Farm-to-Healthcare Institution Tool Kit

RODALE INSTITUTE™

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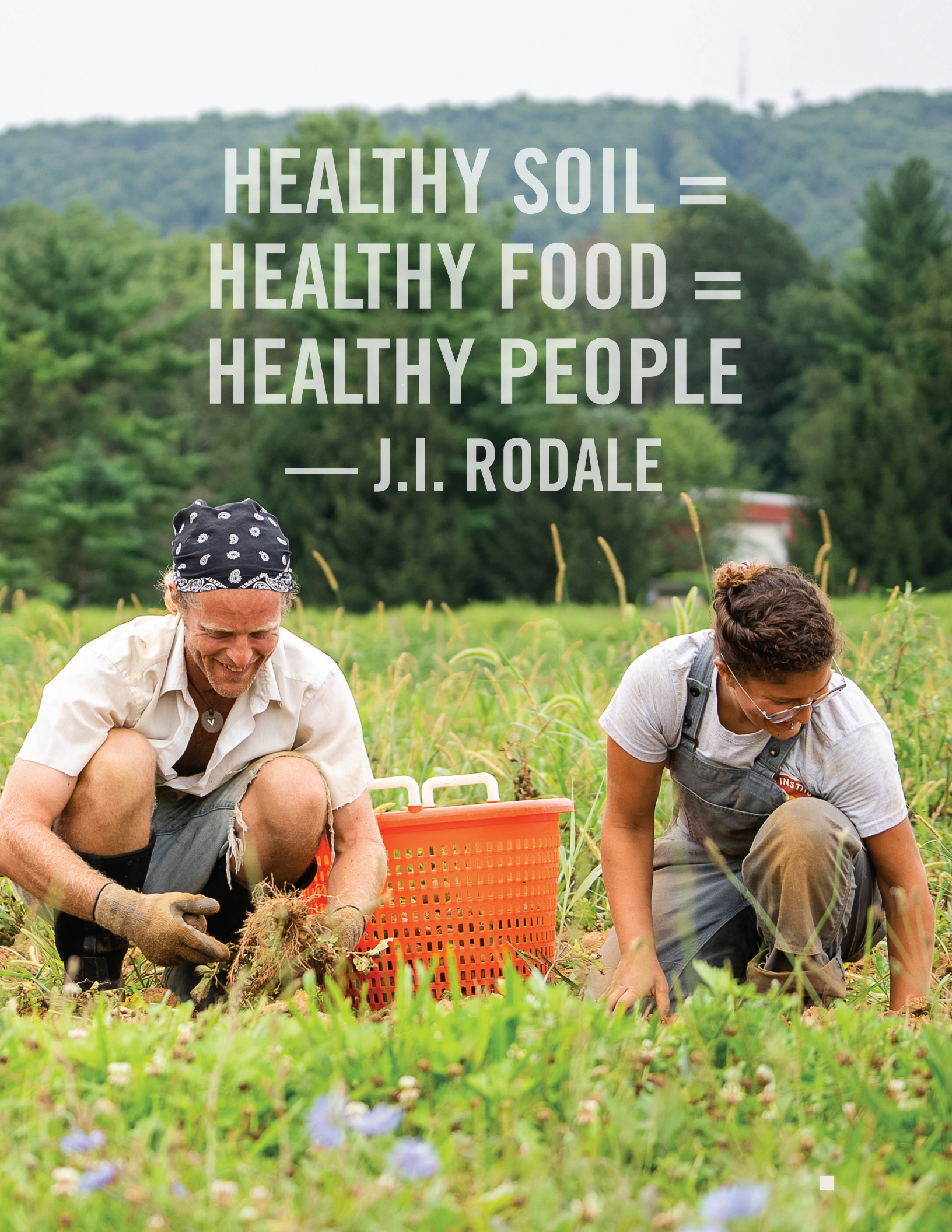
HEALTHY SOIL =
HEALTHY FOOD =
HEALTHY PEOPLE
— J.I. RODALE

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Definitions & Acronyms

Agencies and Organizations

HCWH — Health Care Without Harm
SARE — Sustainable Agriculture Research and Education
USDA — United States Department of Agriculture

Terms

GPO — Group Purchasing Organization. These organizations leverage the collective purchasing power of healthcare organizations to secure better pricing on goods and services. A majority (80 percent+) of food service procurement comes through GPOs.
RFI — Request for Information
RFP — Request for Proposal

Introduction

Our founder, J.I. Rodale, was an entrepreneur from New York City who struggled with health problems early in life. One day he wrote these words on a chalkboard:

> ***"Healthy soil = Healthy food = Healthy people"***

More than 75 years later, those words still serve as the core of Rodale Institute's mission. Rodale Institute, a nonprofit organization, has been at the forefront of best practice research, education, consulting, and thought leadership in regenerative organic agriculture for over 75 years. Conducting research at its main Pennsylvania campus and 10 other locations throughout the U.S. and Europe, Rodale Institute confronts one of the world's greatest challenges: creating a resilient global food system that improves human health and the environment.

At the core of the Institute's work is the belief that regenerative organic agriculture is essential to reversing the trends of chronic disease in the United States. From gut health and nutrition to mental and behavioral health, Rodale Institute's regenerative healthcare programming explores the many ways our healthcare systems and food systems are interconnected, building bridges between healthcare and agriculture. Regenerative healthcare, while a new term, is not a new philosophy. Around the globe, people have used food as medicine for millennia.

This tool kit demonstrates that local, regenerative food has a purpose in our modern healthcare institutions and that charting the path from farm to fork is both feasible and worthwhile. In the following pages, you will find steps detailing how to integrate local, nutritious food into your healthcare organization; best practices to meet the needs of your community; budgeting advice; successful examples from other healthcare institutions; and access to a curated collection of supporting resources. By the close of this tool kit, your organization will be familiar with modes of integrating local regenerative food into your organization, appreciate common pitfalls and best practices, and understand why this work is an investment in the well-being, health, and healing of your community.

Acknowledgments

This tool kit was created for Rodale Institute as an extension of its Regenerative Healthcare program and as a resource accompanying the November 2023 Farm-to-Healthcare Immersion, which is funded thanks to the generous support of Hearst Foundations, the PiK Foundation, and the WAY Foundation.

We appreciate all who contributed their time and expertise to creating this valuable resource. The work of integrating regenerative organic food into healthcare institutions is made infinitely easier through the sharing of successes, failures, and lessons learned. Thanks to your contributions, this tool kit lends its users practical insight and reminds all who launch their own regenerative food programs that they are not alone in their work and vision.

Why Do This Work?

The quality of the food we eat — whether as patients, employees, students, or concerned citizens — is critical for creating healthy people and a healthy planet. Farm-to-healthcare goes beyond what happens when you're sitting on the evaluation table at the doctor's office. Rather, it extends into the community and home, driving better health outcomes for all.

Farm-to-institution models minimize the distance between farm and fork. In doing so, supply chains become more transparent. People learn their farmers' names and the seasonality of food in their area. What investment is made in local food then stays local, encouraging economic growth and community well-being. Most crucially, food arrives fresher to plates, retaining more nutrients and flavor than that which is imported from far and wide. People learn to love the taste, colors, smells, and textures of food that heals more than it harms.

Farm-to-healthcare models serve as a living value proposition that communicates a clear commitment to quality of life and quality of care. Whether sourcing produce from a local farmer or starting an on-site farm — putting existing acreage into regenerative organic land use, building soil health, and sequestering carbon in the process — farm-to-institution models are the way of the future, a future focused on protecting and providing well-being.

As key stakeholders and trusted voices within the community ecosystem, healthcare institutions have a unique opportunity to lead by example. But beyond the opportunity to do so, healthcare institutions have a responsibility to model what health can look and feel like. At a time when chronic illnesses are on the rise at staggering rates, there has never been a more critical era for healthcare institutions to both talk the talk and walk the walk.

These investments in preventive care through food as medicine shift the paradigm of health head on. When healthy choices are optimized at the systems level, everyone stands to benefit. Trust is created between the institution and community at large when a serious commitment is made to investing in the health of patients, employees, community members, and the greater foodshed.

How to Integrate

Preparing Your Team

The merits of integrating local, nutritious food to your healthcare institution are manifold, but the path to integration is rarely simple or smooth. How you prepare for this process and the inevitable challenges will position your organization for success. By engendering organization-wide support, assessing the collaborative and communicative efficacy of existing hierarchies, and defining your goals, you ensure your organization's readiness for the project.

Generating Buy-In

The greatest indicator of a program's success is the fervor of its support and the degree to which that support extends throughout the entire supply chain. Buy-in and commitment to realizing the program's goals must be apparent at every level of decision making, with every stakeholder. You need the support of foodservice staff to incorporate fresh ingredients, the support of facilities teams to receive deliveries, the support of farmer partners to meet production and packing standards, and, crucially, the support of institutional leadership to allocate the necessary resources. Without such support, enthusiasm for the program stumbles at the first hurdle. We recommend three key strategies to generate institution-wide buy-in.

