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Monmouth College Garden Mission Statement & Goals

Our goal is to provide an experimental garden with an emphasis on organic practices in order to educate students about sustainable agriculture. Additionally, the garden will give students a hands-on experience in organic and experimental gardening practices, as they will be able to work throughout the growing season alongside professors dedicated to furthering the progress of the garden. Students will also incorporate composting methods in order to extend their knowledge in sustainable agriculture. Those involved with the garden can also experiment on crops with different gardening practices as well as work with the community as part of the garden's educational outreach program, in which elementary school students have their own educational plot within the garden. The produce grown in the garden is not for profit, and will be donated to charitable organizations (Jamieson Center) as well as Monmouth College's own cafeteria.

The garden will also open up interdisciplinary opportunities for students, as aspects of the garden can be incorporated into a variety of current class curriculums as well as prospective curricula. For instance, Biology 101, a current class offered at MC, could find ways to incorporate field laboratory classroom experiments. In addition to current course offerings, there will be a variety of opportunities for new classes and programs. One example might involve a course in organic gardening methods.

A community outreach program will allow not only MC students but also local schools and organizations to be involved in the garden and share the educational experience. Such a program will offer tangible experiences in sustainable practices. Live web feeds, blogs, lesson

plans and video footage will all offer extensive learning opportunities and allow a collaboration between the community and MC.

Short-Term Goals

- Basic structures, soil preparation, acquiring equipment, organizing methods of irrigation.
- Integration of the garden into current curriculum.
- Creating interest in the garden on campus and the community, getting students involved.
- Creating a living, functional horticultural plot.
- Providing produce to offer to students and local food banks.
- Establish a composting system.

Long-Term Goals

- Establishing Alumni programs
- Create new curriculum
- Provide business students with the opportunity for entrepreneurship
- Garden Scholarships/ Internship opportunities
- WWOOF, Polyface Farms and the Land Institute
- Creating a “MC Home Grown” produce stand
- Expanding the garden into a mini-farm

Garden Design

Now that we have introduced the importance of, and a few goals of the Monmouth College garden; I will discuss the location and design of the garden. The garden will be located near the corner of 9th St. and Broadway on the back side of the founder's village apt. complex. Below is an illustration of the basic dimensions of the experimental garden. The garden is a bit choppy in terms of shape, but it does provide us with 21,763 sq. feet (which is roughly half of an acre), an adequate amount of space for the gardens first two phases. The plot of land does possess a slope of 7.66 (or a pitch of 1.2/12), however, According to John Curtis (local CSA farmer from Barefoot Farms out of Macomb), this will not be an issue. Another item required is a fence to be put up around the garden to keep out smaller animals such as raccoons, squirrels and rabbits. This will be touched on more, when we discuss our budget. Some perks of this location include that it is already owned by Monmouth College, coupled with access to a building and garage on site; accounting for our storage and electrical needs.



PHASE 1

In the garden's first phase our focal point is primarily on growing a living, functional garden that we can perfect. Taking that into account and based on recommendations of local sustainable agricultural farmers, we plan to use about a quarter of the proposed garden surface. So, in our first growing season we can expect to use about 5,000 sq. feet or 1/8 of an acre. This advice is also suggested by Eliot Coleman's *New Organic Grower* book, which is said to be the master tool for any gardener. Research also supports we start with popular, commonly grown vegetables, although we plan to work in a few less well known plants. Among the vegetables to be grown in the gardens first two years are: broccoli, cabbage, beets, carrots, cucumbers, lettuce, tomatoes, green beans and potatoes, while some of the more unique selections will include plants such as chard and leeks.

