

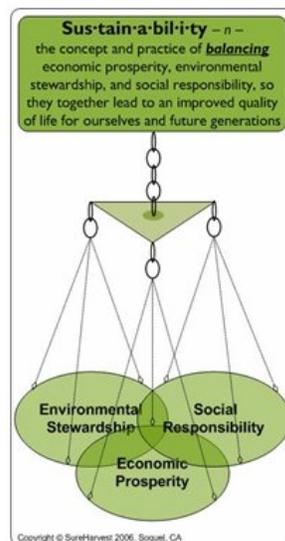
# Sustainable Practices Program Development: Strategic Planning

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## FINAL PROJECT REPORT

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## **Abstract**

Based upon a positive needs assessment analysis in 2007 and the continued strengthening of the sustainability trend in the agrifood supply chain, the California pear industry decided to develop a strategic plan to develop an industry-wide sustainable practices program.

Current sustainable practice programs were examined to determine the type of program appropriate to the pear industry's current needs. They range from self-assessment to certification-oriented programs and differ in the breadth of practice areas addressed. As part of the strategy to minimize the costs of program development, other tree crop association executives were contacted and showed interest in joining the pear industry in developing and implementing a flexible practices program. UC researchers also were interested in assisting in an initiative and suggested a number of available practices checklists, most notably the UC Year-Round IPM Program Annual Checklist for pears.

A strategic planning session was held with an industry leadership team comprised of growers, shippers, processors, and UC researchers. The sustainable practices program will be a California-focused industry-wide program that will provide benefits to both individual growers and the industry itself via a benchmarking initiative with growers across an initial set of practice areas. The amount of content in the practice areas will evolve over time depending on available resources. Industry leaders will actively pursue funding opportunities to further the program development and have two pending proposals for 2009-2010 activities. Content from two existing practice programs, the Sustainable Winegrowing Program and the SYSCO Sustainable Program, was determined to be available for use by crop associations and will be utilized.

Recommended next steps for the industry include the development and implementation of an initial practices program and the utilization of a simple survey tool and data aggregation technique to begin benchmarking their sustainability performance. Additionally, the PPMRF should document its historical production research activities in the context of impacted resources and the three elements of sustainability – economic, environmental and social. The analysis will provide background for any “good story” public relations efforts.

## **Introduction**

As the concept of sustainability has garnered more and more attention in the public eye and corporate world (i.e., Main Street and Wall Street), the agrifood supply chain continues to determine what it means to companies up and down the chain. How do growers answer questions being asked by their shipper/processor customers who in turn are being asked questions by their retailer/foodservice customers? What can these businesses do to become more sustainable in this environment of increasing production,

regulatory, and market pressures? Will consumers help create a new sustainably grown food category?

Over the past two years, the California Pear Advisory Board (CPAB) and the Pear Pest Management Research Fund (PPMRF) have provided funding to proactively determine the viability of a sustainable practices program for the California pear industry. During 2007, funding was used to conduct a grower survey to determine how the industry compared to other regional pear and fruit industries in the areas of pest management, water use, nutrient management, energy use, human resources, and neighbor/community practices – all components of other existing sustainable practice programs. Additionally, a focus group of growers, shippers, processors, and UC researchers determined that growers are interested in a “go-slow,” phased implementation of a best practices program utilizing existing publicly available best practice assessment checklists and tools and seek assistance from UC resources to develop additional tools.

Figure 1 depicts an integrated methodology used to design, develop, and implement sustainable practice programs where Phase 1 is designed to provide decision points for an organization on whether or not they should proceed with an initiative. The 2007 project combined steps 1 and 2 and this project addressed step 3 to determine a strategy to develop and implement a sustainable practices program. (Note: The PPMRF Board decided to fund the Strategic Planning component of the 2008 project proposal and decide upon the Initial Program Design component later in 2008.)

