Duke Campus Farm
ANNUAL REPORT 2014
A LETTER FROM THE FARM MANAGER

More than most, it’s been a season of transition here at the Duke Campus Farm. This time last year, the farm was entering a six-month strategic planning process, building on the work of farm founder Emily Sloss T’10 to grow DCF’s mission. I was returning to New York City after farming and teaching at UC Santa Cruz’s Center for Agroecology and Sustainable Food Systems, heading back to a sub-basement cubicle to wrap up a doctorate in English literature and the environmental humanities.

By early summer, I was here learning to read a new landscape - plucking peas, ordering tools, hauling compost and packing coolers. After four seasons of farming, and five years working in and around the campus farm movement, the chance to restore a piece of hard-used farmland; to work with a dynamic and ambitious young program; and to bring land-based learning to a world-class university eager to start rethinking our relationship to food and to the land and people that grow it – for me, these were irresistible opportunities.

It is increasingly clear that, as a culture and as a species, we need to reimagine and rebuild the current food system. This will take critical thinking, bold leadership, honed skills and a nuanced understanding of social, economic and environmental systems. DCF’s founding story and the steadily growing demand for its programming show unequivocally that Duke students are clamoring for opportunities to rise to this challenge. With your support, we can continue to answer this call.

Over the past four years, the Farm has found fertile ground in a strong network of advocates and supporters. I feel truly grateful to be joining this community, one that recognizes the power of food to create social cohesion and social change. Wherever I grow food, I find I’m always both teaching and being taught – by farmers, by neighbors, by the land itself. I can’t tell you how much I look forward to meeting and growing with you.

Saskia Cornes
As Local as it Gets

Our sustainably-grown produce is available throughout the year, to everyone on campus, at Penn Pavilion. Eaters become stakeholders when they sign up for our Community Supported Agriculture program, sharing in the bounty of summer as well as the leaner days of early spring harvest.

"Participating in the Duke Campus Farm CSA meant getting a whole box of excitement every week this summer. That I got to meet the faculty, staff, and students who had grown the food was icing on the cake. The Farm provides its community the chance to participate in a process that so many take for granted."

- David Schmidt / Assistant Director - Regional Programming, Duke Alumni Affairs

As farm-to-table becomes almost de rigeur in the Triangle, DCF has strengthened its relationships with local chefs. Our yard-long “Red Noodle” beans inspired NOSH chef Katie Featherstone to preserve a full season’s worth (still garnishing NOSH’s famous bloody-marys). Edible flowers and dandelion greens were a new part of this year’s crop plan at the request of Piedmont Restaurant’s Ben Adams. These, alongside our signature beets, were a feature of Piedmont’s Vegan Dinner event.

The South’s Tastiest Town

By the Numbers

$6760 in CSA sales this summer
300 lbs of DCF watermelon eaten by first year students and their families at the Taste of Duke orientation picnic
120 flowering perennials planted to attract beneficial insects
90 lbs of our sweet potatoes served at Penn Pavilion’s Thanksgiving Dinner
30+ lbs each week of DCF arugula and kale sold to Duke Dining
19 different tomato varieties planted for our CSA members
6 sweet potato cultivars bred by renowned local farmer Doug Jones and grown by DCF
4 colors of peanuts in our Cackalacky demonstration plot

“What sets DCF apart for me, is not only that they are local, sustainable, organic and affordable, but also the tremendous respect they have for what they grow. 75% of what makes a successful dish are the ingredients themselves, and having the opportunity to go and see what is being harvested on any given day drives inspiration and motivation to teach, learn, and develop new ideas.”

- Eduardo Polit / Executive Chef, Penn Pavilion / Bon Appetit Management Company
MAKING ROOM TO GROW

Strategic Planning
Having evolved from a student-led organization into a Duke institution over the past three years, DCF took time to reflect on its progress, set priorities and expand its vision. Farm staff, the Board of Advisors, and strategy consultants Set of 1 came together to envision and articulate a five-year strategic plan to fulfill DCF’s new mission: “to inspire and empower the Duke community to catalyze food systems change.” View the full plan at sites.duke.edu/farm.

Infrastructure Improvements
Our ambitious strategic plan demands a top-notch teaching and production facility. Faced with a hot, dry summer this year, we built more efficient irrigation and refrigeration systems to keep our produce cool (even when we’re not). With the help of our neighbors, we turned a garden-shed into a walk-in cooler or “cool bot” that maintains the quality of our vegetables in the hours (not days) between harvest and delivery.

In 2015, we hope to build these little seedlings a permanent home. A sturdy greenhouse will expand our production capacity and offer an enclosed space to welcome students in cold or wet weather.

Two re-engineered high tunnels extend our season two ways. In winter, their warmth keeps our greens growing. In summer, they allow easy trellising of vining crops like cucumbers, peas, and these bitter melons.
FARM TO CAMPUS, CAMPUS TO FARM

This year, we hosted 19 class visits and academic tours, and worked in-depth with professors in a wide range of departments, from Biology to Spanish. With training in agroecology and the environmental humanities, new farm manager Saskia Cornes hopes to extend our academic reach even further, both in the field and in the classroom.

Semester Long Projects at the Farm

“Effects of Biochar Application on Soil Composition and Plant Growth in North Carolina” by Anne Martin, an Honors Thesis in Biology with Dr. Chantal Reid

“Evaluating Programming at the Duke Campus Farm” by Erika Hansen, for Dr. Liz Shapiro, ENVS 755 Community-Based Environmental Management

“Feasibility Study of Integrating a Community Supported Agriculture Option Into the Duke Undergraduate Meal Plan” by Matt Budofsky, an Honors Thesis in ENVS with Dr. Charlotte Clark

“The Medicinal Herb Garden Project at the Duke Campus Farm” a group project with Dr. Charlotte Clark, ENVS 245 Sustainability in Theory and Practice

Course Collaborations

DOCST 167S-01 - “Politics of Food,” Professor Charlie Thompson

PUBPOL 304 - “Economics of the Public Sector,” Professor Steve Sexton

SPANISH 311 - “Intensive Summer Spanish: Food Production and Consumption in NC and Peru,” Professor Melissa Simmermeyer

PE 203 - “Diet and Nutrition,” Professor Franca Alphin

PUBPOL 265 - “Enterprising Leadership,” Professor Tony Brown

PUBPOL 190 - “Civic Engagement in Higher Education,” Professor Eric Mlyn

“My desire to practically express my learning was perfectly complimented by the opportunity to physically build, breathe, consider, and dabble. The cause and effect of our ideas were visible and had consequences.”

- Bryce McAteer, T’ 17
Intensive monocropping of tobacco and cotton dominated this bioregion, the Piedmont, for over a century. Our growing practices bring diversity back to the agricultural landscape by rebuilding soil ecologies and restoring habitats for snake-eating raptors, essential pollinators, and other animals like this Southern Toad, which feeds on insect pests.
WORKING WITHIN A MOVEMENT

Part of a growing movement of farms at liberal arts campuses across the United States, DCF listened and spoke at three national conferences this year. Our workshop at the Yale Food Systems Symposium packed the house, bringing together academics and practitioners to find innovative ways for campus farms to support rigorous curricular work, and vice-versa.

Getting Subnatural

DCF joined an interdisciplinary team of faculty under the leadership of Professor Thomas Parker for the “Subnature and Culinary Culture” series this fall. A flexible interlocutor, DCF moderated a panel on Food Utopias at the Kenan Institute for Ethics, gave talks at the Franklin Humanities Institute and the Marketplace, and provided “subnatural” foods for four public events.

“Beyond laying the theoretical groundwork, the Farm provided a locus, a spatial there-ness. It offered a constructivist element to the gossamer nature of smoke and subnature, a lab where students could pursue the interest the events developed in a space that made real, tested, and informed the theories and ideas the subnature project had brought to the surface.”

- Professor Thomas Parker, lead convener, SubNature and Culinary Culture / Ass’t Professor of Francophone Studies, Vassar College

Artist Jennifer Stratton put DCF at the literal center of the table for the Nordic Food Lab/Five Chefs One Concept Dinner. Foodies lured by the region’s top chefs and visitors from Noma (currently ranked the best restaurant in the world) were surprised to find soil centerpieces and table-top compost collection as part of their dining experience. Diners themselves became part of Stratton’s “Decomposition Dining” project, in tracking the remnants of their meals as they transform back into the soil they came from.

We shared our work with campus farmers from all over the country at the Sustainable Agriculture Education Association conference. Through a tour of our acre, and through a formal presentation, we showcased the opportunities that historic crops, like the cotton pictured above, offer to both establish and problematize students’ sense of place.
“Unlike other areas where the Fuqua Food Forum has engaged with Duke, DCF provides a real-world example of how these activities play out, not just an academic exercise or discussion. It also helps our members really connect with the people working at the base of the agricultural supply chain unlike any other, and appreciate what occurs outside the office.”

