

## Aggie Green Fund Grant Proposal Application - 39900

### General Information

39900

### Project Title

The creation of a campus-based food system through the development of a Student-Run Organic Farm  
Total amount requested from the Aggie Green Fund \$50,000

### Primary Contact

Name Brady Grimes

Title and Department Student ESSM/HORT

[REDACTED]

[REDACTED]

### Secondary Contact

Name Nathanael Proctor

Title and Department Graduate Student LAUP

[REDACTED]

[REDACTED]

How did you hear about this grant?

Through TAMU Office of Sustainability and followed Green Fund developments prior to student body elections.

Registered student organization or campus unit/department through which the grant funds will be administered, if applicable (if different from sponsoring organization):

The Department of Horticultural Sciences has agreed to administer grant funds.

1. Please give a brief history of this project/your organization. Describe the overall purpose (goals) of the project.

The student-run farm project began in March of 2010 by students motivated to create a student run facility for organic agriculture, and ultimately a more sustainable campus. The student farm has grown over the past two seasons and is currently comprised of two acres with over 70 student volunteers

serving in a variety of areas on and off the farm. The student volunteers come from many backgrounds and interests, with most having little prior knowledge of food production. The student farm provides an opportunity for any interested student to learn about sustainable agriculture. To date, the crops grown at the student farm have been marketed to three primary outlets: Texas A&M University Dining, the student farm Community Supported Agriculture, and the Brazos Valley Farmers Market. University Dining became the student farm's first customer in the winter of 2010. This partnership has grown, with nearly 1,300 pounds of fresh, student-grown produce being served to students at the Sbisa dining hall in the fall of 2010. The student farm was largely supported by a community supported agriculture (CSA) marketing system, with CSA "share-holders" receiving a weekly supply of fresh produce. In the fall of 2010 the student farm also began to market produce at the Brazos Valley Farmers Market, giving students experience in direct sales as well as reaching out to a community of potential volunteers interested in local food production. There are plans for the student organic farm to re-establish an on-campus farmers market in order to provide fresh, student-grown produce directly to the Texas A&M campus. The student farm also held weekly donations for the Brazos Valley Food Bank as well as making a large donation in December 2010, providing fresh produce to over 100 families. The student farm is backed by students with a year-long history of working on the project with the support of faculty, staff, and community members. Dr. Joe Novak, a senior lecturer with 28 years teaching experience in the Department of Horticulture, has been advising and guiding the student farm since its inception. Dr. Steve King, a faculty member in the Department of Horticulture, teaches commercial vegetable production and also serves as advisor to the student farm. Dr. Joe Masabni, the vegetable specialist for Texas AgriLife Extension Service, has been involved by incorporating extension activities into the student farm and departmental courses in vegetable production. The student farm also includes support from graduate students. Nathanael Proctor, a graduate student in Urban and Regional Sciences and head of the Brazos Valley Locavores, serves as the student farm's administrator, managing its sales and accounts. Patrick Lillard, a graduate student in Agricultural Education and regional director for Texas Organic Farmers and Gardeners Association (TOFGA), is working to increase the collaborations between the university and TOFGA through the use of the student farm as an educational facility. Goals: The overall purpose of the student farm is to establish an organic student-run farm that provides organic, local produce for the campus and community, while at the same time providing a working organic farm for educational, research, and extension activities. This would reduce the campus' environmental impact and establish a model for farmers to follow. The project's goals include the following: 1. Establish a certified organic parcel of land for food production, education and research. 2. Create a closed system of food production, reducing the campus' waste stream and providing a source of fresh nutrient-dense food. 3. Provide educational opportunities for Texas A&M students in sustainable agriculture through courses, a student organization, and educational outreach. 4. Provide Texas AgriLife Extension and Research Services access to certified organic land for research and community education.

2. What will be the process for implementing your project? Describe the key components and steps of your project.

The first component of the project will be planning and equipment acquisition. This summer will be dedicated to establishing a farm plan and determining how to incorporate the student farm into current

undergraduate and graduate courses. The student farm project team will also meet with University Dining, the floral design programs, and research faculty to develop a schedule of crops to be grown. A farm manager will be hired and will work with the project team to develop a farm systems plan detailing the sustainable agricultural practices to be followed. All agricultural equipment and supplies will be acquired, and seedlings will be started in preparation for the fall planting. The second project component will be the establishment of the crops and the integration of undergraduate and graduate courses and student organizations in the fall semester. The project team and farm manager will oversee the fall planting, and the farm manager will distribute the harvested crops to University Dining and the floral design programs. Ongoing research plots will be utilized this summer where the farm will be able to assist with select research trials, and the harvests coming from these trials will be sold to dining services and the Brazos Valley Farmers' Market. The last component will be the collection of evaluation data, but it will begin concurrently with the second component.