Now that we have some basic vegetables that we will grow in the garden, it is important for the future when we start distribution of the goods to look at the economical value of some different crops. According to the AZ Master Gardener Manual's website, it is difficult to evaluate the economic value of crops grown in the vegetable garden due to the different lengths of time they require for maturity and harvest, the availability of varieties and vegetable types not generally found in the marketplace, and the lack of comparison values for vegetables that are not acceptable by commercial standards, such as bruised or cracked vegetables. Fruit trees are going to be the biggest money maker in the long run. Since they are planted only one time and last for more than one growing season, the need to purchase new seeds is not apparent. Listed below are some of the top 15 vegetables in economic value as listed by the AZ Master Gardener Manual based on pounds produced per square foot, retail value per pound at harvest time, and length of time in the garden:

Top 15 Vegetables in Economic Value:

Tomatoes	Beets
Green bunching onions	Carrots
Leaf lettuce	Cucumbers
Turnip (green + roots)	Peppers
Summer squash	Broccoli
Edible pod peas	Head lettuce
Onion storage bulbs	Swiss chard
Beans (pole, bush)	

Next I would like to talk about ways to extend the season. It is important to note that some of the reasons we have found sustainable agriculture rarely exists anymore is a result of not enough food being able to be produced using these methods without doing it on a year around basis. Because of the many ways that have been developed over the years to extend the growing season we're hoping to put out an image and make a stand, saying we can produce our own food and don't have to fall in the Industrial Agriculture trap we have all been blindly sucked into too as a society.

So, how can we extend the growing season? First, there are both high and low tunnel structures commonly referred to as hoop houses, which are shown in the diagram below. The high tunnel hoops are nice because they are easily accessible, however they are more costly. Other means of achieving a longer growing season are by using row covers (which is a relatively

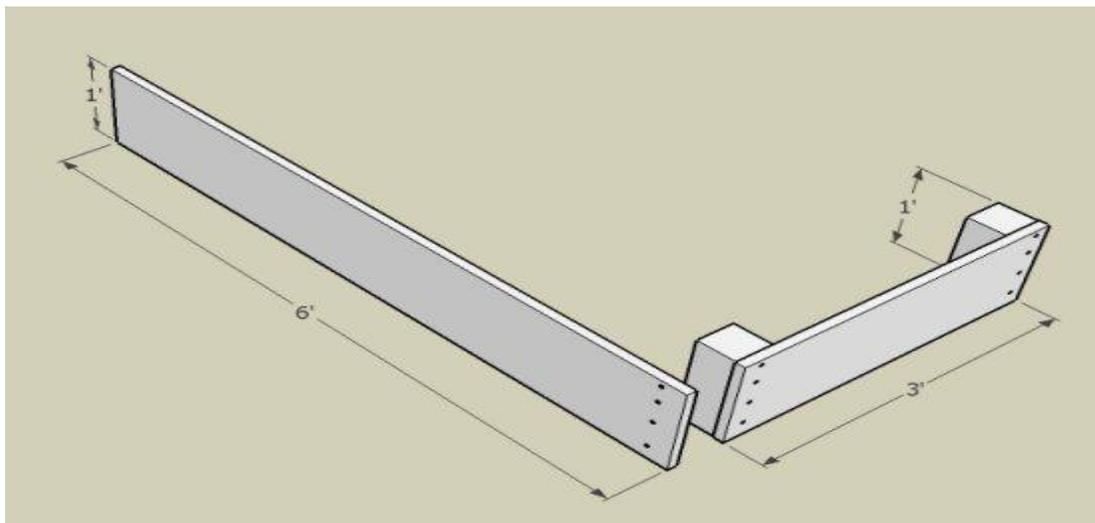
cheap way). Also new silver plastic mulches have been said extend the growing season by keeping the ground temperature warmer for a more extensive period of time, as well as cutting down on weed and pest control issues. Lastly, we have proposed incorporating the Monmouth College greenhouse located on the fourth floor of HT. Upon talking with some of the professors from the Biology Department, we have concluded that there is extra space in our greenhouse and it in fact does not get used very often. (Other colleges such as Berea College in and Dickinson College have had success utilizing greenhouse space).



Aside extending the growing season it has come to our attention that some colleges have attempted growing things that excel in cold weather throughout the winter. For instance,

Cornell University's Agricultural Experiment Station (in Ithaca, NY) has a college garden called Dilman Hill and have been sewing garlic into the soil in the late fall and growing it over the winter. This may be a viable option to increase production.

