

# ANNUAL PERFORMANCE REPORT

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## COVER PAGE

**XX STATE DEPARTMENT OF AGRICULTURE**

**1<sup>st</sup> ANNUAL REPORT**

**AMS Agreement: AM170100XXXXG###**

## PROJECT COORDINATOR

Tom Jones; Manager, Marketing and Development Branch

Division of Agriculture

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**Original Submission:** December 29, 2018

**Revised Submission:** June 1, 2022

## TABLE OF CONTENTS

Cover Page .....	1
Grant Administration .....	3
Project 1: Developing RNA Vaccines to Manager Pepino Mosaic Virus (1 <sup>st</sup> Annual) .....	3
Project 2: Farm-to-School: Building New Market for Specialty Crops in Schools (1st Annual) .....	9
Project 3: Measuring Irrigation Water Quality on Fruit and Vegetable Farms (1st Annual) .....	12
Project4: Enhancing Sustainable Specialty Crop Production (1st Annual).....	16
Project 5: Establish a Superberry Market in the State (1st Annual) .....	20
Project 6: Increase Local Fruit and Vegetable Production at the Local Markets (Final Report).....	23

## GRANT INFORMATION

### AGREEMENT

**AMS Agreement Number:** AM170100XXXXG###

**Period of Performance:**

**Start Date:** 9/30/2017

**End Date:** 9/29/2020

**Award Amount:** \$412,268.00

### RECIPIENT

**Recipient Organization Name:** XX State Department of Agriculture

**Recipient's Point of Contact:**

**Name:** Tom Jones; Manager, Marketing and Development Branch

**Phone:** (555)222-1234

**Email:** Tom.Jones@XXX.gov

### REPORT

<b>Report Type:</b>	1 <sup>st</sup> Annual Report
<b>Date Report is Submitted:</b>	12/28/2018

## GRANT ADMINISTRATION

<b>Amount Requested</b>	<b>Direct and/or Indirect Expended to Date</b>
Direct: \$344,201.00	Direct: \$104,406.31
Indirect: \$4,544.00	Indirect: \$2,342.00
(e.g., If no Indirect was requested include "\$0" or leave blank)	

## ANNUAL PROJECT REPORT TEMPLATE

### PROJECT INFORMATION

<b>Project Title</b>	Developing RNA Vaccines to Manager Pepino Mosaic Virus
<b>Recipient Organization Name:</b>	Sunlit University
<b>Recipient's Project Contact Name:</b>	John Smith
<b>Recipient's Project Contact Phone:</b>	(555) 870 9412
<b>Recipient's Project Contact Email:</b>	John.Smith@XXX.EDU

### PROJECT REPORT

<b>Annual Report Type:</b>	1 <sup>st</sup> Annual Report
<b>Reporting Period:</b>	<b>Start Date:</b> 9/30/2017 <b>End Date:</b> 9/29/2018

## PERFORMANCE NARRATIVE

### ACTIVITIES PERFORMED

*Address the below sections as they relate to this reporting period.*

### ACCOMPLISHMENTS

**Estimate the Total Percentage (%) of Work Completed on the Project: 32%**

*List your accomplishments or activities for this period of performance and indicate how these accomplishments assist in the fulfillment of your project's objective(s), identifying the specific objective(s) from the Accepted Project Proposal.*

#	Accomplishment/Activity	Relevance to Objective
1	Tomato plants were germinated and grown in a growth room and were subsequently inoculated with three isolates of Pepino mosaic virus (PepMV).	Objective 1: Establish three isolates of Pepino mosaic virus within Tomato Plants.
2	The symptom development study caused by three isolates of PepMV was performed. An isolate of PepMV was collected from the Sunlit Farm (SF) and inoculated to greenhouse tomato plants in the laboratory.	Objective 2: Identify symptoms related to the three isolates of PepMV in Tomato plants.

### CHALLENGES AND DEVELOPMENTS

*Provide any challenges to the completion of your project or any positive developments outside of the project's original intent that you experienced during this reporting period. If those challenges or developments resulted or will result in corrective actions and/or changes to the project, include those in the space below.*

#	Challenge or Development	Corrective Action or Project Change
1	Delayed starting date because funds were not available.	The timeline for the project has been amended (see updated timeline below)
2	Even with the delay, a substantial amount of baseline data has been generated to allow the project to move rapidly forward in next year.	With the preparatory experiments done and critical sequence data from the SF PepMV isolate gathered, we are confident that the revised activities outlined below will be completed by the amended termination date for this project.
3	New time line developed.	Develop an attenuated PepMV strain: July 2017 – May 2018 Test the efficacy of the immunization vector: August 2017 – May 2018  Test the protection of tomato plants using the attenuated PepMV strain: June 2018 – September 2018  Draft survey for growers to complete after presentations to measure their interest in using the developed vaccine: July 2018

## OUTCOME AND INDICATOR RESULTS TO DATE

Please list the Outcomes and Indicators you selected in your accepted project proposal, and identify the quantifiable results, along with an update on their progress. It is understood that the results may not yet be final at the time that this report is submitted; however, please provide an update on the progress to date.

