SCBGP PROJECT PROFILE TEMPLATE

AWARD YEARS 2022 FORWARD

The State Plan should include a series of project profiles that detail the necessary information to fulfill the goals and objectives of each project. The acceptable font size for the narrative is 11 or 12 pitch with all margins at 1 inch. The following information must be included in each project profile.

PROJECT TITLE

Provide a descriptive project title in 15 words or less in the space below.

Specialty Crop Block Grant

DURATION OF PROJECT

Start Date: October 1, 2023 **End Date**: September 30, 2025

PROJECT PARTNER AND SUMMARY

Include a project summary of 250 words or less suitable for dissemination to the public. A Project Summary provides a very brief (one sentence, if possible) description of your project. A Project Summary includes:

1. *The name of the applicant organization that if awarded a grant will establish an agreement or contractual relationship with the State Department of Agriculture to lead and execute the project,*
2. *The project's purpose, deliverables, and expected outcomes and*
3. *A description of the general tasks/activities to be completed during the project period to fulfill this goal.*

FOR EXAMPLE:
The ABC University will mitigate the spread of citrus greening (Huanglongbing) by developing scientifically-based practical measures to implement in a quarantine area and disseminating results to stakeholders through grower meetings and field days.

New Age Provisions farms will partner with Butler University to install and launch a solar and storage system that will improve environmental sustainability and reduce the cost to grow specialty crops such as kale and leafy greens all year round. We plan to demonstrate the viability of hydroponics in controlled environment agriculture farming using a shipping container to generate revenue and provide access to fresh specialty crops grown without herbicides, pesticides, or contamination from the soil. Through a collaboration with organizations such as the Butler University and Purdue University we will 1) identify and document the options for solar and storage systems; 2) work with local installer to install solar system and document the process capture sun energy and create usable power; 3) develop educational outreach programs on hydroponics - combining solar with specialty crop production. This will include developing options for electronic resources, budgets, factsheets, farm tours, video conferencing, and workshops. 4) study the effect of increasing or decreasing light availability has on kale and lettuce production yields.

PROVIDE A PROJECT TIMELINE BY QUARTER AND YEAR BELOW.

RESEARCH – January 2022 to March 2023

On December 16, 2022, the Professor of Entrepreneurship and Innovation at Butler University reached out to me to discuss the possibility of partnering on a Social Entrepreneurship class (EI325) in January. I agreed to participate in

the class beginning on January 16, 2023. Three Butler University students were tasked to focus on one of the largest for New Age Provisions Farms. The project entailed (1) identifying at least three suppliers and getting a cost estimate, (2) estimating the potential savings given their current KW usage, (3) identifying potential grants that could be used, and (4) developing a potential timeline/plan for implementation.

FUNDING – March 2023 to October 2023

The project was a success. We were able to gain some key knowledge and identify possible companies to install the solar panels as well as the necessary equipment options. Now that we have the options available, the next step of the process is to get the funding so that we can install the equipment and the options that have been identified by the team. The funding and grant process will last from March 2023 until October 2023 when the funds are received.

INSTALLATION – October 2023 to December 2023

Part of the project was to identify options for solar installation. We contacted Rectify Solar, Jefferson Electric, GNRE Solar and Solar Energy Solutions. We shared our project goals and measurements so they could potentially build out solutions. These companies provided guidance that would best suit the goals. Upon approval of the grant, we will decide on the solar system installers and work with them to finalize a design to work with the farms. We went to visit solar installations in the city of Indianapolis. David Counsell from Lands Stewards invited us to see his solar system setup with the Generac PWRcell system. We learned from him that the installation process would take one to two weeks from start to finish. Therefore, once we received the funds on October 1, 2023, the installation should be completed by November 2023. We will work closely with the solar installer to install the equipment. I have budgeted a headcount for the Farmhand to be on site to help with any needs from the solar installer. After the installation of the solar equipment we will start the commissioning and operation, this is scheduled to happen by December 2023.

SUSTAINABILITY AND KNOWLEDGE – December 2023 – January 2024

The installation of the solar panels will improve the environmental sustainability of specialty crops and help ensure that the equipment can demonstrate a new method of sustainable farming that is economically friendly and uses less water and electricity resources from the environment. We have already begun to use our platform to educate people on controlled environmental agriculture, hydroponics, vertical farming, and plant growth process. This will add another element of education by giving a real-life demonstration of capturing the suns energy to grow specialty crops. This will increase the number of consumers who gain knowledge about specialty crops. We will be able to track the number of people who come to visit the farm through Airbnb Experience tours, website investigation, or neighborhood community members. We will track the number of people and knowledge before and after through surveys and questionnaires.

DESCRIBE HOW YOUR ORGANIZATION WILL INTERACT WITH ANY PARTNERS ON YOUR PROJECT.