1. Connect to Your Institution's Mission

Core to any healthcare institution's mission is dedication to care and advancing community well-being. Steps realizing this mission are not confined to the care administered between doctor and patient during treatments, operations, and checkups. Rather, healthcare institutions can serve as levers of health within their communities through the food they choose to make accessible to their staff, patients, and guests.[1] Programs bringing fresh, nutritious, local food into a healthcare institution demonstrate a commitment to mission by making healthy food readily available, modeling the eating and cooking habits recommended as a fundamental piece of a healthy lifestyle, keeping local dollars local, and supporting agricultural practices that minimize farmworker exposure to harmful chemicals.[2] Simply serving local food can increase fruit and vegetable consumption for a hospital's eaters.[3] It is an act that strives to care for people when they are well, not simply when they are sick.[4] Nonprofit organizations may even be required by law to conduct a Community Health Needs Assessment. A clear connection between a healthcare institution's mission, preventive care, and community well-being are among the most compelling reasons for executives to rally support for such initiatives.

Community Health Needs Assessment

The Affordable Care Act requires that all nonprofit hospital organizations conduct a community health needs assessment (CHNA) every three years and implement a strategy designed to meet the needs defined in the CHNA.[5]

Programs like those described in this tool kit may help meet the needs of community grappling with the following burdens:

- Limited access to fresh fruits and vegetables
- Inadequate average daily consumption of fruits and vegetables
- Presence of noncommunicable diseases, such as heart disease, obesity, and type 2 diabetes
- High rates of exposure and/or injury from agricultural chemicals and pesticides

2. Don't Isolate the Program to a Single Department

The program's success is the responsibility of your healthcare institution as a whole. Accordingly, participation in the program should not be contained to any one department. Isolating responsibility to any single department or team ignores the collaborative nature of the program, removes participation incentives from others, and allows blame to be attributed at the singular, rather than systemic, level. Rather, key decision makers from relevant departments (e.g., clinical nutrition, purchasing, administration, foodservice, executive leadership, and even public affairs or marketing) should participate in the program's oversight and coordination.[6] This coordination should leverage official internal financial and administrative channels to formalize the program's integration, affirm the organization's intention to create lasting change, and build trust and support for the program's initiatives.

Some institutions have taken the approach of establishing a supervising committee of administrative, clinical nutrition, foodservice, and executive representatives to facilitate the program implementation and generate enthusiasm within each department. Others have a team dedicated to the program's coordination but require input and resourcing from a range of departments. The best approach for your organization is unique to your particular context, team, culture, and resources.

3. Coalition-Building Outside of Your Institution

The work of integrating local, nutritious food into a healthcare institution is innately collaborative work. Just as departments will learn from each other inside of an organization, healthcare facilities engaged in this work are constantly learning from each other's mistakes and successes. This learning is made easier through the active building and joining of coalitions organized around common focus areas, goals, and values. These groups are best utilized as networking resources, spaces to build mutually reinforcing

systems around common goals and values, and hubs of expertise.[7] One prominent coalition in this space is Health Care Without Harm's Practice Greenhealth Community, whose members strive to provide local, nutritious, and sustainable food as a means of bettering the public and environmental health.[8] Your organization may also look to local food policy councils, which bring together a diverse range of stakeholders around shared goals pertinent to healthcare institutions, such as food insecurity and healthy food access.[9]

Align Internal Structures

Silos within your organization can hinder communication, resourcing, and thus progress when it comes to implementing your local food program. Farm-to-Healthcare-Institution programs ask for a great deal of coordination, particularly between clinical nutrition and foodservice teams. Rather than bring complementary strengths together, silos between these two departments can reinforce distinct priorities and highlight differences in expertise and resources. In some institutions, this lack of coordination leaves foodservice decisions devoid of nutritional consideration, or even incentivised to focus on revenue generation over food-informed well-being.[10]

Shifting your organization's food culture and integrating more local, high-quality food may be made easier by adjusting internal structures and hierarchies to aid conversation between key stakeholders or departments with complementary expertise. Some institutions made progress in shifting their food culture by merging foodservice and clinical nutrition departments. Once merged, a shared set of values and priorities around food purchasing and menu planning can develop based on each department's expertise and insight into best practices, resourcing, and system constraints.

Greater collaboration between these departments will also help your organization understand what aspect of foodservice is best positioned to integrate local food and what departments need additional support. While patients could greatly benefit from fresh, local ingredients, patient menus may be too complex of a starting point.[11] Similarly, your cafeteria may be better primed to accept local ingredients but lack adequate resourcing. Foodservice teams may need additional training to receive and properly prepare fresh ingredients, or courier teams may need additional investment to manage fresh deliveries from farms. Your integration strategy will ultimately be unique to your organization, but this strategy is best informed and supported by strong collaborative channels throughout your organization and honest communication of needed support.

Know Your Goals

Integrating local food into your organization can yield a range of impacts — from improving community health outcomes to higher employee satisfaction to increasing fruit and vegetable access. Knowing what impacts you wish to see in your organization and your community will guide your implementation strategy. As your organization begins preparing and planning its local food initiative, consider what impact is most important to your organization and what metrics are best indicators of success.[12] Assess which of these metrics can be collected easily and at what frequency. It may be helpful to consider what other, related impacts may arise from the program. These metrics will help your organization build the benchmarking and evaluative systems that will provide credibility to the program and, more importantly, lend a critical eye to its progress and success.

While financial metrics are both readily available and significant to the program's longevity, singular reliance on such metrics ignores impacts central to creating healthier communities, such as behavior change and improved health or environmental outcomes. Instead, consider the short- and long-term goals of your program, and what metrics are embedded into program inputs and outcomes. Consider also how indicators of equity should be included by asking yourself what perspectives are missing, how your program is meeting hard-to-reach populations, and whether services are culturally appropriate. Once you have a list of potential metrics, focus on a few metrics that are most compelling to your organization, its community, and its leadership.

Metrics could include: [13]

- Percent of increased fruit and vegetable consumption
- Percent of served foods sourced locally
- Evidence of improved nutrition knowledge or behavior
- Promoting economic development and job creation
- Number of people enrolled in the program
- Rate of readmission
- Food-related greenhouse gas emissions from agricultural supply chains

Knowing what metrics are most important to your organization and having systems prepared to collect and analyze these metrics can help keep the program on track, teams motivated, and organizations attuned to the impact most essential to their missions.

Navigating Your Supply Chain

Navigating your existing supply chain and its relationships is one of the most complicated and important aspects of integrating local, organic food into your organization. Group Purchasing Organizations, or GPOs, and distributors serve as gatekeepers to healthcare markets.[14]

While some contracts and partnerships may support local food integration, others may limit your ability to act now and complicate the path from farm to fork for local producers. Moreover, working with your supply chain partners to incorporate fresh, local food will ask you to directly address the challenge of balancing sourcing values and supply chain efficiency. However, every conversation demonstrating institutional interest in sustainable, local food, and every successful integration example, is progress toward building a healthier food system and supply chain. Below, you will find steps and strategies to increase local food options in your existing contract and in those to come.

Define and Share Your Preferences

Speak the Same Language

Progress is hard to achieve if you and your supply chain partners do not share the same definitions for the words describing your ideal sourcing criteria and goals. Terms like "local" and "sustainable" can be defined in a multitude of ways.[15] For instance, "local" can describe food sourced from within a 100-mile radius or an 800-mile radius. Even strictly distance-based definitions of "local" cannot distinguish between food that was handled entirely within your community and food that was only processed there. Without precise definitions, broccoli grown down the street from your organization by an organic farmer and a Coca-Cola bottled within your town's city limits can both receive the "local" designation. "Sustainability" can be just as amorphous of a term — a product could be deemed "sustainable" for environmental, social, or only financial reasons.

Define Your Preferences

As you prepare to describe your preferred purchasing standards with your supply chain partners, consider which standards and values you want to emphasize. Rarely can these preferences be communicated with a single term. Instead, define your organization's preferences based on where, how, and by whom food was grown.

- **Where** — This describes how close to your community food was grown and processed and should apply to the entire supply chain, not just one aspect of production or processing.
- **How** — This describes how food was produced and what practice standards that production process adheres to. Third-party food certifications (e.g., USDA Organic, American Grassfed, Fair Trade Certified) may help you describe your preferences.
- **By Whom** — This describes what kind of producers you want to support. These preferences can apply to the size of the operation (e.g., small- and medium-sized), its ownership (e.g., family- or cooperatively-owned), or equity considerations (e.g., BIPOC, veteran, female, or new farmers).