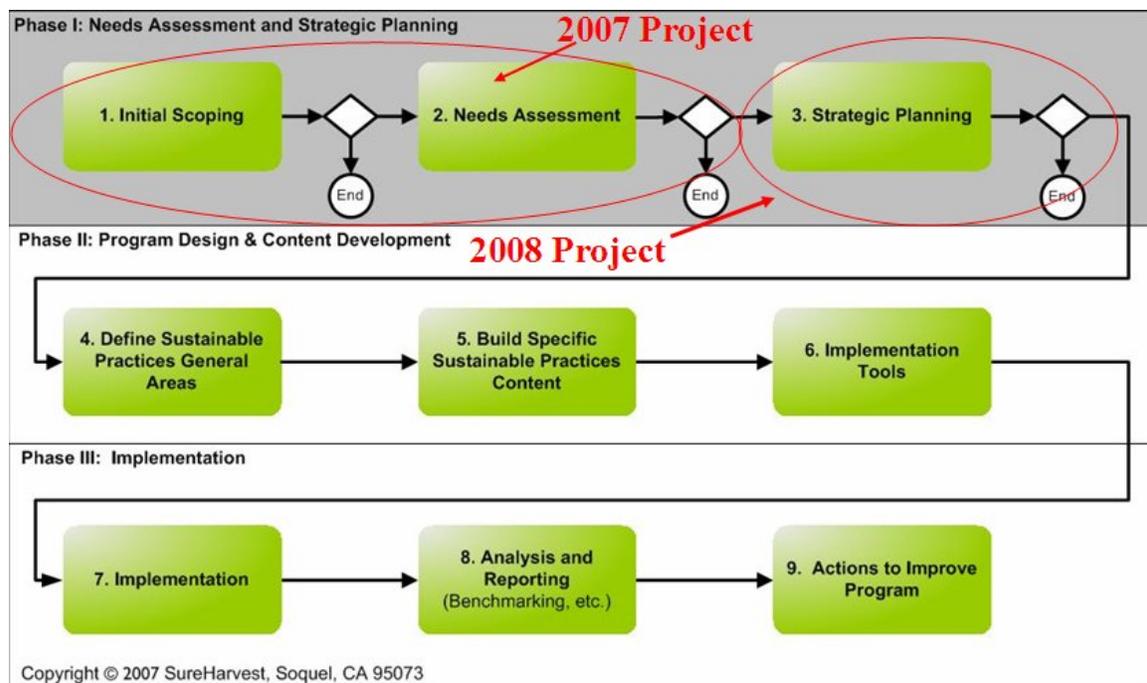


Figure 1 – Sustainable Practice Program Development Methodology

The PPMRF funded the 2008 project to develop a Sustainable Practices Program Strategic Plan to guide the development of a sustainable practice program taking into

account the recommendations of the needs assessment phase. The key question addressed in this project is: “How can we develop the initial components of a program and begin our sustainability measurement process with a limited budget?”

The following report summarizes the background information and input to the strategic planning process, the strategic plan components and suggested next steps.

## **Strategic Plan Background Information and Input**

During the 2007 needs assessment project, pear growers, packers and processors were exposed to a number of elements of sustainable practice programs that painted a picture of how to develop an industry-wide program, what potential practice areas could be included in the program, and what questions needed to be answered to drive a strategic plan. A preliminary best practices benchmark survey was used to illustrate how growers could help measure sustainable performance.

SureHarvest has been a pioneer in developing sustainable practice programs and understands that getting the initial strategy right through a multi-stakeholder process is critical for the long-term success of the program and its participants. Background information for a strategic planning session was needed to allow a grower leadership team to better understand options for: the program framework; potential program development cost-sharing opportunities with other like-minded associations; and public domain sources for program content.

### ***Current Sustainable Practice Programs***

There are a number of sustainable practice “programs” that have been implemented over the past 15 years ranging from simple practice checklists to integrated assessment and education efforts. These programs have been implemented for a number of crops in different regions at the individual grower level up to an industry level. Some programs have been established as simple self-assessments while others have focused on third-party certification of growers’ practices. Programs have been designed and developed from a top-down compliance perspective while others have been driven by grower groups defining their own best practices. And finally, the breadth of practice areas within programs varies widely.

It is in this environment that the California pear industry is selecting what approach is most appropriate for their situation. The following sustainable practice programs were reviewed to determine the type of framework used and its applicability to the pear industry:

Name	Type	Crop(s)
Sustainable Winegrowing Program	Commodity Group	Winegrapes
Lodi Winegrower’s Workbook	Commodity Group	Winegrapes
CCVT Positive Points System	Commodity Group	Winegrapes
Citrus Positive Points System	Commodity Group	Citrus

Food Alliance - Pears	3 <sup>rd</sup> -Party Certification	Pears
Protected Harvest - Pears	3 <sup>rd</sup> -Party Certification	Pears
Fish Friendly Farming	3 <sup>rd</sup> -Party Certification	Winegrapes
Lodi Rules	3 <sup>rd</sup> -Party Certification	Winegrapes
GLOBALGAP	3 <sup>rd</sup> -Party Certification	Multiple
SYSCO Sustainable	Commercial	Multiple
Unilever Sustainability Initiative	Commercial	Multiple

With the exception of Fish Friendly Farming and GLOBALGAP, most programs have a broad list of practices they address in the environmental and social areas with more emphasis placed on environmental practices.

