Starting a College Farm: Stories from the Yale Sustainable Food Project

Why a College Farm?

All over the country, schools are starting up farms on their campuses. These farms offer opportunities to complement classroom lessons, to reach out to the larger community, and to give students a place to relax and recharge while building in them a sense of environmental stewardship. It is becoming clearer and clearer that the way we choose to grow, prepare, and eat our food has far-reaching social and environmental consequences; by learning to cultivate crops and grow their meals, students can begin to understand—and perhaps to work on resolving—some of the most pressing challenges of today’s world.

The Yale Sustainable Food Project’s farm has been going strong since 2003, and so we’ve created this guide for those who are just getting started. In the guide, we’ll share what we’ve learned over the years about setting up the space of the farm and using it well. This is not an exhaustive guide to starting a college farm, but rather the story of how we chose to build our one-acre market garden and why we made those choices. Every farm will be different, but we hope our story will help you think about what shape your college farm might take.

How to Begin

If you’re starting from scratch, the first and most important thing to do is to build support for your idea. You want people on campus to be excited about and invested in the possibilities of a college farm. Grassroots support can be your strongest ally when it comes to making your farm a reality.

While you’re building support, you should also think about your more concrete needs: some space and some money. To get either, you’ll need to convince your college administration that your plan merits their investment of space and money. So build campus support for your farm as you build a wish list for your ideal space and budget. This way you can present your case effectively once you have the ear of administrators. As you’re doing this, think carefully and strategically about what matters to your administration, and try to anticipate objections that might surface. (Remember that people have preconceived ideas about farms that aren’t necessarily the same as yours; have a plan, and be prepared to reassure them that the compost won’t smell and that the plantings will be attractive.)

Strategies

- Build a core group of students who will be primarily responsible for shepherding the project. The group of students who advocated for the Yale Farm was small, but deeply committed. A few of these students even chose to stay in New Haven after they graduated to continue to work on the Farm once it had been established. You may eventually want to hire farmer advisors, or full-time staff with real experience in starting and running a high-quality, educationally-oriented farm. The Yale Sustainable Food Project, which has a full-time staff employed by the university, in part grew out of the Farm; we now run a variety of programming related to sustainable food and agriculture on campus.
- Who are your logical allies? Start with them, whether it’s the environmental studies program or a political science professor who writes about the historic role of farmers in American government. At Yale, the Program in Environmental Studies was a natural ally of the Yale Farm and the Sustainable Food Project.
- Reach out to students who have established new projects on campus or taken on activist
roles. They’ll help you understand how your administration works and how to get things done.

• Build a communications strategy to make your idea attractive to your administration. What makes campus stakeholders tick? What does your school’s website highlight? What do admissions brochures stress? What does your college president talk about when he or she speaks on campus or at other universities? Who are your famous or influential faculty? Yale puts a premium on community and student life as well as on sustainability. When we talked about the idea of the Yale Farm to administrators, we did—and still do—highlight how it would serve to enhance all of those aspects of the university.

Methods
• Build a mailing list so that you can communicate easily with your supporters. Make sure you always have an email signup sheet when holding events.
• Petitions are a good way to document support for your project.
• Big, well-executed events raise your profile and get people excited. Publicity stunts, when they’re smart, work.
• One event that we hold every year at the Yale Farm is a pig roast, to celebrate the last day of classes. The roast was a student’s idea; with support from YSFP staff, he sourced a pig, learned how to cook it, and enlisted his friends to help. Over 200 students come out for this event each year.
• In 2002, when we had just broken ground on the Yale Farm, students herded sheep on the college quad during a busy point in the afternoon to raise awareness about the Project.
• Create publicity: build a profile in the campus newspaper. Create a Facebook group. Get your name on peoples’ lips and your issues on their minds.

Finding a Space
Depending on how big your campus is and what it looks like, space might be the easiest or the most difficult thing to secure. Familiarize yourself with the space of your campus: are there vacant lots that the university isn’t using? Are there courtyards with room for a small garden? Come up with a good list of the spaces you’ve discovered, and figure out who on campus is responsible for allocating space. The space we use for the Yale Farm is a one-acre lot, owned by the university. It was sitting unused when the Yale Farm was founded—students and staff cleared it and began planting almost immediately.