Butler University

We partnered with Butler University to research solar and storage system options. On December 16, 2022, the Professor of Entrepreneurship and Innovation at Butler University Stephanie Farnhaber reached out to me to discuss the possibility of partnering on a Social Entrepreneurship class (EI325) in January. I agreed to participate in the class beginning on January 16, 2023. Three Butler University students, Hannah Ravaris, Ben Packer, and Sam Watters; were tasked to focus on one of the largest for New Age Provisions Farms. The project entailed (1) identifying at least three suppliers and getting a cost estimate, (2) estimating the potential savings given their current KW usage, (3) identifying potential grants that could be used, and (4) developing a potential timeline/plan for implementation.

Organization Interaction

A goal of the project with Butler University is to identify options for solar installation. We contacted Rectify Solar, Jefferson Electric, GNRE Solar and Solar Energy Solutions. We shared our project goals and measurements so they could potentially build out solutions. These companies provided guidance that would best suit the goals. Upon approval of the grant, we will decide on the solar system installers and work with them to finalize a design to work with the farms.

PROJECT PURPOSE

PROVIDE THE SPECIFIC ISSUE, PROBLEM OR NEED THAT THE PROJECT WILL ADDRESS

The project will provide a demonstration of alternative solutions to traditional farming by growing specialty crops such as kale and lettuce in a controlled agriculture environment. The controlled environment is a hydroponic shipping container farm that uses vertical farming to grow over 7 acres of produce all year round. The problem is the limited available land for traditional farming in urban locations. The increase in population is decreasing the availability of farmland. The result is an increase in the time it takes to get fresh produce to the consumer. With our system being hyperlocal, we can harvest and get the produce into the hands of the consumer withing twenty-four hours. This increases the amount of available nutrition in the plant and shelf life of the produce. To make this system environmentally sustainable we need to install ways to use the sun's energy to power the system. This solution will create an option in which people can farm with limited space and limited water and electricity resources. The current method of power use limits the return or investment of the system because the cost of Indiana's electricity is increasing. Governor Holcomb recently approved a Bill that will allow AES to pass on more costs to the consumer. Since 2020, we have used our equipment to provide our community with access to fresh foods and provide a solution to the local food desert. The major overhead cost to run the shipping container farms is the electrical power that is required to power the LED lights and help the plants photosynthesize and grow. The issue is the cost of electrical power continues to increase year over year. Since we begin farming in 2020, Indianapolis Power and Light has been bought out by the company AES. The result is an increase in the kilowatt electric rate. We were once paying .13 cents per kilowatt hour and now we are paying up to .16 cents per kilowatt hour. This is a required cost to operate the shipping container farms and decreases the margin of our business. The only solution to this problem is the installation of solar power to capture energy from the sun and use this power to run the shipping container farms. Once the solution is implemented we will be able to use this demonstration to show other the benefits of shipping container farming.

PROVIDE A LISTING OF THE OBJECTIVES THAT THIS PROJECT HOPES TO ACHIEVE

Add more objectives by copying and pasting the existing listing or delete objectives that aren't necessary.

Objective 1	Number of stakeholders that gained knowledge about environmental sustainability best practices, tools, or technologies will be tracked by using an attendance sheet that captures the visitor's

	Name, Position/ Title, Date, and time visited, Purpose for the visit. I will be able to get information about the audience when I do presentations, workshops, and speaking events.
Objective 2	Number of new tools/technologies developed or enhanced to improve sustainability/ conservation or other environmental outcomes will be measured by tracking the monthly AES bills on Excel and tracking the electrical power consumption and monthly electric costs. We have charted the previous years' worth of data and will continue to add to this. After the installation of the solar and storage system we can compare the before and after data to see how much savings were generated by the installation of solar panels and backup battery.
Objective 3	Increase the number of stakeholders that gained knowledge about environmental sustainability best practices, tools, or technologies by encouraging visitors to fill out a survey before the visit and after the visit questionnaire. I will create an online and printed form that will be able to capture the feedback from visitors and track what people have learned. When people come to visit the farm or take a tour I can have them fill out the survey and I can also send a follow-up questionnaire to determine ask questions about putting practices in place and knowledge retention.

PROJECT BENEFICIARIES

Estimate the number of project beneficiaries: 300

Does this project directly benefit socially disadvantaged farmers and/or underserved communities as defined in the RFA? **Yes** ☑ **No** ☐

If you selected yes, please describe how the project directly benefits socially disadvantaged farmers and/or underserved communities.

Our farm is located within a food desert. This platform enables us to provide the community with access to fresh food all year round. A problem with socially disadvantaged farmers and urban communities is the access to fertile land for traditional farming. The project will create a demonstration of an alternative to traditional farming that can be used as a model to develop a commercial farming system that can generate revenue and increase the number of socially disadvantaged farmers that provide fresh food to urban areas and underserved communities. We give free tours to people in the community and to local grade schools so that they can see the benefits in hydroponic farming.

Does this project directly benefit beginning farmers as defined in the RFA? **Yes** ☑ **No** ☐

If you selected yes, please describe how the project directly benefits beginning farmers.

Many people reach out to me to understand my story and get knowledge about shipping container farming. I have been able to encourage people at all levels about the importance of hydroponic farming. The installation of solar and storage system will improve the environmental sustainability of specialty crops and demonstrate an alternative farming method for beginning farmers.