- Eric Chapell, Fuqua ’15, Co-President, Duke Apiary Club / Founder, Fuqua Food Forum

**Student Life Highlights**

**Alternative Fall and Spring Breaks:** DCF partnered with the Kenan Institute for Ethics to take part in its “Food and Faith” AFB. DCF’s own ASB offered perspectives on food justice and food access from community-based organizations as well as Duke faculty.

**Baldwin Scholars Weekend Workday:** Father-daughter pairs planted a season’s worth of potatoes while sharing family food memories.

**KVille Campout:** The farm offered over forty graduate students a green respite from the KVille hothouse.

**Duke Apiary Club:** With the support of a grant from Burt’s Bees and local bee guru Donna Devanney, the Duke Apiary Club’s workshop series and monthly tours offer an in-depth look into DCF’s four beehives.

**DCF drew well over 1,000 visitors to the farm this year, from KVille campers to the reigning Miss America.**

**Volunteer Hours Worked at DCF**

![Bar chart showing volunteer hours worked at DCF from 2011 to 2014]

Participation in the Duke Campus Farm’s open workdays continues to grow. Twice a week, Duke students and staff, visiting scholars, and Durham families come together to learn, grow, work, and taste the harvest.
THANK YOU!

In four years, Duke Campus Farm has grown from an undergraduate seminar paper and a meadow into a cherished place in the intellectual, communal and spiritual lives of an ever-increasing number of Duke students, faculty, and alumni. We are proud to see our numbers grow each season, and thankful to all who have supported us.

We work hard to offer tangible and visible evidence that a restorative relationship to our environment is possible, and to change the conversation around food and food systems. As a young program, we do not have the benefit of an endowment. Your generosity is essential to sustaining our momentum and helping us grow.

Your contributions sow new opportunities for students, for academic integration, and for our future growth. We welcome financial gifts at sites.duke.edu/farm/giving-opportunities/.

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By the Numbers

1200 new square feet of growing space added to the farm this season
834 volunteers lent a hand at community work days
200 + dancers enjoyed farm food and fancy footwork at our Spring and Fall Contra Under the Stars
80 CSA shares sold
70 oak saplings grown for Trees Across Durham public schools
65 academics and practitioners who attended conference presentations and workshops led by DCF
56 Project BUILD pre-orientation participants
19 course collaborations
4 years of production and programming at DCF
2 lines of electric fence installed to keep deer away
Duke Campus Farm Staff
Saskia Cornes, Farm Manager & Program Coordinator
Emily McGinty, Farm Fellow
Josh Barfield, Site Coordinator

Campus Stakeholders
Sustainable Duke
Duke Forest
Office of the Executive Vice President
Duke Dining

Student Interns
Ivonna Dumanyan
Claire Fox
Sam Jolly
Cole Lutz
Billy Roddy
Simone Serat
Mary Skapek

Nicholas School Assistants
Theo Collins
Greg Cooper
Eleanor Heywood

Board of Advisors
Larry Bohs
Brenda Brodie
Charlotte Clark
Mary Eubanks
Michelle Nowlin
Jedediah Purdy
Charlie Thompson
Daniel Vermeer

Grants
The Duke Endowment

In-Kind
Blue Merle Farm
Brooke Shuman
Carolina Friends School
David and Vickie Davis
Donna Devanney
Doug Jones
Duke Biology Greenhouse
Duke Grounds
Emily Sloss and Lee Miller
Frog Pond Farm
Gretchen and Michael Morrissey
Jenny Stratton
Mark Waller
Peter and Martha Klopfer
Richard Copsey
Sarah Van Name
The Brodie Family
Tom Parker
The Duke Campus Farm is a one-acre working farm grown to catalyze positive change in the food system

Visit Us:
4934 Friends School Road
Durham, NC  27705

Contact Us:
- dukecampusfarm@gmail.com
- facebook.com/dukecampusfarm
- sites.duke.edu/farm
Duke Campus Farm: Five Year Strategic Plan

Our Mission, Our Vision, Our Plan

2014 - 2019
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Process facilitation of strategic planning for the Duke Campus Farm was provided by consultants Kathryn P. Miller and Eric H. Miller.
Executive Summary
A Strategic Plan for the Duke Campus Farm
Executive Summary: A Strategic Plan For The Duke Campus Farm

On a Saturday in March of this year more than 70 Duke students showed up for a workday at the Duke Campus Farm (DCF). The turnout was consistent with a three-year trend: ever-greater numbers of Duke students arriving at DCF eager to learn and ready to work.

It is significant and remarkable that a previously insignificant and unremarkable one-acre tract in Duke Forest—seven miles from our main campus, served by neither campus shuttle nor city bus, supplied by no snack or beverage vendor, offering no climate control, no comfortable seating and no services save a cold water spigot and a single-seat outhouse—that this previously unused bit of land has so quickly become a cherished place in the intellectual, communal and spiritual lives of a growing number of Duke students and alumni.

Significant, yes—but not a surprise. Nor simply a novel and up-trending expression of our students’ current interests.

When asked what the farm means to them, initial student answers are diverse—pastoral refuge, living laboratory, artistic sandbox, pressure valve, social space, tribal badge. Some see it as a soil-and-toil antidote to their necessarily rationalized, digitized, and urbanized campus lives.

But once they’ve given their top-of-mind answer, almost all students tell us that they consider the relationships they establish with and through the farm—the lessons they learn from it and the care they offer back to it—to be as essential to securing their future, and the future of generations that will follow them, as any degree, academic program, student activity or service opportunity offered at Duke.

These students are part of the first generation whose lives are being directly and unavoidably impacted by global climate change and its accompanying environmental degradation and resource exhaustion.
Executive Summary: A Strategic Plan For The Duke Campus Farm

This generation understands more clearly than any generation before that their values, actions and outlooks will have an outsized impact on the future of our planet. They understand that many of the challenges to be solved must begin with transforming the prevailing food system.

Thus when prospective students inquire whether Duke has a campus farm, they are not simply checking on the availability of heirloom tomatoes. They are taking the measure of Duke’s intention to play a material role in creating positive change. They want to know how Duke positions itself within a broader food system—how we grow, harvest, distribute, prepare and eat food—and who plays what role in this process. They want to know how their time at Duke might contribute to building viable alternatives to the current system.

A visit to the farm invariably prompts questions and starts conversations about sustainability, about land and resources, about food systems and their human and environmental costs. This is why Duke students see DCF as literal grounds for hope. Yet they know they’ll need more than hope and organic produce to be effective as the next generation of leaders, and some students worry out loud that the university’s academic programs and policy perspectives have not caught up with their own urgent need to seek solutions.

We see DCF as a cornerstone in Duke University’s response to this clear and earnest invitation from students to help them, and the rest of us, become more knowledgeable and engaged around all aspects of sustainable food production, and more aware of who or what gains or loses as food moves from farm to fork.

By doing so, we prepare Duke students to help effect positive changes in our food system as leaders and engaged citizens of the world.

Which makes our mission clear and simple: We inspire and empower the Duke community to catalyze food system change.
Executive Summary: A Strategic Plan For The Duke Campus Farm

The Duke University strategic plan calls for the application of “knowledge in the service of society” as a natural extension of education and inquiry, what President Brodhead calls "learning to make a difference." We believe the DCF mission, and our engagement with real-world issues, aligns well with this goal.

This plan presents our mission and why it matters, and outlines our vision, organizational values and five strategic imperatives that define how we will pursue this mission over the next five years and beyond:

1. **Educate**: develop strong interdisciplinary partnerships with Duke faculty, schools and institutes to increase food literacy among students;

2. **Engage**: create rich, hands-on opportunities for students and the community to sustainably grow and eat healthy food and to reflect on, and tackle, food system issues;

3. **Empower**: facilitate and amplify critical knowledge, conversations and actions that will inform food system change;

4. **Energize**: connect local individuals, groups and communities around our shared food and sustainability goals;

5. **Enable**: provide a “living lab” for experiential teaching and relevant academic, agricultural and policy research.

It was equally important to address our most pressing operational needs as part of this five-year plan. We have identified six operational goals critical to building a firm foundation for sustained growth and the effective pursuit of our mission.

1. **Build Stronger Academic Alliances**
2. **Support Core Program Excellence**
3. **Optimize Food Production and Operations**
4. **Develop An Exceptional Team**
5. **Diversify And Solidify Our Funding Base**
6. **Define Our Relationship To The Duke Community & Region**

Each goal is presented in this plan with a list of supporting action items and tactics for implementation.

We invite you to peruse our full plan and learn more about our mission to catalyze food system change through education. Of course, we also invite you to visit the Duke Campus Farm and get involved.
Introduction
Introduction: Organizational Summary

The inspiration for the DCF was a 2010 class assignment to assess the feasibility of a sustainable Duke campus farm.