Including these aspects in food sourcing preferences scrutinizes the entire process by which food was produced and delivered, minimizing opportunities for greenwashing. If your organization relies on broad terms without clarification, the values you ascribe to them are easily lost. Your organization must define its preferences and values precisely and ensure that all of its supply chain partners agree to and share these terms.[16]

Communicate Your Preferences and Goals

Once precisely defined, communicate your preferences to your supply chain partners in writing and communicate your goals as early as possible.[17] This formalizes your organization's position and gives your partner time to make progress on your goals with you. Share these preferences in partnership with other hospitals or as a unified hospital network if you have the opportunity to do so; your supply chain partners are more likely to respond.[18]

Defining "Local" and "Sustainable" Foods

Healthcare institutions are encouraged to source food that is produced locally, without synthetic pesticides and hormones or unnecessary antibiotics; that supports farmer health and welfare; and that is ecologically protective and restorative.[19] These preferences still need further clarification to be precise enough for GPOs, distributors, and other supply chain partners. Below are three contract-ready definitions developed by Health Care Without Harm's Practice Greenhealth[20]:

Local — Food that comes from farms, ranches, and processing/production facilities within a 250-mile radius of the purchasing hospital. For processed foods (e.g. foods with multiple ingredients), greater than 50 percent of the ingredients, by weight, must be grown and processed from within a 250-mile radius.

Sustainable — Food that is labeled with one or more of the certifications or label claims listed at *noharm.org/lib/downloads/food/EcoLabels_Matrix.pdf* or other eco-label/certification that has transparent and meaningful standards and independent verification process.

Organic — Certified organic foods are one such example of sustainable foods. Organic foods are grown with specific practices that abstain from synthetic inputs and encourage natural systems. Organic practices result in healthier soil, healthier plants, and ultimately healthier food.[21]

Find these and other contract conditions for food distributors at the following link: *noharm-uscanada.org/issues/us-canada/food-resources#guidesforgpos*.

Navigating Your Existing Partnerships

Understanding the allowances and limitations of your current contracts in sourcing local, nutritious food is equally as important as defining your preferences.

Common Challenges

Your existing contract with a foodservice provider may limit your ability to source food locally through direct contract stipulations or unintentionally by your GPO partners' logistic incompatibility with smaller, local producers. There are two common ways contracts limit outside purchasing: percentage-based purchasing commitments, and direct or indirect prohibition of direct-farm purchasing.[22]

Percentage-based purchasing commitments limit the product quantity that can be purchased from vendors other than your organization's primary vendor. Strict adherence to these purchasing commitments can leave healthcare institutions little room to source locally, especially if this allotment is already allocated to nonfood purchases. Contracts may also specifically prohibit direct-farm purchases, or they may indirectly prohibit such purchases by mandating certifications and like requirements for vendors that are excessive or unattainable for smaller farm operations.[23] The majority of local purchasing occurs outside of existing contracts, as standard supply chains often cannot handle the smaller quantities and irregular delivery schedules of local operations.[24] Accordingly, prohibitions on such relationships will pose a challenge to your institutional goals.

The way food offerings are communicated can be just as taxing as contractual stipulations. While many supply chain partners actively source local and sustainable options, these options can be difficult to find in catalogs. Often local foods and those that have sustainable certifications like "USDA Organic" or "rBGH free," as with some dairy products, are not labeled as such in the catalogs your organization receives.[25] This makes it extremely difficult to distinguish the foods that align with your organization's values from those that do not, even if your supply chain partners have such food available. Ask if these foods can be highlighted or if the foods that do not meet your organization's standards can be filtered out.[26]

As you share your institution's goals with your supply chain partners, make sure you understand your organization's current obligations and your partners' present capabilities. Not all contracts will have these limitations, and many GPOs are actively engaged in sourcing more local and sustainable products in an effort to meet their clients' demand.

Creating Leeway

The presence of restrictive contract stipulations does not mean efforts to incorporate local, nutritious foods are futile. As you engage your supply chain partners in conversation about how to support your organization's food values and goals, remember your bargaining power.[27] While GPOs and supply chain partners can be a crucial component to smooth functioning, your relationship is symbiotic. Your supply chain partners are just as dependent on your partnership as you are on theirs. Furthermore, foodservice represents a small portion of overall GPO purchasing, so there may be additional flexibility in food purchasing here relative to other departments.[28]

GPO contracts set purchasing minimums based on a percentage of what the healthcare institution needs. You and your organization define what you need; if your supply chain partners cannot meet that need, you may be able to decrease your overall spend. Additionally, if you are able to define local, sustainable foods as innately different from non-local and -sustainable foods, you may be able to obtain a waiver to meet that need off contract.[29] Fresh, perishable foods are also challenging for the standard centralized supply chain models because they cannot be stored and distributed as easily as dry, canned, or frozen foods. Accordingly, perishables represent a fraction (4 percent to 9 percent) of total GPO spend.[30] Emphasizing your institution's need for fresh, perishable foods may give you additional leeway for off-contract purchases.

Moving Forward

Renegotiating contracts or preparing new RFI/RFPs is the best time to realign your contract with your organization's goals. With the clean slate of a new contract, your organization can institute new sourcing policies and standards. As your organization prepares for a contract renewal, take note of what past stipulations limited your ability to source food locally, and consider the following to make values-based purchasing a core tenet of your supply chain partnerships going forward.[31]

- **Seek Partners Who Can Help You Meet Your Goals** — Include sustainability stipulations in future RFI/RFP contracts that are traceable and verifiable to a complete set of criteria. Stipulations may ask distributors to label where food is grown or adhere to a Sustainable Food Scorecard (link available in Appendix A).[32] Prioritize contracts that can develop seasonal menus, source locally, and help your organization easily select food aligned with your organization's values.

- **Negotiate for Additional Flexibility** — Some supply chain relationships can offer custom contracts that include feasible specifications tailored to your organization's requirements and your supply chain partners' capabilities.[33] You should expect to work with the appropriate supply chain partners to develop these contracts.

- **Refer Specialty Suppliers** — If there are specific vendors or suppliers in your community with whom you would like to work, ask that they register with your GPO as a potential supplier.[34] While the majority of suppliers your supply chain works with are large in scale and can pack uniform orders, your preferred local supplier likely cannot. Asking your preferred vendor to register as a specialty supplier with your GPO will call your supply chain partners' attention to the type of vendor your organization wishes to source from and educate them on accommodations needed to support that relationship.[35]

- **Take Action Outside of Your Contract** — Your organization can take additional steps by serving on food advisory committees.[36] These committees are composed of member healthcare organizations and shape contract decisions. By joining these committees, your organization can share information about foods' sustainability, nutritional, and quality merits and shape discussions accordingly.

Your supply chain partners are eager to work with you. These actions demonstrate demand for food that prioritizes the health and well-being of people and the planet, and a supply chain that can support their seamless integration.

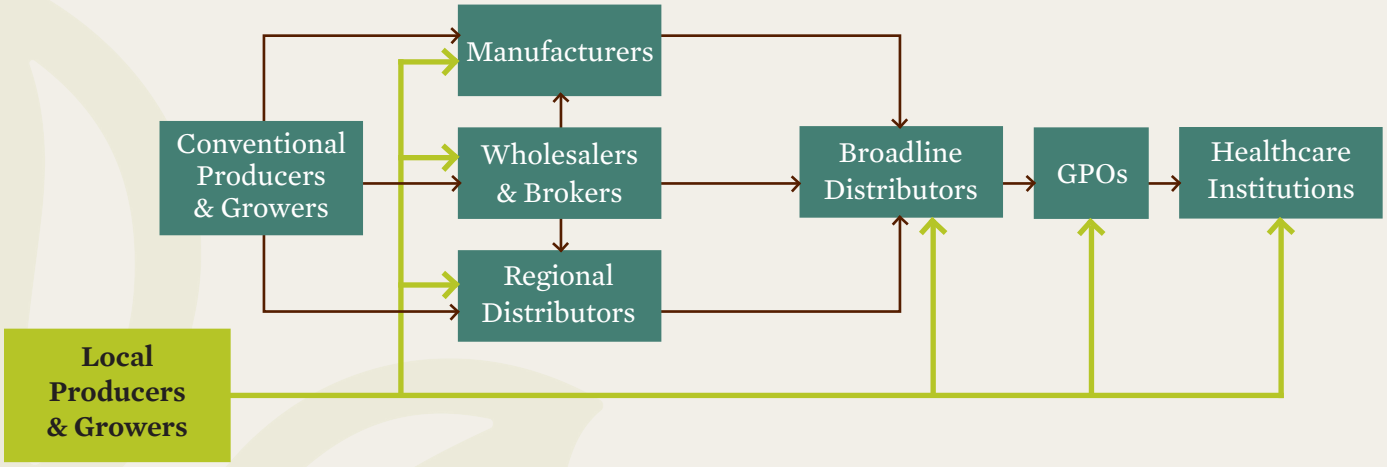
Choosing Your Integration Path

There are many ways of integrating local, nutritious food into your organization's offerings. The best means of doing so in your organization will depend on the strengths, resources, and needs of your community. Before you decide what form your program should take and what resources it draws from, survey your community. Ask what needs are present in your community and which of those needs your organization can address. Consider also your agricultural landscape — what kinds of crops are grown in your area and by whom.Taking the time to understand your community and its local food system will narrow your organization's focus, uncover leverage points for impact, and build deep, sincere trust in your organization with the community.