As I previously mentioned we plan to create a row garden complimented with some raised beds. These will be the primary components in our gardening styles because it allows for space to walk in between the rows since we plan to have a handful of different events and people visiting and working in the garden (which would raise a concern if we were to use a different method such as French intensive gardening where the style is targeted on maximizing the number of plants in a limited amount of space). A diagram is shown on below to better understand what a raised bed looks like; the dimensions of our raised beds will be 5 x 30 feet. Additional benefits driven from these similar, yet differing methods are that raised beds tend to hold warmth in the soil longer in the season, and have less weed problems. Not only is this useful from a production standpoint, but opens up endless opportunities for experiments in the classroom and labs because of the differing styles.



I now want to propose some other things to consider. After talking with Professor Tibbits, he has expressed interest in devoting some time and knowledge to the garden and has urged us to incorporate bees into the garden, as they are a prime source of pollination. So too, he has four beehives that we could possibly use. We also propose that the remaining area not in use in the first phase should be left as untreated, chemical free grass that can compliment our compost used for mulch. This area is also encouraged to be used by groups when reflecting the days' thoughts after working in the garden.

Shown below here is an illustration to help us visualize what the Garden could potentially look like in its first phase. The dirt rows and plants obviously represent the plants, rows and raised beds. It shows the fresh water tank, our compost bins as well as community outreach children's garden. We also have a small hoop house to show what it might look like.



Lastly, in Phase 2 we plan to utilize nearly all of the space by planting more, and different, plants as well as adding in some fruit trees. Beyond this, the vision for the growth of the garden is nearly endless as we hope to see it someday grow into a larger location but for now we are excited about getting it started right here on campus.

Water

To have a successful garden, plenty of clean water is needed. Jeavons "How to Grow More Vegetables" states that a garden needs at least 20 inches of rainfall a year to be successful. Biointensive gardening uses an average of 10 gallons of water per day, per 100 square feet. If we use half of the area of the plot to grow on, this is about 10000 sq. ft. that adds up to 1000 gallons of water per day. Certain growing methods can reduce water needs to as low as 200 gallons of water per day. These numbers are for a Biointensive garden and represent the absolute maximum amount of water that would be required. The garden at Monmouth would probably not require that much water.

The NOAA states that Monmouth can expect an average of 4 inches of rain per month during the growing season, April through October. That is equal to 49870 gallons per month, or 1662 gallons per day that will fall onto the garden. This meets the water needs for the garden, at least during an average season.

Rain water is preferable over Monmouth city water. Professor Sturgeon has expressed worry that the city water may have too much chlorine in it. Too much chlorine will brown and wilt the leaves of the plants. Like all city water, Monmouth's tap water is monitored by the

EPA, the following chemicals and elements that may have come from unnatural sources were reported by the Illinois EPA.

Copper	1.3 ppm
Selenium	2 ppb
Sodium	180 ppm
Chlorine	4 ppm
Arsenic	1 ppb
Fluoride	2 ppm
Nitrate	.15 ppm

All of these chemicals or elements fall within the safe drinking levels described by the EPA. And residents have been using this water for their own gardens for a while now with little to no harm done to their gardens. Since one of the goals of this garden is to grow produce as naturally as possible, limiting artificially introduced chemicals into the garden is a must.

Besides the fact that the city water contains these chemicals and elements, it is very expensive. As an example, one of the reasons the cafeteria here at Monmouth College discontinued the use of trays is due to the rising price of city water. Because rain is not a guarantee, a method of storing rain water for dry spells should be implemented. A tank of water that could hold a few days or a week's supply of water on site would be a great buffer between rain events. The tank should hold at least 1000 gallons of water or about a week's

worth of rain water. The tank would also be elevated to allow gravity fed irrigation instead of using a pump.

The rain water could be collected via roof run off from the buildings that are on site into rain barrels with a small pump to transfer it to the larger tank. And if there were any longer dry spells, Monmouth water, which is available at the site, could be added to the rain water to dilute it.

Labor

In thinking of the garden proposal one's first question becomes, who will work the Garden? This is probably one of the most important aspects of operating the horticultural plot. Workers must be knowledgeable in the practices they are to implement and have a general understanding for how the growing season works. To begin, the Monmouth College Educational Garden is specifically intended for student involvement. It is our vision that the garden be run solely by MC students. These students must contribute their collective labor in order to maintain the garden's upkeep and maintenance. Apart from paid positions, we have tried also to incorporate volunteer opportunities for other students, faculty and community.

