# Report: California Pear Sustainability Practices Survey

From June through November 2009, SureHarvest Inc. conducted a survey of the 56 California pear growers on record regarding their adoption of Best Management Practices related to several key areas of "sustainability." The practices surveyed were identified by a committee of California pear growers, handlers (packers and processors), crop consultants, and representatives of the California Pear Advisory Board and the Pear Pest Management Research Fund. While definitions of sustainability can differ dramatically between various advocates of different aspects of sustainable agriculture, for the purposes of this effort sustainability was defined as:

The concept and practice of balancing economic prosperity, environmental stewardship and social responsibility, so they together lead to an improved quality of life for future generations and ourselves.

Thus, the best practices assembled for this survey included practices related to:

- General Farm Management
- Integrated Pest Management
- Soil & Nutrient Management
- Energy Management
- Water Management
- Ecosystem Management
- Employer Practices

The practices included drew heavily on the University of California's *Pear Year-round IPM Program Annual Checklist* for the Integrated Pest Management section and the SYSCO Farm/Ranch IPM/Sustainable Audit Checklist v09.01 since SYSCO is a major purchaser of California pears not entering the fresh fruit market.

This report gives the percentage of responses given to each question asked in the survey. (The report is set up such that each grower can have their answer put in next to the cumulative industry responses. In the coming months, we intend to return a confidential report to each grower with their own information given in the first field after each question.) We had a response rate of 66%.

It is worth noting that the percentage of adoption of most practices in this document is quite high – well above the mere majority. This is especially true of the Integrated Pest Management section. Some of the soil and irrigation management practices have lower rates of adoption, but this may reflect the incredible longevity of pear orchards which can make certain infrastructure improvements difficult. Similarly, ecosystem management responses are low. It may be worthwhile for these areas to be researched further over the coming years to get a clearer picture of the actual practices being implemented in these areas.

In general, the adoption rate of sustainability practices overall is impressive. In the past decade, the California Pear industry has been embattled. A community which once had 300 pear growers now has less than 60. Perhaps this report reflects the true sustainability of the surviving growers.

### Introduction

### 1.1The number of acres (of pears) that I

Your Response:	Community response:		
Own is:	Own-118.52	Manage-233.96	
Manage:			

### 2. General Farm Management

2.1Have you applied biosolids (treated sewage sludge) on your orchard in the last year (check with your shipper/packer or processor customer for limitation on this subject. Many of their customers do not allow the use of biosolids.)

Your Response:	Community response:		
	Yes-0	No-100%	

### 2.2 Are there any genetically modified pear trees in your orchard(s)?

Your Response:	Community response:		
	Yes-0	No-100%	

# 2.3 In the past year, have you burned waste in your orchard(s) (with the exception of diseased/infested pruning's or materials you are legally mandated to burn such as certain pesticide containers)?

Your Response:	Community response:		
	Yes-11%	No-89%	

#### 2.4 In the past year have you, chopped all orchard pruning's?

Your Response:	Community response:		
	Yes-91%	No-9%	

# 2.5 If you answered "no" to question 4, in the past year, have you chopped some orchard prunings?

Your Response:	Community response:		
	Yes-36%	No-0	N/A-70%

#### 2.6 If you removed an orchard in the past year, were the trees chipped?

Your Response:	Community response:		
	Yes-18%	No-12%	N/A-70%

Comment: Pear orchards are rarely removed, hence the 70% not applicable answer.

# 2.7 In the past year, did you recycle materials used in orchard operations such as plastic containers, bags, etc.?

Your Response:	Community response:		
	Yes-66%	No-34%	

### 2.8 In the past year, did you maintain records of type and amount of recycled materials?

Your Response:	Community response:		
	Yes-11%	No-86%	

Comment: there may be an opportunity to research whether there are benefits to growers in tracking this data.

# 2.9 In the past year, did you conduct or allow researchers to conduct on-farm research on your orchard(s)?

Your Response:	Community response:		
	Yes-57%	No-37%	N/A-6%

### 2.10 In the past year, did you financially support on-farm research projects?

Your Response:	Community response:		
	Yes-59%	No-19%	N/A-22%

Comment: in actuality, 100% of California pear growers support research financially through the California Pear Advisory Board.

# 2.11 If you had research on your farm, was the research conducted with statistically valid methodologies?

Your Response:	Community response:		
	Yes-59%	No-18%	N/A-22%

### 2.12 In the past year, did you participate in any on-site environmental and/or social practice audit programs(s)? If so, please list.

Your Response:	Community response:		
	Yes-83%	No-17%	

Comment: Several participants had been involved in "Fish Friendly Farming Practices," audits, kept Safety Training Records, Pesticide Records and EQUIP.