Local Procurement

One category of integration relies on local procurement. These options look to the farmers and aggregators already in your area and find creative ways of integrating their food into your organization's foodservice offerings. Partner with supply chain actors and local food producers aligned with your organization's goals to bring high-quality, local food to the community your healthcare institution serves. Resources to help you find sustainable producers in your region are available in Appendix A.

Procurement Path 1 — Integrating with Existing Systems



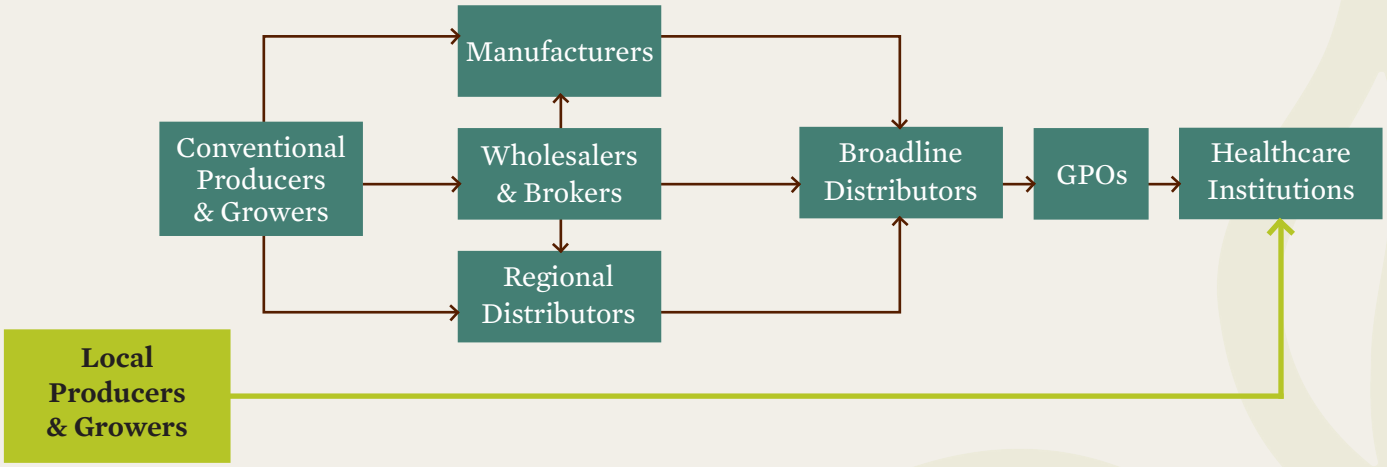
Source: Adapted from Klein, "Values-Based Food Procurement in Hospitals"

If your existing supply chain partners are willing and able to integrate your local agricultural businesses into their supply chains, then do so! Integrating local farms into existing supply chains is the most streamlined way to include their foods in your organization's foodservice offerings. This option may take additional effort to coordinate the best packing, processing, and delivery systems. Local producers often need to be able to meet certain delivery windows, have certain certifications, and deliver minimum quantities of produce consistently. Sometimes an individual farm can meet these requirements independently, but often, farms need to band together as a cooperative or utilize additional supply chain partners. However, this mode of integration brings the food your organization wishes to prioritize into your kitchens with little disruption to normal operations. Systems that integrate local food serve as evidence that existing supply chain models can make space for values-based food producers and the organizations looking for their products.

Common Certifications and Requirements for Local Producers

- Good Agricultural Practices (GAP) certification
- Adequate liability insurance
- Hazard Analysis and Critical Control Points (HAACP)
- Food safety and quality training
- Food Safety Modernization Act compliant training

Procurement Path 2: Building Direct Relationships with Farmers



Source: Adapted from Klein, "Values-Based Food Procurement in Hospitals"

Building direct relationships with local farmers is a rewarding way to tap directly into your local food system and ensure that a greater share of each purchase directly benefits local agriculture. If your organization needs or simply wants to build direct relationships with local farmers, there are a few steps that will make the relationship mutually beneficial and easier to navigate.

- **Prepare to Reach Out** — Before you start reaching out to farmers, you should know your organization's level of commitment and be ready to answer key logistics and purchasing questions.[37] These questions include but are not limited to: What process do farmers need to follow? What is your organization interested in buying, how much, and how often? What price is your organization willing to pay for products to ensure that farmers see a return for meeting high quality standards?[38] Is your organization prepared to pay a premium for certified food? Your organization should also enter the conversation with your sustainable food purchasing protocol, transportation expectations, and logistical requirements ready to be shared.[39]

- **Start Small** — Begin with no more than two partner farms and focus on integrating only one or two ingredients from each. Starting small will keep the program manageable as your organization and farmer partners understand the kinks of your supply chain, food system, and the associated logistics. Taking on too much at the beginning of this project will likely overwhelm your team and lead to burnout on the project as a whole. Set incremental goals with these initial partnerships and slowly scale only when your organization and the many people supporting the project are ready.

- **Choose Farmer Partners Intentionally** — Start with farmers who meet your organization's values-based, logistical, and legal requirements. GAP certification is a common, often nonnegotiable requirement for any food offered through a healthcare institution.[40] Ensure that your farmer partners meet this and other

mandatory requirements along with preferred eco-certifications that align with your organization's food goals. Please note, produce that meets these certifications will often come at a premium. Once you've defined an initial group, connect with those farmers to understand who has the capacity to work with you and the willingness to be flexible as you work through the procurement process together. Farming is an intense and unpredictable life, and not all farms are eager to take on the additional challenge. Additionally, no matter how well prepared you are, something is bound to go astray, so you need a farmer partner who is willing to be flexible. We also recommend that you seek partners who are not relying entirely on your partnership. Be a part of a diverse and therefore more resilient market plan by seeking farmers with diverse income streams and partners.

• **Focus Farmer Outreach in November and December** — As with many industries, there is a busy and a slow season in farming. Rather than trying to reach farmers while they are busy planting or harvesting, be mindful of their time and focus your outreach efforts in the off season, ideally between November and December. (Tip: Look for farmer conferences in your area — these are often held over the winter and provide a great space to meet local farmers.)

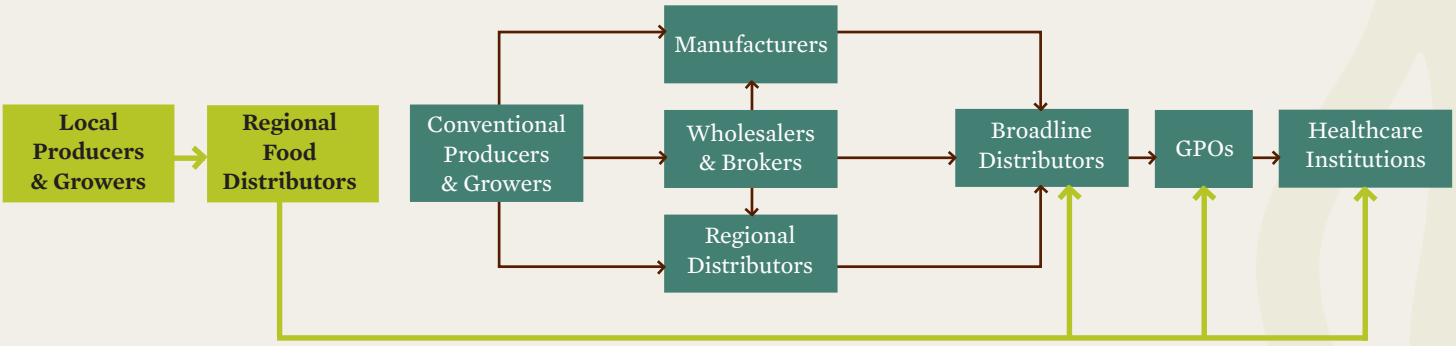
• **Seek Small and Medium-Sized Farms** — The ripple effects of local sourcing are felt the most working with small and medium-sized operations. No only will your partnership open tremendous market opportunities for these farms, but operations of this size may be more likely to utilize sustainable agricultural practices than their larger counterparts.[41]

• **Have a Clear Contract** — Ensure that the terms and commitments of your partnership are clearly captured in a written contract. Conditions should include the agreed-upon market price or price range, the quantity your institution will take, and options for the farmer to backfill in case of crop failure. The contract will also outline delivery expectations (for example, it is best not to schedule local deliveries the same day as standard deliveries). You may also want to include harvest or seasonality charts to have a shared sense of what produce will be available when and to better collaborate on production planning going forward. For example contracts, please see Appendix A.

• **Payment Structures** — You can best support your farmer by paying for a portion of the agreed-upon amount up front and ensuring that farmers receive a premium for the values that you define. Farming requires heavy up-front investment. By offering to pay for a portion of your order at the start of the season, you recognize and respond to the challenges your farmer partner faces.[45] We recommend paying for one-third of your commitment at the start of the season, one-third in the middle, and one-third at the end.

• **Streamline and Simplify Communication** — Wherever possible, keep communication lines simple and straightforward to make life easier for you, your team, and your farmer partners. Be prepared to meet your farmers' communication preferences.