The following are highlights of each program:

Name	Comments
Sustainable Winegrowing Program	California winegrowing industry; sustainability scale from 1 to 4 for 227 criteria in 14 practice area chapters for growers and vintners; 2/3 of winegrape acreage in Calif. is involved; has associated education/outreach component
Lodi Winegrower's Workbook	Used by growers in Lodi area; sustainability scale from 1 to 4 for 171 criteria in 9 practices area chapters
CCVT Positive Points System	First vineyard self-assessment program; 1,000 total points awarded in 6 chapters and 133 Yes/No questions
Citrus Positive Points System	Modeled after CCVT system; has 7 chapters and 212 Yes/No questions and 1,000 total points; includes a food safety chapter
Food Alliance - Pears	For growers and handlers; sustainability scale from 1 to 4 for 24 items in 6 pear-specific practice areas; primarily IPM-oriented with a labor component; certification based upon grower audit
Protected Harvest - Pears	Standards developed but not used; 6 chapters with variable points for practices; target point total scores required for certification; includes pesticide impact model and traceability chapter
Fish Friendly Farming	Not comprehensive - fish and wildlife and water quality oriented program; California only; three resource agencies serve as certifiers
Lodi Rules	Used by growers in Lodi; 6 chapters with variable points for practices; target point total scores required for certification; includes pesticide impact model
GLOBALGAP	Food safety and quality (GAP) oriented annual certification program; non-USA fruit and vegetable standards focused primarily on fresh produce growers; Yes/No checklists; currently adding environmental and social components; regional GAP programs can benchmark their equivalence to GLOBALGAP
SYSCO Sustainable	Mainly an IPM-oriented program plus recycling and HR; Yes/No program with points assigned to questions that correlate to three levels of sustainability; grower/suppliers are audited by 3 <sup>rd</sup> -party certifier

Unilever Sustainability Initiative	10 general indicators for the 3 E's of sustainability; metrics-oriented grower/supplier program using actual audited measurements
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As can be seen from the descriptions of the various programs, the pear industry can follow any of multiple approaches to develop or adopt a sustainable practices program.

#### Observations

- A common driver for many of the programs has been IPM programs which then expanded to other environmental and human resource practices.
- Unilever's program is the most recent and is based upon metrics which is becoming increasingly popular as programs move from prescriptive, practice-based programs to performance-based outcome oriented programs. (See the recently launched [www.stewardshipindex.org](http://www.stewardshipindex.org) for further discussion of this trend.)
- Because certification is not an objective at this time, many of the points-based schemes are not applicable.
- Self-assessment programs can evolve to certification programs as has been proven in the Lodi, CCVT, and now SWP programs.

### ***Multiple-Commodity Sustainable Practices Programs***

One of the realizations in the 2007 project was that other crop associations face the same challenges that the pear industry is facing in addressing the sustainability trend. The process outlined in Figure 1 shows that each association will follow the same path in developing an industry-wide program. Available resources – both people and funding – will be a controlling factor in these initiatives. Pear growers wanted to explore whether or not other tree crop groups may be willing to collaborate on the development of a common sustainable practices “foundation” that could be modified and added to for crop-specific needs.

Executives at the following crop associations were contacted and expressed interest in learning more about sustainable practice programs and the benefits for their grower members:

- California Cherry Advisory Board (Jim Culbertson)
- California Dried Plum Board (Richard Peterson)
- California Walnut Commission (Dennis Balint)
- Western Pistachio Association (Richard Matoian)

When asked about regulatory or market pressures being felt by their grower members, they all felt that more questions are being asked about best management practices. Export markets, particularly the EU and Japan, expressed the most interest in sustainability issues.

Overall, the executives had minimal familiarity with sustainability programs in other crops. The most commonly mentioned programs were FreshSense (a certification program for stone fruit used by several grower/shippers), Lodi Rules (a certification

program for winegrapes), and the Sustainable Winegrowing Program. They were not aware of any coordinated efforts by UC researchers or extension to address sustainable practice programs for commodity groups.

One of the interesting activities relative to sustainable practices that came out during the interviews was an IPM Innovator Award (2005) received by the Dried Plum Board for their "Integrated Prune Farming Practices Decision Guide" that was discussed with 200 growers and PCAs in six workshops.

Based upon the positive feedback from other associations, GVC and SureHarvest will be facilitating a meeting of crop association executives in the early part of 2009 to discuss a collaborative sustainable practices program development initiative.

(See CDFA Specialty Crop Block Grant discussion under Program Funding section below.)