### 3. Pest Management: Dormant/delayed-dormant season activities

# 3.1 During dormant season, beating tray samples were taken for pear psylla adults at the recommended rate of 100 samples per 20-acre block.

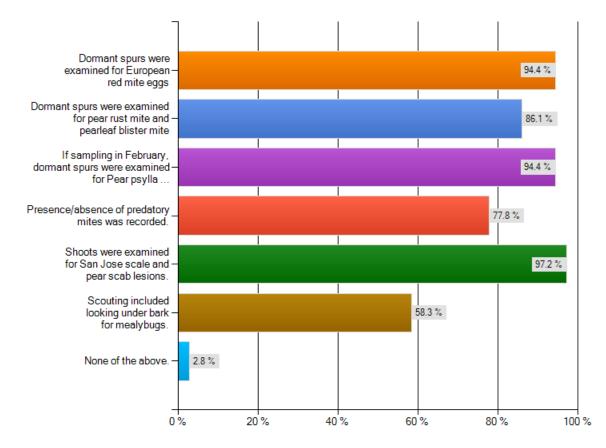
Your Response:	Community response:		
	Yes-86%	No-8%	Other-6%

#### 3.2 During the dormant season...

Practice:	Your Response:
Dormant spurs were examined for European red mite	

Dormant spurs were examined for pear rust mite and	
If sampling in Feb. dormant spurs were examined for	
Presence/absence of predatory mites was recorded	
Shoots were examined for San Jose scale and pear	
Scouting included looking under bark for mealybugs	
None of the above	

### During the dormant season:



3.3 In areas where frost and russetting are likely, weeds and ground cover were eliminated before bloom. In areas where frost and russetting are less likely, resident vegetation or cover crop was mowed before bloom.

Your Response:	Community response:		
	Yes-90%	No-8%	N/A-3%

# 3.4 My orchard is in a potentially low chilling area and I monitored hours during dormant season for chilling requirement.

Your Response:	Community response:		
	Yes-47%	No-47%	N/A-6%

Comment: it appears respondents may have answered "no" (regarding their location outside of a low chilling area) when "N/A" would have been appropriate.

### 4. Pest Management: Bloom Season activities (green tip to petal fall)

### 4.1 Scouting activities during the past year were done by a licensed Pest Control Adviser.

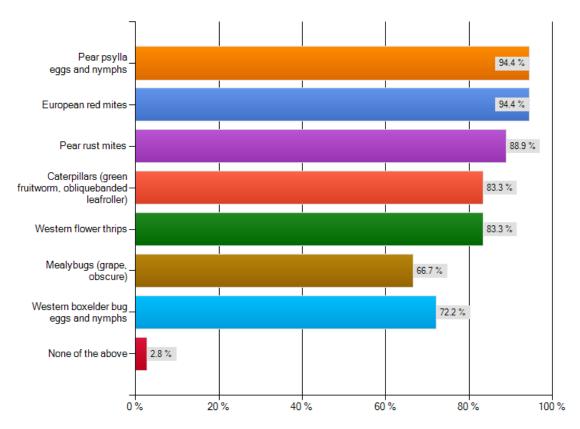
Your Response:	Community response:		
	Yes-100%	No-0	

### 4.2 Scouting activities during the past year were done by the farmer or farming staff.

Your Response:	Community response:		
	Yes-51%	No-43%	N/A-6%

### 4.3 During bloom, flower clusters were examined for:

Practice:	Your Response:
Pear psylla eggs and nymphs	
European red mites	
Pear rust mites	
Caterpillars (green fruitworm, obliquebanded leafroller)	
Western flower thirps	
Western boxelder bug eggs and nymphs	
None of the above	



During bloom, flower clusters were examined for:

4.4 Pheromone traps were placed in the orchard for codling moth and other lepidopterous pests in March or as conditions became favorable.

Your Response:	Community response:		
	Yes-97%	No-3%	

4.5 Consperse stink bug is monitored in early April or as conditions become favorable.

Your Response:	Community response:		
	Yes-86%	No-9%	N/A-6%

### 4.6 Pheromone traps were checked at least weekly and counts recorded.

Your Response:	Community response:		
	Yes-94%	No-6%	

# 4.7 Mating disruption for codling moth was used and pheromone dispensers were placed in the orchard biofix.

Your Response:	Community response:		
	Yes-94%	No-6%	

# 4.8 Weather conditions are monitored during Spring for hours and temperature of wetting to forecast pear scab.

Your Response:	Community response:		
	Yes-100%	No-0	

# 4.9 If pear scab was treated, leaves and emerging fruit are checked for pear scab lesions after an infection period to assess the effectiveness of treatment.