COLLEGES AND UNVERSITIES

Butler University

We partnered with Butler University and the Professor of Entrepreneurship and Innovation at Butler University Stephanie Farnhaber on a Social Entrepreneurship class (EI325). Students will experience a social enterprise close up.

In doing so, they will gain a deeper understanding of the context behind the social enterprise as well as your passion to make a difference. This can be a very impactful and inspirational experience. Students will recognize how business skills can be used for a social purpose, and see how theories and concepts being discussed in class are applied.

Purdue University

I am a Purdue University graduate, so the university extension members continue to reach out to me to communicate on shipping container farming. I have done tours for the Urban Agriculture class, presented at the Hydroponics and Floriculture workshop in the Fall, presented at the Small Farmers conference and given video conference tours to classes. I continue to use the platform to promote the use of hydroponics and show new options of controlled environmental agriculture.

HIGH SCHOOL AND GRADE SCHOOL STUDENTS

I have given free tours to local public schools such as IPS/Butler Lab School 60 who came to visit the farm with twenty-five plus people in March 2023.

I have given multiple presentations at Spring Mill Elementary school to promote the use of hydroponic farming in April 2022 and April 2021.

I have given discounted tours to the Future Farmers of America when they come to visit the farm in the Fall every year for the convention.

Does this project directly benefit veteran farmers as defined in the RFA? **Yes** ☑ **No** ☐

If you selected yes, please describe how the project directly benefits veteran farmers.

My farmhand Micheal Routon is an army veteran. He works with me consistently and loves working at the farm. He has been with me for over 2 years now.

STATEMENT OF ENHANCING SPECIALTY CROPS

By checking the box to the right, I confirm that this project enhances the competitiveness of specialty crops in accordance with and defined by the Farm Bill. Further information regarding the definition of a specialty crop can be found at www.ams.usda.gov/services/grants/scbgp. ☑

List of Specialty Crops: kale, lettuce

CONTINUATION PROJECT INFORMATION

Does this project continue the efforts of a previously funded SCBGP project? **Yes** ☐ **No** ☑

If you have selected "yes", please address the following:

DESCRIBE HOW THIS PROJECT WILL DIFFER FROM AND BUILD ON THE PREVIOUS EFFORTS

PROVIDE A SUMMARY (3 TO 5 SENTENCES) OF THE OUTCOMES OF THE PREVIOUS EFFORTS

PROVIDE LESSONS LEARNED ON POTENTIAL PROJECT IMPROVEMENTS

What was previously learned from implementing this project, including potential improvements?

How are the lessons learned and improvements being incorporated into the project to make the ongoing project more effective and successful at meeting goals and outcomes?

DESCRIBE THE LIKELIHOOD OF THE PROJECT BECOMING SELF-SUSTAINING AND NOT INDEFINITELY DEPENDENT ON GRANT FUNDS

The installation of the solar panels will improve the environmental sustainability of specialty crops and help ensure that the equipment can demonstrate a new method of sustainable farming that is economically friendly and uses less water and electricity resources from the environment. The partnership with Butler University enabled us to track the monthly AES bills that capture the electrical power consumption and costs. We have charted the previous years' worth of data and will continue to add to this. After the installation of the solar and storage system we can compare the before and after data to see how much savings was generated by the installation of solar panels and backup battery. We have already begun to use our platform to educate people on controlled environmental agriculture, hydroponics, vertical farming, and plant growth process. This will add another element of education by giving a real-life demonstration of capturing the suns energy to grow specialty crops.

OTHER SUPPORT FROM FEDERAL OR STATE GRANT PROGRAMS

The SCBGP will not fund duplicative projects. Did you submit this project to a Federal or State grant program other than the SCBGP for funding and/or is a Federal or State grant program other than the SCBGP funding the project currently?

Yes ☐ **No** ☐

IF YOUR PROJECT IS RECEIVING OR WILL POTENTIALLY RECEIVE FUNDS FROM ANOTHER FEDERAL OR STATE GRANT PROGRAM

Identify the Federal or State grant program(s).

I do not have any other grants

Describe how the SCBGP project differs from or supplements the other grant program(s) efforts.

No other grants

EXTERNAL PROJECT SUPPORT

Describe the specialty crop stakeholders who support this project and why (other than the applicant and organizations involved in the project).

Butler University
We partnered with Butler University and the Professor of Entrepreneurship and Innovation at Butler University Stephanie Farnhaber on a Social Entrepreneurship class (EI325). The project allows students to experience a social enterprise close up. In doing so, they will gain a deeper understanding of the context behind the social enterprise as well as your passion to make a difference. This can be a very impactful and inspirational experience. Students will recognize how business skills can be used for a social purpose, and see how theories and concepts being discussed in class are applied.

Purdue University
I am a Purdue University graduate, so the university extension members continue to reach out to me to communicate on shipping container farming. I have done tours for the Urban Agriculture class, presented at the Hydroponics and Floriculture workshop in the Fall, presented at the Small Farmers conference and given video conference tours to classes. I continue to use the platform to promote the use of hydroponics and show new options of controlled environmental agriculture.