Long after the class had ended, students’ interest continued to build. A handful of persistent, hard-working students soon partnered with individual faculty and administrators to turn their theoretical project into a campus reality. The new campus farm quickly gained visibility, symbolic significance, and manifold value for students, faculty, staff and administrators.

Today, DCF is a vibrant working farm offering programs, services, events and activities that educate, connect, engage and inspire our community about sustainable food systems, environmental stewardship and access to good food for all.

Our staff and volunteers share a commitment to demonstrate and teach a “farm to fork” connection by growing food for the Duke community, opening up the farm to students, faculty, staff and Duke’s neighbors, and by offering experiential learning, classes, tours and workshops.

We partner with academic and administrative leaders and programs inside Duke University, and with organizations across the region and country, to elevate the importance of more sustainable food systems and local sustainable farming for healthier food.

Most of all, DCF provides a literal one-acre “field of inquiry” where students, faculty, staff and others may materially and intellectually engage in an active, tangible response to the need for food system change. This positions DCF to take a leading role as cultivator, amplifier, convener and facilitator of conversations and activism to address sustainability topics and food-related issues.

Producing food for the Duke community is also a core commitment. As we explore what new roles DCF can take in these larger conversations, we will work to ensure that every Duke student will graduate having eaten food grown by his or her peers at DCF.
We will continue to enthusiastically encourage Duke professors to teach and break bread with their classes under our pavilion, and urge more and more students to experience a DCF workday, workshop or other on-site event. We will remain an open, welcoming, inclusive place where students, faculty, staff and members of the Duke and surrounding communities can learn hands-on about food and farming or join a lively discussion about food politics.

We will seek increased integration with academic departments, schools and institutes to make DCF a topic of, and starter of, conversations about the modern food system and its effects on people and the planet.

Less than four years after its inception, DCF employs a full-time farm manager, a full-time Farm Fellow (a recent Duke graduate), and several undergraduate and graduate student apprentices, and offers numerous events and education programs. In the next five years, we intend to become a cornerstone in Duke University’s efforts to produce more food-literate leaders and citizens for the world.
Current DCF Core Programs

Alternative Spring Break
One of the most popular DCF initiatives, this intensive 3-day program introduces Duke students to the processes and real-world politics behind “farm-to-fork.” Undergraduate and graduate students work on nearby farms, meet local food entrepreneurs and explore Durham’s network of community food organizations before preparing locally-grown dinners for expert guests conversationalists.

First-Year Orientation Programming
In August 2013, DCF began a partnership with Project BUILD, a service-centered pre-orientation program for incoming Duke first-years. Sixty-four students worked in 8-person teams while building relationships with one another and their new home. Ultimately, DCF would like to create its own food-centered pre-orientation program. DCF also plans to continue hosting an orientation Faculty Outing with Professor Charlotte Clark.

Demonstration Gardens
DCF increasingly dedicates perimeter space to curated mini-gardens that enhance the farm’s educational and aesthetic value. Since 2013, the Cackalacky Cash Crops heritage plot of cotton, tobacco, and peanuts has provided a historic context for modern food, labor, and justice issues as it honors to NC’s complex agricultural legacies. The heritage plot could serve as a model for similar programs across the country. DCF presented an academic paper and hosted a farm tour at the 2014 Sustainable Agriculture Education Association Conference—a national conference for college farms—on the valuable insights that land-based learning contributes to understanding our agricultural legacy. DCF perimeter plots also include an herb garden, native perennial pollinator garden, and a youth-focused “bowling bug” garden, and we look forward to developing others.

Educational Workshops
The farm has hosted a range of do-it-yourself and historical workshops. Early offerings included hands-on how-to lessons: preserving, fermenting, foraging, juicing, and more. In 2013, DCF expanded programming to include a heritage crop series that paired plantings with workshops featuring local experts, including a historian, textile artist, chemist, and crop geneticist. Additionally, DCF hopes to continue working with Duke corn biologist Mary Eubanks, who runs corn trials on site with her non-genetically modified organic corn seed.
DCF, Dining and Sustainable Duke

DCF is managed by Sustainable Duke and partly funded by the Office of the Executive Vice President. Sustainable Duke is the office at Duke charged with reducing the environmental impact of the campus, strategic planning for sustainability, educating the campus community regarding Duke's impact on climate change, and developing programs to positively influence campus sustainability behaviors.

Duke Dining supports our program by purchasing produce for its dining halls. The Duke community may also purchase produce from DCF directly through our CSA (Community Supported Agriculture) programs.

June through September our produce is available at the Duke Farmers' Market. Students can enjoy our produce in campus dining halls, the Marketplace and the Penn Pavilion on West Campus, or find DCF food on the menus of local Durham restaurants such as Piedmont and Nosh.

The Duke Campus Farm hopes to feature its produce at special university events in the future, and plans to make broad connections across departments and events management to fulfill this goal.
Why A Strategic Plan Now?

The DCF board of advisors and staff chose to conduct a strategic planning process for several reasons:

- Accelerating student engagement and faculty interest as well as changes in key administrative and academic leadership roles at Duke University pointed to the need for a clear strategy ensuring the farm’s long-term stability and relevance.

- The recruitment and hiring of a new DCF manager highlighted the need for a clearly defined mission, values and goals.

- Sustainable Duke staff, DCF staff and members of the farm’s board of advisors (BOA) recognized the organization’s capacity to contribute in larger ways toward positive change to the food system.

Planning Horizon

The planning horizon for this strategic plan is five years. The strategies and action items herein presented cover this time frame.

The first three years of this plan will be a period of foundation-building to make us ready for accelerated growth in years four and five, and beyond. However, DCF’s strategy must be responsive to environmental and economic trends and remain aligned with the dynamic culture of a major university. As such, this will be a living plan, reviewed and modified as needed throughout this five-year period.
Introduction: Plan Development Methodology and Report Organization

Plan Development Methodology

This strategic plan was developed using a research-based and participatory process. We reviewed background literature, evaluated other campus farms, and conducted confidential interviews with current board members, current staff and key stakeholders.

Draft content for the strategic framework was crafted by the full advisory board and all staff during a day-and-a-half strategic planning session. This plan was then further built out by our consultant team and a full draft of the strategic plan was presented to the board and all staff for review and refinement. The finalized strategic plan is presented here.

Report Organization

The content is organized as follows:

A Statement of Purpose articulates board and staff members’ stated understanding of why the DCF’s mission and activities are important.

A Strategic Framework presents DCF’s mission, organizational values, vision and strategic imperatives.

An Operational Plan presents six priority goals and corresponding action items needed to realize the strategic framework.
Our relationship to our food is in crisis.

Civilization as we know it began with agriculture, and it may well end with agriculture, too.

The modern food system feeds an enormous number of people with ruthless efficiency, but it does so at enormous cost—global environmental degradation, climate change and social and economic inequity.

Extreme weather across North America and the world, food riots in the global south, debates over genetically modified crops and 21st-century agriculture’s dependence on non-renewable resources—these all warn us that the strength of our civilization rests upon an agricultural base itself wholly dependent upon a larger ecosystem now in precipitous decline—a decline in large part due to an agriculture that undermines the very ecologies on which it depends.

The prevailing food system has brought us seemingly permanent pandemics of chronic disease that undermine centuries of progress in medicine and public health. The predominant methods for growing food no longer promote, but hinder and indeed critically threaten human life.

The strength of our civilization rests upon an agricultural base itself wholly dependent upon a larger ecosystem now in precipitous decline … our relationship with all things food is now so deeply troubled that we must save the food system to save ourselves.

Our relationship with all things food is now so deeply troubled that we must save the food system to save ourselves. This is no small task, and if we are to succeed, universities must take a leading role. For too long, the study of agriculture, and the food system more broadly, has been “siloed” within land grant universities or agribusiness research facilities.

Duke, with its strengths in health, medicine, business, law and public policy, as well as in the liberal arts and sciences, is uniquely positioned to take on the interconnected challenges presented by the current food system.

DCF is a vital platform for informing, enlivening and grounding this work.
It is for these reasons that DCF exists.

Leading colleges and universities such as Yale, Dartmouth and Cornell are not creating campus farms simply as extensions of academic programs, nor as student activities, nor to deliver a predictable supply of fresh produce to university dining tables, though these farms may in fact do all these things.

They are creating campus farms to signal their intention to play a material role in addressing the most important and urgent issue of our time: our relationship to each other and the planet that sustains us. Duke University’s participation in the conversations regarding food systems and food policy will necessarily take many forms. But DCF offers an inimitable and interdisciplinary entry-point into these conversations.

Unlike an institute or a curriculum, unlike publications or lectures, a farm is of the earth itself: alive and fertile. It offers tangible evidence that a positive and restorative relationship to our environment is possible. Our campus farm visibly demonstrates that the particular system we embrace, and how we measure its success, matters.