3. Which aspects of campus sustainability will your project address, and why is addressing these sustainability components important? How will your project benefit the Aggie community as a whole?

The student farm will address four core components of the campus' sustainability initiatives and is even included as an item in the university's sustainability master plan. One of the objectives in the university's master plan is to utilize more locally grown food, with one of the action plans being to "develop a student farm program to supply cafeterias." The farm will also accomplish another core component, which is to purchase more locally produced items and to educate the campus about "sustainably produced Texas A&M products." By purchasing produce from the student farm, the campus will also be funding experiential learning opportunities for students. The student farm project will also contribute to the goal of reducing the amount of waste generated by the university, assisting University Dining to accomplish their target of reducing their waste by minimizing and reusing packaging. The student farm project will also reduce the amount of shipping, packaging and waste from the Department of Horticulture's floral design programs. Because the student farm will follow the principles of organic agriculture, it will support the campus' goal of increasing sustainable land use, managing and utilizing cover crops and perennial foliage to establish a "green reserve" that will serve as habitats for wildlife and beneficial insects. These practices will then be taught to undergraduate students through courses and other student farm activities.

4. Does your project tie into any broader campus environmental initiatives? If so, how?

The student farm project ties into University Dining's sustainability initiatives by increasing on-campus access to "local and/or organically grown fruits and vegetables." This project will also support the Department of Horticulture's goal of incorporating more opportunities for students to learn sustainable agriculture.

5. Please explain how your project meets the funding requirements of HB 3353 Sec. 54.5041 (c)(1) (pdf).

The proposed project would meet the funding requirements of HB 3353 Sec. 54.5041 (c)(1) by providing environmental improvements at Texas A&M University through services related to recycling and product purchasing. The project will provide recycling of agricultural waste products and food waste currently

produced on campus and disposed of in the local landfill. This service will be accomplished through composting and the application of organic fertilizers to fields for food production. The project will work with University Dining to convert food product purchases to organic locally produced products.

(Projects will not be considered without the relevant approvals).

6. Do any aspects of your project require approval from an entity on or off campus? If so, please explain. (For example, a project which affects campus grounds or buildings must be approved by either the appropriate Department Head or Director) For each listed entity, please submit a completed Project Approval form. [Click here for form.](#)

The student farm will be located on land currently under the authority of the Department of Horticultural Sciences. The department will also provide administrative support for student employees and purchasing. Dr. Tim Davis Professor and Head of Horticultural Sciences 979 845 5341 t-davis5@tamu.edu

7. What quantifiable environmental impacts will your project have and what will be the estimated cost savings to the campus? How do these impacts fit into the larger campus context (For example, what fraction of campus electricity usage does your savings represent)?

Currently University Dining does not purchase organic fruits, vegetables, and herbs. Organic produce on average costs 2 to 3 times conventionally farmed produce. The student farm has the potential to provide University Dining with a cost savings by producing an organic product for the cost of conventional produce. This cost savings will come from volunteer labor and student labor, reduced transportation costs, effective use of university resources (land, water, and equipment) and the recycling of waste. For example, University Dining purchased over 61,000 lbs of potatoes between 9/1/09 and 8/31/10. Most of these potatoes traveled over 1,700 miles from Idaho to College Station. All of these potatoes were grown by industrial monoculture farms which require huge inputs of pesticides and artificial fertilizers. The student farm could grow all of the University's potatoes on less than 2 acres of land with organic practices, greatly reducing the environmental impacts caused by pesticides, artificial fertilizers, and transportation. This one example would have an estimated cost savings of \$30,000 per year for University Dining compared to buying organic potatoes on the market. As another example, during the 2010 fall season, University Dining purchased \$1,200 worth of organically raised produce. This produce was produced on less than .5 acres over a 2 month period. The same produce would have cost University Dining between \$2,400 and \$3,600 if purchased through their wholesaler. These examples show a proven cost savings to the University. With the help of the Green Fund Grant the student farm plans to expand in size to 4+ acres and provide produce year round. It is well within the potential of the student farm to create both positive environmental effects and cost savings.

8. What are the qualitative benefits that would allow you to deem this project successful?

The student farm would be deemed successful if it affected both student and community perceptions and attitudes about locally produced organic food. These changing perceptions and attitudes will be captured through several sources, including interviews, student journals and essays, and student-farm customer surveys. The student farm project would be deemed successful when students eating on campus say "I never liked turnips/beets/kale/collard greens etc. but now I do"; when local farmers see A&M's example and say "I can be more sustainable"; when students who volunteer with the project feel confident about growing their own food; when students feel confident enough to choose organic farming as a profession; and when our community realizes the potential for "waste products" to be recycled to grow wholesome food.