Procurement Plan 3: Leveraging Alternative Supply Chains

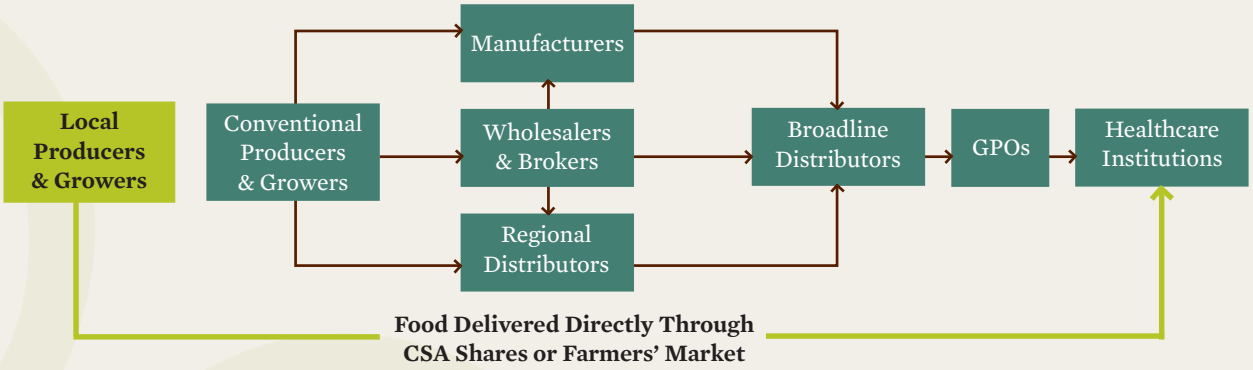


Source: Adapted from Klein, "Values-Based Food Procurement in Hospitals"

While your organization may be able to work directly with producers, often you will need the support of alternative supply chain actors who specialize in bringing fresh, local, sustainable food to customers.

The typical healthcare institution supply chain prefers vendors with existing infrastructure (like refrigerated trucks, cold storage, and even processing capabilities), who can seamlessly blend with their systems based on their production and delivery capacities. Local and organic producers often struggle to join these systems because they lack the typical infrastructure or operation scale.[42] Your organization can consider providing this infrastructure support — grants providing farmers resources to develop infrastructure are rare. However, a growing regional food movement has sparked a rise in new supply chain actors focused on the unique needs of small and midsize sustainable producers. If your primary supply chain partners cannot incorporate local producers, see if any of the following organizations exist in your area: food distributors specializing in local food, local food hubs and aggregators, farmer cooperatives, and nonprofit organizations dedicated to building regional food systems. These organizations, often in partnership with government agencies, may provide unique solutions to local food procurement challenges and can serve as a resource for finding other partners and refining food purchasing guidelines and policy.[43] See Appendix A for links to USDA's national Food Hub Directory.

Procurement Plan 4: Host a CSA or On-Site Farmers' Market



Source: Adapted from Klein, "Values-Based Food Procurement in Hospitals"

To avoid the complications of integrating local food with your supply chain and kitchen preparation process, consider starting a Community Supported Agriculture (CSA) program or hosting a farmers' market on your property. CSAs allow clients to purchase a "share" of a farm for a season and receive fresh produce from that farm on a weekly basis. In this model, your organization would partner with a farm and manage the sign-up and delivery of shares to your community. Often, a healthcare institution organizing a CSA will offer the CSA program to a select group within its ecosystem, such as employees or patients in specific need of more fruits and vegetables. Similarly, to host a farmers' market, your organization would need to coordinate with at least one farmer and determine the location, times, and dates of the market. Rather than overseeing share delivery and pickup, guests, patients, employees, and community members could visit the market to select fresh produce themselves. Your organization could consider subsidizing produce purchases for patients or community members struggling with food insecurity or noncommunicable diseases to encourage health and healing.

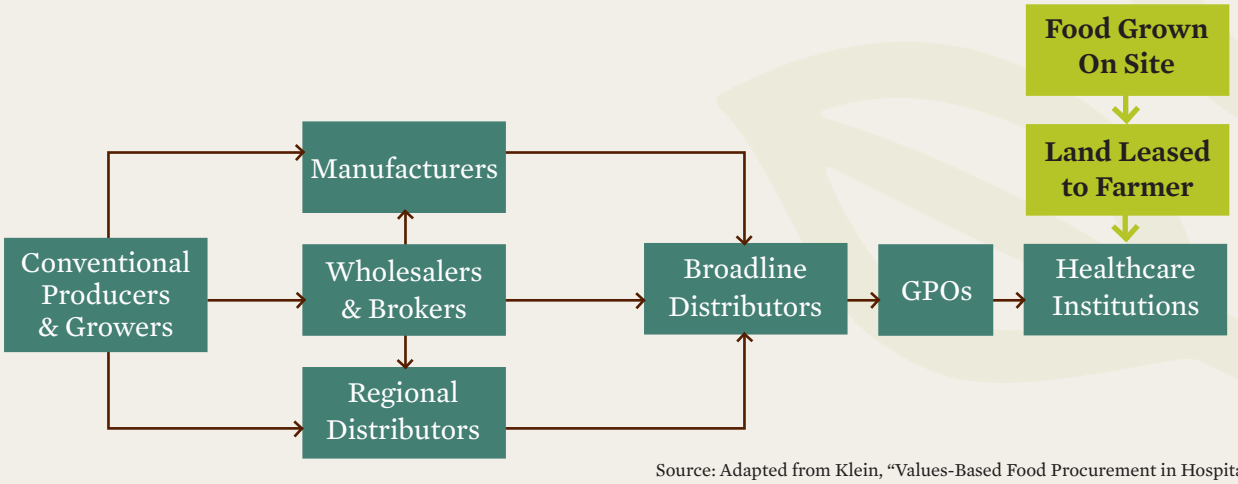
This option takes much of the administrative and logistical burden off of your organization's team. Many farms operate CSAs of their own or regularly attend farmers' markets. Accordingly, you can seek farm partners who have existing experience and interest in these models. As the food is not served through patient meals or retail cafeterias, many requirements, like GAP certification, are not mandatory and there is no pressure on foodservice staff to integrate seasonal offerings into menus. However, share delivery will need to be coordinated and share pickups overseen by your organization's relevant staff or volunteers.

Resources to support starting and managing CSAs and farmers' markets can be found in Appendix A.

Food Production

Another primary mode of integrating local food begins with growing food on your organization's property. While this may seem like an intimidating task, food production does not need to be as large of an operation as starting your own farm (though you can!). Three main paths to food production are outlined below; each has its own set of requirements. As is recommended throughout this tool kit, always start with small, manageable steps.

Production Path 1: Lease Land to a Farmer



Source: Adapted from Klein, "Values-Based Food Procurement in Hospitals"

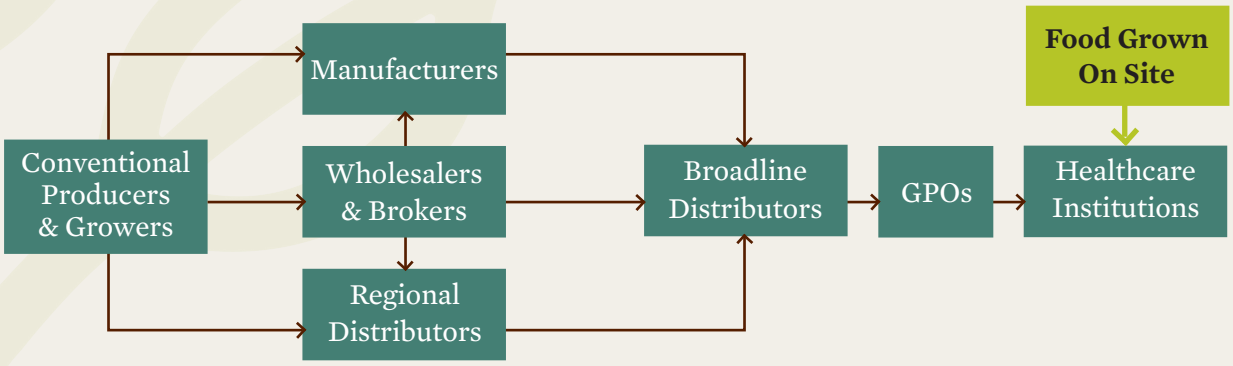
If your organization has a few acres of land zoned for agricultural use and legal access to water, but does not want to take full responsibility for operating a farm, you may want to consider leasing your land to a farmer. In this situation, a farmer would lease land from you for a minimum of three years to run his or her farming operation on it. In your agreement, your organization can specify the type of production practices you want used on the land and you can work directly with the farmer to match your organization's crop preferences with the crops harvested on the land.[44] This option presents an opportunity for your organization to support underserved farmers who struggle to obtain land, such as new, young, or BIPOC farmers.

In this setup, you may still encounter a few logistical complications depending on how you integrate that food to your organization's ecosystem. If you intend to serve the food through your retail cafeteria or patient meals, you will need to work with the farmer leasing your land to ensure that this farmer is GAP certified and meets your organization's standards. If you intend to distribute the food through an on-site CSA or farmers' market, you will need to collaborate with your farmer to ensure seamless share delivery and pickup. Resources for connecting with farmers looking for land can be found in Appendix A.