#	Outcome/Indicator	Quantifiable Results
1	<p>Outcome 5: Enhance the competitiveness of specialty crops through more sustainable, diverse, and resilient specialty crop systems.</p> <p>Indicator 4. Number of new diagnostic systems analyzing specialty crop pests and diseases.</p>	<p><b>FIRST QUARTER (NOV. 2017 – DEC. 2017)</b></p> <p>Preparatory experiments were conducted to get this project underway. Tomato plants were germinated and grown in a growth room and were subsequently inoculated with three isolates of Pepino mosaic virus (PepMV). Symptom development and naturally acquired resistance were observed and recorded. However, no natural recovery phenomenon has been observed in these experiments, contrary to previously held beliefs. PepMV was purified from infected tomato tissues and the viral genomic RNA was isolated from the purified virus. These RNA preparations would be used to make full-length infectious cDNA clones that are required for the development of an attenuated PepMV strain. Additional tomato plants were inoculated and will be used to determine if RNAi is involved in the naturally occurring resistant to this virus.</p>
2	<p>Outcome 5: Enhance the competitiveness of specialty crops through more sustainable, diverse, and resilient specialty crop systems.</p> <p>Indicator 4. Number of new diagnostic systems analyzing specialty crop pests and diseases.</p>	<p><b>SECOND QUARTER (JAN. 2018 – MARCH 2018)</b></p> <p>In this quarter, we continued several experiments to study the symptom development caused by three isolates of PepMV. In these experiments, symptoms caused by PepMV were similar to what had been reported in literature; however, they appeared more severe in the tomato varieties we used. Again, infected tomato plants did not recover from the PepMV infections. Based on consistent data from the repeated experiments, we conclude that PepMV infected tomato plants do not naturally recover from PepMV infections.</p> <p>Experiments were also initiated to clone the 5'terminal and the 3'terminal of the genomes from three PepMV isolates. Published genomic sequences of 20 different PepMV isolates were collected from GenBank and aligned with the ClustalX alignment program. Four pairs of primers were designed, according to the conserved regions in the aligned sequences. Three pairs were intended for detection of PepMV, and one pair was intended to amplify the full-length PepMV genome. Initial experiments indicated that the primers worked well to amplify regions of PepMV by reverse transcription (RT), followed by polymerase chain reaction (PCR).</p>

#	Outcome/Indicator	Quantifiable Results
3	<p>Outcome 5: Enhance the competitiveness of specialty crops through more sustainable, diverse, and resilient specialty crop systems.</p> <p>Indicator 4. Number of new diagnostic systems analyzing specialty crop pests and diseases.</p>	<p><b>THIRD QUARTER (APRIL 2018 - JUNE 2018)</b></p> <p>In this quarter, we completed the follow-up experiments on PepMV symptom development and switched emphasis to molecular characterization of the viral isolates and determination of the 5'terminal and the 3'terminal regions of the viral genomes. Forty-six cDNA clones were obtained and sequenced. Although there were substantial sequence variations between different isolates, the sequence of each isolate exhibited little changes. These sequences allowed us to refine the primer design that would increase the likelihood to amplify and clone the full-length PepMV infectious cDNA clones, and eventually to engineer an attenuated strain for vaccination.</p>
4	<p>Outcome 5: Enhance the competitiveness of specialty crops through more sustainable, diverse, and resilient specialty crop systems.</p> <p>Indicator 4. Number of new diagnostic systems analyzing specialty crop pests and diseases.</p>	<p><b>FOURTH QUARTER (JULY 2018 - SEPT. 2018)</b></p> <p>An isolate of PepMV was collected from the Sunlit Farm (SF) and inoculated to greenhouse tomato plants in the laboratory. Since the goal of this project was to provide an attenuated PepMV strain as a vaccine in Arizona, characterizing a local isolate and using it to develop an attenuated strain is vitally important. Experiments were conducted to determine the 5'and 3'terminal sequences of the SF PepMV isolate. Over 35 clones of the PepMV terminal regions were obtained by RT-PCR and sequenced. There was little sequence variation among the clones, indicating that the PepMV isolate contained a pure strain. Sequence analysis suggested that the Arizona PepMV isolate was most closely related to strains originally reported in Europe, suggesting a possible European origin of this isolate. These baseline data are crucial to the construction of the infectious PepMV cDNA clone and the engineering of a vaccine strain with attenuated virulence.</p> <p>A pair of oligonucleotide primers was subsequently designed according to the newly generated sequence for amplification of the entire PepMV genome as the first step to make an infectious cDNA clone of the virus. Each primer was tested in combination with another set of internal primer and was shown to bind to and amplify viral cDNA. The optimum annealing temperature for each of the primers was subsequently determined by temperature gradient PCR. We attempted to amplify the entire PepMV genome by long-range RT-PCR using the optimized PCR conditions, but the yield of the expected DNA fragment was low and inconsistent. Amplification of a long DNA fragment of more than 6.5 kb is much</p>

#	Outcome/Indicator	Quantifiable Results
		<p>more difficult than a DNA fragment of 1 to 2 kb, but we should be able to optimize the conditions to complete this task in the next reporting quarter.</p> <p>Meanwhile, we continued to observe PepMV-infected plants for symptom development and induced resistance of the SF PepMV isolate. The Mariachi variety of tomato used in the experiment has displayed very severe symptoms and has not shown any signs of recovery from infection.</p>

#### DISCUSSION OF ACTIVITIES PERFORMED (IF NEEDED)

*Provide any additional information that has not already been covered by Accomplishments, Challenges, and/or Outcomes sections. This section is not required.*

Through the pursuit of current outcomes and indicators we have discovered a new possibility of achievement in adding to the number of potential findings that we have previously estimated.

#### UPCOMING ACTIVITIES

Describe activities you plan to complete during the next reporting period.