9. How will you measure these impacts after your project is implemented in order to see if you have met your goal? In addition to AGFAB, who will you report your information to?

1. Invoices through University Dining for each purchase showing the crop, cultivar, weight, price per lb., and cost savings per lb.
2. Number of members served through a CSA program
3. Pounds of food donated to local food banks
4. Amount of food sold through farmers markets
5. Flowers and materials provided to the Benz School of Floral Design, estimates of cost savings and environmental impact savings
6. A tracking of organic pesticide products and fertilizers used
7. A tracking of tons of waste products recycled (ie. tons of chicken, cow, or horse manure used as fertilizer).
8. Number of volunteer hours
9. Number of active members in the student organization
10. Number of students enrolled in courses associated with the student farm
11. Number of undergraduate and graduate research projects utilizing the farm
12. Number of research projects through Agrilife Extension and Research Services using the farm
13. Number of participants trained through workshops utilizing the farm
14. Acres of land organically certified.

In addition to the AGFAB this information will be reported to the Department of Horticultural Sciences, Agrilife Extension and Research Services, and University Dining.

10. How does your project go above and beyond the requirements already mandated by Texas A&M University and/or state law?

Currently there are no requirements mandated by Texas A&M University or any state laws that deal with organic food production or food purchasing as they relate to institutions of higher education. (Other states have passed initiatives requiring universities to purchase a percentage of their food locally.) The TAMU Sustainability Master Plan sets the goals for University Dining to "Increase the use of locally grown and third party certified foods in Campus-operated cafeterias to 20% of food purchases by 2015" and for the University to "Develop a student farm program to supply cafeterias." TAMU is also a member of the Association for the Advancement of Sustainability in Higher Education (AASHE), which tracks sustainability through its STARS program. This program includes a category for dining services and the purchase of food through organic sources. The student farm will help A&M reach its stated sustainability goals and increase the university's STARS rating.

11. Please identify the project manager(s) as well as the member of the team (liaison) responsible for reporting project status and success in the following tables (each project will be expected to report regularly to the Aggie Green Fund Advisory Board with frequency based on the scale of the project).

Name Stephen King

Title and Department Associate Professor, Department of Horticultural Sciences

Project Role Project Manager -Advisor

Relevant experience or knowledge for this project

Over 20 years experience in vegetable crop research, including 10 years in private industry and 8 years teaching commercial vegetable production at TAMU. Dr. King is currently co-owner of Millican Farms, a commercial small farm operation in the Brazos Valley which produces greenhouse tomatoes for grocery stores and restaurants and markets a variety of field and greenhouse vegetable crops through the largest CSA in the B/CS area.

Name Brady Grimes

Title and Department

Student- HORT/ESSM

Project Role

Farm Manager

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Relevant experience or knowledge for this project

I conducted prior research for the initiation of the student farm. Managed the student farm from March 2010-January 2011. As a Horticulture major I have taken courses in vegetable production, fruit and nut production, plant propagation, and general horticulture. I managed fruit and vegetable plots for the Holistic Teaching Garden from August 2009 - March of 2010.

Name

Patrick Lillard

Title and Department

Extension Assistant and Graduat Student - Agricultural Leadership, Education and Communications

Project Role

Liason to AGFB and Agrilife Extension

[REDACTED]

[REDACTED]

[REDACTED]

[REDACTED]

Relevant experience or knowledge for this project

As an extension assistant Patrick is responsible for maintaining vegetable research experiments and collecting data. These experiments will be incorporated into the student farm and he will assist in their maintenance and data collection. His graduate research has focused on local food systems and organic agriculture. He is also a regional director for Texas Organic Farmers and Gardeners Association, and is excited to establish collaborations with TOFGA and the Texas A&M student farm.

Name

Eric Nathanael Proctor

Title and Department

Graduate Student - Landscape Architecture and Urban Planning

Project Role Liaison to AGFB and University Dining

[REDACTED]

[REDACTED]  
[REDACTED]  
[REDACTED]

Relevant experience knowledge for this project

Coordinator for Howdy! Farm from August 2010 to January 2010. Helped run 19-person CSA and established sales process with University Dining. Garden Coordinator for Holistic Garden, 9 hours of Horticulture Courses (Garden Science, Vegetable crop production, and Greenhouse Management).