If we start with the premise that workers should be knowledgeable in the practices that they are implementing, it becomes obvious that it takes a certain expertise in getting the garden started. But do we necessarily need experts to run the plot? Simply put, no. Though it does take quite a bit of knowledge, expertise and experience to run an operation such as the one proposed in later phases or visions, we can conceive our garden starting out with students whose background may involve little to no experience in the field. In other words, we aren't

looking for experts but students with a passionate interest concerning the operation and functioning of the garden.

Ideally, a garden manager would be appointed in order to oversee the general operation of the garden. Institutions like Berea College, in Berea Kentucky, which already have fully functioning gardens, greenhouses and sustainable agricultural projects, have full-time farm managers employed and paid by the college. These farm managers might also serve as faculty or staff to the college. Since a paid expert employed through the college would not be financially viable, the next best appointee would be a student granted the position of garden manager. This follows the model set forth by Lawrence University, a rival school in Monmouth's Midwest Conference. The Sustainable Lawrence University Gardens are currently run by only four university students, two of whom share in the part-time garden manager role (Sustainable 1). Their goals and mission are much like ours in the first phase of the garden proposal. Our student garden manager would be in charge of all other students working in the garden. The garden manager must also be able to organize and designate jobs for the workers efficiently. Another task of the garden manager would be to organize and maintain a garden journal in order to keep track of what plants were grown from season to season.

In his book, The New Organic Grower, Eliot Coleman takes a chapter to explore the many facets of labor and part-time help when running a garden. One of the most important ideas to take away from this chapter in relation to our project is his idea on a family run operation. Coleman states, "the most important recommendation is to set up an operation that is small, manageable, and efficient enough to be run by family labor," pointing out the strength

and bond of a close knit group (Coleman 24). Taking this into consideration, four other students would also be employed to work in the garden. No experience in gardening is necessary for these workers, but an interest in organic practices and furthering the progress of the garden is vital in selecting these students for employment.

Along with the garden manager, all would be paid through the pre-existing work study program here at Monmouth. Any student eligible for work study hours with an interest in gardening may apply for the opportunity to work in the garden. We envision 4-6 hours of labor per day, five days a week, during the growing season topping out at 30 collective hours a week for labor costs. These hours would be split by the garden manager and the four other workers. In keeping with the family theme and in order to make the garden as accessible as possible to the student workers it is important that we house the students together and close to the garden plot. It is recommended that they move into one of the East Broadway residences in front of the garden. If this option is not available and the student's are eligible, we recommend a room in one of the Founders Village apartments, also located on East Broadway.

In the future, it would be beneficial to send students on academic internships or field trips in order to further students' knowledge of organic gardening. Students could become involved in programs such as WWOOF (World Wide Opportunities on Organic Farms) and gain immense hands-on experience in working on organic farms. The WWOOF program is one that facilitates the communication of host and volunteer so that student workers would be able to find places to volunteer. In addition, Monmouth College could create its own summer work shops, where future students seriously interested in organic gardening could be educated and

trained by the original garden workers and professors dedicated to the fruition of the garden. WWOOF would also be a very good outlet for the college to look into some overseas Study Abroad programs where students could attend University while at the same time working for a WWOOF host.

Summer months are expected to be the busiest and most labor intensive phases of the garden. Therefore, students who are interested in summer work could be employed for much longer periods of labor than work study students. Summer workers, farm manager included, would be expected to work a cumulative 35-40 hours per week, with the possibility of working Saturdays as well. The number of workers would remain the same as when school is in session, with 4 workers under the supervision of a garden manager working much more intensively and putting forth more of their time into the garden. Additionally, Monmouth College could seek out WWOOF volunteers to aid in the summer months.

Aside from paying students to work in the garden, those interested in research could also provide a vital role in maintaining the garden. Students taking laboratory classes could integrate experiments into the garden. For example, students could experiment with the sustainability of certain crops within the garden from season to season and compare data. Such experimental interests would be categorized as free labor.