Solar power installers
A company will be contracted to install the solar and storage system. Upon approval of the grant, we will decide on the solar system installers and work with them to finalize a design to work with the farms.
The student attend Butler University and this spring they took the EI325 Social Entrepreneurship Partners class. This course examines how entrepreneurial skills are used to create innovative approaches to societal problems. Social entrepreneurship applies to both profit and non-profit firms who have programs designed to meet the double bottom line of being financially sustainable while creating social value. The students were given the opportunity to apply the concepts of social entrepreneurship on a project with DeMario Vitalis, the owner and founder of New Age Provisions Farms, an urban commercial farming company that uses state-of-the-art technology to grow fresh lettuces and leafy greens using hydroponics and vertical farming methods.

EXPECTED MEASURABLE OUTCOMES

SELECT THE APPROPRIATE OUTCOME(S) AND INDICATOR(S)/SUB-INDICATOR(S)

You must choose at least one of the eight outcomes listed in the SCBGP Performance Measures, which were approved by the Office of Management and Budget (OMB) to evaluate the performance of the SCBGP on a national level.

OUTCOME MEASURE(S)

Select the outcome measure(s) that are applicable for this project from the listing below.

- ☐ **Outcome 1:** Increasing Consumption and Consumer Purchasing of Specialty Crops
- ☐ **Outcome 2**: Increasing Access to Specialty Crops and Expanding Specialty Crop Production and Distribution
- ☐ **Outcome 3**: Increase Food Safety Knowledge and Processes
- ☐ **Outcome 4**: Improve Pest and Disease Control Processes
- ☐ **Outcome 5**: Develop New Seed Varieties and Specialty Crops
- ☐ **Outcome 6**: Expand Specialty Crop Research and Development
- ☑ **Outcome 7**: Improve Environmental Sustainability of Specialty Crops

OUTCOME INDICATOR(S)

Provide at least one indicator listed in the SCBGP Performance Measures and the related quantifiable result. If you have multiple outcomes and/or indicators, repeat this for each outcome/indicator.

FOR EXAMPLE:

Outcome 1, Indicator 1.1a
Total number of consumers who gained knowledge about specialty crops, Adults 132.

Outcome 7, Indicator 1
Number of stakeholders that gained knowledge about environmental sustainability best practices, tools, or technologies [200].

Outcome 7, Indicator 4
Number of new tools/technologies developed or enhanced to improve sustainability/ conservation or other environmental outcomes [1].

Outcome 7, Indicator 2
Number of stakeholders reported with an intent to adopt environmental sustainability best practices, tools, or technologies [100].

MISCELLANEOUS OUTCOME MEASURE

In the unlikely event that the outcomes and indicators above the selected outcomes are not relevant to your project, you must develop a project-specific outcome(s) and indicator(s) which will be subject to approval by AMS.

DATA COLLECTION TO REPORT ON OUTCOMES AND INDICATORS

Explain how you will collect the required data to report on the outcome and indicator in the space below.

Number of stakeholders that gained knowledge about environmental sustainability best practices, tools, or technologies will be tracked by using an attendance sheet that captures the visitor's Name, Position/ Title, Date, and time visited, Purpose for the visit. I will be able to get information about the audience when I do presentations, workshops, and speaking events. Increase the number of stakeholders that gained knowledge about environmental sustainability best practices, tools, or technologies by encouraging visitors to fill out a survey before the visit and after the visit questionnaire. I will create an online and printed form that will be able to capture the feedback from visitors and track what people have learned. When people come to visit the farm or take a tour I can have them fill out the survey and I can also send a follow-up questionnaire to determine ask questions about putting practices in place and knowledge retention.
Number of new tools/technologies developed or enhanced to improve sustainability/ conservation or other environmental outcomes will be measured by tracking the monthly AES bills on Excel and tracking the electrical power consumption and monthly electric costs. We have charted the previous years' worth of data and will continue to add to this. After the installation of the solar and storage system we can compare the before and after data to see how much savings were generated by the installation of solar panels and backup battery.

BUDGET NARRATIVE

All expenses described in this Budget Narrative must be associated with expenses that will be covered by the SCBGP. If any matching funds will be used and a description of their use is required by the State department of agriculture, the expenses to be covered with matching funds must be described separately. Applicants should review the Request for Applications section 4.7 Funding Restrictions prior to developing their budget narrative.

BUDGET SUMMARY

Expense Category	Funds Requested
Personnel	$1,600.00
Fringe Benefits	$0.00
Travel	$0.00
Equipment	$27,600.00
Supplies	$5,500.00
Contractual	$20,000.00
Other	$2,000.00
Direct Costs Sub-Total	$56,700.00
Total Budget	$56,700.00

PERSONNEL

List the organization's employees whose time and effort can be specifically identified and easily and accurately traced to project activities that enhance the competitiveness of specialty crops. See the Request for Applications section 4.7.2 Allowable and Unallowable Costs and Activities, Salaries and Wages, and Presenting Direct and Indirect Costs Consistently under section 4.7.1 for further guidance.