Requirements for Production Programs That Involve Leasing Land to a Farmer:

- Land zoned for agricultural use
- Legal access to water, specifically agricultural metered water in the Western United States

Production Path 2: Begin Your Own Operation



Source: Adapted from Klein, "Values-Based Food Procurement in Hospitals"

Your organization may prefer to house any farming operations within the organization itself. In this case, your organization would be beginning its own operation with all related employees, expenses, and oversight folded into your organization's hierarchical, administrative, and resourcing structures. Beginning your own operation does not exclusively mean beginning your own farm. Rather, there are many iterations of food production models.

The best fit for your organization will depend on the available environmental, spatial, economic, and labor resources. Three main models are outlined below. Each model creates opportunities for community engagement, provides space to educate members on the food system, and promises the freshest produce. Any of these models can be tailored to incorporate the food grown into your foodservice offerings, as an on-site farmers' market, or as a CSA program.

Community Kitchen Garden

Community kitchen gardens are spaces, cared for by a community, in which vegetables, herbs, fruits, and even flowers are grown.[45] These spaces are designed, maintained, and grown by the community members who volunteer to do so. Community kitchen gardens are used to fight food insecurity; engage communities in physical, outdoor activity; and derive community benefit from otherwise idle lots.[46] Resources for starting and maintaining a community kitchen garden can be found in Appendix A.

Rooftop Kitchen Garden

Rooftop kitchen gardens are gardens located on building roofs that specialize in growing food. Unlike community gardens, these gardens are not as easily accessed by the community, and therefore the garden's maintenance must be overseen by employees, not the general public. Rooftop gardens are especially beneficial for healthcare institutions that have limited space or are situated in urban areas. Like community gardens, rooftop kitchen gardens can combat food insecurity and create both reason and place for your organization to experience the benefits of gardening and homegrown foods. They transform otherwise unused space into productive hubs of nourishment, healing, and well-being.

On-Site Farm

An on-site farm is the most robust production option. Farms require extensive labor and investment but can produce significant quantities of food for your community. Establishing an on-site farm asks your organization to move through the standard procedures of setting up a farm in general, but all farm activity — from hiring to harvest — occurs within your organization's hierarchies and budget. On-site farms bring food production close to your organization, opening opportunities for your organization's employees and patients to engage with their food system and the food production process. On-site farms can serve as a hub for education and community engagement.

While size and scope may vary, each of these models requires dedicated employees, fundamental equipment, and infrastructure. Thought should also be given to what departments these programs report to and seek resources from. These steps are outlined below:

• **Secure Environmental Resources and the Appropriate Permissions** — Prospects of producing any food are slim without the appropriate environmental resources; namely, legal access to water and space to grow food in. It is always a good idea to work with local officials such as urban planners to ensure that your program complies with local code and obtains the correct permits and that you are clear about what infrastructure can or cannot be built as your program scales.

• **Hire a Farm or Garden Manager** — Make hiring a farm or garden manager an absolute priority. The process of starting a farm or garden differs for each unique landscape and context. A farm or garden manager will have the experience and expertise necessary to guide that process and ensure that the program invests in the staff, equipment, and infrastructure necessary to start and expand your food production program. Steps may include soil remediation, soil preparation, and other necessary groundwork. The farm or garden manager you hire should have experience growing food in accordance with the sustainability standards your organization values. Depending on how you intend to incorporate the food into your organization, this individual may need to be familiar with GAP certifications and other required standards. A sample farm manager job description can be found in Appendix C.

• **Prepare to Invest in Infrastructure** — Any food production site should consider the following as part of their expected infrastructure investment. Not all of these investments should or need to occur at once. To begin, your organization should focus on water infrastructure and greenhouses, which help to lengthen the growing season (this is particularly helpful in cooler climates). Later on, your organization should be prepared to invest in additional infrastructure to make foodservice integration easier. This infrastructure includes wash stations, a spacious packhouse, and storage space.

• **Understand Equipment Needs** — Farming equipment makes planting, weeding, and harvesting processes exponentially more efficient. Your farm or garden manager will provide you with a list of the necessary equipment and can describe each piece of equipment's utility. The type and quantity of equipment needed will depend on the size and scope of your institution's production program. A list of common farm equipment is provided in Appendix F.

Prepping Your Kitchen

Integrating local food through your foodservice operations can be an effective way of bringing local food to a large number of people. To do so, your foodservice teams must be resourced adequately and ready to work through necessary changes. The section below highlights some common learning curves and resources that make the process of integrating local food easier for your foodservice teams, now and in the future. Review this section and work with your foodservice team to understand how they are best supported in this initiative.

Address Knowledge Gaps

One of the biggest changes for anyone beginning to work with local foods is adjusting to produce seasonality. Standard supply chains — from institutional cafeterias to local grocery stores — import food from across the world to ensure that a wide variety of foods is available year round. Local food supply chains can offer only the products available for that particular season. Understanding that certain products may be limited to specific times of the year is a large change, specifically for the individuals planning menus. Educating your teams about what products are and are not available in your region before integration helps them prepare and adjust expectations. Seasonality resources are provided in Appendix B.

Consider Infrastructure and Labor Needs

Another related adjustment is how to prepare local, fresh foods. Often healthcare institutions rely on products and meals that are at least partially prepared or processed.[47] Local fresh foods, rather, are typically delivered washed but whole, meaning they must be further processed or prepared to be used in retail cafeterias and patient meals. Healthcare institutions can overcome this additional challenge by leveraging commercial kitchen space or similar teams to handle the additional processing for their in-house teams. Alternatively, they can provide additional training or labor for their existing teams to train them on processing and preparing fresh foods. This training should include proper storage of fresh foods, and integrating local foods may mean that your organization needs to invest in additional storage space for those products. Other advantageous infrastructure worth investing in may include cold storage or an expanded courier system to move fresh products quickly from farm to kitchen. What training, additional infrastructure, labor, or partners are needed is best discussed in partnership with your existing foodservice and kitchen teams.

Assess Menu-Planning Protocols

The individual or individuals responsible for menu planning are crucial to the success of your program. As you work with this person or department, ensure you are aligned on seasonal availability in your area and prioritize optionality in your menu-planning process so items can be substituted if unexpected changes occur in product harvest and product

availability. Confirm the lead time necessary for menu planning and try to align future menus with seasonality. Some organizations have had success featuring select local crops on the menu, creating more opportunities to utilize and purchase that produce while it is in season.[48]

Determine Feedback and Communication Channels

Simple and straightforward communication channels will minimize the burden of integration on your foodservice teams. Your foodservice and kitchen teams are likely some of your busiest teams. Ensuring that communication about product availability and deliveries is easy and accessible will save your foodservice teams a great deal of time and effort. As you determine the best communication channels, consider how you want to collect feedback from foodservice teams to improve local food partnerships going forward. While farmers cannot quickly change their planting or harvest plans, they can incorporate existing feedback into future planting and harvest plans. Strong communication with your foodservice teams is the foundation of a successful program and crucial to garnering your foodservice teams' overall enthusiasm.

Educating Consumers

However your organization has decided to integrate local food, you'll find that how you talk about the initiative transforms its reception among your patients, employees, and community.

Take Steps to Educate

Encouraging healthy habits is not simply a matter of demonstrating them; your organization must take steps to educate your community about how to incorporate these behaviors into their own lives and why they should do so. Accessing local food, taking additional time to cook with fresh ingredients, and learning to prepare nutritionally conscious meals takes a great deal of effort, time, and commitment. Highlighting your organization's own motivation to incorporate local, fresh foods will be compelling to your audience. As your organization rolls out its local food initiative, make sure the motivation for doing so — the benefits to your employees, patients, and community — is clear. Topics may include: [49]

- The importance of increasing fruit and vegetable consumption
- The connection between agricultural practices and nutritional quality
- Tips to increase fruit and vegetable consumption
- The environmental benefits of local, responsible agriculture
- The community benefits of local and regional food systems
- What was *not* used to produce your locally sourced foods
- What *was* used to produce your locally sourced foods

Your organization should also educate consumers about their expectations of local food. Just as your kitchen teams may need additional training about produce seasonality and how to wash, store, and prepare local food (relative to conventional produce and processed foods), consumers may need similar support. Topics may be as broad as describing your region's seasonally available produce or as specific as describing an heirloom tomato and how to distinguish between unique heirloom coloring and actual evidence of bruising or blemishes. Other topics include:

- Introducing the local farmers your organization has partnered with
- Seasonal food descriptions, including nutritional profile, signs of ripeness, and recipe ideas
- How to select, wash, and store a specific item
- When and where your community can access this food outside of your organization

Appendix D has an example of produce flyers featuring seasonality details, nutritional information, and recipes.