The final opportunity for those interested in the garden would come from volunteers and professors willing to donate their time to the garden. Saturdays could be open to the campus (or even the general public) and anyone with free time could donate a few hours to the garden's progress. This type of volunteer program already exists at other college gardens. For

example, Dilmun Hill Student Farm, part of Cornell Universities Agricultural Experiment Station, already holds what it calls “work parties.” As stated by Katie Duerr of the *Cornell Daily Sun*, “During season, Dilmun holds volunteer ‘work parties’ where students and community members can go and work in the field. This gives almost anyone an opportunity to get involved, even with no prior farm experience (Part-Time 1).” Also, MC Professors interested in organic gardening or other aspects of the garden such as irrigation could donate as much time as they would like. Professors can also teach student workers and provide helpful insight if they have any previous knowledge of garden.

Exportation of Produce

The Monmouth College Educational Garden will function as a non-profit organization for the first year of operation. The produce that accumulates after the first year of harvest will be donated to the Jamieson Center, a local community outreach facility, and the Monmouth College cafeteria. We plan to divvy up the produce between these two institutions according to the amount needed for pre-planned events. We will continue to donate all of the produce that the garden provides until the new curriculum established by this project intervenes with lesson plans on how to turn this organization into an entrepreneurship program for business students.

In order to establish credibility and an overall awareness of our services to the public, we plan on producing an artistic logo that symbolizes this organization. We will be illustrating this logo wherever our produce can be found so both students and members of the community can differentiate the quality of health and taste of our produce from the rest of the food

available. We feel this is a vital element toward the future success of our business program taking this concept and expanding on it in order to create a profitable organization. Some possible business markets that could utilize this symbol would be selling at farmer's markets, selling to local restaurants and grocery stores, and establishing a student Community Supported Agriculture or CSA program. Professor Capener of the business department expressed a great interest in this project and said many departments could be involved in this program including: advertising, accounting, finance, economics, and many others.

Donating the produce to the Jamieson Center will be an easy drop-off operation conducted by our student volunteers. The center has agreed to let us set up a separate stand with our logo from the rest of their goods so the community is well aware of our generous offerings. We believe this is a great Public Relations opportunity for this organization to promote this stand as the base of how we give back to the community. We hope this stand will continue in future programs but understand that once this program is incorporated to the business department it is up to the discretion of the students and faculty of where all the produce will go.

Donating the produce to the cafeteria services, however, will be a complicated operation because we must drop-off and then formulate a plan of how the food will be incorporated into the meals. This means that our organization will need someone to work with Bruce, the Aramark manager, before every drop off on adding our food to the pre-planned menus featured on the Monmouth College website. Bruce has stated that the vegetables would be very easy to mix in with our vegetarian station and the honey would be easy to bottle for our

spreads station. He also said he would be willing to set aside certain days in the semester toward buying all local produce alongside our produce in order to promote awareness of healthier eating options. Where ever our produce ends up in the cafeteria we plan on putting up our logo along with our mission statement and fun facts that spark conversation among the students. We believe the more the students know about where their food came from and how it helps with their overall health, the better.

The liability that goes along with our donating would go under the Good Samaritans Act. This means that since we are donating the produce we can't be held accountable for any problems that may arise with consumption unless foul play is suspected. However, this will become an issue for the business department when we switch our program from non-profit to profit; but we believe this will open new doors of educating the students on how true small businesses work and operate.

As we stated earlier, the future of where and how our produce will be exported and traded is entirely up to the business department and students. That being said the creators of this program would like to see that this future organization not be entirely driven by profit. The ethical code behind this proposal is to promote education throughout the campus and community. Although money will be a very important aspect, do not forget to be charitable to those who need this service the most.

Education Across Curriculum

One of the most important uses of this garden is furthering education of the college students here on campus. It is not only important for students to eat healthy fruits and vegetables that

will be grown from the Monmouth College garden, but it is also important for students to learn about agricultural practices and become closer to the land and the food, which they consume. There is a wide range of possibilities that the garden could offer students and as an immediate consequence, current classes will be altered to include various aspects of the garden. Other Colleges and Universities with garden or farm plots incorporated into curriculum include Berea College, Dickenson College, and Maharishi University, to name a few [1]. After talking to a variety of different professors, interest in the garden and the educational current curriculum changes seem very viable in the area of humanities, fine arts, and sciences.