Know what you need in a space. If you end up with three acres without any direct sunlight, you’ll be in trouble. Make sure whatever space you settle on has:
• Good sun
• Running water
• Decent soil
• The right size for your purposes—this can be anything from half an acre to ten acres, depending on your goals and the staffing structure.
• Transportation to and from central campus. Ideally, your farm should be within easy walking distance.
• Friendly neighbors

Building a Budget
In theory, building a budget is pretty simple: find out what you need and how much it costs, and then figure out how you’ll pay for it. Taking on each of those parts, of course, is where it gets tricky. The best way to find out what you’ll need is to visit local farms and gardens and get to
know the people who run them. They’ll be able to help you figure out what you’ll need, and ideally give you tips on where you can acquire quality equipment at a low cost. They’ll also be able to help you understand how much revenue you’ll be able to generate. Once you have a handle on all this information, building a budget is much less overwhelming.

Make sure you build a budget with a little wiggle room, because something unexpected will always happen, and it will usually cost you money. In the best of all possible worlds, you won’t need to spend your “in case of emergencies” money and will have a little extra at the end of the fiscal (or agricultural) year to expand or improve your programs or space. In the worst-case scenario, you won’t find yourself scrambling for funds. Meeting your budget will build your own confidence and increase administrative support for your program.

The startup costs for your farm may vary, and keep in mind that your maintenance costs will be much higher for the first few years. With some labor and a few tools, we had the empty lot of the Yale Farm planted relatively quickly, but the budgeting and construction of its infrastructure took much longer.

Here are some budget figures you might expect for a one-acre, volunteer-based market garden, which may change based on the available markets in your area and your farm’s size, purpose, and style.

Income:
- Produce sold at market: $10,000–30,000
  *This depends on markets and programming focus.*

Expenses:
- Materials/Supplies: $2,000–5,000
  *This includes seeds, tools, basic infrastructure, soil amendments, and incidental expenses.*
- Services: $200–1,000
  *This includes contracted repair and maintenance.*
- Site upkeep/improvement: $1,000–5,000
  *This includes maintenance of facilities and incremental site/systems improvements like fencing, storage, and signage.*
- Donation: $6,000–10,000
  *This includes donations to local food banks, schools, and other organizations.*
- Utilities: $0–?
  *Your school may or may not pay for your use of water, gas, and electricity.*
- Labor: $0–?
  *Your Farm Manager may be paid from the farm’s budget or from another funding source.*

The Space of the Farm

Before you start plowing and planting, take some time to think about your plot of land and how you want to lay it out:
- How big is it?
- Who will be using it?
- How will they be using it?

With these questions in mind, try to design a space that will best serve your audience. We knew we wanted a space that would mostly be cultivated by hand, that would be beautiful and
productive, and that could accommodate small groups of workers as well as larger groups of
tours or other visitors. Before we broke ground, we enlisted the services of a few experts:

- An architect, to help us understand how best to lay out the space to meet our needs, how
  storage would work, and where we should place greenhouses,
- An expert farmer, Eliot Coleman, who advised on the sizing and spacing of beds, our
  growing strategy, and crop planning, and
- Yale’s university planner, who made sure we acquired the necessary city permits and
  university permissions.

It also pays to get to know the Facilities crew at your school, who are in charge of grounds
maintenance. They will likely have been taking care of the space for some time, and will know it
well; they’re also the most likely to have tools you can borrow if, for instance, your lawn mower
stops working. Yale doesn’t spray the trees on campus, so when Facilities collects fallen leaves
each autumn, they bring them to the Farm, where we compost them and use them for ground
cover and soil fertility. These are the people who care for the rest of the campus’ greenery –
they’re probably interested in what you’re doing!

With this group’s help, the Yale Farm took shape. Today, it meets the goals we initially set out:
work can get done well because materials and people can move efficiently around the space, small
groups can work together or individuals can work on their own, and tour groups of up to thirty
can easily move through the farm. As we keep these goals in mind, we’ve also worked hard to
make the space beautiful: the beds are lush and well-kept, and the Farm is full of flowers (which
have also served as a revenue stream). People want to spend time on the Farm even if they’re not
actively involved in our programs. We try to keep the space beautiful and welcoming so that
visitors and community members will feel comfortable when they enter it.
• Storage Container

What we call “the container” is a retrofitted shipping container, painted barn red. Here we store tools and seeds. It also locks, providing us with a secure on-site storage space.

• The Oven

We make pizza in our wood-burning hearth oven every Friday to thank our volunteers; gathering around the oven to share a meal is a convivial way to mark the end of the day’s work. Our cooking classes are also hosted here throughout the year. We built the oven with some help from the folks at the Maine Wood Heat Company, using local, recycled materials as often as possible.