Highlight Local Food at Point of Sale

To take advantage of local food options, the people in your healthcare institution need to be able to distinguish local from conventional options! Spread the word throughout your healthcare institution, but most importantly at the point of sale. As consumers browse your food offerings, local options should be clearly marked as such. Even products that are not directly integrated into your cafeterias and patient meals need to be clearly marked as locally sourced and produced in accordance with your organization's sustainability standards or specific eco-certifications.

Showcase Your Work

The effort, collaboration, and investment your organization has given to your local food initiative is absolutely worth sharing with other healthcare institutions. Communication materials created for your patients, employees, and communities — especially materials that pertain to your organization's motivations for launching a local food initiative — can serve as a template for these other institutions. Communication with similar institutions presents an opportunity to share how your organization integrated local food alongside the reasons why local foods are a priority for your organization. Additionally, conversations with other healthcare institutions are ripe for discussing tensions shared between food and healthcare systems, whether it be reducing readmissions through nutrition prescriptions, social determinants of health, and unlocking access to preventive and lifestyle care. Share your local food program, its impact, and the systemic issues it reveals with other organizations.

Engaging Your Community

Beyond the metrics your organization has agreed to track, understanding the success of your local food initiatives is best demonstrated by the outcomes and engagement of your community. This engagement is more often visible in people's enthusiasm for fresh options, the relationships built through the program, and newfound connections to food and place. While these outcomes may not be easily captured and measured, they are ultimately the greatest, most sincere indicators that your program has connected with your local community and has fostered nourishment, healing, and community bonds.

The following categories can serve equally as principles of engagement or core values by which you guide your program. While these categories are nontechnical and sometimes nonmeasurable, keeping them in the forefront of your mind will keep your program attuned to the needs of your community.

Listening

The best-received programs are those that listen closely and carefully to their community's needs and attempt to respond to them. Listening to your community's needs sincerely may mean momentarily putting aside the goals and desires of your organization to ensure that your understanding of the issue is uninfluenced by your expectations and preconceptions. By understanding your community's needs in this way, you better position your organization to meet its goals. Listening is also an act of resourcefulness. It is the process by which you understand both what your community needs and what it is already capable of providing.[1]

Listening may be what defines your local food intervention's emphasis on physical access versus educational and informational access. It may determine if your community will respond better to a farmers' market or a CSA program. It may be what calls attention to the untapped land, resources, or skills already present in your organization. As you plan your local food program, talk to community members, patients, employees, and foodservice teams. Ask what they need and what prevents them from integrating local, nutritious foods into their lives. Listening to these answers will guide your local food program to be as targeted, efficient, and effective as possible.

Accessibility

To effectively reach your community, your organization must consider the accessibility of the program — including physical, cultural, social, and resource accessibility. Does the demographic you hope to reach have a simple and reliable means of physically accessing

the program? Is the space in which you're hosting your program socially and culturally comfortable for your target audience?[2] Are they already familiar with the space? In what language is your target audience most proficient? Does your target audience need the internet to stay informed about your program, and do they have reliable internet access? Does your target audience have the time required to take full advantage of your program?

Hospitals and healthcare facilities likely have an advantage in accessibility relative to other institutions. Often, healthcare centers are centrally located and are already frequented by your target audience. Nevertheless, assess your program's accessibility and barriers to accessibility for your target audience as you implement changes.

Affordability

Affordability is a tremendous barrier for many people when it comes to healthy eating. Affordability relates to the financial accessibility of your program for your target audience but also considers the financial sustainability of your program for your community. To assess affordability of your program, understand what financial resources your target audience already has access to. If your program relies on financial support from third parties, assess how long you can rely on that support. If the support is temporary, consider means of decreasing reliance on outside support or philanthropy so the program can continue should partners change.[3]

Agency

"Agency" refers to the power individuals participating in your program have to protect their preferences, make decisions for themselves, and control the means of their participation. In local food interventions, agency often becomes a stumbling block in prescription programs.[4] Programs that give participants little to no choice in what produce they receive and consume may inadvertently deter participation, dampen enthusiasm, or engender food waste.[5] Central to any intervention should be concern for how the program protects and preserves community members' agency.

Paying for Local and Sustainable Foods

Funding your organization's sustainable food initiative is key to increasing its longevity and impact. Some organizations have seen cost savings and increased revenue with new purchasing behavior. However, many more organizations support their local food initiatives simply by prioritizing the initiative in their budgets, recognizing that their investment is an investment in the health of their community, employees, and patients and that the costs of supporting the industrial food system outweigh that of their local food program. To support your organization's efforts to incorporate local food, the following section outlines ways to fund and budget for your initiative.

Offset the Costs of Local Foods

If your organization is ready to prioritize local, nutritious food through purchasing and investment, it should also consider prioritizing these values through the foods it does *not* purchase. Reducing the budget allocated to purchasing unhealthy foods can help your organization offset the premium costs of sustainable, local foods while demonstrating a uniform commitment to its food values. Reallocate food costs by minimizing or even eliminating spending on sodas, frying oils, and sugary foods.[1] Reducing meat purchasing is another avenue by which your organization can offset food costs while promoting diets prioritizing fruits and vegetables.[2]

Commit to Purchasing Specific Volumes

Committing to specific volumes of local, sustainable food helps your organization contain costs.[3] Your supply chain and farmer partners may offer discounts for purchasing certain volumes of products and may also reduce administrative costs of more frequent, smaller orders. Bulk orders should be directly informed by consumption trends or your organization in an effort to reduce food waste.

Discover Local Savings

Not all sustainable food is more expensive than its conventional counterparts.[4] Local options during peak season may be priced comparably to, if not cheaper than, nonlocal options.[5] This is particularly true when comparing local organic and nonlocal organic options. Local farms and distributors may also offer discounts on in-season produce of which they have a surplus.[6] Direct purchases from a local farmer are often less expensive than relying on additional supply chain actors.[7] By paying close attention to in-season, local offerings, your organization could enjoy the nutrition, taste, and quality advantages of local produce without breaking the bank.

Customers Are Likely to Pay Premiums for Local Products

Strong evidence suggests that consumers across retail settings and socioeconomic backgrounds are willing to pay more for local, sustainable food options.[8] The USDA's Sustainable Agriculture Research and Education (SARE) program found that more than

69 percent of respondents to the Health Care Collaborator Food Service Survey were willing to pay at least 10 percent more for a $5 lunch made with sustainable ingredients, while 14 percent were willing to pay at least 25 percent more for the same lunch.[9] Note: Customers' willingness to pay hinges on clear labeling of local and sustainable products at point of sale. Look to other high-volume institutions in your region and online resources like USDA's vegetable pricing terminal to help your organization set prices.[10]

Phase the Integration

Local, sustainable food integration is not an all-or-nothing proposition. No matter how prepared your organization is to incorporate local, sustainable foods, start small. Beginning slowly, with measured incremental steps, will not only prepare your team to scale while allowing you to refine your approach; it will also lessen the burden of initial investment and give time to prove the program's feasibility. Overburdening your organization's teams and resources will threaten the program's long-term feasibility and viability. Rather, scale your initiative only as much as your organization can bear.[11] Below are recommendations for phasing local food integration into your healthcare institution's foodservice offerings. While these may not be the right first steps for your unique organization, we implore you to consider starting with actions of similar scope.

Start with the Salad Bar

Incorporating local food requires an investment of time and resources throughout your supply chains. Your kitchen and foodservice teams are no exception. Start incorporating local foods by first focusing on foods that require no additional preparation from your foodservice teams — such as those found in your salad bar.[12] Salad bars and self-serve options minimize disturbance to current foodservice operations. They also present an opportunity to directly compare diners' interest in conventional versus sustainable, local items. By marking local options as such in a salad bar, your organization can compare sales and volume consumed of local products directly against sales and consumed volume of their conventional counterparts. In this way, your organization can gauge interest and test marketing or labeling strategies while beginning the process of incorporating local food.

Look for Optionality

Assess your foodservice offerings to see if there are any menu items that can be tweaked to offer greater optionality. For instance, "apple slices" are a common fresh fruit offering.[13] By limiting a fresh fruit

option to “apple” and specifying the preparation as “sliced,” however, your organization can neither switch out apples for other in-season fruit offerings nor adjust preparation methods to reduce demands on kitchen staff. Where possible, adjust menu items and descriptions to make room for seasonal, whole foods.

Prioritize Familiar Foods

Your organization will likely encounter learning curves as distinct as understanding produce seasonality in your area and retraining teams on the best delivery process for local partners. As you begin to incorporate local foods, avoid introducing another learning curve: dealing with unfamiliar food.[14] Your kitchen staff may already need training on how to prepare and store raw, local foods. By focusing your first purchases on products your foodservice team already knows how to prepare (e.g., corn, apples, leafy greens), you protect your foodservice team from additional initial change. While you do not need to focus on familiar foods for the entirety of your program, keeping products familiar in the beginning respects the bandwidth and acknowledges the additional work of your foodservice teams.