One of the first integrations we would like to make is changes to the integrated studies courses. We propose to incorporate the garden into all four levels of the integrated studies curriculum, to introduce new freshman into the garden, for them to learn the mission, and the goals, and to spark and gain interest. By having selected freshman level courses work around and learn about the garden, our hope is that they will want to stay involved and eventually manage it by the time they have junior or senior standing. As a sophomore, students can learn about the globalization of food and incorporate the garden into the teachings. Junior year, students can reflect on the food they eat, where it comes from, and see how the food a person eats portrays who a person is, "You are what you eat." Come senior year, students will have hands on experience in the garden, expanding upon existing foundations, developing solutions to any problems, and inventing new tools and ideas to help make the garden prosper. As a specific example, in an interview with Professor Brad Sturgeon, we learned that he is teaching a Green Initiatives course next semester and through our interview, he has expressed interest taking an active role in helping solve water issues in the garden (Sturgeon). As a potential

possibility, students can help set up rain buckets and barrels to begin our collection of water for the garden. By the time students complete their four years through the integrated studies program, we hope that each student will have had at least some contact with the garden and will have a better understanding for sustainability and the food that one consumes. Current integrated studies courses that could incorporate the garden include:

INTG 203. Global Perspectives: Food

INTG 204. Global Perspectives: The Environment

INTG 208. Global Perspectives: Work and Leisure

INTG 214. Global Perspectives: Contemporary Art and Culture

INTG 309. Reflections: Personal Identity

INTG 317. Reflections: Food For Thought

INTG 402. Citizenship: Green Initiatives

INTG 410. Citizenship: Voluntary Action

INTG 411. Citizenship: Outside-School Learning Programs

INTG 414. Food and Culture

The garden can easily be integrated into the art classroom. At Carthage College, in Kenosha, Wisconsin, a Creative Arts course, taught by Professor Easley Ward, can be used as an example of a course in which students learn about various artists and then recreate the style of their work (*Carthage College*) [2]. Monmouth College can use the same model in drawing and painting class as well. Students can learn about famous natural art painters, such as Claude Monet, a famous French impressionist painter, discuss the textures and styles used, and use the

Monmouth College garden as a backdrop of reproducing the same style of creation. Other artists such as Camille Pissarro, Severin Roesen, and Pierre Auguste Renoir can be other exemplary figures portraying different styles of natural, or still life, art. Fruits and vegetables from the garden can also be used as models for illustration and still art.

Chemistry 101, Nutrition and Food, taught by Loure Moore can also incorporate the garden into its curriculum. This course examines different aspects of nutrition, food safety, and biotechnology. The laboratory of this class also involves the examination of the composition of food. For an example experiment – students could test the nutritional value of industrial food from the local store versus naturally grown vegetables from the MC garden. In the plans for the new science building is a Nutrition Focused Cafe. Serving produce from the garden would be a great example of slow food; food that is grown sustainably by students, for and served to students in an environmentally conscious way.

Paying close attention to the education department in particular, Professor Vivian emphasized and summarized, that there are endless possibilities of incorporating the garden into current and future education classes [3]. We talked thoroughly about incorporating the idea of slow foods into the classroom [4]. Future educators will be able to learn about “Nature and the Curriculum,” designed to incorporate the garden, outdoor spaces, into teaching methods. This course would include theory based research, as well as a hands on approach to learning. Bees can be of a great example in the elementary school classroom. Teachers can educate students on the functions of bees, the various roles each bee plays in the hive, and use it as a leeway to compare bees to people, explaining why each is important. Flowers can be planted outside a classroom window and children can further watch for the bees they just

learned about. Sensory education is very important for young children, taste, touch, and smell can be taught. Future educators will learn the practices of incorporating these ideas into the classroom. Books, such as, *The Carrot Seed*, written by Ruth Krauss, can be incorporated into the classroom. Not only will future educators learn how to incorporate the garden into their classroom, they will also be able to incorporate insects from the garden. By taking field trips and nature walks, kids can learn how to keep a nature journal. There are a vast number of possibilities for expansion of curriculum, as well as current curriculum within the education department.

