in the partnership.
- | | |
|-----------------|----------------|
| [] Outstanding | [] Fair |
| [] Very Good | [] Poor |
| [] Good | [] Don't Know |
- C. Leaders were/are _____ inspiring or motivating people that may be impacted by partnership and project outcomes.
- | | |
|-----------------|----------------|
| [] Outstanding | [] Fair |
| [] Very Good | [] Poor |
| [] Good | [] Don't Know |

D. Leaders were/are _____ at including affiliated partners and others in planning and implementation throughout the duration of the Ag. Pilots project.

- | | |
|--------------------------------------|-------------------------------------|
| <input type="checkbox"/> Outstanding | <input type="checkbox"/> Fair |
| <input type="checkbox"/> Very Good | <input type="checkbox"/> Poor |
| <input type="checkbox"/> Good | <input type="checkbox"/> Don't Know |

E. Leaders were/are _____ at communicating the vision and outcomes of the partnership.

- | | |
|--------------------------------------|-------------------------------------|
| <input type="checkbox"/> Outstanding | <input type="checkbox"/> Fair |
| <input type="checkbox"/> Very Good | <input type="checkbox"/> Poor |
| <input type="checkbox"/> Good | <input type="checkbox"/> Don't Know |

F. Leaders were/are _____ at fostering trust, respect, inclusiveness and openness in the partnership.

- | | |
|--------------------------------------|-------------------------------------|
| <input type="checkbox"/> Outstanding | <input type="checkbox"/> Fair |
| <input type="checkbox"/> Very Good | <input type="checkbox"/> Poor |
| <input type="checkbox"/> Good | <input type="checkbox"/> Don't Know |

G. Leaders were/are _____ at combining the perspectives, resources, and skills of partners.

- | | |
|--------------------------------------|-------------------------------------|
| <input type="checkbox"/> Outstanding | <input type="checkbox"/> Fair |
| <input type="checkbox"/> Very Good | <input type="checkbox"/> Poor |
| <input type="checkbox"/> Good | <input type="checkbox"/> Don't Know |

H. Leaders were/are _____ at fostering new and creative thinking.

- | | |
|--------------------------------------|-------------------------------------|
| <input type="checkbox"/> Outstanding | <input type="checkbox"/> Fair |
| <input type="checkbox"/> Very Good | <input type="checkbox"/> Poor |
| <input type="checkbox"/> Good | <input type="checkbox"/> Don't Know |

Please elaborate on leadership performance that either helped or hindered the success of the project and on how leadership may be improved if the project was/is to continue, comment in the space below.

Comment:

2. Synergy and Momentum: Gains through collective Action, and New or improved working relationships.

Please think about the overall success to date of the Ag Pilots partnerships when answering the following questions.

A. Through the collaborative partnership, how well is the Ag. Pilots project strengthening already existing partnerships and relationships between *organization/farm/individual* and other *organizations*?

Extremely Well

Not So Well

Very Well

Not Well at All

Somewhat Well

Don't Know

B. Through the collaborative partnership, how well is the Ag. Pilots project strengthening already existing partnerships and relationships between *organization/farm/individual* and other *farms and/or individuals*.

Extremely Well

Not So Well

- | | |
|--|--|
| <input type="checkbox"/> Very Well | <input type="checkbox"/> Not Well at All |
| <input type="checkbox"/> Somewhat Well | <input type="checkbox"/> Don't Know |

C. Through the collaborative partnership, the Ag. Pilot project is doing _____ at fostering **new partnerships and/or relationships** with other *organizations*.

- | | |
|---|--|
| <input type="checkbox"/> Extremely Well | <input type="checkbox"/> Not So Well |
| <input type="checkbox"/> Very Well | <input type="checkbox"/> Not Well at All |
| <input type="checkbox"/> Somewhat Well | <input type="checkbox"/> Don't Know |

If new partnerships or relationships were formed with other organizations during the project, please list them?

D. Through the collaborative partnership, the Ag. Pilot project is doing _____ at fostering **new partnerships and/or relationships** with other *farms and/or individuals*.

- | | |
|---|--|
| <input type="checkbox"/> Extremely Well | <input type="checkbox"/> Not So Well |
| <input type="checkbox"/> Very Well | <input type="checkbox"/> Not Well at All |
| <input type="checkbox"/> Somewhat Well | <input type="checkbox"/> Don't Know |

If new partnerships or relationships were formed with other farms and/or individuals during the project, please list them?

E. Affiliated partners were/are _____ in the planning stages of the pilot project.

- | | |
|--|---|
| <input type="checkbox"/> Extremely Important | <input type="checkbox"/> Not So Important |
| <input type="checkbox"/> Very Important | <input type="checkbox"/> Not Important at All |
| <input type="checkbox"/> Somewhat Important | <input type="checkbox"/> Don't Know |

F. Affiliated partners were/are _____ in the implementation and completion of the pilot project.

- | | |
|--|---|
| <input type="checkbox"/> Extremely Important | <input type="checkbox"/> Not So Important |
| <input type="checkbox"/> Very Important | <input type="checkbox"/> Not Important at All |
| <input type="checkbox"/> Somewhat Important | <input type="checkbox"/> Don't Know |

G. Others (besides project managers and affiliated partners) were/are _____ in the implementation/completion of the pilot project.

- | | |
|---|--|
| <input type="checkbox"/> Extremely Involved | <input type="checkbox"/> Not So Involved |
| <input type="checkbox"/> Very Involved | <input type="checkbox"/> Not Involved at All |
| <input type="checkbox"/> Somewhat Involved | <input type="checkbox"/> Don't Know |

If others were involved who were they?