• The Lazarus Pavilion
The Lazarus Pavilion allows us to gather around the oven, rain or shine. It’s made from wood sourced from the Yale Forest. To build it, we hosted an old-fashioned traditional New England barn raising for students, alumni, faculty, staff, and the New Haven community. Together, we raised the structure and danced underneath it that night.

**Farm Beds**

Because the Yale Farm is designed to be cultivated by hand, we’ve built beds that are 30 inches wide, with 12-inch paths between them; the paths are wide enough to permit volunteers to stand comfortably between beds while they work.

**Hoop Houses**
Our two unheated hoophouses allow us to grow greens throughout the winter and to cover our tomatoes, which like it extra hot, during the summer.

- **Fence and Gate**

Our fence is made of wire so that people passing by can easily see through it and know what’s happening at the Farm. The Farm’s gate is always open, welcoming volunteers and visitors.

- **Picnic Table**
The picnic table offers a spot for small groups to gather, whether they’re resting from work, sharing lunch, or having a seminar meeting. Our picnic tables were created for us by carpenters who work with urban trees, which are usually trashed after being felled because of imperfections like nails and staples in the trunk. We think that the blue stains the metal created in the wood lend the tables some character—and they’re hyper local, since they’re made from a tree that used to stand right across the street!

• Compost

We make our own compost: yanked-out plants and weeds go in, as do food scraps from the oven and occasionally manure from a local horse farm.

• Prop House
In the propagation house, we start seeds in soil blocks; once they’ve sprouted, they’re transplanted out into the field. We also use the prop house to wash vegetables and prep them for market, and as a small gathering and teaching space. Ideally, vegetables would be processed somewhere else, as the heat of a covered prop house wilts delicate greens. Building a separate processing facility is next on our list!

• **Perennial Bed**

The perennial bed is home to herbs and flowers; we sell both at market and use the herbs for pizza each week. From 2003 to 2009, we sold flowers in our flower CSA: each week from April to October, Yale offices that had signed up would receive a bouquet from the Yale Farm.

**What to Grow**

After you’ve laid out your space, you can start thinking about a crop plan. Think about what will thrive in your local climate and soil, but also consider what will provide educational value and
build excitement around the farm.

We decided that anything we grow at the Yale Farm has to meet three criteria:

- It has to taste delicious. Visitors who have tasted the best carrots of their life will be likely to return.
- It has to be a productive variety. Eliot Coleman advised us that in order to convince skeptics, we would need a productive rather than a merely high-minded farm. To that end, we work to use our space efficiently while maintaining it as a group space.
- It has to generate excitement. We try to grow things that give our visitors small epiphanies: the sight of a plant they’ve never seen growing anywhere else, like artichokes or cardoons, or the taste of something they didn’t know they could eat, like nettles.

We have a core of crops that meet these criteria and we grow them every year. When students want to try growing something new, we give them the opportunity to do so on a small scale. Our favorites include: Sun Gold tomatoes, Costata Romanesco zucchini, Amish Paste tomatoes, Sylvetta arugula, Hakurei turnips, pimientos de Padrón, Sunbright Supreme sunflowers, and d’Avignon radishes.

**Making a Crop Plan**

Once you’ve weighed your goals and come up with a list of crops you definitely want to grow, develop a crop plan for how you’ll use the space of the farm over the course of the year. As you’re doing this, make sure to take into account the soil and sun on your plot of land, but also who will be managing the garden throughout the year: if you are depending on student volunteers, make sure you have a plan for summer vacation. Also think about periods of the school year when students are busy (midterms) or away from campus (spring break) and make sure your crop plan takes them into account.

Here’s a sample of what we grow throughout the year:

- January: greens (kale, spinach, mizuna, claytonia, tatsoi) in an unheated hoophouse
- February: greens (kale, spinach, mizuna, claytonia, tatsoi) in an unheated hoophouse
- March: harvest the last of the field parsnips planted in the summer
- April: harvest the last hoophouse greens
- May: peas, head lettuce
- June: peas, beans
- July, August, September: tomatoes, eggplants, peppers, beans
- October, November, December: kale, radicchio, carrots, potatoes

Before you grow anything, test your soil to make sure it’s safe to eat what you grow. Your local agricultural extension agency will be able to do this. You can find yours here: [http://www.csrees.usda.gov/Extension](http://www.csrees.usda.gov/Extension).

**Sharing the Space**

Once you have developed a plan for the space itself, you’ll need to create a work plan so that student and community volunteers can participate in a way that’s meaningful for them and useful for you.

We have a full-time Farm Manager and Educator who is responsible for all of the work involved in taking care of the farm; he oversees a team of five assistant student farm managers. The Farm Manager also designs and oversees all education programs that happen there, such as the Public
Schools program and our summer internship, in addition to the administrative work of the Farm’s budget.