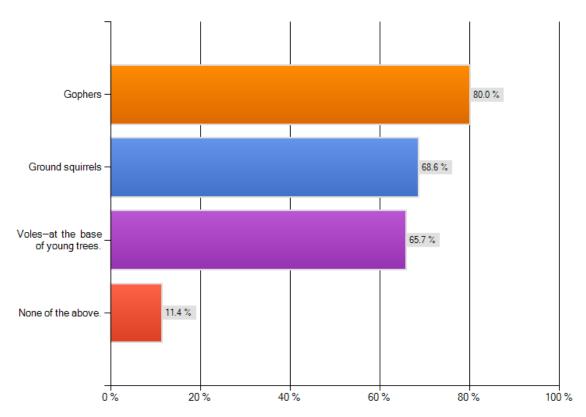
Your Response:	Community response:		
	Yes-100%	No-0	

# 4.10 Weather conditions are monitored during Spring for degree hours and precipitation to forecast fire blight.

Your Response:	Community response:		
	Yes-94%	No-6%	

4.11 At least twice in the past year the orchard has been monitored for the following vertebrate pests:

Practice:	Your Response:
Gophers	
Ground Squirrels	
Voles- at base of young trees	
None of the above	



### At least twice in the past year the orchard has been monitored for the following vertebrate pests:

### 5. Pest Management: Fruit development period activities (petal fall to harvest)

### 5.1 From petal fall to harvest, scouting was done at least weekly.

Your Response:	Community response:		
	Yes-100%	No-0	

### 5.2 From petal fall to harvest, scouting was done at least every two weeks.

Your Response:	Community response:		
	Yes-41%	No-18%	N/A-41%

Comment: in light of the results of 5.1, this answer appears to be the result of confusion caused by a poorly worded option in the online survey.

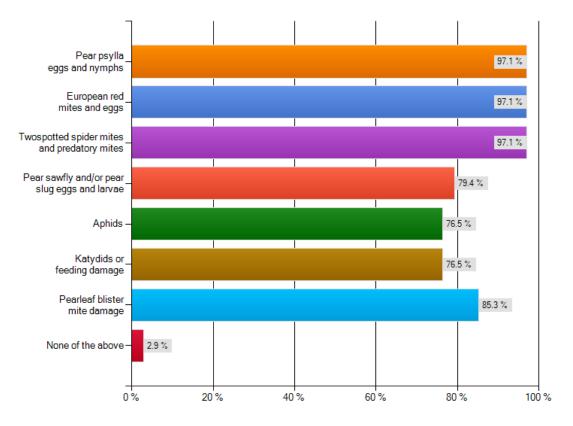
### 5.3 From petal fall to harvest, scouting was done less than every two weeks.

Your Response:	Community response:		
	Yes-5%	No-59%	N/A-36%

Comment: in light of the results of 5.1, this answer appears to be the result of confusion caused by a poorly worded option in the online survey.

### 5.4 From petal fall to harvest, leaf samples were taken and examined for:

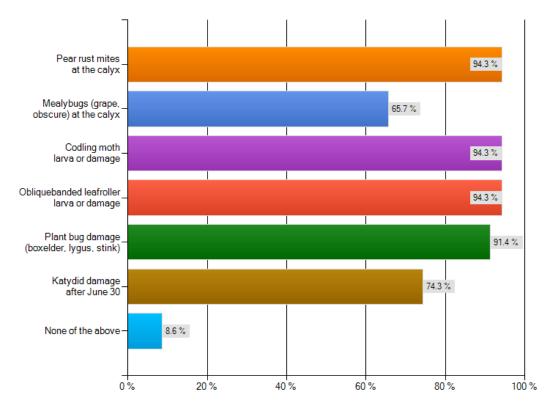
Practice:	Your Response:
Pear psylla eggs and nymphs	
Europen red mites and eggs	
Twospotted spider mites and predatory mites	
Pear sawfly and/or pear slug eggs and larvae	
Aphids	
Katydids or feeding damage	
Pearleaf blister mite damage	
None of the above	



#### From petal fall to harvest, leaf samples were taken and examined for:

### 5.5 From petal to harvest, fruit or shoots were sampled for:

Practice:	Your Response:
Pear rust mites	
Mealybugs (grape, obscure) at the calyx	
Codling moth larva or damage	
Plant bug damage (boxelder, lygus, stink)	
Katydid damage after June 30	
None of the above	



### From petal fall to harvest, fruit or shoots were sampled for:

# 5.6 Degree days were monitored and recorded for codling moth beginning with biofix and traps are monitored throughout season through mid-September.