#	Activity	Anticipated Completion
1	Conduct phase 2 of the cultivation phase	10/10/2018
2	Prepare building site for construction	3/1/2019
3	Host marketing conference in relation to specialty crop	7/20/2019

## PROJECT EXPENDITURES TO DATE

### EXPENDITURES

Cost Category	Amount Approved in Budget	Actual Federal Expenditures (Federal Funds ONLY)
Personnel	\$27,000.00	\$10,000.00
Fringe Benefits	\$9,585.00	\$0.00
Travel	\$1,608.00	\$0.00
Equipment	\$5,000.00	\$4,500.00
Supplies	\$14,830.00	\$6,000.00
Contractual	\$0.00	\$0.00
Other		
<b>Direct Costs Sub-Total</b>		
<b>Indirect Costs</b>		
<b>Total Federal Costs</b>	<b>\$63,523.00</b>	<b>\$20,500.00</b>

### DISCUSSION OF EXPENDITURES

*For 1st Annual Reports if this amount is less than 30 percent and for 2nd Annual Reports if this amount is less than 60 percent, include a statement explaining how the grant funds will be expended and project activities completed as planned by the end date on the grant agreement.*

N/A

### PROGRAM INCOME (IF APPLICABLE)

Source/Nature (i.e., registration fees)	Amount Approved in Budget	Actual Amount Earned
<b>Total Program Income Earned</b>		

#### Use of Program Income

*Describe how the earned program income was used to further the objectives of this project.*

N/A



## PROJECT INFORMATION

**Project Title:** Farm-to-School: Building New Market for Specialty Crops in Schools

**Recipient Organization Name:** Farm to School Inc.

**Recipient's Point of Contact:**

**Name:** Juley Thompson

**Phone:** (555) 870 9412

**Email:** Juley.Thompson@XXX.ORG

## PROJECT REPORT

<b>Annual Report Type:</b>	1 <sup>st</sup> Annual
<b>Reporting Period:</b>	<b>Start Date:</b> 9/30/2017 <b>End Date:</b> 9/29/2018

## PERFORMANCE NARRATIVE

### ACTIVITIES PERFORMED

*Address the below sections as they relate to this reporting period.*

### ACCOMPLISHMENTS

**Estimate the Total Percentage (%) of Work Completed on the Project: 15.72%**

*List your accomplishments or activities for this period of performance, and indicate how these accomplishments assist in the fulfillment of your project's objective(s), identifying the specific objective(s) from the Accepted Project Proposal.*

#	Accomplishment/Activity	Relevance to Objective
1	Hired a Project Coordinator	Objective 1: Establish consistent leadership and vision for this project.
2	Conduct grower trainings to assist specialty crop producers in selling to institutional markets.	Objective 2: Create grower trainings to assist producers in selling to institutional markets.
3	Develop resources and hold events to help farmers to understand and prepare for Good Agricultural Practices (GAP) certification	Objective 3: Create resources and events to educate growers on GAP certifications.

### CHALLENGES AND DEVELOPMENTS

*Provide any challenges to the completion of your project or any positive developments outside of the project's original intent that you experienced during this reporting period. If those challenges or developments resulted or will result in corrective actions and/or changes to the project, include those in the space below.*

#	Challenge or Development	Corrective Action or Project Change
1	The hiring of the Project Coordinator was delayed until April 1 <sup>st</sup> , due to coordinator relocating from out-of-state.	The delayed start time pushed back the initial timeline targets for the toolkit set-up and planning for the GAP outreach as indicated in the work plan, though it did not delay the activities themselves
2	Developing the Web-based Toolkit	Slight planning delays occurred due to the delayed start date of the coordinator. More significant delays came from identifying that the coding and a backend database would need to be developed for the toolkit to be functional in the long-term. This also implied that the toolkit would be built offsite from the SDA website, and would require database expertise outside the agency. Creating the toolkit off-line provided the opportunity to design a Farm-to-School website framework and toolkit within the same budget initially intended for creating just the toolkit. - Further delays occurred because the process of developing a website and toolkit required hiring a contractor and creating a personal services contract for the amount of \$10,000, the amount initially budgeted for the toolkit. These steps were successfully completed. - The website and toolkit is scheduled to be launched in January of 2018.
3	GAP/GHP Video	Segments of footage from the On-Farm GAP event are usable. However, in order to make the final video of professional quality, the SDA Farm-to-School Program is exploring working with a professional video production company.

## OUTCOME AND INDICATOR RESULTS TO DATE

*Please list the Outcomes and Indicators you selected in your accepted project proposal, and identify the quantifiable results, along with an update on their progress. It is understood that the results may not yet be final at the time that this report is submitted; however, please provide an update on the progress to date.*

#	Outcome/Indicator	Quantifiable Results
1	Outcome 6, Indicator 3. Number of individuals who learn about prevention, detection, control, and intervention food safety practices and number of those individuals who increase their food safety skills and knowledge.	According to the post training survey 92% of the participants involving in the grower trainings reported successfully learning about prevention, detection, control, and intervention food safety practices and intended to further increased skills and knowledge.

## DISCUSSION OF ACTIVITIES PERFORMED (IF NEEDED)

*Provide any additional information that has not already been covered by Accomplishments, Challenges, and/or Outcomes sections. This section is not required.*

## UPCOMING ACTIVITIES

Describe activities you plan to complete during the next reporting period.

#	Activity	Anticipated Completion
1	Host regional conference in reference to best food safety practices	10/10/2018
2	Prepare for GAP/GHP certifications	6/15/2019

## PROJECT EXPENDITURES TO DATE

### EXPENDITURES

Cost Category	Amount Approved in Budget	Actual Federal Expenditures (Federal Funds ONLY)
Personnel	\$124,000.00	\$26,926.77
Fringe Benefits	\$31,000.00	\$8,975.00
Travel	\$8,000.00	\$2,412.00
Equipment	0.00	0.00
Supplies	\$3,000.00	\$1,000.00
Contractual	\$61,000.00	\$0.00
Other		
<b>Direct Costs Sub-Total</b>	<b>\$250,000.00</b>	<b>\$39,313.77</b>
<b>Indirect Costs</b>		
<b>Total Federal Costs</b>	<b>\$250,000.00</b>	<b>\$39,313.77</b>

### DISCUSSION OF EXPENDITURES

For 1<sup>st</sup> Annual Reports if this amount is less than 30 percent and for 2<sup>nd</sup> Annual Reports if this amount is less than 60 percent, include a statement explaining how the grant funds will be expended and project activities completed as planned by the end date on the grant agreement.