DCF is representative of the larger ecosystem that supports us. It demonstrates our understanding that the relationships we establish within that ecosystem, the lessons we learn from it, and the care we offer back to it, will—as much as academic degrees, or professional achievements, research projects or career paths—fundamentally and materially determine the quality and richness of our lives and those of generations to follow.
Strategic Framework
Our Mission, Vision, Imperatives and Values
OUR MISSION:
We inspire and empower the Duke community to catalyze food system change.

**Openness:** we are a welcoming, joyful and inclusive community resource.

**Collaboration:** we connect with our local community and neighbors to share our mission and values.

**Integrity:** we are honest, fair and transparent in all practices, operations and activities.

**Leadership:** we lead by example, and through strong partnerships with others.

**Justice:** we speak to and promote ecological sustainability and support the rights of all to healthy food.
Our Strategic Imperatives:  
How We Deliver On This Mission

1. **Educate**  
develop strong interdisciplinary partnerships with Duke faculty, schools and institutes to increase food literacy among students;

2. **Engage**  
create rich, hands-on opportunities for students and the community to sustainably grow healthy food, to eat the same, and to reflect on, and address, food systems issues;

3. **Empower**  
facilitate and amplify critical knowledge, conversations and actions that will inform and effect food system change;

4. **Energize**  
connect individuals and groups on campus and in the community around our shared food and sustainability goals;

5. **Enable**  
provide a “living lab” for experiential teaching and relevant academic, agricultural and policy research.
Our Vision

We envision that—

- As part of their education and campus life, every Duke student becomes “food-literate”; gaining a realistic understanding of the resources and energy required to grow, harvest, process, distribute and prepare food, and the benefits and costs created by various systems for doing so. This is accomplished through hands-on learning at DCF, through multi-faceted touch points in Duke’s academic curriculum and through DCF’s outreach to students and presence in daily campus life.

- All Duke students carry this knowledge and experience forward into their roles as citizens and food consumers. Some are inspired to directly drive food system change as leaders in public policy, business, law, agriculture and community life.

- DCF plays an integral role in university conversations about food, especially the need for, and cultivation of, a more just and sustainable food system, and informs these conversations with a deep understanding of how food impacts some of the key social, cultural, environmental and economic challenges of our time.
Our Vision In Action

• Duke University provides its campus community with enriching hands-on opportunities to help grow or prepare food at the Duke Campus Farm.

• Every Duke student leaves the university with a basic understanding of the environmental and human costs and benefits of various means of food production.

• DCF offers and hosts credit bearing courses, and employs multi-disciplinary curricula and/or certificate programs to explore ideas and programs related to food systems and sustainable agriculture.

• DCF is a mission-critical and permanent program at Duke University; funded and supported by multiple administrative, academic, and philanthropic sources associated with Duke University.

• Duke University has metrics for sustainable food on campus and is meeting established goals and a timeline for increasing sustainable food.

• DCF is an integral part of a global university campus farm movement working to create a just and sustainable food system.

• DCF regularly engages and collaborates with its neighbors, including local farmers, Durham neighborhood and community gardens, and community food programs.
Operational Plan

Priority Goals and Actions
Our Operational Plan

DCF’s focus for the next five years will be on building a strong organizational foundation that allows us to thrive, grow and pursue our mission for decades to come.

We have identified six priority goals that we believe are necessary for such a foundation and position the farm as a permanent and valued entity within Duke University.

During the first three years of this plan, our focus will be on food production, staff development, board participation and core program development. These initiatives will establish a firm platform for program growth and expansion during the final two years of the plan’s scope.

The exact nature and timing of these future implementations will depend largely on what we learn and what we accomplish in the first three years. But they are likely to include significant service expansion, further enhanced curriculum and academic integration, and potentially, land expansion on our current site or to other sites within the campus.

Like any long-term plan must be, this is a dynamic blueprint designed to be flexible and responsive as DCF, Duke University and the world around us continue to evolve.
DCF Operational Goals:

1. Build Stronger Academic Alliances
   a. Facilitate new curriculum, research and programs
   b. Foster relevant academic thought leadership
   c. Cultivate interdisciplinary partnerships

2. Support Core Program Excellence
   a. Maintain hands-on agricultural and educational offerings
   b. Establish key metrics and reporting to enhance outcomes
   c. Continue to develop extended community opportunities
   d. Expand Sustainable Duke integration

3. Optimize Food Production and Operations
   a. Improve record keeping
   b. Increase operational efficiency
   c. Continue planning and monitor plan implementation

4. Develop an Exceptional Team
   a. Develop organizational structure and staff roles
   b. Define and expand Board of Advisors roles

5. Diversify and Solidify Funding Base
   a. Annually evaluate and manage financial resources
   b. Generate new funding and/or additional earned income

6. Define Our Relationship To The Duke Community & Region
   a. Enhance DCF image and value within the Duke community
   b. Increase student awareness of and engagement with DCF
   c. Build external community relationships
# Implementation Plan: Goals and Priority Actions

## Goal 1: Build Stronger Academic Alliances

<table>
<thead>
<tr>
<th>Action</th>
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<tbody>
<tr>
<td><strong>1.</strong> Facilitate New Curriculum, Research and Programs</td>
</tr>
<tr>
<td>1.1</td>
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<tr>
<td>1.2</td>
</tr>
<tr>
<td>1.3</td>
</tr>
<tr>
<td><strong>2.</strong> Foster Relevant Academic Thought Leadership</td>
</tr>
<tr>
<td>2.1</td>
</tr>
<tr>
<td>2.2</td>
</tr>
<tr>
<td>2.3</td>
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</tbody>
</table>
### GOAL 1: Build Stronger Academic Alliances

<table>
<thead>
<tr>
<th>Action</th>
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</thead>
<tbody>
<tr>
<td>3. Cultivate Interdisciplinary Partnerships</td>
</tr>
<tr>
<td>3.1 Strengthen the farm’s capacity to become part of academic and campus life through interdisciplinary collaboration to create, increase and maintain campus touch points around healthy food and sustainability.</td>
</tr>
<tr>
<td>3.2 Increase broad faculty awareness of DCF and continue to expand interdisciplinary opportunities for academic connections via DCF staff giving guest lectures, attending numerous department meetings, and sharing information (via TEDx, case studies, blogs, etc.) that demonstrates past partnerships.</td>
</tr>
<tr>
<td>3.3 Maintain a list of faculty who have been involved with the farm or expressed interest in the farm and communicate relevant opportunities (research, field trips, curriculum etc.) at the farm to faculty prior to each semester and as appropriate.</td>
</tr>
</tbody>
</table>
### GOAL 2: Support Core Program Excellence

<table>
<thead>
<tr>
<th>Action</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. <strong>Maintain Hands-On Agricultural and Educational Offerings</strong>&lt;br&gt;1.1</td>
<td>Continue to develop, formalize and advertise volunteer (work day) opportunities, food-related campus events, on-site farm tours, programs and workshops for Duke students, identify how each of these are distinct, and develop new and additional program features and outreach strategies for each.</td>
</tr>
<tr>
<td>1.2</td>
<td>Create a prioritized list of potential partnerships with external community audiences (farmers, organizations, schools, leaders) who would be essential to the success of future DCF experiential-learning or community education offerings.</td>
</tr>
<tr>
<td>1.3</td>
<td>Continue offering fun, practical and educational workshops about sustainable agriculture and healthy food issues and topics that are open and relevant to both the Duke and surrounding communities.</td>
</tr>
<tr>
<td>2. <strong>Establish Key Metrics and Reporting to Enhance Outcomes</strong>&lt;br&gt;2.1</td>
<td>Develop and implement program measurements that help DCF assess its programs and outcomes in relation to established metrics and to the DCF mission, and integrate measurement results into communications and presentations as needed to support partnerships and fundraising.</td>
</tr>
<tr>
<td>2.2</td>
<td>Include metrics related to DCF’s on-the-ground sustainability practices in this process. Roll measurement results into communications and fundraising applications designed to support this program as it grows and evolves.</td>
</tr>
<tr>
<td>2.3</td>
<td>Explore developing a campus survey (or append to an annual survey already developed) to accurately assess levels of community awareness and perceptions of DCF and its mission to help evaluate the success of community programs and initiatives.</td>
</tr>
</tbody>
</table>
## GOAL 2: Support Core Program Excellence

### Action 2.4
Create a process to immediately assess individual program satisfaction. Create tools to conduct pre- and post-activity testing for students. Create a process to solicit faculty feedback on DCF support, site usefulness and program outcomes (surveys, interviews, etc.).

### 3. Develop Extended Community Opportunities

#### 3.1
Continue to query local farmers and community leaders about information and support needs around sustainable agriculture, healthy food and environmental issues and topics, and publish findings for Duke faculty and students.