#	Name/Title	Level of Effort (# of hours OR % FTE)	Funds Requested
1	**Micheal Routon, Farmhand**	80	$1,600.00

Personnel Subtotal: $1,600.00

PERSONNEL JUSTIFICATION

For each individual listed in the above table, describe the activities to be completed by name/title including approximately when activities will occur. Add more personnel by copying and pasting the existing listing or deleting personnel that aren't necessary.

Personnel 1:	Army veteran and Farmhand will be there to support the installation of equipment

FRINGE BENEFITS

Provide the fringe benefit rates for each of the project's salaried employees described in the Personnel section that will be paid with SCBGP funds.

#	Name/Title	Fringe Benefit Rate	Funds Requested
1	,		

Fringe Subtotal: $0.00

TRAVEL

Explain the purpose for each Trip Request. Please note that travel costs are limited to those allowed by formal organizational policy; in the case of air travel, project participants must use the lowest reasonable commercial airfares. For recipient organizations that have no formal travel policy and for-profit recipients, allowable travel costs may not exceed those established by the Federal Travel Regulation, issued by GSA, including the maximum per diem and subsistence rates prescribed in those regulations. This information is available at http://www.gsa.gov. See the Request for Applications section 4.7.2 Allowable and Unallowable Costs and Activities, Travel, and Foreign Travel for further guidance.

#	Trip Destination	Type of Expense (airfare, car rental, hotel, meals, mileage, etc.)	Unit of Measure (days, nights, miles)	# of Units	Cost per Unit	# of Travelers Claiming the Expense	Funds Requested
1							

Travel Subtotal: $0.00

TRAVEL JUSTIFICATION

For each trip listed in the above table describe the purpose of this trip and how it will achieve the objectives and outcomes of the project. Be sure to include approximately when the trip will occur. Add more trips by copying and pasting the existing listing or delete trips that aren't necessary.

Trip 1 (Approximate Date of Travel):	

CONFORMING WITH YOUR TRAVEL POLICY

By checking the box to the right, I confirm that my organization's established travel policies will be adhered to when completing the above-mentioned trips in accordance with 2 CFR 200.474 or 48 CFR subpart 31.2 as applicable. ☑

EQUIPMENT

Describe any special purpose equipment to be purchased or rented under the grant. "Special purpose equipment" is tangible, nonexpendable, personal property having a useful life of more than one year and an acquisition cost that equals or exceeds $5,000 per unit and is used only for research, medical, scientific, or other technical activities. See the Request for Applications section 4.7.2 Allowable and Unallowable Costs and Activities, Equipment - Special Purpose for further guidance

Rental of "general purpose equipment" must also be described in this section. Purchase of general purpose equipment is not allowable under this grant. See Request for Applications section 4.7.2 Allowable and Unallowable Costs and Activities, Equipment - General Purpose for definition, and Rental or Lease Costs of Buildings, Vehicles, Land and Equipment.

#	Item Description	Rental or Purchase	Acquire When?	Funds Requested
1	Back up Battery	Purchase	October 2, 2023	$7,600.00
2	Solar Panel	Purchase	October 2, 2023	$17,000.00
3	Solar power inverter	Purchase	October 2, 2023	$3,000.00

Equipment Subtotal: $27,600.00

EQUIPMENT JUSTIFICATION

For each Equipment item listed in the above table describe how this equipment will be used to achieve the objectives and outcomes of the project. Add more equipment by copying and pasting the existing listing or delete equipment that isn't necessary.

Equipment 1:	A backup battery is used to store the power that is generated from the solar panels
Equipment 2:	Solar panels are required to capture the sun energy
Equipment 3:	A solar power inverter is required to convert sun energy to usable power

SUPPLIES

List the materials, supplies, and fabricated parts costing less than $5,000 per unit and describe how they will support the purpose and goal of the proposal and enhance the competitiveness of specialty crops. See Request for Applications section 4.7.2 Allowable and Unallowable Costs and Activities, Supplies and Materials, Including Costs of Computing Devices for further information.

Item Description	Per-Unit Cost	# of Units/Pieces Purchased	Acquire When?	Funds Requested
Solar panel racks	$100.00	20.0	October 2, 2023	$2,500.00
Solar power optimizer connections	$300.00	10.0	October 2, 2023	$3,000.00

Supplies Subtotal: $5,500.00

SUPPLIES JUSTIFICATION

Describe the purpose of each supply listed in the table above purchased and how it is necessary for the completion of the project's objective(s) and outcome(s).

Solar panel racks: Used for rack and mounting of the solar panels and back up battery
Solar power optimizer connections: Used to connect the solar panels to each other

CONTRACTUAL/CONSULTANT

Contractual/consultant costs are the expenses associated with purchasing goods and/or procuring services performed by an individual or organization other than the applicant in the form of a procurement relationship. If there is more than one contractor or consultant, each must be described separately. (Repeat this section for each contract/consultant.)

ITEMIZED CONTRACTOR(S)/CONSULTANT(S)

Provide a list of contractors/consultants, detailing out the name, hourly/flat rate, and overall cost of the services performed. Please note that any statutory limitations on indirect costs also apply to contractors and consultants.