In response to less than 30 percent expenditures, we plan to increase our expenditures to 60 percent by the end of the 2<sup>nd</sup> annual report by implementing phase 2 of this project simultaneously with the closeout of phase 1. By doing this we should be able to regain our expenditure schedule.

### PROGRAM INCOME (IF APPLICABLE)

Source/Nature (i.e., registration fees)	Amount Approved in Budget	Actual Amount Earned
<b>Total Program Income Earned</b>		

#### Use of Program Income

Describe how the earned program income was used to further the objectives of this project.

N/A

## PROJECT INFORMATION

**Project Title:** Measuring Irrigation Water Quality on Fruit and Vegetable Farms

**Recipient Organization Name:** XX Dept of Agriculture

**Recipient's Point of Contact:**

**Name:** Kyle Bacher

**Phone:** (555) 870 9412

**Email:** Kyle.Bacher@XXX.ORG

## PROJECT REPORT

<b>Annual Report Type:</b>	1st Annual
<b>Reporting Period:</b>	<b>Start Date:</b> 9/30/2017 <b>End Date:</b> 9/29/2018

## PERFORMANCE NARRATIVE

### ACTIVITIES PERFORMED

*Address the below sections as they relate to this reporting period.*

### ACCOMPLISHMENTS

**Estimate the Total Percentage (%) of Work Completed on the Project: 50%**

*List your accomplishments or activities for this period of performance and indicate how these accomplishments assist in the fulfillment of your project's objective(s), identifying the specific objective(s) from the Accepted Project Proposal.*

#	Accomplishment/Activity	Relevance to Objective
1	<p>In 2017-18, irrigation water was sampled on 12 farms across East and West, with a total of 28 irrigation water sources, including 12 surface water sources, 14 wells and two municipal water sources. Eight of these farms grew tomatoes exclusively. Three other farms grew a mixture of vegetables, and one farm grew strawberries. Samples were taken three times throughout the production season.</p> <p>Originally, it was planned to sample 30 farms per year; however, multiple irrigation sources on most farms had not been taken into account. Therefore, 12 farms with multiple irrigation sources were sampled for a total of 28 samples. Additionally, it was planned to sample each farm four times throughout the cropping season. Farms were sampled three times before crops were removed for the season.</p> <p>Analyses included quantified generic E. coli, specific conductance, turbidity, and pH. Of all 84 samples taken, only one sample was above the allowable limits for cfu/ 100 ml of E. coli, and this sample was taken from a surface water source shortly after a heavy rain event. The results from</p> <p>all samples were added to the National Irrigation Database to be used to help shape future irrigation water quality standards.</p> <p><b>States B, C, D, and F</b> States B, C, D, and F have worked together over the previous reporting period to effectively collect irrigation water samples from a variety of farms that lie within the seven states that make up this multi-state project. Specifically, they have gathered data from approximately 49 farms (B: 12, C: 9, D: 5, E: 16, F: 10, and G: 8). These States collected four samples throughout the 2015-16 production season, which totals 196 samples. The data collected by these States was added to the National Irrigation Database, which was developed by the National GAPs Program at Cornell University.</p>	<p>Objective 1: Sample irrigation water throughout the production season to assess the presence and persistence of E. coli</p>

#	Accomplishment/Activity	Relevance to Objective
2	<p>In year 1 of the project, sampled growers had one- on-one instruction with Dr. Doug Smith and his assistant on proper water sampling and interpreting the test results.</p> <p>Training materials (factsheets) are currently being developed to cover irrigation water quality assessment and management.</p> <p>Water Sampling – supplies that are needed and proper technique.</p> <p>Water Testing – what to test for and how to interpret results.</p> <p>Mitigation Strategies – if coliforms are present what are the options for managing them.</p> <p><b>States E and G</b> Over the previous reporting period, States E and G were actively engaged in the quality analyses to ascertain qualified generic E. coli, specific conductance, turbidity, and pH. This information has been used to develop workshop materials and factsheets for water sampling, testing, and mitigation strategies to reduce microbial load while growers and farm managers about the importance of on-farm irrigation water management. To date, State E and G have conducted a total of 20 one-on-one training sessions for water sampling with individual growers.</p>	Objective 2: Train Extension professionals and producers in irrigation water quality assessment and management

## CHALLENGES AND DEVELOPMENTS

*Provide any challenges to the completion of your project or any positive developments outside of the project's original intent that you experienced during this reporting period. If those challenges or developments resulted or will result in corrective actions and/or changes to the project, include those in the space below.*

#	Challenge or Development	Corrective Action or Project Change
1	Most farms sampled contained more than one irrigation source so sampling of each farm has taken longer than expected.	In order to accommodate the multiple irrigation water sources for each farm we reduced the overall number of farms sampled from 30 to 12. The total number of irrigation samples was 28 and included multiple samples from separate sources on a single farm. Additionally, farms were each sampled three times before crops were removed as opposed to four times as a result of this.

## OUTCOME AND INDICATOR RESULTS TO DATE

*Please list the Outcomes and Indicators you selected in your accepted project proposal, and identify the quantifiable results, along with an update on their progress. It is understood that the results may not yet be final at the time that this report is*

submitted; however, please provide an update on the progress to date.

#	Outcome/Indicator	Quantifiable Results
1	Outcome 7, Indicator 1: Increased understanding of fecal indicators and pathogens	Analyses included quantified generic E. coli, specific conductance, turbidity, and pH. Of all 84 samples taken, only one sample was above the allowable limits for cfu/ 100 ml of E. coli, and this sample was taken from a surface water source shortly after a heavy rain event. The results from all samples were added to the National Irrigation Database to be used to help shape future irrigation water quality standards.