#### 3.2
Explore establishing a regional community “digital clearinghouse” for gathering, curating and sharing information related to healthy food, sustainable farming and changing the food system. Invite diverse audiences to participate through submissions of articles, videos and other relevant content.

### 4. Expand Sustainable Duke Integration

#### 4.1
Incorporate DCF metrics and goals into Sustainable Duke’s overall strategic and operating plans and clearly define and promote the role of DCF as part of the university’s sustainability strategy and actions.

#### 4.2
Include DCF staff and/or BOA representation (as time allows) in the conceptual development of new sustainability outreach campaigns targeted to Duke students and communities.
## GOAL 3: Optimize Food Production And Operations

<table>
<thead>
<tr>
<th>Action</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>1.</strong> Improve Record Keeping</td>
<td></td>
</tr>
</tbody>
</table>
1.1 Establish consistent farm practices so that records are current and complete and institutional knowledge is not lost during staff and volunteer transitions.  
1.2 Ensure an easy mechanism exists to regularly track and record volunteer/intern hours related to the farm, and that a basic accounting infrastructure is in place to manage the farm business (e.g., farm sales and costs).  
1.3 Continue publishing the DCF annual report (digital format only).  
1.4 Use available technologies to enhance data collection and reporting (e.g., AgSquared and a mobile application for volunteer sign in). |
| **2.** Increase Operational Efficiency |  
2.1 Determine and establish the most advantageous crops and timing to optimize growing and harvesting seasons, align with farm staff vacation schedules, and meet customer needs.  
2.2 Evaluate and streamline outlets for produce sales including Duke Dining, CSA, local restaurants and farmers’ market.  
2.3 Assess DCF’s participation in current farmers’ markets, and re-imagine ways to participate cost-effectively and establish baseline standards for continued participation.  
2.4 Ascertain how to expand staff capacity to support increasing student engagement and programs while maintaining sufficient resources for operations and food production. |
### Implementation Plan: Goals and Priority Actions

#### GOAL 3: Optimize Farm Operations And Systems

<table>
<thead>
<tr>
<th>Action</th>
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<tbody>
<tr>
<td>2.5</td>
</tr>
<tr>
<td>3.</td>
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<tr>
<td>3.1</td>
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<td>3.2</td>
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<td>3.3</td>
</tr>
</tbody>
</table>
## GOAL 4: Develop An Exceptional Team

<table>
<thead>
<tr>
<th>Action</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td><strong>Develop Organizational Structure and Staff Roles</strong></td>
</tr>
<tr>
<td>1.1</td>
<td>Create an organizational chart that identifies the responsibilities of current staff. Determine areas that require increased staffing, and prioritize funding for those roles. Use this chart to guide strategic staff recruiting as needed in the future.</td>
</tr>
<tr>
<td>1.2</td>
<td>Develop job descriptions for each DCF staff and make them readily available to all as requested (staff, board, students, faculty, etc.). Ensure that each description articulates the goal/objective of the position as it relates to DCF’s organizational chart and strategy and update as necessary.</td>
</tr>
<tr>
<td>1.3</td>
<td>Develop job descriptions for interns (including goals, objectives and responsibilities) for these positions to assist with management.</td>
</tr>
<tr>
<td>1.4</td>
<td>Evaluate DCF employees annually against organizational goals and objectives associated with that staff position.</td>
</tr>
<tr>
<td>2.</td>
<td><strong>Define and Expand Board of Advisor Roles</strong></td>
</tr>
<tr>
<td>2.1</td>
<td>Strengthen the DCF Board of Advisors by clarifying roles and responsibilities. Increase board training and develop an “onboarding” process to enhance member understanding of DCF’s history and mission.</td>
</tr>
<tr>
<td>2.2</td>
<td>Create an organizational chart that identifies the responsibilities of the individuals currently on the board, and roles that are currently unfilled. Use this chart to guide strategic recruiting for the board.</td>
</tr>
<tr>
<td>2.3</td>
<td>Create “elevator speech” materials that board members can use to introduce DCF and its mission to other stakeholders, Duke community and external audiences.</td>
</tr>
</tbody>
</table>
### GOAL 4: Develop An Exceptional Team

<table>
<thead>
<tr>
<th>Action</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.4</td>
<td>Clearly articulate DCF’s position on financial or in-kind contributions, expectations with regard to resource development, academic relations and outreach, and expectations with regard to time spent on DCF activities such as twice-a-year meetings.</td>
</tr>
<tr>
<td>2.5</td>
<td>Standardize the timing of Board of Advisor meetings. At present we recommend quarterly meetings.</td>
</tr>
</tbody>
</table>
**GOAL 5: Diversify And Solidify Funding Base**

<table>
<thead>
<tr>
<th>Action</th>
<th>1. Annually Evaluate and Manage Financial Resources</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.1</td>
<td>Clarify approved budget and existing grant funding for each year, and set up a clear tracking system for grant and operational spending to be managed by DCF staff.</td>
</tr>
<tr>
<td>1.2</td>
<td>Develop an annual business plan that allocates budget for DCF’s primary functions—student engagement, academic and research programs and support, food production, revenue generation (CSAs, farmer’s markets, restaurant sales), fundraising, community outreach, etc.</td>
</tr>
<tr>
<td>1.3</td>
<td>Create an integrated financial plan that evaluates all of the components of DCF’s operations and programs since its inception, and projects cash flow and cash needs for the next five years.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2. Generate New Funding and/or Additional Earned Income</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1</td>
<td>Measure and publish results to enhance fundraising and grant submission practices, and develop new ideas about non-production-based earned income.</td>
</tr>
<tr>
<td>2.2</td>
<td>Conduct a national scan of earned income and fundraising strategies used by other campus farms or similar organizations. Assess the benefits and drawbacks of such strategies, and implement the best ideas as time and resources allow.</td>
</tr>
<tr>
<td>2.3</td>
<td>Assess the revenue potential of non-DCF special events that could be hosted at the farm site. In addition to researching the cost implications of this idea, assess any restrictions that may exist regarding zoning, permitting, insurance, etc. If special events become an earned income strategy, incorporate them into DCFs financial plan and implement accordingly.</td>
</tr>
<tr>
<td>2.4</td>
<td>Assess the potential for value-added or specialty product sales (i.e. jam, heritage produce, etc.) as a revenue generator for the farm business.</td>
</tr>
</tbody>
</table>
GOAL 6: Define Relationship To The Duke Community And Surrounding Region

<table>
<thead>
<tr>
<th>Action</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>1.</td>
<td>Enhance DCF’s Image and Value Within The Duke Community</td>
</tr>
<tr>
<td>1.1</td>
<td>Update existing communications channels with new mission statement and wording from strategic plan and continue to publish fresh, mission-relevant and useful content on the DCF website, the Sustainable Duke website and DCF social media sites.</td>
</tr>
<tr>
<td>1.2</td>
<td>Partner with Duke communications staff to create an electronic “storybook” about DCF that can be used to support communication, outreach, fundraising and partnership development efforts. Included in this “storybook” would be year-to-year photo documentation, the story of the farm, a history of activities and any media clippings. Post this storybook on the DCF site and multiple Duke University and social media sites to be accessible to the public.</td>
</tr>
<tr>
<td>1.3</td>
<td>Continue to cultivate, promote and reinforce the diverse, celebratory and inclusive environment at the farm. Demonstrate this by amplifying diverse and alternative viewpoints about food system change.</td>
</tr>
<tr>
<td>1.4</td>
<td>Partner with Duke communications staff to create DCF digital media kit (photos, basic information, logo). Maintain relationships with Duke communications staff and promote events, updates and opportunities at the farm. Create brief print materials to be used at in-person events with a goal of directing people to further electronic resources.</td>
</tr>
<tr>
<td>1.5</td>
<td>Regularly evaluate DCF communication strategies and tactics. Develop key messages targeted to the Duke community and external audiences.</td>
</tr>
<tr>
<td>1.6</td>
<td>Organize DCF’s existing photo stock to determine which photographs have appropriate releases on record, and discard photographs that do not have appropriate release information. Create model and photo release forms that can be used routinely during photo/video shoots moving forward.</td>
</tr>
</tbody>
</table>
## GOAL 6: Define Relationship To The Duke Community And Surrounding Region

<table>
<thead>
<tr>
<th>Action</th>
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</thead>
<tbody>
<tr>
<td><strong>2.</strong> Increase Student Awareness of, and Engagement with, DCF Programs</td>
</tr>
<tr>
<td>2.1 Implement an ongoing DCF positioning effort targeted to Duke undergraduates and graduate students that articulates the DCF mission, vision, values and goals. Spread the word through campus initiatives targeted to students such as Sustainable Duke campaigns, “DCF Day” at Duke dining establishments, freshman orientation (PBuild and PFarm), feature articles published on the Duke University website and in student recruitment materials, etc. Proactively work to create cooperative campaigns and partnerships.</td>
</tr>
<tr>
<td>2.2 Identify DCF’s most differentiating features (i.e. “what makes DCF unique?”) and incorporate into all DCF message and communications.</td>
</tr>
<tr>
<td><strong>3.</strong> Build External Community Relationships</td>
</tr>
<tr>
<td>3.1 Evaluate staff capacity when considering community outreach opportunities. Ensure that sufficient staff, board, intern and volunteer capacity exists to carry out new ideas, like events and outreach with a focus beyond the Duke community.</td>
</tr>
<tr>
<td>3.2 Brainstorm a list of potential DCF partnerships. For each potential partnership, identify the perceived mission connection, the goal of partnership, and the potential pathway to the group or organization. Prioritize this list to enable best use of staff time.</td>
</tr>
</tbody>
</table>
Capacity Assessment

The activities outlined in this plan will not require immediate additional financial investment in the DCF staff or DCF farm infrastructure, although specific equipment needs in year one include:

- Greenhouses
- Covered wash station
- Six-row seeder
- Walk-behind tractor

New staff, resources and other investments would be needed as DCF begins to expand its program offerings and increase visibility on campus. Potential site expansions to other campus locations especially would require additional, even potentially capital, investments.

