

**Applicant Names:** Oklahoma State University at Stillwater, OKC and Samuel Noble Foundation

### GENERAL INSTRUCTIONS

- Application form must be completed in its entirety and required documentation attached.
- Incomplete applications will not be reviewed.

### APPLICANT INFORMATION

1. NAMES OF APPLICANTS Lynn Brandenberger\*, Warren Roberts, Jim Shrefler, Julia Laughlin, Merritt Taylor, Sue Gray, Brian Kahn, Steve Upson
2. Federal Tax ID Number or Social Security Number XXXXXXXXXX
3. Mailing address 358 Ag Hall
4. City/Zip Stillwater, Oklahoma 74078-6027
5. AGRIBUSINESS ENTITY (Business, University, Government, etc) University and non-Profit Organization
6. Phone\* (XXX) XXX-XXXX FAX#\* XXX-XXX-XXXX
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### PROJECT INFORMATION

1. PROJECT NAME Extended season leafy greens for health and wealth
2. LOCATIONS OF PROPOSED PROJECT Tulsa, Lane, Oklahoma City, Ardmore
3. START AND COMPLETION DATES January 2010-December 2011

### ABSTRACT (200 words or less)

Developing season extension techniques for fresh vegetable production is a key aspect of helping producers increase the number of months that they are able to produce and sell fresh produce in the state. Cool season greens can be produced throughout the fall-winter-spring in hoop houses because of their tolerance to cold temperatures. An important aspect of this process is trialing and learning what crops and varieties perform best within hoop houses in Oklahoma. The project will include variety trialing of several leafy greens crops that can be grown for fresh market sales in local farmers markets and within the Farm to School marketing program. Leafy greens include both brassica greens and spinach which can be eaten fresh and cooked. Both types have high levels of nutrients and are considered very healthy foods for adults and school children. Our project will seek to determine not only what varieties perform best in hoop houses, but also which crops will have the highest potential for profitability for fresh producers within the state. Replicated trials will be carried out at three locations (Tulsa, Lane, Oklahoma City) the first year and four locations (Tulsa, Lane, Oklahoma City, Ardmore) the second year with results being published each year.

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**Project Purpose and Goals** – Clearly state the purpose of the project and explain why the project is important.

1. Determine the best varieties of cool season greens for production within a hoop house.
2. Determine the best mix of different cool season greens crops for production and profitability within a hoop house.
3. Encourage the use of hoop house production within Oklahoma for season extension and increasing profitability for fresh produce producers.
  - a. Extension of growing season to 12 months per year.
  - b. Cool season crops for filling the market void that occurs during the winter.
4. Increase the nutritional quality of school lunch programs by increasing the availability of fresh greens during the school year.

**Potential Impact** – Discuss the number of people or operations affected and the intended beneficiaries of the project. The potential economic impact if such data is available and relevant to the project. (One page or less)

The impact of this project could be far reaching for several reasons. First, the trials would be located in different geographical areas of the state which would allow producers from around the state an opportunity to visit a trial site near them. Visits could include both formal field days and individual visits. The trials themselves would lay the ground work for variety selection decisions by producers with trial information generated from sites close by rather than from a centralized site for the entire state. The extension of their growing season to 12 months a year could generate income during the winter when no income from fresh produce is coming into their operation. When considered, this would conservatively add two months of growing time to the production season for fresh produce growers. It is felt that producers would benefit significantly from this effort. Producers that are currently involved in the Plasticulture program should be well suited to move into a season extension system utilizing hoop houses for protection during the winter. This along with variety information would provide a basis for continued improvement in the profitability of their operations.

**Expected Measurable Outcomes** – For each project, describe at least one distinct, quantifiable, and measurable outcome that directly and meaningfully support the project's purpose.

1. Completion of leafy greens variety trials to determine the best varieties and crop mixes for efficient production within a hoop house.
  - a. Trial data and reports from three sites the first year and four sites the second year of the trial program.
    - i. Publication of trial results in the Oklahoma State Vegetable Trial Report.
2. Field days and other outreach efforts to transfer the technology and information generated by the trials directly into growers hands.

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- a. Each site will carry out a field day each year of the trials and allow individual producer visits for sharing season extension techniques and for transfer of information from the trials directly to producers.

**Work Plan** – For each project, explain briefly the activities that will be performed to accomplish the objectives of the project and indicate who will do the work of each activity. Include appropriate time lines. Outcomes may exceed the grant period; simply indicate that they exceed the grant period and what work will be ongoing.

1. Establishment of a cooperative variety trial program in hoop houses located at Tulsa, OSU/OKC, OSU/Lane, and Noble Foundation/Ardmore.
  - a. Replicated trials of leafy vegetables including brassica greens and spinach
  - b. Lynn Brandenberger, Brian Kahn, Sue Gray at Tulsa, Warren Roberts, Jim Shrefler, Merritt Taylor at Lane, Julia Laughlin at Oklahoma City, and Steve Upson at Ardmore will be responsible for establishment of trials, data collection, and written reports of results.
2. Each site will host at least one educational event per year with emphasis on leafy greens production in the hoop house with other production issues also part of the event.
  - a. Lynn Brandenberger and Sue Gray will organize and carry out the educational programs at the Tulsa site.
  - b. Warren Roberts, Jim Shrefler, and Merritt Taylor will organize and carry out educational programs at the Lane site.
  - c. Julia Laughlin and Lynn Brandenberger will organize and carry out educational programs at the OKC site.
  - d. Steve Upson and Lynn Brandenberger will organize and carry out educational programs at the Ardmore site.