#	Name/Organization	Hourly Rate/Flat Rate	Funds Requested
1	Contract Labor	$250.00	$20,000.00

Contractual/Consultant Subtotal: $20,000.00

CONTRACTUAL JUSTIFICATION

Provide for each of your real or anticipated contractors listed above a description of the project activities each will accomplish to meet the objectives and outcomes of the project. Each section should also include a justification for why contractual/consultant services are to be used to meet the anticipated outcomes and objectives. Include timelines for each activity. If contractor employee and consultant hourly rates of pay exceed the salary of a GS-15 step 10 Federal employee in your area, provide a justification for the expenses. This limit does not include fringe benefits, travel, indirect costs, or other expenses. See Request for Applications section 4.7.2 Allowable and Unallowable Costs and Activities, Contractual and Consultant Costs for acceptable justifications.

Contractor/Consultant 1:	Contractor to install the solar panel will be chosen between Jefferson Electric or Rectify. We estimated that the installation will take 2 weeks at a rate of $250 an hour.

CONFORMING WITH YOUR PROCUREMENT STANDARDS

By checking the box to the right, I confirm that my organization followed the same policies and procedures used for procurements from non-federal sources, which reflect applicable State and local laws and regulations and conform to the Federal laws and standards identified in 2 CFR Part 200.317 through.326, as applicable. If the contractor(s)/consultant(s) are not already selected, my organization will follow the same requirements. ☑

OTHER

Include any expenses not covered in any of the previous budget categories. Be sure to break down costs into cost/unit. Expenses in this section include, but are not limited to, meetings and conferences, communications, rental expenses, advertisements, publication costs, and data collection.

If you budget meal costs for reasons other than meals associated with travel per diem, provide an adequate justification to support that these costs are not entertainment costs. See Request for Applications section 4.7.2 Allowable and Unallowable Costs and Activities, Meals for further guidance.

Item Description	Per-Unit Cost	Number of Units	Acquire When?	Funds Requested
Advertisement	$2.00	1,000.0	December 1, 2023	$2,000.00

Other Subtotal: $2,000.00

OTHER JUSTIFICATION

Describe the purpose of each item listed in the table above purchased and how it is necessary for the completion of the project's objective(s) and outcome(s).

Advertisement: Printed materials and handouts that will be used in the workshop, trainings, and tours

PROGRAM INCOME

Program income is gross income—earned by a recipient or subrecipient under a grant—directly generated by the grant-supported activity or earned only because of the grant agreement during the grant period of performance. Program income includes, but is not limited to, income from fees for services performed; the sale of commodities or items fabricated under an award (this includes items sold at cost if the cost of producing the item was funded in whole or partially with grant funds); registration fees for conferences, etc.

Source/Nature of Program Income	Description of how you will reinvest the program income into the project to enhance the competitiveness of specialty crops	Estimated Income
Sale of produce	The project will help to reduce the cost of overhead which will help to generate more revenue for the business. We will use the revenue generated from the sale of produce to reinvest back into the	$25,000.00

Source/Nature of Program Income	Description of how you will reinvest the program income into the project to enhance the competitiveness of specialty crops	Estimated Income
	business and maintain a competitive market price for our produce	

Program Income Total: $25,000.00

Timeline:

Research and options with Butler University Social Entrepreneur Partners	Q1/ 2023 – Q2/ 2023
Funding from the Specialty Crop Block Grant	Q4/ 2023
Contractor selection between Jefferson Electric, Rectify	Q3/ 2023
Installation of the solar system and backup battery:	Q4/ 2023
Commissioning system to work with the Freight farms	Q4/ 2023

Hannah Ravaris, Ben Packer, and Sam Watters
EI 325
Professor Fernhaber
March 2, 2023

Research Insights Final Report

Research Overview

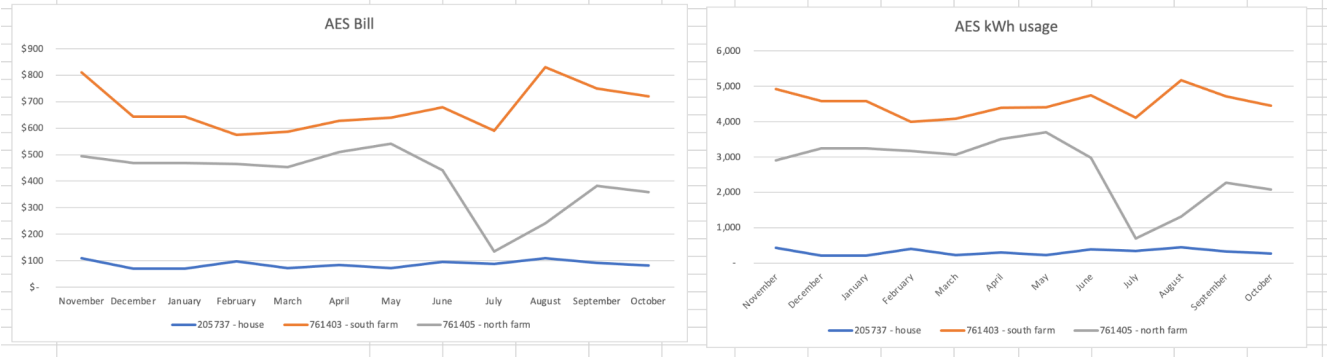
We worked with DeMario (Mario) Vitalis, founder of New Age Provisions, to explore solar energy as an alternative. One of Mario's largest expenses is to power LED lights which is crucial to the growth of the crops. Our goal was to find solar solutions to reduce the cost of his electric bill and make his shipping container farm more efficient and innovative. We were tasked with identifying three installers and getting cost estimates, analyzing potential savings given Mario's current kilowatt (kW) usage, identifying potential grants and developing a potential timeline/plan for implementation. Our overall goal was to understand how to decrease Mario's power consumption and how it will benefit his farms.