Based on this need, it seems that preparation for highly expanded fundraising, possibly even a capital campaign, may need to begin in the third or fourth year of the strategic planning period.

Growth also will require technological investment (computers, etc.) and increased communication and outreach resources. At this time, no significant investments in these areas are required, but the DCF organizational budget should routinely consider these needs in the annual business planning process.
Today, half of our one-acre farm is intensely cultivated with fruits and vegetables, and cover crop. We currently have one greenhouse for seed propagation, one large hoop house to carry out winter growing, and four beehives.

The land where the Duke Campus Farm sits was previously part of a 1600-acre corn, wheat and tobacco plantation dating back to 1862. Duke bought part of that land in 1996 to add to Duke Forest. It had been unused until the farm’s arrival.
Terp Farm is the University of Maryland’s sustainable farming operation dedicated to growing produce for the campus dining program, supporting educational opportunities for students, and providing food to those experiencing food hardship. This year, Dining Services, in collaboration with the College of Agriculture and Natural Resources and the Office of Sustainability, launched the three year pilot program for the farm. The College of Agriculture and Natural Resources provided two acres of land at the Central Maryland Research and Education Center in Upper Marlboro, MD; researchers at the facility share technical advice and expertise with Terp Farm. Terp Farm helps fulfill a major component of Dining Services’ Sustainable Food Commitment: purchasing 20% local and sustainable foods by 2020. In its first year of operation Terp Farm produced 6,842 pounds of produce and continues to build its network of stakeholders, all invested in sustainable food and agriculture.
Meet Guy H. Kilpatric
Lead Agricultural Technician

Farmer Guy grew up in the foothills and valleys of Western Maryland, where life is steeped in agricultural heritage – though he is a first-generation farmer in his family. His diverse skill set and holistic approach to farming comes from many years of experience on organic fruit and vegetable farms, in addition to completing the Apprenticeship in Ecological Horticulture at the University of California, Santa Cruz. His knack for agricultural sustainability is as evident as his passion for growing delicious food, which is truly an inspiration to anyone who visits the farm.

As we prepare to commence with the second ever growing season at Terp Farm, we can also take the opportunity to reflect on the adventure thus far. Thanks to the contributions of many people, we have made tremendous progress in just one year to ensure the viability of the farm for years to come. From construction of our first high tunnel, to mapping out crop rotations and working with the chefs to design a crop production plan that uniquely suits both the farm and Dining Services’ needs. We have been bridging connections with the campus community, and also the community at-large, and have received an abundance of support for this project.

Looking ahead we can see that there is still much work to be done, but the demand for Terp Farm’s products is inexhaustible, both in terms of the food we produce and the opportunities we can create by engaging with students and other members of the community. As you read through our first Annual Report you will get a sense of the numbers that make Terp Farm a successful operation, but to get a real sense of the empowering work taking place at Terp Farm you must visit! I have given numerous tours of the farm over the past nine months and the responses are unanimous: What we need is here.

As ever,

Guy H. Kilpatric Lead Agricultural Technician

[Signature]
SUSTAINABILITY AT TERP FARM

Terp Farm is supported by the University Sustainability Fund, and our mission is to be a model of environmental stewardship. Here’s how we practice sustainability on Terp Farm.

ECONOMIC
Terp Farm does not sell produce for profit, but instead aims to grow enough produce to offset the costs of managing the farm. The high tunnel enables year-round food production and harvest. Terp Farm plans its plantings based on Dining Services chefs’ needs.

ENVIRONMENTAL
Terp Farm makes all of its decisions with environmental impact in mind. Local food helps the environment by reducing transportation and following growing seasons. Crop rotations, cover crops, and composting build soil health. A pollinator garden and border plantings create a welcoming habitat for natural pollinators.

SOCIAL
Terp Farm is an educational resource for the community. In its first season, Terp Farm hosted interns, academic classes, and volunteers to work and learn on the farm. In the future, Terp Farm will welcome students and other community members to volunteer. Terp Farm donated produce to hunger relief organizations—including the UMD Campus Pantry—and will donate 5–10% of future harvests.

Year Round Crops
Educational Center
Food Donations
Resource Conservation
Soil Health
Local Food
Collaborative Planning

Terp Farm 2014 | 3
In 2014, Terp Farm received a University Sustainability Fund grant to fund a three year pilot program. After one year, here's what Terp Farm has spent.

**Crop Inputs**
- **Mulch**
- **Soil Amendments**
- **Seeds & Plants**

**Farm Infrastructure**
- **High Tunnel**
- **Irrigation**
- **Signage, Tables, and Benches**
- **Site Preparation**
- **Multipurpose Building**
- **Small Scale Farm Equipment**
- **High Tunnel**

**Integrated Pest Management**
- **Electric Fencing**
- **Row Covers**
- **Soil Cover**
- **Pesticides**
- **Fertilizer**

**Materials**
- **Certified Scale**
- **Bins**
- **Packing Supplies**
- **Tools**

*High tunnel valued at $17,538; donated by Rimol Greenhouse Systems.*
Planning for Terp Farm

Honoring the land grant history of the University of Maryland, students have been involved in Terp Farm before the first seeds were even planted. As part of their coursework, Institute for Applied Agriculture Alternative Enterprises (INAG205) and Plant Sciences Capstone (PLSC399) students conducted assessments to determine viable crop options and the feasibility of following organic farming practices. Communications and Event Planning (COMM498) students planned and advertised for Meet and Greet Homegrown Eats, Terp Farm’s first campus event. TerpAMA’s consulting group, Red/Black, provided recommendations for the website and social media.

The high tunnel, donated by Rimol Greenhouse Systems and constructed in May and June 2014, allows for year-round growth and harvest.

The native pollinator garden, planted on Earth Day 2014 by a dozen students from the Department of Plant Sciences Capstone class, makes the farm a welcoming environment for bees, birds, and other natural pollinators.
First Planting

Crops included:

» Basil
» Summer squash (yellow, zucchini and pattypan)
» Tomatoes
» Cucumbers
» Jalapeño peppers
» Watermelon

Where the produce went:

» 795 pounds to catering
» 1,550 pounds to dining halls
» 2,261 pounds donated to local hunger-relief organizations

Over the summer, three full-time student interns worked on the farm. They helped set up irrigation systems, planted beds in the high tunnel, and harvested early crops.

It was incredible to watch our land transform from bare ground to vibrant soil full of life in three short months. We’re not just Terps feeding Terps here, but actually sowing the seeds for this farm to evolve as a model for sustainability and generations of future farmers.

—Karyn Owens, Plant Sciences ’15
Continuing to Take Root

Crops included:
» Greens (Swiss chard, arugula, collards, lettuce mix, and more)
» Winter squash (butternut and delicata)
» Beets
» Turnips
» Fennel
» Jalapeño peppers
» Spinach
» Carrots
» Radishes

Where the produce went:
» 1,705 pounds to catering
» 3,544 pounds to dining halls
» 119 pounds donated to UMD Campus Pantry

Students from Fruit and Vegetable Technology, a Plant Sciences lab course (PLSC433), visited the farm weekly. The twenty volunteers assisted with seeding, planting, harvesting, and weeding.
Beginning in 2015, Terp Farm will use an old chicken feed mill as a washing and packing facility for produce. This will allow Terp Farm to receive Good Agricultural Practices (GAP) Certification, a necessary food safety standard. It will also enable direct produce distribution to individual dining units, rather than all produce going to the commissary and later being redistributed.

In its second year, Terp Farm will be operating for its first full season. With this additional time, plantings can be planned with input from Dining Services chefs, ensuring that chefs have a need for the produce grown and that it can be delivered at pre-arranged times of the year.