**Financial Feasibility** – How do you intend to use the grant funds? Provide a breakdown of the components of the proposal and where the grant funds fit into the overall project financing. Prioritize funding needs, if possible. Provide budget estimates for the total project cost.

**Remember, no administrative funds may be included in the budget request.**

- Grant funds will be used to purchase supplies, pay for travel, publication costs, labor, and field day expenses (program printing, refreshments). Only one site (Lane) will need additional hoop houses and the cost of their portable hoop house will be included under supplies.

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**Budget**

Budget for Extended Leafy Greens for Health and Wealth					
Category	SCBGP-FB Funds	Cash Match	In-Kind Match	Total	Comments
<b>Year 1 budget</b>					
Personnel	\$3,317	N/A	N/A	\$3,317	
Travel	\$2,500	N/A	N/A	\$2,500	
Supplies	\$4,800	N/A	N/A	\$4,800	
Other	\$3,300	N/A	N/A	\$3,300	
Totals	\$13,917			\$13,917	
<b>Year 2 budget</b>					
Personnel	\$3,317	N/A	N/A	\$3,317	
Travel	\$2,500	N/A	N/A	\$2,500	
Supplies	\$1,800	N/A	N/A	\$1,800	
Other	\$4,300	N/A	N/A	\$4,300	
Totals	\$11,917	N/A	N/A	\$11,917	
<b>Total for 2 years</b>					
Personnel	\$6,634	N/A	N/A	\$6,634	
Travel	\$5,000	N/A	N/A	\$5,000	
Supplies	\$6,600	N/A	N/A	\$6,600	
Other	\$7,600	N/A	N/A	\$7,600	
Totals	\$25,834	\$6,717		\$32,551	Cash match includes indirect costs of 26% of total grant

**Budget Narrative** – Provide sufficient information in paragraph format about the budget categories listed for each project to demonstrate that grant funds are being expended on eligible grant activities that meet the purpose of the program.

- The project is designed to test leafy green varieties over a period of two years in four locations of Oklahoma utilizing season extension techniques in hoop houses to find the varieties that are capable of growing in conditions for early or late harvest such that they may be marketed during the period that schools are in session. The four locations are Ardmore, Oklahoma City, Tulsa and Lane. The Ardmore and Oklahoma City test sites currently contain at least one hoop house that can be utilized for these tests. The Tulsa site will be in cooperation with a private agency which is planning on a hoop house to be set up in fall 2009, Lane is planning on setting up a portable hoop house after approval of these grant funds. Lane will evaluate the potential of a portable hoop house to reduce soil borne pest problems in greens production.

Expenses requested from SCBGP-FB Funds as follows: Total Requested: **\$25,834.00**

- **Personnel:** (part time) to assist with production of greens - Salary plus benefits at \$3,317/year for a total of \$6,634 for the two years of the project.

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- **Travel:** at \$2,500 per year for a total of \$5,000. This would defray mileage costs for project leaders to and from demonstration sites and to educational venues.
- **Equipment:** None to be purchased.
- **Supplies:** \$6,600 for two years of project
  - Materials to build portable hoop house - \$3,000
  - Seed - \$500/year - Total \$1,000
  - Fertilizer \$300/year - Total \$600
  - Drip Tape \$300/year - Total \$600
  - Plastic Mulch - \$300/year - Total \$600
  - Pesticides \$400/year - Total \$800
- **Contractual:** None
- **Other:** \$7,600 for two years of project

The project includes educational field days at the production sites to demonstrate the techniques that have been successful.

- One Field Day Educational Program at Three Sites the First Year - \$3,000
  - Field day costs may include program printing, refreshments, portable toilets, etc.
- One Field Day Educational Program at Four Sites the Second Year - \$4,000
  - Field day costs may include program printing, refreshments, portable toilets, etc.
- Publishing costs include development of materials to be distributed to the public at field days, at professional meetings, for extension publications and for web sites.
  - \$300.00 per year for a total of \$600 for the two year project.
- **Total Requested funds:** \$25,834
- **Cash Matching funds:** \$6,717
  - Indirect costs of 26% totaling \$6,617

**Project Oversight** – Describe the oversight practices that provide sufficient knowledge of grant activities to ensure proper and efficient administration.

- Grants and projects administration at OSU follow all applicable state laws and regulations regarding regulation of outside grant funding.

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**Project Commitment** – Describe how all grant partners commit to and work toward the goals and outcome measures of the proposed project.

- Grant partners include the principal investigator and co-investigators and their related agencies including Oklahoma State University, Oklahoma State University at Oklahoma City, Oklahoma Cooperative Extension Service, and the Samuel Noble Foundation. Each partner is well experienced in variety trialing and will be a major contributor to the success of the project. All partners will provide signed letters indicating their willingness to participate in the project and a two page vitae if requested by ODAFF.

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*I certify that the information provided is true and correct to the best of my knowledge. If approved for the specialty crop grant, I agree that the organization will assume sole responsibility of any and all debts or liabilities that may be incurred from this project; and will provide the required documentation to the Oklahoma Department of Agriculture, Food, & Forestry upon request. I understand that if this proposal is funded, I will be required to sign a grant agreement and other necessary documentation containing terms and conditions upon which funds will be released.*

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Signature

Title

Date