We all had some previous solar knowledge, but we first gained information about the functionality of Mario's farm. We researched Freight Farms, the manufacturer of the shipping containers with hydroponic systems. Once we met with Mario and saw his farm, it gave us an idea of the size of the shipping containers and space we would be working with on his plot of land. Visiting his farms also made the experience more impactful for us and we learned more about Mario's personal story.

Analyzing Usage Data

To understand what solar solution will be best for Mario, he sent us past electric bills and his monthly kWh usage. We created an Excel chart tracking his kWh and the cost per hour so Mario can analyze his average monthly usage and identify when it is cheapest to use energy. Mario powers his LED lights at night because this is when purchasing energy from the grid is the cheapest.

						Monthly Price							
Service ID	November	December	January	February	March	April	May	June	July	August	September	October	Average
205737 cost	$ 110	$ 70	$ 70	$ 97	$ 72	$ 83	$ 72	$ 95	$ 87	$ 108	$ 92	$ 82	$ 86
205737 energy usage (kWh)	433	210	210	404	222	300	216	391	335	442	330	261	313
Farm 1 (South side - 761403) cost	$ 810	$ 643	$ 643	$ 575	$ 587	$ 627	$ 639	$ 679	$ 590	$ 830	$ 750	$ 720	$ 674
Farm 1 (South side - 761403) energy usage (kWh)	4,926	4,581	4,581	3,992	4,084	4,387	4,412	4,747	4,114	5,165	4,720	4,451	4,513
Farm 2 (North side - 761405) cost	$ 494	$ 468	$ 468	$ 465	$ 452	$ 510	$ 542	$ 442	$ 134	$ 240	$ 383	$ 359	$ 413
Farm 2 (North side - 761405) energy usage (kWh)	2,902	3,244	3,244	3,171	3,073	3,506	3,693	2,975	688	1,320	2,270	2,079	2,680
TOTAL COST:	$ 1,414	$ 1,181	$ 1,181	$ 1,137	$ 1,112	$ 1,220	$ 1,253	$ 1,216	$ 810	$ 1,179	$ 1,225	$ 1,160	$ 1,173.98
TOTAL kWh:	8,261	8,035	8,035	7,567	7,379	8,193	8,321	8,113	5,137	6,927	7,320	6,791	7,506.58
Average Cost per kWh:	$ 0.171	$ 0.147	$ 0.147	$ 0.150	$ 0.151	$ 0.149	$ 0.151	$ 0.150	$ 0.158	$ 0.170	$ 0.167	$ 0.171	$ 0.157



Installers

Once we figured out usage, we used websites such as EnergySage which is a platform that gathers info about past energy usage, location and solar needs and suggests solar + storage solutions as well as installers in the area. EnergySage generated a list of installers specific for Mario's needs. We contacted Rectify Solar, GNRE Solar and Solar Energy Solutions. We shared our project goals and measurements (and graphic below) so they could potentially build out solutions. These three companies provided guidance as we tried to find feasible options that would best suit Mario's solar goals.

Solar + Storage Systems

We also began to develop a list of various commercial and residential solar + storage systems that could be functionable for his needs. Companies such as Generac, SolArk and Enphase offer systems with inverters, panels, and storage systems. When researching, we found charts like the one below that compared battery and inverter systems so it was easy to analyze statisticfrom Sherdexias about each of the products from the leading companies (mrsolar.com).