At the Yale Farm, we have regularly scheduled volunteer workdays on Tuesdays, Fridays, and Sundays from 1:00–5:00pm. We work hard to publicize this at the beginning of every school year and every spring. This way, we know when we’ll have groups of people on the farm that will help us to get big projects done, and everyone on campus knows when they can drop in and do some work. Having a Sunday workday means that there’s a time when community members who work all week, or students who have particularly heavy class schedules, can also help out. While the work we do on volunteer days is necessary to keep the Farm running, sharing food is an important part of our mission as well. On Fridays, we make pizza in our wood-fired brick oven, and when the workday is done volunteers gather to eat and rest.

As well as a productive market garden, the Farm is also an educational space. Tour groups, who come on one-time visits to learn about the Farm, class groups who come to supplement their curriculum, and the local students who take part in our Public Schools Program all also use the space. We schedule these groups to come during non-workday hours, so that they don’t interfere with volunteer work.

In the summer, six interns, all Yale undergrads, work full-time at the Yale Farm. These six students learn the theory and practice of organic farming, and are responsible for managing the space under the guidance of our Farm Manager. During the summer, we also host community workdays, which are special volunteer days targeted to the New Haven community. These strengthen our ties to the local community and help us build wider support for our programs.

**Don’t Forget to Eat**

One of the best ways to teach the connection between land and food is to create a kitchen of some kind in your farm. Everyone gets more excited about the beautiful beets they’ve harvested when they get to taste them—and just as volunteers might not know anything about farming until they show up at your gate, they might not know anything about cooking, either. Combining both in the space of a farm makes it an especially potent educational tool: not only will people learn more, but they’ll have the experience of eating together, which goes a long way toward reinforcing the sense of community you’ve built by working together. For each season, we like growing crops that you can taste right at the Farm with no cooking required, like sugar snap peas, Sun Gold tomatoes, and Hakurei turnips.

In 2005, we built an on-site, wood-fired brick oven at the Yale Farm. Every Friday, at the end of our volunteer workday, we make pizza from whatever we’ve harvested from the farm that day. New Haven is a city that cares about pizza, and ours is the best you can find. The oven also allows us to hold cooking workshops, inviting local chefs who are thrilled to use the oven and the farm’s vegetables. We’ve recently added a grill, which will allow us to expand our cooking repertoire. A farm with an on-site kitchen will always require more maneuvering than one without; you’ll have to acquaint yourself with local health and fire codes, and become food-safety certified. But the extra work will give you much greater educational capacity, even if your “kitchen” is a small burner or even just a picnic table where you can make a salad at the end of the day.

There are other ways to share your farm’s bounty. You can hold events like tastings or
workshops in communal kitchens on campus, or ask your dining services to highlight a particular ingredient in the dining halls. If you choose to do this, it’s important to make sure that dishes with your ingredients are labeled as such and that they taste delicious. This way, you’ll be sure to build interest in and awareness of your farm, and get people excited about the tastiness of local and sustainable food.

**Sharing the Harvest**

As you plan your farm, think about what you want to do with the harvest. Remember that your vegetables can be a source of revenue for you, but that they can also be a way to build goodwill among volunteers or school administrators, or even a way of collaborating with other organizations. Decide which of these objectives are most important to you, and make a plan. (Budget accordingly, too. If you decide that the bulk of your harvest will go to local hunger-relief charities, make sure you have another revenue stream.)

Some ideas for the fruits of your labor:

* Connect with a local farmers’ market.
  This is a great way to build community interest in your farm as well as strong connections with your local farming community. It’s also, of course, a way to turn your farm into a profit center. We sell our produce every Saturday at New Haven’s CitySeed Farmers’ Market, and this has helped us create ties both with the New Haven residents who buy our vegetables and the other farmers who sell there.

* Start a Community Supported Agriculture program.
  A CSA works essentially as a subscription to your farm: folks pay a set amount of money at the beginning of the season in exchange for regular baskets of your produce. Like selling at market, this will give you a revenue stream; it’s also a good way to raise money at the beginning of a season, so if you’re having trouble securing budgetary support from your college, you might consider this option. If you build in a volunteer component to your CSA, as many farmers do, it will also increase your volunteer numbers and grow their investment in the farm.

* Connect with local charities, like soup kitchens or other hunger-relief associations.