Name

Dr. Joseph Masabni

Title and Department

Extension Vegetable Specialist

Extension and Research Advisor

[REDACTED]  
[REDACTED]  
[REDACTED]  
[REDACTED]

Dr. Masabni is the Extension Vegetable Specialist based in College Station. His extension programs are directed at small acreage farms, and try to improve their profitability and sustainability. These extension programs address the continued education of Extension agents and producers through workshops, training sessions, and print or electronic publications.

12. If your project team is partnering with other organizations, departments, individuals, or other stakeholders, please explain their involvement and include their contact information.

The student farm will contract with University Dining for the sale of produce. University Dining will also provide marketing support. Mr. David Riddle Executive Director of University Dining [REDACTED]. The student farm will be in partnership with the Benz School of Floral Design. The Benz School will utilize the farms biodiversity of plants to grow flowers and elements for floral designs. Mr. Jim Johnson, Distinguished Lecturer, Horticultural Sciences [REDACTED]  
[REDACTED]

13. Please be specific about the ways in which you can ensure that your team will have time available to work on this project. (For example, students might choose to take fewer classes in order to

have time to devote to the project. Staff might receive permission from a supervisor to devote X hours per week to the project).

Brady Grimes will be seeking the position of farm manager and plans to take a reduced course load during the summer and fall semesters. Dr. Steve King plans to incorporate the student farm into his Vegetable Crop Production course in the fall and plans to start a new spring vegetable crops course that will utilize the student farm as an educational opportunity for students. Dr. Joe Masabni and Patrick Lillard are planning to incorporate the farms organic production into research projects for AgriLife Extension. Nathanael Proctor is planning to incorporate the project into his PhD research topic. Jose Franco (Ph.D. graduate student in Horticultural Sciences) has plans to conduct his research on intercropping different vegetable species on the student farm.

14. How much of your project will students be involved in? What roles will students play in your project? Does your project target involvement of a certain section of the student body? Explain.

The student farm was begun through student initiative and maintains a commitment to be a student-driven organization. Student workers, students participating in courses, as well as student volunteers will make up the largest component at the student farm. Students will be involved in all aspects of the student farm. They will contribute the majority of labor for the production of organic vegetables and cut flowers and will be involved in all stages of production, such as planning and land preparation, planting and harvesting. Students will also be able to participate in on-going research projects and will learn about plot design and data collection. Sales to University Dining and in farmers markets will be handled by students. Research opportunities in organic/sustainable agriculture will be open to graduate and undergraduate students and the student farm will be open to any student who is interested in sustainable farming or sustainable living. Students with previous experience in food production will be targeted, but over the last year students from diverse backgrounds and interests have contributed to the student farm.

Note: This section is about letting the campus know what your project has accomplished after you've met your project goals. If outreach and education are the primary goals of your project, please describe them above in the section entitled Metrics and Measurability.

15. What is your plan for publicizing your project on campus?

Campus publicity began for the student farm in fall of 2010 with a presence at the Student Activities Open House. The farm used this opportunity to begin recruitment of volunteers. University Dining has also begun publicizing their involvement with the student farm. The Sbisa dining hall currently has signage advertising menu items grown on campus by students at the student farm. Several dining facilities on campus currently have signs announcing volunteer opportunities on the farm. Resident Life has also publicized the farms activities in the residence halls. The farmers market is also a great platform to advertise the organization and publicize the accomplishment of TAMU students growing and marketing student grown produce. The Sustainable Agriculture Student Association (SASA) is a student

organization currently going through the student organization recognition process. SASA will primarily be affiliated with the student farm. This organization will handle recruitment, organization, and training of volunteers. SASA will have the opportunity to publicize the student farm on campus through various print and electronic sources. Social media and internet-based communication will play a large role in the communication of the student farm to potential volunteers and customers. Platforms such as Facebook, online blogging, or a combination of multiple networks will be explored to find what best reaches our audience. Extension programs to the community will be instituted and will provide an opportunity for interested individuals to come on location and get involved with sustainable agriculture.

16. Do you have any specific outreach goals? If so, how will they be measured?

Texas AgriLife Extension Service’s greatest strength is its ability to disseminate research-based information and implement sound educational programs that meet the needs of local communities. The lack of research on organic agriculture, though, has limited its involvement in delivering information in this area. The student run organic farm will provide a facility to conduct organic research and extension activities. Extension outreach activities will include farm tours, workshops, and print and online publications. The impact of these activities will be measured through farm tour and workshop attendance, requests for print materials, as well as views of online publications.

17. List all budget items for which funding is being requested under the appropriate category. Include cost and total amount for each item requested. Please be as detailed as possible. If you have price quotes from vendors or additional historical budget information for projects that have occurred previously or are on-going, please submit those with this application.