## DISCUSSION OF ACTIVITIES PERFORMED (IF NEEDED)

Provide any additional information that has not already been covered by Accomplishments, Challenges, and/or Outcomes sections. This section is not required.

## UPCOMING ACTIVITIES

Describe activities you plan to complete during the next reporting period.

#	Activity	Anticipated Completion
1	Extending sample sizes and collection periods to further analyze effect of mitigation strategies.	1/10/2019
2	Interpret the second phase of the results in order to begin to determine best practice relating to irrigation water quality assessment and management.	5/15/2019

## PROJECT EXPENDITURES TO DATE

### EXPENDITURES

Cost Category	Amount Approved in Budget	Actual Federal Expenditures (Federal Funds ONLY)
Personnel	\$9,480.00	\$5,605.00
Fringe Benefits	\$3,792.00	\$2,203.00
Travel	\$9,000.00	\$3,600.00
Equipment	0.00	0.00
Supplies	\$1,750.00	\$1,200.54
Contractual	\$22,960.00	\$1,000.00
Other	\$3,050.00	\$1,000.00
<b>Direct Costs Sub-Total</b>	<b>\$50,032.00</b>	<b>\$24,873.54</b>
<b>Indirect Costs</b>	<b>\$4,544.00</b>	<b>\$2,342.00</b>
<b>Total Federal Costs</b>	<b>\$54,576.00</b>	<b>\$27,215.54</b>

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**DISCUSSION OF EXPENDITURES**

*For 1<sup>st</sup> Annual Reports if this amount is less than 30 percent and for 2<sup>nd</sup> Annual Reports if this amount is less than 60 percent, include a statement explaining how the grant funds will be expended and project activities completed as planned by the end date on the grant agreement.*

N/A

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**PROGRAM INCOME (IF APPLICABLE)**

<b>Source/Nature (i.e., registration fees)</b>	<b>Amount Approved in Budget</b>	<b>Actual Amount Earned</b>
<b>Total Program Income Earned</b>		

**Use of Program Income**

*Describe how the earned program income was used to further the objectives of this project.*

N/A



## PROJECT INFORMATION

<b>Project Title</b>	Enhancing Sustainable Specialty Crop Production
<b>Recipient Organization Name:</b>	XX University of Agricultural Education
<b>Recipient's Project Contact Name:</b>	Lisa Kelly
<b>Recipient's Project Contact Phone:</b>	(555) 870 8000
<b>Recipient's Project Contact Email:</b>	Lisa.Kelly@XXX.EDU

## PROJECT REPORT

<b>Annual Report Type:</b>	1 <sup>st</sup> Annual
<b>Reporting Period:</b>	<b>Start Date:</b> 9/30/2017 <b>End Date:</b> 9/29/2018

## PERFORMANCE NARRATIVE

### ACTIVITIES PERFORMED

*Address the below sections as they relate to this reporting period.*

### ACCOMPLISHMENTS

**Estimate the Total Percentage (%) of Work Completed on the Project: 10%**

*List your accomplishments or activities for this period of performance, and indicate how these accomplishments assist in the fulfillment of your project's objective(s), identifying the specific objective(s) from the Accepted Project Proposal.*

#	Accomplishment/Activity	Relevance to Objective
1	8-week specialty crop workshop series completed - 65 specialty crop producers	Objective 1: Establish educational opportunities through interactive workshops.
2	Pre- and post-workshop assessments completed	Objective 1: Establish educational opportunities through interactive workshops.
3	11 farm enterprises that participated in the apprenticeship program in 2015 (28 apprentices)	Objective 1: Establish educational opportunities through interactive workshops.
4	Farm Extension & Research Center hosted two workshops and one site meeting	Objective 2: Create a positive and educational relationship with the Farm Extension and Research Center.

## CHALLENGES AND DEVELOPMENTS

*Provide any challenges to the completion of your project or any positive developments outside of the project's original intent that you experienced during this reporting period. If those challenges or developments resulted or will result in corrective actions and/or changes to the project, include those in the space below.*

#	Challenge or Development	Corrective Action or Project Change
1	The project experienced a delay in the purchase of supplies for the hoop house; however, this did not hinder the completion of the project's goals and objectives. The delay was caused by a lack of access to a secure location to store the project's supplies.	Our staff is investigating a variety of alternatives and is currently making efforts to resolve the issue associated with supply storage. A temporary building provided by State University has been brought to the site and professionally leveled.  Electricity will be connected to this site in the coming month. The project's targets and goals are still realistic and attainable; however, the timeline must be modified.

## OUTCOME AND INDICATOR RESULTS TO DATE

*Please list the Outcomes and Indicators you selected in your accepted project proposal, and identify the quantifiable results, along with an update on their progress. It is understood that the results may not yet be final at the time that this report is submitted; however, please provide an update on the progress to date.*

#	Outcome/Indicator	Quantifiable Results
1	Outcome 2, Indicator 2a	The Specialty Crop Workshop Series was completed in March 2018. The Specialty Crop Workshop Series was an 8-week workshop series that included topics on whole farm planning, transplant production, business planning, enterprise development, cash flow statements, farmers markets, weed management, drip and micro-irrigation, general soils, soil fertility, cover crops, and record keeping. It was held January- March on Wednesday evenings. This series of workshops was particularly successful with an attendance of 65 specialty crop producers. Each participant was evaluated through pre- and post- workshop assessments. The data has been compiled and will be analyzed over the course of the next reporting period.

#	Outcome/Indicator	Quantifiable Results
2	Outcome 2, Indicators 3 & 4	Over the previous reporting period, we also contracted with a mentor farmer to provide a farmer-link to apprentices. There were 11 farm enterprises that participated in the apprenticeship program in 2017 with a total of 28 apprentices. The specific duties of this mentor farmer included the provision of timely guidance for specialty crop production activities and advice on interventions for disease and weed issues. The mentor farmer also served as a liaison for program administration, coordinated on farm learning activities, and helped to plan infrastructure improvements.