H. Through the collaborative partnership, the Ag. Pilot project _____ access to scientific knowledge and/or data. (Not sure you can ask this question yet... unless you qualify it by prefacing with the phrase... "To date")

- | | |
|---|---|
| <input type="checkbox"/> Dramatically Increased | <input type="checkbox"/> Did Not Increase |
| <input type="checkbox"/> Increased | <input type="checkbox"/> Reduced |
| <input type="checkbox"/> Slightly Increased | <input type="checkbox"/> Don't Know |

I. The likelihood that this partnership will continue beyond the Agriculture Pilot Funding is

- | | |
|---|---|
| <input type="checkbox"/> Extremely Likely | <input type="checkbox"/> Not Likely |
| <input type="checkbox"/> Very Likely | <input type="checkbox"/> Definitely Not |
| <input type="checkbox"/> Likely | <input type="checkbox"/> Don't Know |

J. The likelihood that this partnership will or already is pursuing continuing funding is

- | | |
|---|-------------------------------------|
| <input type="checkbox"/> Already Pursuing | <input type="checkbox"/> Likely |
| <input type="checkbox"/> Extremely Likely | <input type="checkbox"/> Unlikely |
| <input type="checkbox"/> Very Likely | <input type="checkbox"/> Don't Know |

Please elaborate on the outcomes (partnerships/increased knowledge etc) of the collaborative partnership, and discuss improvements that could be made. Please comment in the space below

Comment:

3. Project Coordination and Management: individual Pilot Projects as well as overall Ag. Pilot Project.

Please think about the administration and management activities of individual Ag. Pilot Projects. Please rate the effectiveness in carrying out each of the following partnership activities:

A. Coordinating communication among partners currently is.

- | | |
|--------------------------------------|-------------------------------------|
| <input type="checkbox"/> Outstanding | <input type="checkbox"/> Fair |
| <input type="checkbox"/> Very Good | <input type="checkbox"/> Poor |
| <input type="checkbox"/> Good | <input type="checkbox"/> Don't Know |

B. Coordinating communication with people and with organizations outside the partnership currently is.

- | | |
|--------------------------------------|-------------------------------------|
| <input type="checkbox"/> Outstanding | <input type="checkbox"/> Fair |
| <input type="checkbox"/> Very Good | <input type="checkbox"/> Poor |
| <input type="checkbox"/> Good | <input type="checkbox"/> Don't Know |

C. Organizing partnership activities, including projects and meetings.

- | | |
|--------------------------------------|-------------------------------------|
| <input type="checkbox"/> Outstanding | <input type="checkbox"/> Fair |
| <input type="checkbox"/> Very Good | <input type="checkbox"/> Poor |
| <input type="checkbox"/> Good | <input type="checkbox"/> Don't Know |

D. Applying for and managing grants and funds.

- | | |
|--------------------------------------|-------------------------------------|
| <input type="checkbox"/> Outstanding | <input type="checkbox"/> Fair |
| <input type="checkbox"/> Very Good | <input type="checkbox"/> Poor |
| <input type="checkbox"/> Good | <input type="checkbox"/> Don't Know |

E. Preparing materials that inform partners and help them make timely decisions.

- | | |
|--------------------------------------|-------------------------------------|
| <input type="checkbox"/> Outstanding | <input type="checkbox"/> Fair |
| <input type="checkbox"/> Very Good | <input type="checkbox"/> Poor |
| <input type="checkbox"/> Good | <input type="checkbox"/> Don't Know |

F. Evaluating the progress and impact of the partnership to date.

- | | |
|--------------------------------------|-------------------------------------|
| <input type="checkbox"/> Outstanding | <input type="checkbox"/> Fair |
| <input type="checkbox"/> Very Good | <input type="checkbox"/> Poor |
| <input type="checkbox"/> Good | <input type="checkbox"/> Don't Know |

G. Minimizing barriers to participation in the partnership's meetings and activities (example: convenient places and times)

- | | |
|--------------------------------------|-------------------------------------|
| <input type="checkbox"/> Outstanding | <input type="checkbox"/> Fair |
| <input type="checkbox"/> Very Good | <input type="checkbox"/> Poor |
| <input type="checkbox"/> Good | <input type="checkbox"/> Don't Know |

A. Communication between OFM, Conservation Commission, Ruckelshaus Center, Oversight Committee and Project Managers.

- | | |
|--------------------------------------|-------------------------------------|
| <input type="checkbox"/> Outstanding | <input type="checkbox"/> Fair |
| <input type="checkbox"/> Very Good | <input type="checkbox"/> Poor |
| <input type="checkbox"/> Good | <input type="checkbox"/> Don't Know |

Please elaborate on Ag. Pilot management and discuss ways that may improve

Comments:

communication within, and administration of the program below:

4. Innovation, Impact, and Replication: (new approaches or practices, combining tried and true practices in new ways, likelihood of replication, impact on the agricultural sector)

Please think about the future implications and applicability of each individual Agriculture Pilot Project when answering the following questions. Please answer “yes” or “no” or “Don’t Know”, then explain in the comment box below.

A. Is there current interest about the outcomes/applicability of the Ag. Pilot project from the larger agricultural community?

Yes

No

Don’t Know

Comment:

B. Will implementation require new skills of the agricultural community?

Yes

No

Don't Know

Comment:

As the Agriculture Pilot Program is in the Proof of Concept phase we are very interested in any comments you would like to make on any aspect of the Agriculture Pilots Program that will help improve implementation in the future. (attach additional sheets if you wish)

Thank you very much for your participation in this important survey!

¹ Beefing Up the Palouse – An Alternative to the Conservation Reserve Program (CRP) Ag Pilot full proposal page 3.

² Information from direct seeders on the WSU Extension BIOAg tour sustainable farming in the Palouse region of Washington State held on May 28, 2008.