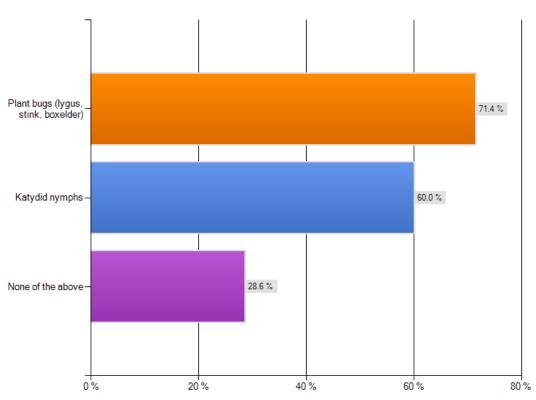
Your Response:	Community response:		
	Yes-97%	No-0	N/A-3%

#### 5.7 At 800 to 900 degree-days from biofix fruit is monitored for damage.

Your Response:	Community response:		
	Yes-88%	No-6%	N/A-6%

### 5.8 Scouting included checking cover crops and weeds for:

Practice:	Your Response:
Plant bugs (lygus, stink, boxelder)	
Katydid nymphs	
None of the above	



### Scouting included checking cover crops and weeds for:

Comment: Some had no crop cover or sprayed and mowed weeds

#### 5.9 During rattail bloom weather conditions were monitored for fire blight.

Your Response:	Community response:		
	Yes-97%	No-3%	

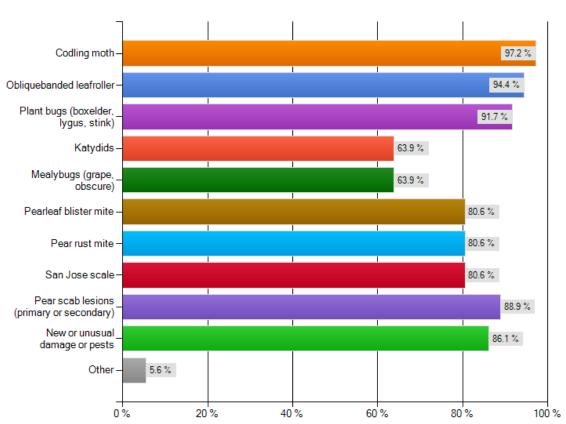
# 5.10 During the season a survey for the presence of Armillaria root rot (oak root fungus or other soil borne diseases) was done.

Your Response:	Community response:		
	Yes-39%	No-59%	N/A-3%

### 6. Pest Management: Harvest Activities

### 6.1 During harvest fruit was checked for feeding damage caused by:

Practice:	Your Response:
Codling moth	
Obliquebanded leaftroller	
Plant bugs (boxelder, lygus,stink)	
Katydids	
Mealybugs (grape, obscure)	
Pearleaf blister mite	
San Jose scale	
Pear scab lesions (primary or secondary)	
New or unusual damage or pests	
Other	

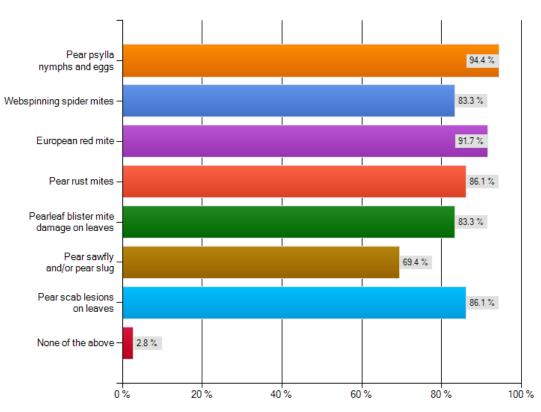


### During harvest fruit was checked for feeding damage caused by:

### 7. Pest Management: Postharvest Activities

### 7.1 Top shoots were checked for:

Practice:	Your Response:
Pear psylla nymphs and eggs	
Webspinning spider mites	
European red mite	
Pear rust mites	
Pearleaf blister mite damage on leaves	
Pear sawfly and/or pear slug	
Pear scab lesions on leaves	
None of the above	



#### Top shoots were checked for:

### 7.2 Fruit left on tree was sampled for coding moth and/or damage.

Your Response:	Community response:		
	Yes-80%	No-19%	

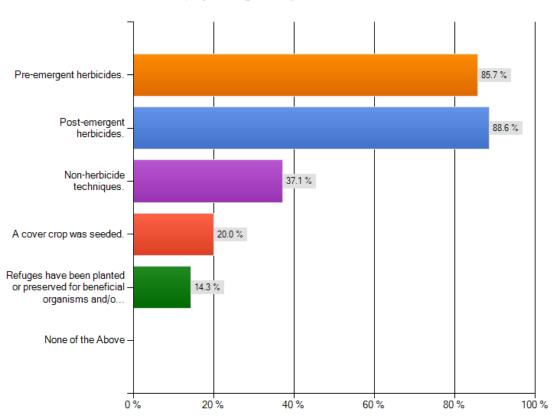
### 8.Pest Management: Orchard Floor Vegetation