## DISCUSSION OF ACTIVITIES PERFORMED (IF NEEDED)

Provide any additional information that has not already been covered by Accomplishments, Challenges, and/or Outcomes sections. This section is not required.

## UPCOMING ACTIVITIES

Describe activities you plan to complete during the next reporting period.

#	Activity	Anticipated Completion
1	The data collected through pre- and post-workshop assessments has been compile and will need to be analyzed of the course of the next reporting period.	10/30/2018
2	The next set of educational seminars will be conducted and used to analyze the effectiveness of the delivery of educational material and concepts	5/15/2019 6/20/2019 7/28/2019

## PROJECT EXPENDITURES TO DATE

### EXPENDITURES

Cost Category	Amount Approved in Budget	Actual Federal Expenditures (Federal Funds ONLY)
Personnel	\$0.00	\$0.00
Fringe Benefits	\$0.00	\$0.00
Travel	\$0.00	\$0.00
Equipment	0.00	0.00
Supplies	\$17,800.00	\$500.00
Contractual	\$5,000.00	\$500.00
Other	\$0.00	\$0.00
<b>Direct Costs Sub-Total</b>	<b>\$22,800.00</b>	<b>\$2,500.00</b>
Indirect Costs	\$0.00	\$0.00
<b>Total Federal Costs</b>	<b>\$22,800.00</b>	<b>\$2,500.00</b>

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## DISCUSSION OF EXPENDITURES

*For 1<sup>st</sup> Annual Reports if this amount is less than 30 percent and for 2<sup>nd</sup> Annual Reports if this amount is less than 60 percent, include a statement explaining how the grant funds will be expended and project activities completed as planned by the end date on the grant agreement.*

In response to having only spent 10% of the budget expended, we are going to attempt to run two specialty crop workshop series courses and the apprenticeship program simultaneously. We believe this will be possible by offsetting the times of the season that we originally planned to run these courses and instead run them closer together with a trade off in scheduling.

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## PROGRAM INCOME (IF APPLICABLE)

<b>Source/Nature (i.e., registration fees)</b>	<b>Amount Approved in Budget</b>	<b>Actual Amount Earned</b>
<b>Specialty Crop Workshop Series Registration Fee (\$50 per each of the 65 Participants)</b>	\$2,500.00	35
<b>Apprenticeship Program (\$70 per registrant with 28 participants)</b>	\$2,250.00	\$1,960.00
<b>Total Program Income Earned</b>	\$4,750.00	\$4,210.00

### Use of Program Income

*Describe how the earned program income was used to further the objectives of this project.*

This income collected from the workshops and apprenticeship program will be used to improve the educational materials used in these workshops and programs to better support the outcomes and indicators selected in this project.

## PROJECT INFORMATION

<b>Project Title</b>	Establish a Superberry Market in the State
<b>Recipient Organization Name:</b>	XX Department of Agriculture
<b>Recipient's Project Contact Name:</b>	Brandon Mcmanus
<b>Recipient's Project Contact Phone:</b>	(555) 870 8000
<b>Recipient's Project Contact Email:</b>	Brandon.Mcmanus@XXX.GOV

## PROJECT REPORT

<b>Annual Report Type:</b>	1 <sup>st</sup> Annual
<b>Reporting Period:</b>	<b>Start Date:</b> 9/30/2017 <b>End Date:</b> 9/29/2018

## PERFORMANCE NARRATIVE

### ACTIVITIES PERFORMED

*Address the below sections as they relate to this reporting period.*

### ACCOMPLISHMENTS

**Estimate the Total Percentage (%) of Work Completed on the Project: 35%**

*List your accomplishments or activities for this period of performance, and indicate how these accomplishments assist in the fulfillment of your project's objective(s), identifying the specific objective(s) from the Accepted Project Proposal.*

#	Accomplishment/Activity	Relevance to Objective
1	Planted 1,400 superberry plants	Objective 1: To increase the number of growers and producers of superberries
2	Working with 4 growers	Objective 1: To increase the number of growers and producers of superberries

### CHALLENGES AND DEVELOPMENTS

*Provide any challenges to the completion of your project or any positive developments outside of the project's original intent that you experienced during this reporting period. If those challenges or developments resulted or will result in corrective actions and/or changes to the project, include those in the space below.*

#	Challenge or Development	Corrective Action or Project Change
1	Record Levels of Flooding	Purchasing more superberry plants to replace those lost.

### OUTCOME AND INDICATOR RESULTS TO DATE

*Please list the Outcomes and Indicators you selected in your accepted project proposal, and identify the quantifiable results, along with an update on their progress. It is understood that the results may not yet be final at the time that this report is submitted; however, please provide an update on the progress to date.*

#	Outcome/Indicator	Quantifiable Results
1	Outcome 8, Indicator 6: There will be 4 new beginning farmers who went into specialty crop production	<p>This year most of the work has been dedicated to the planting, caging, and caring for the plants. We have been in contact with 4 growers, who are interested in the superberry market and are working to meet our target of assisting in the establishment and development of 3 to 4 additional superberry producers by fall 2016. In 2012 we planted an additional 800 superberry plants. In 2013, we added an additional 600 plantings and in 2015, with the help of the specialty crop block grant, we were able to double our superberry plantings and added an additional 2,000 plantings to our farm. It is our understanding that, on average, a 5-year bush produces about 20 pounds per bush. On a 10-year bush, the average is 40 pounds of berries per bush. With our goal of 4,000 superberry plants, we hope to see a long-term average of over 100,000 pounds of berries per year from our farm that will assist in forming alliances with other producers to obtain contracts with the health and wellness processors.</p> <p>We are members of the Aronia Association (<a href="http://www.aroniaassociation.org">www.aroniaassociation.org</a>) where over 120 producers and vendors have come together to assist one another in planting methods as well as production and marketing opportunities.</p>