Terp Farm also hopes to expand its educational reach within the UMD community and to the surrounding community. Some ideas include a harvest festival, open volunteer days and hosting new farmers for sustainable agriculture education.

An important part of the second season will be post-pilot strategy development: identifying long term goals for the farm, seeking additional funding from external grants and donors and other planning. This way, the Terp Farm team can be sure that if the pilot is successful, they are prepared to continue the program into a fourth year.

*3,132 lbs of delivered produce came from generous contributions by researchers at the Central Maryland Research and Education Center.
Virginia Tech Dining Services Farm
Program Report, 2012—2014
The Dining Services Farm started as little more than an herb garden in Fall of 2009. Now, it occupies 6 acres at Kentland Farm, the College of Agriculture & Life Sciences’ research farm and a 30 x 96 foot high tunnel at the Urban Horticulture Center. The project is a collaboration between Virginia Tech Dining Services, Department of Horticulture and the College of Agriculture & Life Sciences.

**2014 Season In Review**

In January 2014, Alex Hessler was hired as the Sustainable Food Systems Production Director and joint-appointed faculty member in the Department of Horticulture and Dining Services. His role is to manage crop production at the Dining Services Farm and teach classes on sustainable and organic agriculture in the Department of Horticulture.

Another addition to the farm in 2014 was a 30 x 96 foot high tunnel located at the Urban Horticulture Center. The high tunnel was joint funded by the Department of Horticulture and Dining Services. Tomatoes, cucumbers, and basil were grown there during its first season.

Progress has been made on our processing and packing shed with materials salvaged from around the farm and the Surplus Department.

A new class, the Sustainable Agriculture Practicum, was offered in the Fall semester with eleven students taking part in the day to day operations at Kentland Farm.
2014 Farm Production Totals

Harvested Produce by Location

- Dining Services Farm at Kentland 84%
- Kentland Farm Research 10%
- Urban Horticulture Center 6%

Total Pounds Harvested: 40,857 pounds

Types of Crops Grown, in lbs

<table>
<thead>
<tr>
<th>Crop Type</th>
<th>Pounds</th>
</tr>
</thead>
<tbody>
<tr>
<td>Summer Squash</td>
<td></td>
</tr>
<tr>
<td>Winter Squash</td>
<td>6,086</td>
</tr>
<tr>
<td>Beans &amp; Corn</td>
<td>2,683</td>
</tr>
<tr>
<td>Fruit</td>
<td>3,159</td>
</tr>
<tr>
<td>Peppers, Tomatoes, Eggplant</td>
<td></td>
</tr>
<tr>
<td>Root Crops</td>
<td>9,663</td>
</tr>
<tr>
<td>Greens</td>
<td>2,599</td>
</tr>
<tr>
<td>Herbs</td>
<td>246</td>
</tr>
</tbody>
</table>
| Greens include arugula, spinach, braising greens, collards, Swiss chard, kale & mustard greens.

Produce Used by Unit, in lbs

- Dining Services: 1,865
- Farm at Kentland: 2,577
- Kentland Farm Research: 2,577
- Urban Horticulture Center: 2,577

Spring Crops include asparagus, broccoli & peas.
Root Crops include carrots, turnips, potatoes & sweet potatoes.
The Dining Services Farm operated on 6 acres at Kentland Farm as well as in a 30 x 96 foot high tunnel at the Urban Horticulture Center. We harvested over 40,000 pounds in 2014, and calculated our market value to be almost $23,000.

Since hiring the Sustainable Food Systems Production Director in January 2014, our total expenses have increased, but so have our market value and total pounds harvested (see below).
Labor at the Farm: Summer Crew, SAP Class & Volunteers

Farm Labor Recap:
During the 2014 season, several groups served as our farm crew on a seasonal basis. From May—August, 12 Dining Services employees worked at the farm full time. From August to November, we relied on the Sustainable Agriculture Practicum (SAP) class and Volunteers.

Number of Volunteer Hours, 2012 - 2014
Clockwise from Top Left:

- Dining Services staff member takes part in sweet corn harvest,
- Sustainable Agriculture Practicum students take a break while harvesting pumpkins,
- Summer Farm crew member takes newly refurbished Allis Chalmers Model G out for a spin,
- Sunday volunteers from the VT Corps of Cadets & VT Engage pose for a photo after a workday,
- Décor for the Chef’s Table: A Tribute to Virginia’s Ingredients meal were sourced from Kentland Farm.
Farmscaping to Provide Beneficial Insect Habitat in Agroecosystems.  
Dr. Megan O’Rourke, Horticulture.  
Six-foot wide, 420-foot long blocks of native flowering plants were planted in five Dining Services Farm production fields. Beneficial insect populations and insect pest control were assessed.

Determining the Conservation Value of High Tunnels.  
Nate Foust-Meyer, Graduate Student; Dr. Megan O’Rourke, Horticulture.  
264 square feet of plot-space in the high tunnel at the Urban Horticulture Center was dedicated to the evaluation of the influence of high tunnels on fruit yield and quality, and plant diseases on tomatoes and cucumbers.

Control of Colorado Potato Beetle in Organic Potatoes.  
Dr. Tom Kuhar, Entomology.  
1,440 square of plot-space in a 0.25 acre field of potatoes on the Dining Services Farm was dedicated to the evaluation of the experimental organic insecticide PFR-97 for control of Colorado Potato Beetles.

Trap-cropping for Control of Insect Pests in Organic Tomato.  
Taliaferro Trope, Graduate Student; Dr. Doug Pfeiffer, Entomology.  
600 square feet of plot-space on the Dining Services Farm was dedicated to the evaluation of sorghum and sunflower as a trap crop for insect pests of organically-grown tomatoes.

Stink Bug Monitoring Traps in Community Gardens.  
John Aigner, Graduate Student; Dr. Tom Kuhar, Entomology.  
Four stink monitoring traps were positioned around the Dining Services Farm herb plot to evaluate stink bug activity in diversified community gardens.

Eastern Organic Broccoli Variety Trial  
Dr. Ron Morse, Horticulture.  
Dining Services Farm personnel assisted with plot establishment and maintenance; approximately 60 hours.

Strip Tillage as a Climate Change Mitigation and Adaptation Tool for Vegetable Production.  
Shaun Francis, Graduate Student; Dr. Megan O’Rourke, Horticulture.  
Dining Services Farm personnel assisted with plot establishment and maintenance; approximately 200 hours.
Acknowledgements

Susan Clark, Associate Professor, Department of Horticulture
Susan Day, Associate Professor, Department of Horticulture & Forest Resources & Environmental Conservation
Ted Faulkner, Director, Virginia Tech Dining Services
Roger Harris, Dean, Department of Horticulture
Bill Hess, Associate Director, Virginia Tech Dining Services
John James, Urban Horticulture Center Facilities Manager, Department of Horticulture
Tom Kuhar, Professor, Department of Entomology
Ron Morse, Emeritus Faculty, Department of Horticulture
Megan O'Rourke, Assistant Professor, Department of Horticulture
Dwight Paulette, Kentland Farm Manager, College of Agriculture & Life Sciences
Anthony Purcell, Assistant Director, Virginia Tech Dining Services
Holly Scoggins, Associate Professor, Department of Horticulture
Susan Sumner, Associate Dean of Academic Programs, College of Agriculture & Life Sciences
Jon Wooge, Agricultural Program Director, College of Agriculture & Life Sciences

Kentland Farm Crew
Dining Services Summer Farm Crew
Sustainable Agriculture Practicum Class Farm Crew

This report was compiled by:
Rial Carver, Sustainability Coordinator, Virginia Tech Dining Services
Alex Hessler, Sustainable Food Systems Production Director, Department of Horticulture
So, you want to [start or] grow a campus farm?

A checklist of topics to consider: these key features help to shape the structure of your campus farm program.