<b>Item</b>	<b>Cost Per Item</b>	<b>Quantity</b>	<b>Total Request</b>
Equipment and Construction Costs			<b>(15,400)</b>
Dump trailer for transporting compost	<b>7,000</b>	<b>1</b>	<b>7,000</b>
Manure spreader for spreading compost	<b>2,500</b>	<b>1</b>	<b>2,500</b>
5’ tractor mounted tiller	<b>2,400</b>	<b>1</b>	<b>2,400</b>
5’ tractor mounted disc	<b>800</b>	<b>1</b>	<b>800</b>
16’ Low-boy trailer for transporting equip.	<b>1,200</b>	<b>1</b>	<b>1,200</b>
8’ X 12’ Resin Portable storage building	<b>1,500</b>	<b>1</b>	<b>1,500</b>
Publicity and Communication			<b>(1,500)</b>
Signage material (boards, paints)	<b>80</b>	<b>10</b>	<b>800</b>
Student farm designed organic T-shirts	<b>7</b>	<b>100</b>	<b>700</b>
Personal and Wages/Benefits			<b>(25,575)</b>
Farm Manger (Student Worker Position – full time during summer, part-time during school year)	<b>11,448</b>	<b>1</b>	<b>11,448</b>
Student Worker Positions (part-time year-	<b>4,709</b>	<b>3</b>	<b>14,127</b>

round)			
General Supplies and Other			<b>(7,525)</b>
Irrigation & field supplies			<b>1,000</b>
Seeds & transplant supplies			<b>1,650</b>
Organic fertilizers & pesticides			<b>1,125</b>
Packing & Harvest Supplies			<b>1,250</b>
Equipment Repair & Maintenance (for pickup and tractors)			<b>2,500</b>
		<b>Total \$</b>	<b>50,000</b>

18. If your project is implemented, does it require any on-going funding after its completion? If yes, what is your strategy for supporting the project after this initial period to cover replacement, operational, and renewal costs?

(Note: The Aggie Green Fund is unlikely to provide funding beyond the initial year for ongoing projects).

Yes, funds will be required, but we have developed a two-year budget that will allow the student farm to be self-sufficient after the Aggie Green Fund money has been spent. While we hope to be able to expand the education, research and extension components of the farm through future grants such as the SARE Research and Education grant listed below, we believe the student farm will be able to continue to operate through revenues generated from sales to University Dining, Farmers Markets, CSA's, and Floral Design Courses.

19. List all non-Aggie Green Fund sources you are pursuing for funding, volunteer time, in-kind donations, etc.

Source/Description	Amount	Date Request submitted	Date received / date funding will be announced
Sustainable Agriculture Research and Education (SARE) - Research and Education Grant from the US Department of Agriculture	\$150,000	6/01/2011	2/01/2012
Pursuing 500 hours of volunteer time in the first year	\$4,000 (est. @ \$8/hr)	N/A	Ongoing throughout project
Food sales to University Dining & Farmers' Markets	\$20,000 (est. 1 <sup>st</sup> year sales)	N/A	Ongoing throughout project
CSA membership sales	\$4,000	N/A	10/01/2011

20. Please complete the following table to describe your project timeline. List milestones chronologically. For the Timeframe column, please estimate how long each task will take to be completed.

Each one of the following items must be included on your timeline:

Project start date

Target date for project completion

Date by which you will need the first installment of Aggie Green Fund money

Date by which you expect to have spent all Aggie Green Fund funds

Target date for submitting final project report to the Aggie Green Fund Board

Any significant tasks or milestones along the way (For example: identifying an equipment vendor, begin installing equipment, finish installing equipment, etc.)

Task	Timeframe (# of wks to completion)	Estimated completion date
Announce student worker positions on jobsforaggies.tamu.edu	4	5/1/2011
Hire Farm Manager	1	6/1/2011
Project Start Date	0	6/1/2011
First Installment of Aggie Green Fund money for purchase of equipment	4	6/1/2011
Begin farm planning and coordination with University Dining for fall season	10	8/10/2011
Prepare field	2	8/1/2011
Fall Season – sales to Dining Services, CSA, Farmers Market, volunteer training, Horticulture Courses and Extension Research projects	12	12/16/2011
Spring Season – sales to Dining Services, CSA, Farmers Market, volunteer training, Horticulture Courses and Extension Research projects	12	5/1/2012
Start of Summer Season Planning and Field Preparation	3	6/1/2012
All Aggie Green funds will be spent – student farm project will be ongoing	52	6/1/2012