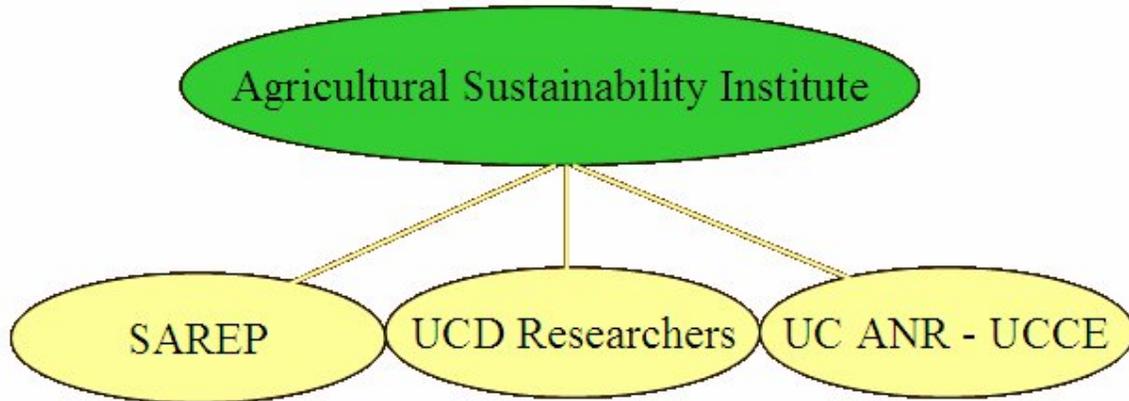
### ***UC Researcher Interviews***

During the 2007 needs assessment project, growers voiced the need to continue, and build upon, the positive relationship the pear industry has developed with the University of California research and extension community over the years. The relationship has resulted in numerous tools for the industry such as the Pear Production and Handling Manual, the UC IPM Pest Management Guidelines for Pears, and research reports created through the PPMRF program.

The following UC researchers were interviewed to see what resources are available today from the UC in the form of practice checklists and what will be available in the near future as a means to minimize the cost of developing a sustainable practice program.

Name	Organization	Focus Area
Tom Tomich	UC Ag Sustainability Institute	Sustainable agriculture
Karen Klonsky	UC Ag & Resource Economics	Ag economics
Gail Feenstra	UC SAREP	Sustainable agriculture
Beth Mitcham	UC Davis – UCCE	Post-Harvest
Chuck Ingels	UCCE – Sacramento County	Horticulture
Rachel Elkins	UCCE – Lake and Mendocino Counties	Horticulture
Doug Gubler	UC Davis – UCCE	Plant Pathology
Pete Goodell	UC Kearney Ag Center	IPM

The following diagram shows the current relationships between various UC entities involved with sustainable practices research and programs.



The Agricultural Sustainability Institute (ASI) is a relatively new organization that has been set up to coordinate research, teaching and outreach and extension activities in agricultural and food systems sustainability at UC Davis and throughout UC system. Because ASI is in start-up mode, much of its effort to date has been developing a strategy for the institute and prioritizing sustainability areas to address. There is great potential in the future for ASI to address the needs for a broad sustainable agriculture program for crop production in California. It should also be noted that under the leadership of its new Vice President, Dan Dooley, the UC Division of Agriculture and Natural Resources (ANR) is undergoing a review of its strategy and role in supporting the California agriculture industry. Based upon early indications, we assume that sustainable agriculture will be a component of the strategy.

In general, all UC researchers were in favor of continuing work with the pear industry to address specific research needs and saw the development of an overarching sustainable practices program as a means to tie together best practices within one integrated perspective. Tom Tomich, ASI Director, expressed great interest in the pear industry's effort and views it as an early example of growers addressing pressing environmental and market issues.

Based upon discussions with UC researchers, the following table is a summary of grower-level practice checklists available through both UC and outside sources:

Practice Area	Potential Sources	Status
Pest Management (IPM)	UC IPM	Very Good
Water Conservation & Quality	UC, UC ASI, USDA NRCS, Resource Conservation Districts	Good
Energy Efficiency	PG&E, UC ASI	Not Available
Air Quality	California Air Resource Board, USDA NRCS, UC ASI	Fair
Nutrient Management	UC, UC ASI, USDA NRCS	Fair
Labor	California Institute for Rural Studies, Ag Personnel Mgmt. Assn.	Fair
Solid Waste/Recycling	UC, CDFA	Not Available

Leveraging existing checklists is a cost-effective method to jumpstart a sustainable practices program. Pest management and water management are two areas where checklists could be readily used in the pear program. Practice checklists were either not available for pears or too generic in the other areas and it does not appear to be a priority to develop them in the near future. Ongoing monitoring of the non-UC resources will be important to utilize publicly available materials for the program.

One of the key elements of sustainability is the balance of economic factors with environmental and social aspects of crop production. Economics are not addressed specifically in the above checklists, but UC cost/return studies for pears address a number of the practice areas. Karen Klonsky focuses on the economic analysis for UCCE and suggested that environmental accounting tools are still in their infancy as a means to evaluate economic tradeoffs of various key practices. This type of analysis will become increasingly important for growers as economic pressures on crop production continue.

## **Strategy Development Meeting**

As part of the collaborative effort to develop an industry-wide sustainable practices program, a one-day strategic planning meeting was held with an industry leadership team to review background information and develop the industry strategy.

The agenda for the meeting included the following topics:

- Discuss and validate the goals for a California pear industry sustainable practices program
- Review existing sustainable practice program frameworks and determine which best fits the industry's goals
- Discuss available best management practice checklists from UC and other sources
- Discuss interest level from other commodity groups to develop a multi-commodity sustainable practices program
- Discuss the potential level of financial resources that could be available to support a program
- Discuss next steps in the Program Development phase

The industry leadership team included six growers (one who also packs fresh pears), two pear processors, and four UC researchers and extension staff. (See Appendix 1 for the list of participants.)