### 8.1 Do you have an orchard floor vegetation management plan?

Your Response:	Community response:		
	Yes-97%	No-3%	

### 8.2 If so, my management plan includes:

Practice:	Your Response:
Pre-emergent herbicides	
Post-emergent herbicides	
Non-herbicide techniques	
A cover crop was seeded	
Refuges have been planted or preserved for	
beneficial	
None of the above	



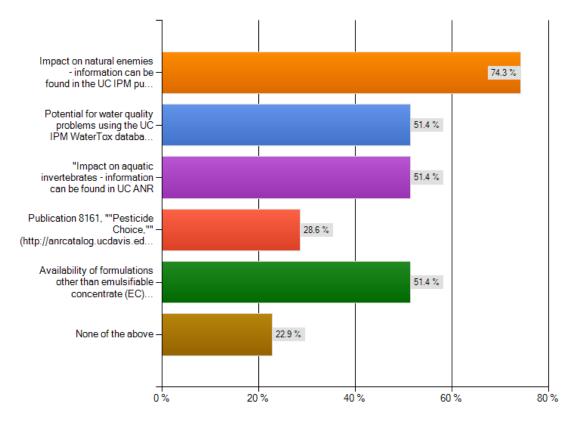
#### If so, my management plan includes:

### 9. Pest Management: Pesticide Application Tools

### 9.1 For commonly applied pesticides, the following data sources have been collected:

Practice:	Your Response:
Impact on natural enemies-information can be found	
Potential for water quality problems using the UC	
"Impact on aquatic invertebrates-information can	
Publication 8161. "Pesticide Choice."	
Availability of formulations other than emulsifiable	
None of the above	

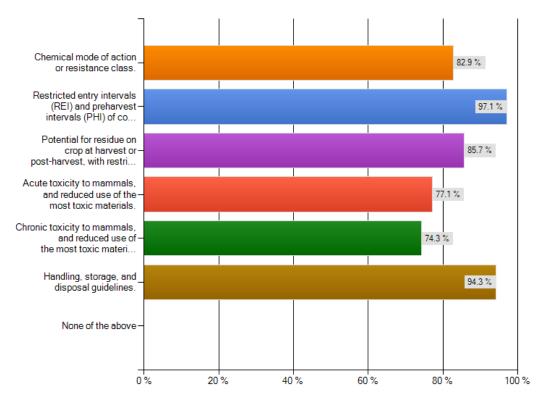
### For commonly applied pesticides, the following data sources have been collected:



### 9.2 For pesticides applied in the past year, the following data sources have been collected:

Practice:	Your Response:
Chemical mode of action or resistance class	
Restricted entry intervals (REI) and preharvest	
Potential for residue on crop at harvest or post-harvest	
Acute toxicity to mammals, and reduced use of the	
Chronic toxicity to mammals, and reduced use of the	
Handling, storage, and disposal guidelines	
None of the above	





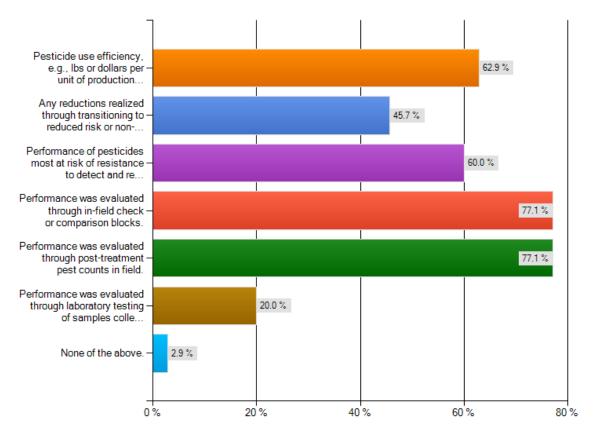
9.3 Complete, legible pesticide application records are kept available and maintained for at least three years. Records include: Date, Time, Location, Material applied, Rate, Applicator, Application method, Weather conditions: estimated or measured wind speed.

Your Response:	Community response:		
	Yes-92%	No-8%	

### 9.4 At the end of the season, pesticide records are reviewed for the following:

Practice:	Your Response:
Pesticide use efficiency, e.g., lbs or dollars per unit	
Any reductions realized through transitioning to	
Performance of pesticides most at risk of resistance	
Performance was evaluated through in-field check	
Performance was evaluated through post-treatment	
Performance was evaluated through laboratory testing	
None of the above	





9.5 Staff members most directly responsible for pest management have met the minimum continuing education requirements for pesticide applicator licensing/certification.