* Send vegetables home with volunteers.
  Allowing volunteers to take vegetables home to eat will show them that you value their work and keep them coming back. Seeing (or eating) the results of your labor always builds investment in a project, and you’ll soon have a strong base of regular volunteers. And unless you have an army of workers in a tiny farm, sending workers home with a bag of lettuce or a few zucchini won’t drain your harvest unduly.

* Connect with local restaurants.
  They might get excited about regularly featuring your salad mix, for instance, on their menu; they can also often buy surplus produce for a special dish or to supplement what they have on hand.

**Taking it to the Next Level**

*Measure Effectiveness*

You worked hard to build support for your programs when you were lobbying to start your program—don’t stop now, and don’t neglect your constituents! Make sure your farm continues to be a credit to the institution and an asset to the community. Become an enduring and beloved part of the landscape.
As well as remaining popular, make sure you’re effective. This can mean different things depending on the goals you’ve set yourself. If you planned a market garden, make sure your revenue is on track and your customers are happy. If your goal was to involve local schools in your programs, make sure you’re building strong relationships with them and tracking the number of students on your farm. Build a set of goals and attach numbers to them so that you can track your progress—then keep track of those numbers. This will allow you to demonstrate effectiveness on an ongoing basis. This is something we work hard at: we make sure to monitor how many people are on our mailing lists, how many visitors have come out to the Farm on a weekly basis, how many pounds of vegetables we’ve sold, how many classes have used the Farm as an educational space, and a whole host of other things. Especially when you’re starting out, it can be hard to monitor your programs as well as create them, but it’s worth the extra work.

**Build a Staff**

While the Yale Farm was born from student activism, today it has five full-time staff members who run the Farm as well as all the other programs of the Yale Sustainable Food Project. We still rely very heavily on student support, and make sure that student voices have a guiding role in the Farm and the YSFP. But having full-time staff ensures the longevity of the program: there’s no risk that dynamic leaders will graduate and leave the Farm in the hands of less committed students. Depending on the level of support you receive from your administration, you can lobby for staff before you’ve even broken ground on your farm, or you can wait until your project gets going.

Our five staff positions:

- **Executive Director:** responsible for designing and implementing strategic plans, as well as overseeing the day-to-day operations of the Project.
- **Events and Outreach Coordinator:** assists the director, manages the administrative aspects of the Project, plans and executes all special events.
- **Farm Manager and Educator:** manages the Yale Farm, designs and oversees all educational programs that happen there, including our Public Schools Program and summer internship.
- **Communications Coordinator (part time):** Responsible for all print and web materials, editorial content, publicity, and press relations.
- **Program Coordinator:** creates and oversees the Project’s educational programming, including workshops, panels, and lectures. This position is a two-year fellowship for a recent Yale graduate, which helps establish institutional memory among our student interns.

As your project grows, especially once you’ve hired staff, you’ll need to think about where your programs should belong, institutionally. Thinking strategically about where your programs should sit can go a long way to ensuring their longevity and effectiveness. We recommend situating your program either in an environmental department or in your university’s office of student life.

**Grow Your Programs**

Once you have established your farm, you can think about growing your programs. We’ve focused our energies on four priorities:

- **The Harvest Pre-Orientaion Program**
Yale operates a number of pre-orientation programs, which incoming freshman can attend before school begins. The Harvest Program, which we began overseeing in 2006, places groups of students on family-owned local farms, where they spend a week working, learning, and making their first friends at Yale.

- **Summer Internship Program**
  
  Our inaugural group of summer interns planted and cared for the Yale Farm’s first season of crops. We’ve worked hard to develop this program over the years, building in weekly seminars, field trips, and teaching opportunities for the interns.

- **Public Schools Program**
  
  Our Public Schools Program brings fifth-graders from New Haven’s local schools to the Yale Farm, where they take part in an eight-week curriculum designed to complement their science courses and teach them about plant growth.

- **Academic Work & Faculty Support**
  
  Universities are educational institutions, and allying your program with relevant academic departments, such as Agrarian Studies or Environmental Studies, helps to establish your work as central to your school’s mission. We publish a list of courses in food, agriculture, and the environment each semester and monitor how many students enroll in these classes—it’s a great way to show that there is interest in these fields. Yale also has a college seminar program, in which staff and graduate students can propose syllabi for seminar-style courses. We proposed such a class, titled “Farming and Eating in the United States,” which was accepted and taught in spring 2009 by our director.

**Further Resources**

We took a particular approach to building a college farm; we designed it to fit the ecosystem of Yale and New Haven. Other schools have used different strategies to build different kinds of campus farms. To see a full list, along with links to helpful organization, please visit our website at www.yale.edu/sustainablefood.