## **Program Scope**

Based upon discussions regarding the current scope of a sustainable practices program, participants agreed to the following:

- The sustainable pear program will be a California-focused industry-wide program that will provide benefits to both individual growers and the industry itself. At this time, the program will not address sustainability aspects of packing/shipping or processing operations.
- The breadth of practice areas addressed in the program will be wide rather than focusing on just a few issues. This approach is consistent with other sustainable practice programs and the general trend of initiatives such as the Stewardship Index for Specialty Crops. The amount of content in the practice areas will evolve over time depending on available resources
- The California pear industry would like to show leadership amongst other regional pear industry organizations by developing a sustainable practices program.

### ***Program Benefits***

The potential benefit areas of implementing an industry-wide sustainability program were described as follows:

#### Industry Benefits

Based upon experiences in other sustainable practice programs, potential benefits for the pear industry were discussed and included:

#### Public Relations

- It would represent a proactive, grower-led initiative
- It would provide a framework to tell the industry's "good story" about pest management and environmental practices

#### Industry Capacity

- Experience and expertise resulting from design, development and implementation of a sustainable practices program
- Identification of grower education and outreach opportunities in low-scoring practices areas based upon analysis grower benchmark data

#### Regulatory Incentives

- Working collaboratively with regulatory agencies on programs improves understanding and dialog on environmental and social issues
- Ag waiver or regulatory relief as a result of sustainable practice program development

#### Market Incentives

- Industry-level source of sustainably grown fruit for interested retailers and foodservice companies

#### Grower Benefits

In addition to benefits to the industry, potential benefits for the individual grower were discussed and included:

#### Operational Cost Incentives

- Reduction in input costs due to implementation of additional best practices

- The USDA offers NRCS Environmental Quality Innovation Program (EQIP) and Conservation Security Program (CSP) cost-sharing programs with the potential of additional programs in recently approved Farm Bill

#### Private Incentives

- Some crop insurance and financial lending organizations are looking at growers who participate in sustainable programs as “lower risk” clients and offer discounts

#### Regulatory Incentives

- Ag waiver or regulatory relief as a result of sustainable practice program participation

#### Market Incentives

- Favorable contracts from packers or processors based upon market dynamics for sustainably grown fruit

It should be noted that market incentives have been slow to develop as consumers are still determining the value of a sustainable product category that will lie between conventional and organic products. This market situation has food packers and processors in a situation where price and/or contract premiums to growers are not yet commonplace.

### ***Collaboration with Other Tree Crop Associations***

Individual crop associations throughout the United States are at various stages of understanding how to address the sustainability trend and implement industry-wide sustainability programs. To their credit, the California pear industry is further along than many associations due to proactive industry leadership and market pressure felt by pear processors. Based upon the interest expressed by tree crop association executives contacted as part of the project research, there is an opportunity to work with other associations on a sustainable practice program framework.

The diagram below illustrates the concept that for various tree crops, there are a number of practices that will be similar (blue) in the practice areas within a sustainable practices program, but each crop will have practices specific (green) to their crop production operations. By working together to define the similar areas and practices, individual crop associations can pool resources and use an economy of scale to reduce the costs to develop a program. The practices framework would need to be flexible enough to accommodate crop-specific practices.

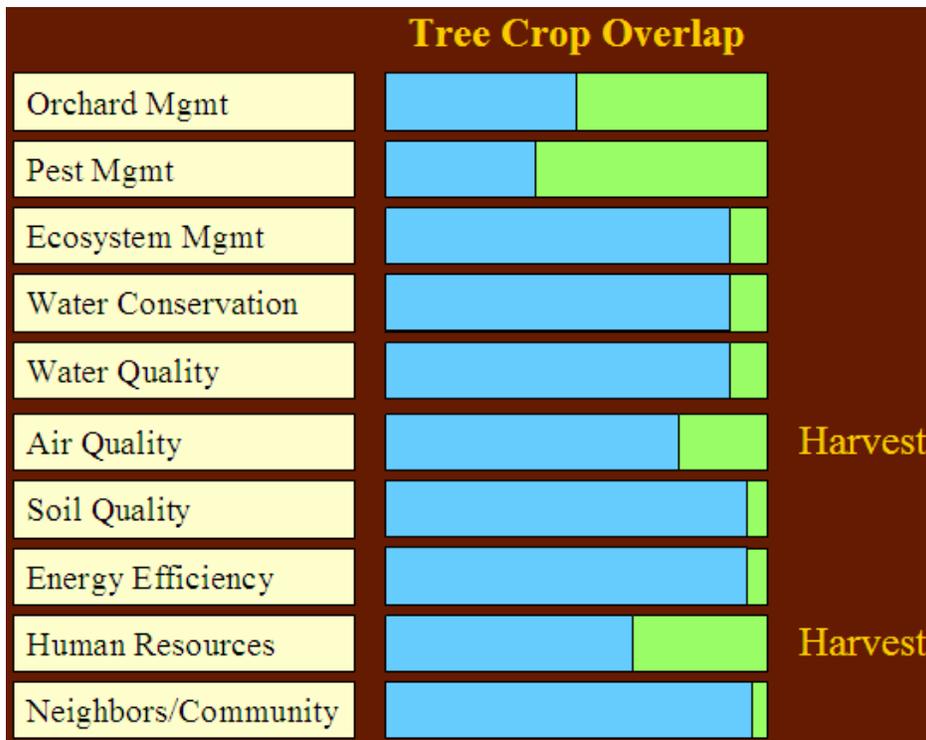
#### Similar Practice Examples:

- IPM fundamentals
- Irrigation management
- Nutrient management
- Orchard floor management

#### Crop-Specific Examples:

- Hand harvesting versus machine harvesting

- Crop protection strategies and target pests
- Soil erosion potential due to geography
- Air quality (i.e., dust) issues during harvest



A potential funding opportunity for a multi-commodity sustainable practices program through the CDFA Specialty Crop Block Grant program is described below.

### ***Program Funding***

The development and implementation of the program will be determined by the availability of internal and external funding. This component of the strategy will require creativity and flexibility by the PPMRF to react to new opportunities as they arise.

Funding sources will likely be a combination of PPMRF project funds and grant opportunities. The California winegrape industry has been quite successful in obtaining grant funding from such organizations as USDA Natural Resource Conservation Service, USDA Risk Management Agency, California EPA & DPR as well as “partnership” funding from PG&E. Their grant strategy has been to identify specific practice areas – water and air quality, pest management, energy efficiency, etc. – where improvement can be facilitated through the continued development of the self-assessment and education components of their Sustainable Winegrowing Program.

With resource protection and sustainability being at the top of many government agency and private foundation priority lists, there continue to be numerous funding opportunities that should be monitored for applicability.

As a result of activities during this 2008 PPMRF project, SureHarvest and GVC have identified two such opportunities and submitted two grant proposals to further the pear industry's pursuit of a sustainable practices program.

#### Western SARE

SureHarvest and GVC submitted a grant proposal for \$50,000 funding to the Western Sustainable Agriculture Research and Education (SARE) group entitled "Working Together to Benchmark and Incentivize Sustainable Pest Management with California Pear Farmers." SARE grants are used to increase knowledge about sustainable agricultural practices and to help farmers and ranchers adopt those practices.

The proposal essentially describes 2009 and 2010 activities defined by this 2008 PPMRF project. It focuses on the implementation of a benchmarking tool and reporting feedback process for IPM practices throughout the industry. (See Next Steps section below.)

Grant awards will be announced in the Spring of 2009.

Note: A copy of the SARE proposal is attached to this report.

#### CDFA Specialty Crop Block Grant

After a successful pre-proposal, SureHarvest and GVC were invited to submit a final proposal to CDFA in early December, 2008 for funding of the project "Specialty Crop Multi-Commodity Sustainable Practices Program." The concept behind the proposal is based upon discussions with several other tree fruit association executives as part of this 2008 PPMRF project.

Project funding would allow several interested commodity groups (one being pears) to more fully develop a strategy to design and implement a sustainable practices program customizable to their crops. This approach leverages the commonality in a number of sustainable practice areas across crops (see next section for further discussion).

Grant awards will be announced by January, 2009.

### ***Appropriate Practice Program Framework***

A review of existing sustainable practice program frameworks was conducted and reviewed at the strategy meeting. There are a number of formats that have been implemented by various organizations (e.g., Sustainable Winegrowing Program, SYSCO, Food Alliance, California citrus industry) and vary in complexity and breadth. Most importantly they differ in the effort and resources required to develop the practice list content and the relative ranking of good-to-best, least-to-most sustainable practices.

The following table lists the various types of program frameworks presented and the pros and cons of each from the perspective of the pear industry's objectives.

Framework Type	Pros	Cons
Yes/No	- Allows tracking of practices across industry	- Treats all practices equally, regardless of investment,

	<ul style="list-style-type: none"> <li>- Less expensive to develop</li> <li>- Likely would suffice for SYSCO</li> </ul>	risk, sustainability benefits
Positive Points (Central Coast Vineyard Team, California citrus industry)	<ul style="list-style-type: none"> <li>- Similar to Yes/No except a level of sustainability is tied to points awarded for practices</li> </ul>	<ul style="list-style-type: none"> <li>- Similar to Yes/No except a level of sustainability is tied to points awarded for practices</li> </ul>
4-Level Least-to-Most Sustainable (Sustainable Winegrowing Program, Lodi Workbook, Food Alliance)	<ul style="list-style-type: none"> <li>- Attempts to equate practices to reward "higher" performance</li> <li>- Widely accepted model</li> </ul>	<ul style="list-style-type: none"> <li>- Levels not truly equivalent across criteria</li> <li>- Subjective</li> <li>- More time and effort to implement</li> </ul>
5-Level Process Oriented (next generation SureHarvest model)	<ul style="list-style-type: none"> <li>- Better correlation of industry results to needed industry responses</li> <li>- Allows for flexibility in achieving goals at farm level (i.e., not prescriptive)</li> </ul>	<ul style="list-style-type: none"> <li>- Experimental</li> <li>- Investment needed likely comparable to 4-Level model</li> </ul>

After reviewing the pros and cons of the various approaches, the current resources available to develop a program, and the available practice checklists (see below), we would recommend a hybrid framework of Yes/No and 4-Level Least-to-Most Sustainable questions on practices. This will allow growers to benchmark where they are today and see what additional practices may lead to a higher level of sustainability.