#### DISCUSSION OF ACTIVITIES PERFORMED (IF NEEDED)

*Provide any additional information that has not already been covered by Accomplishments, Challenges, and/or Outcomes sections. This section is not required.*

#### UPCOMING ACTIVITIES

*Describe activities you plan to complete during the next reporting period.*

#	Activity	Anticipated Completion
1	In the next phase of the process we will have to attempt to amend the damage caused by the flooding in the planting area while continuing to establish the newly planted superberry plants	10/30/2018
2	We will continue to plant the superberry plants in support of our planting goal of 4,000. We are hoping to achieve a plant of 1,200 this season.	5/1/2019

## PROJECT EXPENDITURES TO DATE

### EXPENDITURES

Cost Category	Amount Approved in Budget	Actual Federal Expenditures (Federal Funds ONLY)
Personnel	\$5000.00	\$2450.00
Fringe Benefits	\$1100.00	\$100.00
Travel	\$300.00	\$300.00
Equipment	0.00	0.00
Supplies	\$2,300.00	\$1,700.00
Contractual	\$0.00	\$0.00
Other	\$0.00	\$0.00
<b>Direct Costs Sub-Total</b>	<b>\$8,700.00</b>	<b>\$4,550.00</b>
<b>Indirect Costs</b>	<b>\$0.00</b>	<b>\$0.00</b>
<b>Total Federal Costs</b>	<b>\$8,700.00</b>	<b>\$4,550.00</b>

### DISCUSSION OF EXPENDITURES

*For 1<sup>st</sup> Annual Reports if this amount is less than 30 percent and for 2<sup>nd</sup> Annual Reports if this amount is less than 60 percent, include a statement explaining how the grant funds will be expended and project activities completed as planned by the end date on the grant agreement.*

N/A

### PROGRAM INCOME (IF APPLICABLE)

Source/Nature (i.e., registration fees)	Amount Approved in Budget	Actual Amount Earned
	\$0.00	\$0.00
	\$0.00	\$0.00
<b>Total Program Income Earned</b>	<b>\$0.00</b>	<b>\$0.00</b>

#### Use of Program Income

*Describe how the earned program income was used to further the objectives of this project.*

N/A/

## PROJECT INFORMATION

<b>Project Title</b>	Training Series to Increase Local Fruit and Vegetable Production at the Local Markets
<b>Recipient Organization Name:</b>	XX University
<b>Period of Performance:</b>	<b>Start Date:</b> 9/30/2017 <b>End Date:</b> 9/29/2018
<b>Recipient's Project Contact Name:</b>	Joe Haley
<b>Recipient's Project Contact Phone:</b>	(555) 870 8000
<b>Recipient's Project Contact Email:</b>	Joe.Haley@Univeristy.EDU

## PERFORMANCE NARRATIVE

### PROJECT BACKGROUND

*Provide enough information for the reader to understand the importance or context of the project. This section may draw from the background and justification contained in the approved project proposal.*

In the last couple of years, the local market has seen a downtrend in the purchasing of local specialty crops. The effect that this has had on local farmers has decreased the planting and cultivation of specialty crops on their farms and therefore creating less availability of specialty crops at the market. This project sought to educate local consumers as well as wholesale buyers about how to purchase specialty crops. The idea was that through this exposure this project may have had an effect on increasing the purchasing of more specialty crops in the area in order to turn around the down trend facing specialty crops in this area.

### ACTIVITIES PERFORMED

*Address the below sections as they relate to the entire project's period of performance.*

### OBJECTIVES

*Provide the approved project's objectives.*

#	Objective	Completed? Yes	Completed? No*
1	To increase consumer knowledge about production practices and purchase methods of various specialty crops.	<input checked="" type="checkbox"/>	<input type="checkbox"/>
2	To increase wholesale buyer knowledge about production practices and purchase methods of various specialty crops.	<input checked="" type="checkbox"/>	<input type="checkbox"/>

*\*If no is selected for any of the listed objectives, you must expand upon this in the challenges and lessons learned sections.*

### ACCOMPLISHMENTS

*List your accomplishments for the project's period of performance, including the impact they had on the project's beneficiaries, and indicate how these accomplishments assist in the fulfillment of your project's objective(s), outcome(s), and/or indicator(s).*



#	Accomplishment or Impact	Relevance to Objective, Outcome, and/or Indicator
1	Participants become more knowledgeable about production practices of various specialty crops	Objective 1: Create an effective learning opportunity to increase knowledge of production practices related to various specialty crops.
2	Participants become more aware of marketing options available for specialty crops	Objective 1: Create an effective learning opportunity to increase knowledge of production practices related to various specialty crops.

## CHALLENGES AND DEVELOPMENTS

*Provide any challenges to the completion of your project or any positive developments outside of the project's original intent that you experienced during this project. Also, provide the corrective actions you took to address these issues. If you did not attain an approved objective(s), outcome(s), and/or indicator(s), provide an explanation in the Corrective Actions column.*

#	Challenge or Development	Corrective Action or Project Change
1	For long-term outcomes, it has been difficult to assess the true impact of the project on these variables.	We attempted to get a feel for how the project might affect the amount of land in specialty crop production throughout the evaluation process.
2	The last field trip held on June 26, had fewer participants than we had hoped (9), as compared to the first two field trips, which had 19 and 24 respectively.	It is difficult to determine why the number of participants dropped. If we held another field trip after that one, we could have seen if the numbers would increase again.