The current class, Print Media: Workshop (COMM114), taught by Professor Jane Carlson, could also be another area in which the garden can be incorporated into. In this class, students gain a basic understanding of journalism and print media. Throughout the course of the semester, students participate as staff reporters in the Monmouth Courier newspaper (Monmouth College Department Schedules). This could be a great avenue to draw from yet another different field of study, to help promote diversity and gain an entourage of students to become involved within the garden. This aspect would emphasize a public relations perspective and would be responsible for promoting the garden and its activities. Writing weekly articles in the newspaper would help gain publicity for the garden, which could also lead to more student involvement and interest.

Future Curriculum

Along with the endless possibilities of adapting the garden into current curriculum, the garden will allow an outlet for newly designed and featured curriculum across campus as well.

Professors with a special interest will have the opportunity to develop new curricula, centered on the garden. Courses in science and business will have major expansion abilities once the garden is put into place. One example is a new entrepreneurship course. Maharishi University offers a course in sustainable entrepreneurship that focuses on creating successful green business that produces a value for the society (*Sustainability*). As the garden expands, we also plan to market some of the produce that is grown in the future. This would be a great area for business students to plan a way of marketing the produce to the community. Business students could incorporate the garden into the advertisement course, set up a MC produce stand, try to maximize the income that could help further the growth of the garden, and develop new marketing tactics. As the garden gains enthusiasm and support, there are possibilities to create a whole new horticulture or agribusiness major which many schools have already have in place. Harper College, has an agricultural program in place in which students can focus their studies in crop protection and agronomy, international sustainable agricultural management, or sustainable agriculture. Aside from the coursework in agriculture, Harper also offers business classes in International Agri-Business (*Postgraduate Study*). University of Illinois extension has a very advanced and known horticultural studies program in which Monmouth could aim to reproduce on a smaller scale (*University of Illinois Extension*).

Independent Study & Internships

Students will be given the opportunity to design an independent study or internship, working to help fulfill the garden objectives. The independent study can involve various majors including, but not limited to business, biology, and education. Dickinson College encourages students to do independent research projects on their farm land. Students gain academic credit and do

research expanding upon a large variety of fields. For example, students have spent time investigating the compostability of glycerol, a bio diesel by-product; and documenting the interactions between farm wildlife and farm ecology (*Dickinson College*). Internships are supported also supported at Dickinson College as students discover a unique aspects of the farm and food systems (*Dickinson College*). Internship opportunities would empower students and enhance the Monmouth College Garden. The garden could also provide students with experience and skills that can benefit them later in life.

Off Campus Study

Education within the college garden also has the potential of spreading international. Students can enroll in programs, such as World Wide Opportunities on Organic Farms (WWOOF) [5], in which Monmouth College can sponsor a student to spend the semester overseas working on another farm. After the trip is completed, the student can have the opportunity to be a student manager at the college garden, and also have the opportunity to teach, share, and incorporate new methods into our garden. Schools such as Dickenson College require off campus study from all majors that directly influence and work in the college farm [6]. As the garden and curriculum expand, off-campus study requirements can be put into place and highly emphasized. As an alternative option, students can spend the semester, or summer, at Polyface Farms, in Shenandoah Valley, Virginia, has talk topics and opportunities for people gain hands-on experience on their farm [7]. Monmouth could also look to expand and gain partnerships with other Colleges and Universities, in which a Monmouth College student could

go to Dickinson College Farm, for example, to work and gain a hands-on experience and acquire new practices to bring back to Monmouth and vice-versa.

Alumni

Along with incorporating the garden into current classes and developing further classes, an additional goal is to develop alumni programs specifically relate to the garden. A benefit of going to a liberal arts college is that learning never stops. An immediate goal is to get the alumni involved in, and to promote the Monmouth College garden. This process will begin immediately. For example, at homecoming 2010, alumni day will be held at the garden. We will have an hour long open house where alumni can learn about our garden. This event can be a prime opportunity to get alumni, students, and faculty involved, and working with each other in the garden. People who work in the garden will be able to explain the garden proposal, project, goals, and future plans to promote. The educational outreach group will go into more depth and research about alumni day in their paper.