### ***Available Practice Checklists and Tools***

The process of developing content for a sustainable practices program can vary in complexity from utilizing existing content to developing content from scratch. As discussed in the UC Researchers Interview section above, there are several practice areas that can be readily translated into the pear program. The Year-Round IPM Program Annual Checklist should be the first target.

Other existing sustainable practice programs are also a potential source of practice lists that can be incorporated into the pear program. Individuals associated with the following programs were contacted to determine if it is possible to use their content and if so, under what arrangements.

**Sustainable Winegrowing Program (SWP):** A component of the California Sustainable Winegrowing Alliance's (CSWA) mission is to share its experience of developing a sustainable practices program, with other crop associations, particularly in California. Based upon the specific request of the pear industry, the CSWA Board has recently agreed to share the SWP content with other groups using a no-fee licensing agreement where adequate acknowledgement of the content source is made. This will be an excellent resource for high-level content applicable to pears as well as winegrapes.

Food Alliance: The Food Alliance offers third-party certification for growers and processors who use their proprietary sustainable practice standards that have been developed for a number of crops, including pears. Discussions with the Food Alliance about the use of their pear standard hinged upon additional services being provided for certification. This did not seem to be an appropriate arrangement for the self-assessment approach being taken by the pear industry.

SYSCO Sustainable: The SYSCO Sustainable program is familiar to several PPMRF Board members because SYSCO has been in discussions with pear processors about using their certification standards with pear growers. The SYSCO standards were developed primarily as an IPM-based standard and have expanded to include several other crop production areas. Based upon discussions with Shane Sampels, SYSCO Senior Manager of Quality Assurance, the SYSCO program tries to be open and transparent with its standards and is fostering a move towards “standardized” standards to help growers and processors avoid “audit fatigue.” In that spirit, SYSCO does not have an issue with the pear industry using any part of their standards as long as appropriate acknowledgements are made. Pacific Coast Producers can help review SYSCO elements for inclusion based upon their supplier relationship with SYSCO.

The SWP and SYSCO Sustainable content sources should be actively pursued in the next phase of the pear program development

### ***Program Development Priority Areas***

Successful sustainable practice programs are built on the foundation of measuring improvement in practice areas over time. Data is collected and aggregated and feedback is provided to individual growers on their assessment and a comparison to industry averages. The assessment cycle continues over subsequent years and provides a means for growers to monitor their performance. The industry can also measure its collective performance to drive identifying educational needs in select practices and to report to outside interests to help tell the “good story.”

Pest management, water management, and nutrient management were deemed to be priorities for initial program development efforts. The following approach should be taken in addressing the areas:

#### **Pest Management Practices**

- Convert UC IPM Year-Round IPM Program checklist to discrete practices
- Work with UCCE to verify the conversion
- Review SYSCO Sustainable pest management practices and add significant practices accordingly to above list
- Review with grower leadership team and modify as needed

#### Water Management and Nutrient Management Practices

- Review UC ANR documents, SWP chapters, and SYSCO Sustainable document and create appropriate checklists
- Work with UCCE to verify the UC ANR document conversion
- Review with grower leadership team and modify as needed

#### Other Practice Areas

- Discuss with grower leadership team including several other practice areas (e.g., neighbors and community, air quality, energy efficiency) using SWP chapters
- Convert content to checklists
- Review with grower leadership team and modify as needed

Note: Per the program framework conclusions presented in the Appropriate Practice Program Framework section above, we will attempt to use where possible a least-to-most sustainable ranking of practices.

Once the initial practice checklists have been completed, a simple online survey tool should be introduced to growers as a means to collect a first set of benchmark data for the growers and the industry. This data can be aggregated in Excel for analysis and anonymous comparison reporting where a grower can see how they performed relative to their peers. This cycle can be repeated in subsequent years to measure performance improvements.

Note: The above steps are consistent with the “go-slow” approach voiced by growers during the 2007 PPMRF project. As funds become available, expanding the breadth and depth of practices should be pursued as well as a more sophisticated data capture and reporting mechanism.

### ***Historical Production Research in the Context of Sustainability***

One of the results of the 2007 project was to determine how to capture and convey the California pear industry’s “good story” that can be distilled from historical IPM and environmental activities. This project did not address public relation campaign strategies or planning, but an analytical tool was introduced to the leadership team that can help categorize previous years’ PPMRF-funded projects within a resource impact and sustainability framework.