Your Response:	Community response:		
	Yes-97%	No-3%	

9.6 Staff members most directly responsible for pest management have participated in IPM/sustainable ag training events in the previous year beyond minimum legal requirements. Options include DPR continuing education events related to IPM, sustainable ag/IPM.

Your Response:	Community response:		
	Yes-86%	No-11%	N/A-3%

#### 9.7 Does your operation maintain organized legal documentation pertaining to pesticide usage?

Your Response:	Community response:		
	Yes-97%	No-0	N/A-3%

# 9.8 Does your operation maintain organized records on pesticide applicator licensing/ certification for its applicators?

Your Response:	Community response:		
	Yes-92%	No-6%	N/A-3%

# 9.9 Does your operation maintain organized legal documentation pertaining to worker protection standard/ right-to-know material and availability of personal protective equipment (PPE) for pesticides used?

Your Response:	Community response:		
	Yes-94%	No-3%	N/A-3%

#### 9.10 In the past two years, has your operation been cited for chemical application violations?

Your Response:	Community response:		
	Yes-31%	No-69%	

#### 9.11 If yes, have all the citations been resolved or in the process of being resolved?

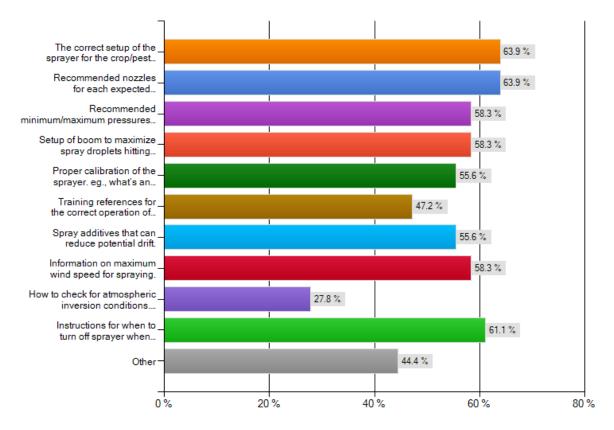
Your Response:	Community response:		
	Yes-62%	No-8%	N/A-31%

### 10. Pest Management: Drift Management Plan

# 10.1 In the past year, your operation has written or updated a drift management plan containing the following information:

Practice:	Your Response:
The correct setup of the sprayer for the crop/pest	
Recommended nozzles for each expected	
Recommended minimum/maximum pressures	
Setup calibration of the spray droplets hitting	
Proper calibration of the sprayer. e.g., what's an	
Training references for the correct operation of	
Spray additives that can reduce potential drift.	
Information on maximum wind speed for spraying.	
How to check for atmospheric inversion conditions.	
Instructions for when to turn off sprayer when	
Other	

### In the past year, your operation has written or updated a drift management plan containing the following information:



# 10.2 In the past three years, has the operation been cited for off-target application of agrochemicals (i.e., drift)?

Your Response:	Community response:		
	Yes-8%	No-89%	N/A-3%

### 10.3 If so, have you documented the response internally?

Your Response:	Community response:		
	Yes-20%	No-80%	

### 11. Soil & Nutrient Management

#### 11.1 In the past year, have you developed or updated a written nutrient management plan?

Your Response:	Community response:		
Yes	Yes-43%	No-49%	N/A-9%

# 11.2 In the past year, have you taken or done tissue nutrient testing at least once to determine macro-and micronutrient levels in the tree tissues?

Your Response:	Community response:		
	Yes-75%	No-19%	N/A-6%

# 11.3 Does your nutrient management plan use previously recorded nitrogen use efficiency rates (e.g., total N per acre) to forecast orchard nutrient needs?

Your Response:	Community response:		
	Yes-75%	No-19%	N/A-6%

# 11.4 In the past year, were your application rates kept at or below university recommended rates, as correlated to your tissue testing results?

Your Response:	Community response:		
	Yes-80%	No-11%	N/A-9%

#### 11.5 Do you track and record information on nutrient applications made to your orchards?

Your Response:	Community response:		
	Yes-86%	No-14%	

#### 11.6 Do you maintain nutrient application records for a minimum of three years?

Your Response:	Community response:		
	Yes-86%	No-14%	

#### 11.7 Do you use fertigation technology to apply nutrients?

Your Response:	Community response:		
	Yes-42%	No-8%	N/A-31%

### 11.8 Does your operation maintain records pertaining to nutrient applications?

Your Response:	Community response:		
	Yes-86%	No-11%	N/A-3%

#### 11.9 Have you tested soil organic matter in the last five years?

Your Response:	Community response:		
	Yes-58%	No-42%	

#### 11.10 Have you tested soil salinity levels in the past five years?

Your Response:	Community response:		
	Yes-42%	No-56%	N/A-3%

# 11.11 Are the row middles of your orchard maintained in resident vegetation or cover cropped (discing of row middles is not done every year, but only to correct occasional problems)?