Feature Comparison	Sol-Ark 5K	Tesla Powerwall2	Generac PWRcell	LG/SolarEdge EnergyHub	Enphase Encharge 10
Install Simplicity	Entire Home Transfer Switch, All-In-One Hybrid, Some Load mgmt.	Entire Home Transfer Switch. No Load mgmt.	Entire Home Transfer Switch, All-In-One Hybrid, 8ch Load mgmt.	Entire Home Transfer Switch. No Load mgmt.	Entire Home Transfer Switch. No Load mgmt.
7 Day Single Support Line For Solar + Storage for both installer and end-user	Yes	No	Yes	No	Yes
Peak Current (Off-Grid) Higher Power = Fewer Support Calls	67 A	30 A	50 A	30 A	24.6 A
Continuous PV to AC Power (On-Grid)	5 kW	5 kW	7.6 kW	7.6 kW	10-15kW
Continuous Batt Power (On/Off-Grid)	5 kW	5 kW	7.6kW	5kW	3.84kW
Battery Life Span	16 Years (LFP) No Cooling Needed	10 Years NMC Must Active Cool	10 Years NMC Must Active Cool	7 Years NMC Only Passive Cooling	16 Years (LFP) No Cooling Needed
Hardware Reliability	20+ Year Design Life, Electronics Isolated from Environment	20+ Year Design Life, Electronics Isolated from Environment	10 Year Life, Electronics Exposed to Humidity & Dust or Clogged Filter	20+ Year Design Life, Electronics Isolated from Environment	20+ Year Design Life, Electronics Isolated from Environment
AC Coupling for Easy Upgrades	Yes	Yes	No	Yes	Yes
Charging Battery from Generators	Yes	No	No	No	No
PV to Batt to AC Efficiency	93%	87%	85%	82%	87%
Fleet Mgmt Tool w/ Remote Setup	Yes	No	Yes	Yes	Yes
Customer Satisfaction Rating / Reviews	5.0 x 82	4.0 x 210	5.0 x 1	3.0 x 19	3.5 x 24

Collaboration with Land Stewards

Additionally, we met with David Counsell from Land Stewards and visited his farm to learn more about his solar system and how he uses solar to run his farm more efficiently with his Generac PWRcell system. David also advised us to look into “DIY” kits found on Amazon that could be retrofitted to Mario’s system. These solar kits would be less expensive and wouldn’t require a formal install like the residential system. David was able to give us suggestions that helped us to explore solar products on a greater scale. Through this program, Mario and David connected and were able to share industry advice.

Grant Process

When trying to find a reasonably priced system, identifying potential grants was a pivotal part of this project. We realized that by adding battery storage to the system would be the greatest expense. We received information that will help us narrow down what systems are feasible based on grant limitations and funding availability. Mario notified us of the Speciality Crop Block Grant Program (SCBGP) which is a grant geared toward specialty crops and growing methods in Indiana. This grant proposal is due at the end of March and we have started to assist Mario with the application process.

Challenges

After working through these objectives, we realized installing solar was going to be a greater challenge than we first anticipated, as well as our schedule of events was quite ambitious. We ran into roadblocks as many solar systems are made to be for residential or commercial buildings but compatibility with shipping containers is a difficult task. Since the roof area is smaller and there isn’t a ton of room on the lot, this limits the amount of solar panels that can be installed or mounted on the ground. Additionally, some companies don’t allow panels to be installed and financed since the containers don’t have a permanent foundation. Since shipping

container farming itself, and putting solar panels on top of the containers are a new innovation, many companies haven't installed like this before. After reaching out to many solar installers like the ones listed above, many installers didn't believe they were able to help after many installation and logistic setbacks. Even though installers don't believe they can help Mario, they have given great feedback and this has helped us to continue our search allowing us to know what we are specifically looking for.

Conclusion

While we have a strong foundation of research, we are finding there are many more hoops to jump through. We have greater knowledge of what to look for when analyzing solar systems, built great connections with installers who have provided impactful advice, and learned more about the grant application process. Even though we set our goals high, our team learned tremendously from this experience and enjoyed helping Mario to progress towards achieving his solar goals. We can all agree that connecting with Mario was one of our favorite parts. His story of adversity and determination is inspiring and is shown through his organization. Our team is available and willing to assist Mario in the coming weeks as he is still navigating this solar process. We are looking forward to continuing our relationship with New Age Provisions to further grow in our experience and knowledge also.

March 6, 2023

Program Manager,

Specialty Crops Block Grant Program

Funding opportunity: USDA-AMS-TM-SCBGP-G-23-0003

Dear Selection Committee,

I am thrilled to support the proposal titled '**Specialty Crop Block Grant**' submitted by DeMario Vitalis at New Age Provisions LLC and the participants of the Butler University Social Entrepreneurship Partners class.

I, Benjamin Packer, am a student at Butler University. This spring I was able to take the EI325 Social Entrepreneurship Partners. This course examines how entrepreneurial skills are used to create innovative approaches to societal problems. Social entrepreneurship applies to both profit and non-profit firms who have programs designed to meet the double bottom line of being financially sustainable while creating social value. We were given the opportunity to apply the concepts of social entrepreneurship on a project with DeMario Vitalis, the owner and founder of New Age Provisions Farms, an urban commercial farming company that uses state-of-the-art technology to grow fresh lettuces and leafy greens using hydroponics and vertical farming methods.

We were able to help research the many varieties of solar system options and come up with some alternatives that meet the needs of the business. Our research has concluded, and we have come to the realization that the expense of a solar system with a backup battery will be a minimum of $50,000. We are writing this letter of support so that New Age Provisions can meet the next

important step of the process, which is to fund the purchase of the solar equipment so it can be installed, and we can see the results of our hard work come to fruition. Once the solar system project is funded this will ensure that New Age Provision will help improve food access in underserved areas.

Regards,

Ben Packer

224-244-0663

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