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<thead>
<tr>
<th>Location</th>
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<tr>
<td>USDA plant hardiness zone</td>
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<td>Development environment¹</td>
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<tr>
<th>Campus Environment</th>
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<tbody>
<tr>
<td>Public or private institution</td>
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<tr>
<td>Land grant university</td>
</tr>
<tr>
<td>Designated college of agriculture (or equivalent)</td>
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<tr>
<td>Related academic departments</td>
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<tr>
<td>Land availability</td>
</tr>
<tr>
<td>Community²</td>
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<table>
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<tr>
<th>Marketing Opportunities</th>
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<tbody>
<tr>
<td>Campus food service</td>
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<td>Small, niche venues, cafes, or outlets</td>
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<td>Farmers market on campus</td>
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<td>CSA on campus</td>
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<th>Funding and Staffing</th>
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<tr>
<td>Rural (&lt;2,500), urbanized area(&gt;50,000), urban cluster (2,500-50,000)</td>
</tr>
<tr>
<td>Community relations and nearby farm-related organizations</td>
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</tbody>
</table>

¹ Rural (<2,500), urbanized area(>50,000), urban cluster (2,500-50,000)
² Community relations and nearby farm-related organizations
Internal grants available

Departmental advocates

Campus staff support

External grants

## Student Engagement

<table>
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<tr>
<th>Existing student clubs or groups</th>
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<tr>
<td>Related courses, programs, research</td>
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<td>Summer student opportunities</td>
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## Checklist for Enhancing Educational Engagements

**Steps**
1. Identify mission for campus farm, including weighing production vs. educational priorities
2. Identify specific work, analytical, and/or research needs for the campus farm
3. Build stakeholder network with key staff, faculty and students (ongoing)
4. Consider which types of educational engagements best meet the needs you’ve identified for your farm (see list below for some of our ideas)
5. Identify resources, staffing and time needed to implement these educational opportunities
6. Select key educational opportunities that best align with program mission
7. Identify resources and staffing needed to implement selected key educational opportunities
8. Prioritize implementation based on available resources
9. Set goals for selected educational engagements and formalize an agreement with partners involved including timeline, resources and deliverables expected
10. Repeat each season and/or semester

### Awesome Wish List of Potential Educational Opportunities

- Class farm site visits
- Courses offered on farm or taught by farm staff
- Drop-in volunteers (one-time, few-times, or regular)
- Course volunteer requirement
- Student leadership (volunteer roles such as outreach, social media, fundraising, compost coordinator, etc.)
- Student Internships (paid or for class credit)
- Student Staff Positions (paid)
- Student Independent Research
- Workshops (one-time or regular)
- Speakers
- Farm Tours & Visits
- Harvest Festival
- Farm to Table Dinners
- Potlucks and Pizza Bakes
So, you want to [start or] grow a campus farm?
A checklist of topics to consider: these key features help to shape the structure of your campus farm program.

### Location

| USDA plant hardiness zone | VT: 6b  
UMD: 7a  
Duke: 7a  
UW: 8a |
|---------------------------|--------|
| Development environment¹ | VT: Urban Cluster  
UMD: Urbanized area  
Duke: Urbanized Area  
UW: Urbanized area |

### Campus Environment

| Public or private institution | VT: Public  
UMD: Public  
Duke: Private  
UW: Public |
|-----------------------------|-----------|
| Land grant university       | VT: Yes  
UMD: Yes  
Duke: No  
UW: No |
| Designated college of agriculture (or equivalent) | VT: Yes  
UMD: Yes  
Duke: No  
UW: No |
| Related academic departments | VT: Horticulture, Dining Services  
UMD: College of Agriculture and Natural Resources, including Plant Science Department; Institute of Applied Agriculture; Environmental Science and Technology; etc.  
Duke: Nicholas School of the Environment  
UW: UW College of the Environment |
| Land availability | VT: Urban Horticulture Center & Kentland Farm - College of Agriculture & Life Sciences research land, room for growth in acreage there.  
UMD: Maryland Agricultural Experiment Stations, part of College of Agriculture and Natural Resources  
Duke: 1 acre provided free by the Duke Forest (opportunity to expand)  
UW: ~1.75 acres (combined 3 sites) |

¹Rural (<2,500), urbanized area(>50,000), urban cluster (2,500-50,000)
| Community² | VT: mostly just campus partnerships, but have had outside groups visit like Master Gardeners, Cooperative Extensions, etc.  
UMD: Campus gardens, University of Maryland Extension, Future Harvest Chesapeake Alliance for Sustainable Agriculture, Prince Georges County Food Equity Council, & nearby college campuses (UDC, Hopkins, GMU, etc.)  
Duke: Carolina Farm Stewardship Association, Durham Network of Agriculture, many valuable small farmer listservs  
UW: Seattle Tilth, Tilth Producers of Washington, seattle p-patch (municipal community gardens) listserv, Washington State University Master Gardeners, City Fruit |
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| Campus food service | VT: Yes  
UMD: Yes  
Duke: Yes  
UW: Yes |
| Self-operated/contracted food service | VT: Self operated  
UMD: Self operated  
Duke: Bon Appetit  
UW: Self operated |
| Small, niche venues, cafes, or outlets | VT: Yes - Farms & Fields Project, although we’re trying to broaden our local food options in campus dining units.  
UMD: Yes, Green Tidings Mobile Dining Food Truck, 2 on-campus full service restaurants, one specialty dining hall  
Duke: Yes, 30+ total eateries at Duke, some sales to local restaurants  
UW: Yes, restaurant style cafes for students (Housing and Food Services, faculty and alumni (UW Club), and the medical center |
| Farmers market on campus | VT: No - concern with town/gown relationship, don’t want to usurp the town’s farmers market  
UMD: Yes  
Duke: Yes, low traffic, declined participating for first time this year  
UW: There is a University District Farmers Market (nearby, one block from campus, not affiliated with UW) - we do not participate, for various reasons |
| CSA on campus | VT: No  
UMD: No  
Duke: Yes  
UW: Yes |
| Funding and Staffing | VT: Green RFP program is meant for student organizations to fund sustainability ideas. We have not taken advantage of that |

² Community relations and nearby farm-related organizations
<table>
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<tr>
<td>● UMD: Campus Sustainability Fund; Pepsi Enhancement Grants; Maryland Parents Association Grants</td>
</tr>
<tr>
<td>● Duke: Some help from Green Grant Fund during startup; most comes from Executive Vice President budget</td>
</tr>
<tr>
<td>● UW: Campus Sustainability Fund (run by the office of Environmental Stewardship and Sustainability), USEED (service hired by UW to host crowdfunding campaigns), farm manager salary funded by Housing and Food Services, College of the Environment, School of Public Health</td>
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<td>● VT: Dining Services - Sustainability Coordinator, Department of Horticulture - Sustainable Food Systems Production Director &amp; Steering Committee</td>
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<td>● UMD: Dining Services, College of Agriculture and Natural Resources, Office of Sustainability</td>
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<td>● Duke: Sustainable DUke</td>
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<td>● UW: College of the Environment, Office of Environmental Stewardship and Sustainability, UW Botanic Gardens</td>
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<td>● VT: Dining Services offers staff support in summer - around 12 salaried employees work at the farm May through August</td>
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<tr>
<td>● UMD: 1.75 Full Time employees (Dining Services) plus additional support from Dining Services for Marketing and Programming; Faculty and instructors from College of Agriculture and Natural Resources provide academic oversight for labs visiting the farm</td>
</tr>
<tr>
<td>● Duke: 2 Full Time employees work at farm</td>
</tr>
<tr>
<td>● UW: 1 full time employee, 3 part time student interns hired for growing season (10 hours spring quarter March-June, 30 hours summer July-Sept, 10 hours fall quarter October-December)</td>
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<td>● VT: USDA Higher Education Grant: Restoring Community Foodsheds was involved in establishment of Dining - Kentland partnership. This grant is now ended.</td>
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<td>● UMD: Currently seeking external grant funds; applied to Johnny’s Seed &amp; Cliff Bar</td>
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<td>● Duke: The Duke Endowment funded $225,000 over 3 years towards Farm Fellowship and capital improvements</td>
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<td>● UW: Currently seeking external grant funds; applied to or planning to apply to PCC Natural Foods Community Grants, Sustainable Path, University Sunrise Rotary Club</td>
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<td>● UMD: Sustainable Food Committee (coordinated by Dining Services interns); Four student garden groups</td>
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<tr>
<td>● Duke: Some food-related groups, not specifically involved with farm</td>
</tr>
<tr>
<td>● UW: Loosely affiliated (sometimes collaborate with the farm): Associated Students of UW Student Food Coop, Husky Real Food Challenge</td>
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| Related courses, programs, research | VT: Sustainable Agriculture Practicum - students work at farm 6 hours/week  
UMD: Fruit and Vegetable Technology (Plant Sciences); Plant Sciences Capstone; Crop Production (Institute of Applied Agriculture); Introduction to Sustainable Agriculture (Institute of Applied Agriculture); Integrated Life Sciences Scholars Program (community service requirement); plus other one-time class visits  
Duke: University food course, working on development of a graduate certificate in food studies  
UW: GEOG 271 Geography of Food and Eating ENVIR/POL S 385 World Food Politics ENVIR 495 The Urban Farm CENV 110 Food and the Environment B CUSP 140 Impacts of Food Production in Biodiversity |
| Summer student opportunities | VT: In the works, have not developed anything quite yet  
UMD: Paid summer student staff positions (3-4)  
Duke: Paid summer internships (2-3 students), try to incorporate education as well as farm labor  
UW: 3 part time student interns hired for growing season (10 hours spring quarter March-June, 30 hours summer July-Sept, 10 hours fall quarter October-December) |

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