## LESSONS LEARNED

*Provide recommendations or advice that others may use to improve their performance in implementing similar projects.*

We could not identify why the number of participants had dropped. Working into the future we may have tried to collect post field trip surveys to gauge the interest or effectiveness that the trip had on the participants. Moving into the future it would be a best practice to measure different points of this project to identify what could be improved to create more awareness among as many people as possible.

## CONTINUATION AND DISSEMINATION OF RESULTS (IF APPLICABLE)

*Describe your plans for continuing the project (sustainability; capacity building) and/or disseminating the project results.*

We will use this information in a way to educate consumers and wholesale buyers to continue to increase awareness of how to access/ produce/ prepare/preserve specialty crops.

## BENEFICIARIES

**Number of project beneficiaries: 200**

## OUTCOME(S) AND INDICATOR(S)/SUB-INDICATOR(S)

*Provide the results of the project outcome(s) and indicator(s) as approved in your application and project proposal. The results of the outcome(s) and indicator(s) will be used to evaluate the performance of the Program on a national level.*

### OUTCOME MEASURE(S)

*Select the Outcome Measure(s) that were approved for your project.*

- Outcome 1:** Enhance the competitiveness of specialty crops through increased sales
- Outcome 2:** Enhance the competitiveness of specialty crops through increased consumption
- Outcome 3:** Enhance the competitiveness of specialty crops through increased access
- Outcome 4:** Enhance the competitiveness of specialty crops through greater capacity of sustainable practices of specialty crop production resulting in increased yield, reduced inputs, increased efficiency, increased economic return, and/or conservation of resources
- Outcome 5:** Enhance the competitiveness of specialty crops through more sustainable, diverse, and resilient specialty crop systems
- Outcome 6:** Enhance the competitiveness of specialty crops through increasing the number of viable technologies to improve food safety
- Outcome 7:** Enhance the competitiveness of specialty crops through increased understanding of the ecology of threats to food safety from microbial and chemical sources
- Outcome 8:** Enhance the competitiveness of specialty crops through enhancing or improving the economy as a result of specialty crop development

### OUTCOME INDICATOR(S)

*Provide the indicator approved for your project and the related quantifiable result. If you have multiple outcomes and/or indicators, repeat this for each outcome/indicator (add more rows as needed).*

#	Outcome and Indicator	Quantifiable Results
1	Outcome 3, Indicator 1.a.: Of the _200 total number of consumers or wholesale buyers reached, 150 gain knowledge on how to access/ produce/ prepare/preserve specialty crops.	<p><b>Short-Term Outcomes:</b></p> <p>As outlined in the project proposal, participants were expected to become more knowledgeable about production practices of various specialty crops and become more aware of marketing options available for these crops.</p> <p>For production practices, participants assessed their knowledge prior to participating in the series at 2.91 on a five-point scale and 4.64 after the series. This reflects an increase of 1.73 on a 5-point scale. For marketing options, participants assessed their knowledge prior to participating in the series at 2.73 on a five-point scale and 4.36 after the series. This reflects an increase of 1.63 on a 5-point scale.</p> <p>Additional short-term outcomes can be assessed by viewing participant comments. Included here is a sampling of those comments:</p> <p>“The series was very helpful in learning about available markets &amp; practices.”</p> <p>“The series provides a solid introduction to many significant aspects of specialty crop production.”</p> <p>The high tunnel information was fascinating.”</p> <p><b>Long-Term Outcomes:</b></p> <p>As outlined in the project proposal, long-term outcomes include an increase in the number of regional specialty crop producers and/or an increase in the quantity of land dedicated to specialty crop production in the region. As you can imagine, project managers have not been able to assess the true impact of the project on these variables. However, we did attempt to get a feel for how the project might affect the amount of land in specialty crop production throughout the evaluation process.</p> <p>Eighty-seven percent of participants responding indicated that their participation in the project has encouraged them to expand the amount of land they currently have in specialty crop production. Additionally, 90 percent of respondents indicated that they were more confident about the demand for their products as a direct result of the project. At least one participant has already planted twice as much of his crop after his participation in the project led him to discover a better marketing opportunity.</p>

## DATA COLLECTION

Explain what data was collected, how it was collected, the evaluation methods used, and how the data was analyzed to derive the quantifiable indicator.

For production practices, participants assessed their knowledge prior to participating in the series at 2.91 on a five-point scale and 4.64 after the series. This reflects an increase of 1.73 on a 5-point scale. For marketing options, participants assessed their knowledge prior to participating in the series at 2.73 on a five-point scale and 4.36 after the series. This reflects an increase of 1.63 on a 5-point scale. This data was collected into two separate data sets and compared upon the completion of both assessments. The data was transferred into an excel format type document in order to construct the quantifiable results of the program and the assessments.

## FEDERAL PROJECT EXPENDITURES

### EXPENDITURES

Cost Category	Amount Approved in Budget	Actual Federal Expenditures (Federal Funds ONLY)
Personnel	\$2,543.00	\$2,543.00
Fringe Benefits	\$739.00	\$739.00
Travel	\$1,667.00	\$1,667.00
Equipment	0.00	0.00
Supplies	\$200.00	\$200.00
Contractual	\$0.00	\$0.00
Other	\$7,520.00	\$7,520.00
Direct Costs Sub-Total	\$12,669.00	\$12,669.00
Indirect Costs	\$0.00	\$0.00
Total Federal Costs	\$12,669.00	\$12,669.00

### PROGRAM INCOME (IF APPLICABLE)

Source/Nature (i.e., registration fees)	Amount Approved in Budget	Actual Amount Earned
1.	\$0.00	\$0.00
2.	\$0.00	\$0.00
3.	\$0.00	\$0.00
Total Program Income Earned		

#### Use of Program Income

Describe how the earned program income was used to further the objectives of this project.

N/A/

## ADDITIONAL INFORMATION

Provide additional information available (i.e., publications, websites, photographs) that is not applicable to any of the prior sections.

N/A