Your Response:	Community response:		
	Yes-86%	No-11%	N/A-3%

# 11.12 In the past two years, have you added soil organic matter amendments (eg. compost, mulch, or composted manure)?

Your Response:	Community response:		
	Yes-17%	No-83%	

11.13 The farm property outside of the orchard has no visible erosion, OR erosion potential is being reduced or corrected through one or more of the following techniques: windbreaks, terraces, cover crops, mulches, contours, managed drainage, butter or filter strips, minimum tillage.

Your Response:	Community response:		
	Yes-77%	No-14%	N/A-9%

11.14 Orchard(s) has no visible erosion, OR erosion potential is being reduced or corrected through one or more of the following techniques: terraces, cover crops, mulches, contours, managed drainage, buffer or filter strips, minimum tillage.

Your Response:	Community response:		
	Yes-83%	No-14%	N/A-3%

### 12. Energy Management

# 12.1 In the past year, have you developed or updated an annual energy management plan for your orchard(s)?

Your Response:	Community response:		
	Yes-17%	No-83%	

#### 12.2 Do you track and record energy inputs for your orchard operations?

Your Response:	Community response:		
	Yes-61%	No-39%	

#### 12.3 Do you track electrical power usage for your orchard operations?

Your Response:	Community response:		
	Yes-69%	No-30%	

### 12.4 Do you track fuel usage for your orchard operations?

Your Response:	Community response:		
	Yes-78%	No-22%	

# 12.5 Do you use previously recorded energy efficiency rates (e.g., total kwH per acre) in your energy management plan?

Your Response:	Community response:		
	Yes-23%	No-77%	

# 12.6 In the past year, did you use alternative fuels for vehicles used in at least some of your orchard operations?

Your Response:	Community response:		
	Yes-3%	No-97%	

#### 12.7 In the past year, did you generate solar energy in your operation?

Your Response:	Community response:		
	Yes-8%	No-92%	

### 13. Water Management

### 13.1 In the past year, have you written or updated a water management plan for your orchard(s)?

Your Response:	Community response:		
	Yes-39%	No-62%	

### 13.2 In the past year, did you track and record information on irrigation applications made to your orchard(s)?

Your Response:	Community response:		
	Yes-83%	No-17%	

### 13.3 Does your operation use microirrigation on a majority of its pear orchard(s)?

Your Response:	Community response:		
	Yes-28%	No-69%	N/A-3%

# 13.4 If your operation uses flood/ furrow irrigation, was the orchard(s) laser leveled prior to planting?

Your Response:	Community response:		
	Yes- 2%	No-27%	N/A-62%

#### 13.5 Do you use soil moisture monitoring devices?

Your Response:	Community response:		
	Yes-47%	No-8%	N/A-31%

#### 13.6 Do you use an evapotranspiration model to schedule irrigations?

Your Response:	Community response:		
	Yes-20%	No-80%	

#### 13.7 In the past year, have you tested conveyed irrigation water annually for nutrients, pH and EC?

Your Response:	Community response:		
	Yes-25%	No-72%	N/A-3%

### 13.8 In the past five years, have you sampled well water used for irrigation for nutrients, pH and EC?

Your Response:	Community response:		
	Yes-43%	No-46%	N/A-11%

#### 13.9 In the past year, has your irrigation water been tested for bacterial levels?

Your Response:	Community response:		
	Yes-31%	No-69%	

# 13.10 Do you have a policy to not use "gray" water/effluent from sewage facilities as irrigation water?

Your Response:	Community response:		
	Yes-64%	No-27%	N/A-8%

### 13.11 Are flow meters installed on at least some of your pumps?

Your Response:	Community response:		
	Yes-45%	No-56%	

#### 13.12 If so, did you record your water usage volume?

Your Response:	Community response:		
	Yes-48%	No-44%	N/A-8%

### 13.13 Have you done a pump efficiency test in the past five years?

Your Response:	Community response:		
	Yes-61%	No-39%	

### 14. Ecosystem Management

14.1 Have you converted any environmentally sensitive areas within your orchard(s) to pear production within the past three years?

Your Response:	Community response:		
	Yes-0	No-100%	

14.2 Do you have a current map of your orchard(s) identifying environmentally sensitive areas? Map should include: surface water bodies, wetlands, wellheads, endangered or threatened species habitat, chemical storage sites, drainage areas, fuel tanks, on-site dwellings.

Your Response:	Community response:		
	Yes-41%	No-58%	

#### 14.3 Does your map delineate buffer zones around sensitive areas?

Your Response:	Community response:		
	Yes-26%	No-51%	N/A-23%

# 14.4 Are sensitive areas marked by signs cautioning applicators and others against activities which might negatively impact these areas?