A long term goal, three-year goal, is to develop programs for alumni to learn about gardening techniques. Alumni, students, and faculty will have opportunities to collaborate, talk about their own farms and/or gardens, and have roundtable discussions. The Middlebury College Organic Garden has a "Garden Alumni" website and program to involve their alums and they share their stories (*Garden Alumni*) [8]. There will be an area available on the garden website where people can reflect on their days working in the garden. The educational outreach group will go into more depth and research concerning the website and information for alumni and blogs.

Design Group Budget

As a whole, the construction of the garden, tools and equipment, labor, and water and barrels brings the design group total to \$22,370. We estimated all of the materials on the high side for budgeting purposes and we did not include compost materials.

Labor

- $\$10/\text{hour} * 40\text{hours}/\text{week} * 30\text{ weeks (April-October growing season)} = \mathbf{\$12,000}$

Tools and Equipment

- 12 horse power tiller tractor = **\$5,000**
- Fencing (materials and installation 800 linear feet) = **\$3,000**
- 2 Benches = $\$150 * 2 = \mathbf{\$300}$
- Seeds = **\$500**
- 10 Drip irrigation hoses (1,000 feet total) = $\$30 * 10 = \mathbf{\$300}$
- 2 industrial wheelbarrows (6 ct. feet) = $\$85 * 2 = \mathbf{\$170}$
- Hoes and hand tools (miscellaneous) = **\$400**
- Wood and stakes for raised beds (400 feet, 10 foot 2 x 6, treated) = $\$5 * 40 = \mathbf{\$200}$

Water and Barrels

- 1,000 gallon water tank (above ground tank) = **\$500**

Total = \$22,370

End Notes

[1] Berea College is ranked one of the most eco-friendly schools in Kentucky, and is also ranked one of the top “greenest.” Berea offers a major in Sustainability and Environmental Studies, in which students take a hands-on approach in learning and help efforts to develop a sustainable campus environment. Dickenson College offers a green campus to its students. Leadership on food, purchasing, building, waste management, and the environment are all missions that college students are responsible for maintaining. The mission of Dickenson is to incorporate concern for the environment into every aspect of the campus life and operations. Maharishi University has many fields dedicated to agriculture and sustainability. The University offers an MBA in Sustainable business and has programs including Sustainability Initiatives, student sustainability projects, and houses students in a sustainable living center. The café has organic vegetarian meals for all students and the mission of the campus is to give students a conscious-based education using traditional academic studies accompanied by simple, natural, scientifically validated technologies. The approach Maharishi University is designed to develop students’ ability to manage their lives successfully, live healthily, gain wisdom, and achieve personal and professional fulfillment.

[2] According to Carthage College’s catalog, “[Creative Arts is] A study of the philosophies, methods, and materials essential in facilitating artistic development in elementary and middle school students. This comprehensive approach to arts education includes art and music history, criticism, aesthetics, and active participation in art-making and musical performance.”

[3] Dr. Craig Vivian discussed the importance learning teaching methods of incorporating nature into the classroom. He discussed the various ways of including a garden into the classroom and talked about things such as slow food, sensory education, nature walks, nature journals, sorting, and literature.

[4] Slow Food is an organization that promotes the idea of a healthy way of living and eating. A global organization has grassroots movements with thousands of members around the world. The purpose of Slow Food is to link the pleasure, taste, and atmosphere of food with a commitment to community and the environment.

[5] WWOOF is an exchange in which a person can volunteer on organic farms or smallholdings with people who are looking for an extra hand. In return for help, WWOOF hosts offer food, accommodation, and opportunities to learn about organic lifestyles. The purpose of this program is to create a network for international movement, helping people share a more sustainable way of living.

[6] At Dickenson College, environmental Studies students are encouraged to spend a semester in academic programs around the world. The semester can be in the area of environmental science, agriculture, biology, aquatic sciences, etc.

[7] Polyface Farm is a family owned, organic, local-market farm, that promotes community outreach in Virginia. They believe that they are healing the land, food, economy, and culture by growing strictly organic substances. Polyface Farm highly encourages the culture and community of eating.

[8] At Middlebury College Organic Garden, alumni share stories about starting and working in the garden. Past summer interns and people who helped shape the garden come together to share their memories and experiences in the garden.

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