SureHarvest has developed a process whereby crop associations use a compiled list of historical production research projects and funding amounts to qualitatively assess each project’s impact on the following resources: water, air, soil, wildlife, energy, worker, and consumer. In addition, the sustainability impact – economic, environmental, social – is also assessed. At the end of the process, the crop association has data to analyze its activities from a research theme and investment perspective. The exercise and results will also serve as a bridge between production research and the concept of sustainability, which will be helpful in illustrating to growers how sustainability fits into their orchard operations. Furthermore, the resulting data can also be used for discussions with the

public, government agencies, and UC researchers as well as to help guide future research funding decisions to address “holes” in a balanced research strategy.

The following is a sample of what the framework looks like with point values of 1, 5, and 10 representing low to high impact potential.

Project Name	Project #	Area	Year	\$ Amt	Resource Affected							Sustainability Impact			
					Water	Air	Soil	Wildlife	Energy	Worker	Consumer	Economic	Environ	Social	
Development of cost effective pheromone mating disruption for codling moth		IPM	2007		5	5		5		5	1		5	10	1
Use of platforms for orchard operations normally performed from ladders		HVST	2007							10			5	1	10
Efficacy of new reduced-risk codling moth		IPM	2007		5	5		5		5	1			10	5
Monitoring and control of katydids		IPM	2007		5	5		5		5	1			10	5
Developing an educational outreach program to reduce outside sources of orchard pests		IPM	2006		5	5		5		5	1		5	10	5

## Conclusions and Recommendations

The project resulted in the following going-forward strategy:

### Strategy

- Begin capturing grower self-assessment data on practices. A high percentage of grower participation is critical for industry-wide claims.
- Utilize existing checklists from UC sources, the Sustainable Winegrowing Program, and components of the SYSCO Sustainable Program to develop and implement an initial pear sustainable practices program.
- Add additional practice areas and practices to the program as funding allows.
- Due to the relatively small number of growers in the industry, utilize a combination of a simple online survey tool and data aggregation approach to generate benchmark data for growers and the industry.
- Monitor and participate in other specialty crop sustainability initiatives to ensure pear industry representation and possible funding opportunities. Examples: Stewardship Index, Multi-Commodity Sustainable Practices Program
- Monitor activities in the buyer community to anticipate sustainability documentation or verifications from pear suppliers

The recommended activities for 2009 will begin to implement the strategy and the need to start the full cycle of a sustainable practices program on a small scale rather than building out the entire program content (Phase II in Figure 1) and then implementing the program. Subsequent projects can back-fill additional content and utilize more automated implementation and analysis tools.

### Next Steps

The following are recommended next steps to implement the pear industry sustainable practices program strategy.

1. Utilize the following existing “open source” practice lists to develop the initial practices program content:

- a. UC IPM Year-Round IPM program checklist
  - b. Several non-pest management chapters from the Sustainable Winegrowing Program
  - c. SYSCO Sustainable program (as deemed necessary)
2. Convene a grower leadership team to help finalize the list of practice areas and practices
  - a. Include UCCE as a participant
3. Utilize a low-cost online survey tool to launch a grower self-assessment campaign
  - a. Aggregate survey results in Excel tool
  - b. Generate initial industry performance benchmark data
  - c. Provide comparison reports to growers to measure their performance relative to the industry
4. Actively engage in cross-commodity sustainable practice program development initiatives
  - a. Stewardship Index for Specialty Crops (development of sustainability metrics)
  - b. Multi-Commodity Sustainable Practices Program (pending CDFA grant)
5. Continue pursuing grant funding opportunities to build out the practice program content
6. Analyze historical pear industry production research activities from a sustainability perspective

Based upon the sustainable practice program development methodology shown in Figure 1, the pear industry should pursue activities in Phase 2: Program Design and Content Development and Phase 3: Implementation for a limited number of practice areas during 2009 to help them reach their goal of being a California crop that can tell and demonstrate their “good story.”

## **Acknowledgements**

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## APPENDIX 1: Strategic Planning Meeting Participants

The following pear industry members participated in the meeting:

Name	Organization	Group
Chuck Baker	Chuck Baker's Ranch	Grower
Doug Hemly	Greene & Hemly	Grower + Shipper
Diane Henderson	Henderson Rohner Orchards	Grower
Michael Hildreth	Hildreth Farms Inc.	Grower
Tim Norgard	Norgard Farms, Inc.	Grower
David Weiss	Bella Vista Farming Company	Grower
Jim Adaskaveg	UC Riverside	UC
Chuck Ingels	UCCE Sacramento County	UC
Bob Van Steenwyk	UCCE - UC Berkeley	UC
Lucia Varela	UCCE Sonoma County	UC
Jerry Cordy	Pacific Coast Producers	Processor
Dan Winiecke	Sabroso	Processor
Bob McClain	CPAB, PPMRF	Project Sponsor

The meeting was facilitated by Andrew Arnold and Dan Sonke from SureHarvest and Holly King from GVC.