Your Response:	Community response:		
	Yes-6%	No-77%	N/A-17%

#### 14.5 Are filter strips established around riparian or drainage areas of your property(ies)?

Your Response:	Community response:		
	Yes-48%	No-44%	N/A-8%

### 14.6 Are sensitive areas fenced off?

Your Respo	onse:	Community response:		
		Yes-9%	No-71%	N/A-20%

# 14.7 In the past three years, have you identified and taken action to remove invasive plants on your property?

Your Response:	Community response:		
	Yes-69%	No-29%	N/A-3%

### 14.8 Is a portion of your property maintained in an undeveloped state?

Your Response:	Community response:		
	Yes-42%	No-58%	

### 14.9 In the past 12 months have you visually monitored sensitive areas in your orchard(s) and recorded the status and any corrective actions you have taken to protect the area?

Your Response:	Community response:		
	Yes-35%	No-47%	N/A-18%

#### 14.10 Are pesticides stored on the farm in a locked containment area?

Your Response:	Community response:		
	Yes-97%	No-0	N/A-3%

#### 14.11 Are pesticides stored within a secondary containment device or structure?

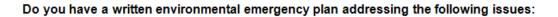
Your Response:	Community response:		
	Yes-50%	No-47%	N/A-3%

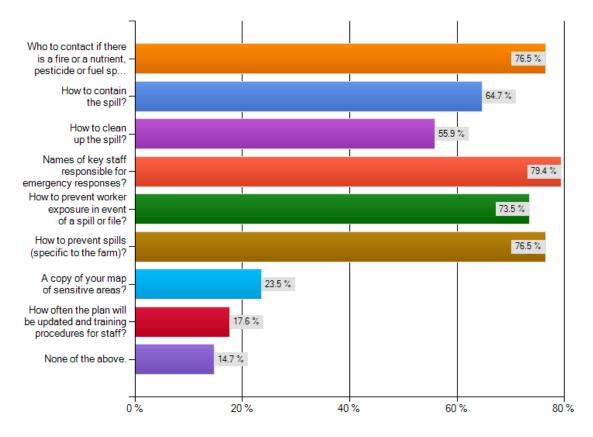
#### 14.12 Is a spill response/cleanup kit in the pesticide storage facility?

Your Response:	Community response:		
	Yes-53%	No-44%	N/A-3%

### 14.13 Do you have a written environmental emergency plan addressing the following issues?:

Practice:	Your Response:
Who to contact if there is a fire or nutrient, pesticide	
How to contain the spill?	
How to clean a spill?	
Names of key staff responsible for emergency	
How to prevent worker exposure in event of a spill or	
A copy of your map of sensitive areas?	
How often the plan will be updated and training	
None of the above	





### 14.14 Have you experienced an environmental emergency in your orchard operations within the past three years?

Your Response:	Community response:		
	Yes-6%	No-94%	

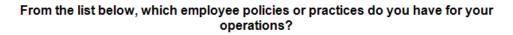
### 15. Employer Practices

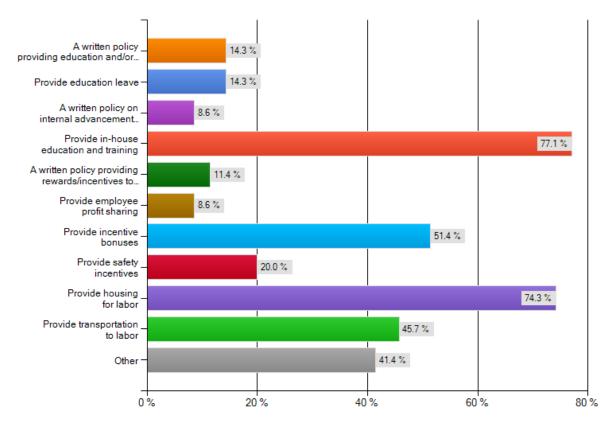
### 15.1 Do you have employees in your orchard operations? If no, skip the remainder of this section?

Your Response:	Community response:		
	Yes-97%	No-0	N/A-3%

### 15.2 From the list below, which employee policies or practices do you have for your operations?:

Practice:	Your Response:
A written policy providing education and/or	
Provide education leave	
A written policy on internal advancement	
Provide in-house education and training	
A written policy providing rewards/incentives to	
Provide employee profit sharing	
Provide incentive bonuses	
Provide safety incentives	
Provide housing for labor	
Provide transportation to labor	
Other	





# 15.3 Does your operation maintain organized legal documentation pertaining to employee health and safety?

Your Response:	Community response:		
	Yes-80%	No-18%	N/A-3%