Work Step by Step

Another way of pacing integration is by creating a limited-time menu item or meal featuring local foods. This menu item could be rotated per season, per month, or per week depending on the capacity of your organization and its teams.[15] This option allows you to integrate local foods into one aspect of your foodservice offerings, while offering a second advantage of being able to build with demand. As interest from your community in local food grows, your organization can increase the frequency and/or number of the local offerings.

Look Outside of Your Organization for Funding

There is great political, philanthropic, and private sector interest in building regional, sustainable food systems. If your organization is positioned to do so, consider looking to local, federal, and state agencies as well as nonprofit and philanthropic organizations for funding support. Appendix E provides a list of specific grants and funding resources that can help your organization launch its local food initiative.

Case Studies

A Pioneer in Farm-to-Hospital Models: The Farm at Trinity Health

Ann Arbor and Pontiac, Michigan • Established 2009

Key Points

- The Farm at Trinity Health is one of the nation's first on-site, farm-to-hospital models.
- Leadership understood the farm was greater than the hospital and strove to build a resilient, regional food system.
- The farm emphasizes education that encourages healthy habits by creating excitement over fresh foods, gardening, and cooking.
- The collaborative CSA program supports local farmers and greatly increases produce access for consumers.
- Comprehensive support and adequate staffing have proven key to Trinity Health's success.

The Farm at Trinity Health, originally the farm at St. Joe's, began when the organization took a look at itself and realized that while it was a *health* organization, it was not a *healthful* one.[1] The farm was established in response to this reflection and became one of the first on-site farm-to-hospital models of its kind. It has since become a hub of education, a crucial support system for farmers, and an overall central component of how Trinity Health cares for its community.[2]

A Vehicle for Change

Trinity Health's story begins with a group of grassroots organizers within the hospital who proposed that the hospital prioritize fresh, healthy food by investing in foodservice teams with scratch-cooking expertise and replacing fryers with equipment that would enhance fresh produce.[3] Included in this proposal was a plan to take 20 acres of land on its Ann Arbor campus that would otherwise have been lawn and transform it into a farm. By 2010, the farm was a reality.

The farm has hoophouses, fruit and vegetable growing, and a community garden for staff. While it was started with the intention of supplementing the Ann Arbor campus's cafeteria, it quickly became clear that the greatest value the farm could provide was in investing in nutrition security for all and supporting a sustainable regional food system. The farm's mission today is to grow a healthy community by empowering people through food, education, and relationships.

Trinity Health leadership and staff understand that the farm and its programs play a role in actively shaping the local food system. In addition to the thousands of pounds of produce donated to Trinity Health's food pantry and Produce to Patients program, the farm hosts a CSA, called the Farm Share program.[4] The Farm Share program simultaneously supports local farmers and ensures fresh produce access for all. For 36 weeks each year, the farm aggregates fresh food from more than 20 local farms and distributes that food to hundreds of registered Farm Share members with a plethora of affordable payment options.[5] Trinity Health's medical residents can use their meal stipend funds to purchase shares, and employees can pay for shares through a payroll deduction. Shares are also offered on a sliding scale basis and can be purchased using

SNAP/EBT funds, for food-insecure and low-income families. Providers can even refer patients to the program. The farm has a community health worker on staff who assists patients and community members experiencing food insecurity and other challenges that can impact health and well-being, such as lack of transportation, housing assistance, and help making appointments. Supplying farmers who partner with Trinity Health find support through the revenue generated by the Farm Share program and through the classes Trinity Health hosts to help local farmers grow their businesses.[6] The farm share has become an economic engine for local producers, with more than $200,000 in revenue being generated for the farmers each year.

Beyond food served, Trinity Health recognized that the community needed a place to learn about nutrition, food, growing food, and what "good food" is in the first place. Trinity Health met that need through the farm and its countless educational initiatives. In addition to the time dietetic interns and lifestyle medicine residents are required to spend participating with farm programs, the Farm at Trinity Health hosts tasting demonstrations and sampling events to show that healthy food is delicious food worth getting excited about. This theme, encouraging excitement around eating fresh produce, runs strong through all of the farm's educational programs.[7] Rather than delve into nutritional details, the farm hosts cooking and kitchen gardening classes so people young and old create positive, emotional connection to healthy foods. The Farm at Trinity Health's unique model has positioned it to reach a wide audience and secure diverse funding.[8]

Following the Ann Arbor campus's success, Trinity Health established a second farm on its Oakland campus including 1.3 acres of productive land featuring a cut flower garden and herb garden.[9] Both farms are emblems of preventive care and community nourishment.

Credit Due to the People Behind the Farm

The unique support the Farm at Trinity Health received from the start is crucial to its subsequent success. From its origin, the farm had the support not just of leadership but of a strong group of employees and staff. The support of executive leadership ensured that resources would be committed to founding the farm, but the grassroots support for the farm meant that those responsible for executing and implementing the vision were equally enthusiastic. Further, this grassroots group was large enough to bring others into the fold. While there were those who doubted the initiative's success and the value proposition, support was always widespread enough to overcome initial uncertainty.

As the farm grew to fill the roles of educational center and even food hub, having an adequate team to support its operations has been another key to its success. Charging a single individual with farm operations or programming and the responsibility of telling the program's story is a recipe for burnout. The Farm at Trinity Health currently has staff dedicated to its many programs and to telling the story of the farm to ensure that the farm is supported well into the future.

An On-Site Production-Focused Farm: St. Luke's–Rodale Institute Organic Farm

St. Luke's University Health Network, Anderson Campus, Easton, Pennsylvania
• Farm established 2014

Key Points

- St. Luke's–Rodale Institute Organic Farm focuses on production, rather than education, to bring fresh, certified organic produce to the St. Luke's University Health Network.
- To accommodate farm-fresh produce in the network's kitchens, St. Luke's foodservice teams emphasize flexible menus and cooking from scratch.
- St. Luke's chefs and farmers have regular meetings to communicate feedback for future seasons.
- Support from executive leadership, without expectations of profit generation, is key to the farm's success.

The St. Luke's University Health Network (SLUHN) is a nonprofit network with 12 hospitals and 15,000 employees throughout the system.[10] St. Luke's Anderson campus was constructed in 2011 and sits on more than 500 acres in the Lehigh Valley.[11] While the hospital was establishing itself, employees approached Ed Nawrocki, president of St. Luke's University Health Network East and Anderson campus, with a suggestion to use the Anderson campus's many acres for a farm. When the SLUHN CEO shared an article about an educational farm at St. Joseph's in Michigan, Nawrocki interpreted that email as permission to create an organic farm on the network's own campus.[12] He immediately called Rodale Institute and commissioned it to build an organic farm in 2013.

Now approaching its 10th growing season, the farm has tripled in size, broadened its produce offerings, and expanded to include an orchard, among other fruit plants.[13] The St. Luke's–Rodale Institute Organic Farm has provided thousands of pounds of produce to patients, employees, and visitors alike; has caught the attention of hundreds of aspiring Lifestyle Medicine residents; and sets St. Luke's apart from other health networks.

The Path from Farm to Hospital Fork at St. Luke's

Since 2021, Rodale Institute Farmer Training (RIFT) graduate Aslynn Parzanese has been managing the farm with the help of full-time farm staff and seasonal interns.[14] Located on 14 acres of land at the Anderson campus, St. Luke's–Rodale Institute Organic Farm is a production farm, growing 70 varieties of 30 different types of certified organic produce which support the St. Luke's network cafeterias and CSA Employee Wellness program.[15]

All produce is washed and packed on the farm before it is delivered to one of the 12 SLUHN hospitals. When the farm began, the farm's manager delivered produce directly to SLUHN Anderson campus cafeterias herself. Having grown in both size and scale, SLUHN now leverages its existing courier network, bringing fresh produce along with other crucial supplies to hospitals throughout the network. Larger campuses receive

two deliveries per week, while smaller campuses receive one. One of the foodservice directors, Ryan Zellner, manages the distribution allotments.

Once farm products arrive in the kitchen, foodservice teams prepare the ingredients and integrate them into the day's menus and meals. SLUHN's kitchens are run by Metz Culinary Management, whose emphasis on scratch cooking makes them an ideal partner for fresh produce integration.[16] To accommodate the irregularities of farm harvest and supply, foodservice teams plan entrées in advance but wait to finalize side and other menu offerings until they know what will be available from the farm that week. When produce deliveries are unexpectedly large, these teams think creatively and resourcefully, turning an overabundance of tomatoes, for instance, into marinara sauce ready for another day. Product deliveries available from the farm are balanced against deliveries from SLUHN's standard supply chain partners.

The farm-fresh ingredients are a source of pride and joy for kitchen teams, eliciting compliment after compliment from eaters about the quality of St. Luke's food, but the adjustment to fresh produce was not a painless one. Cooking meals from scratch took more time, and kitchen teams found that not all produce was compatible with their existing equipment and processes. However, with permission from leaders to increase meal preparation expectations and SLUHN investments in labor, storage, and other infrastructure, foodservice teams adjusted.[17]

Central to the program's success are regular "seed meetings" between campus nutrition services directors and the St. Luke's farm team.[18] Held monthly during the harvest season and weekly during the off season, the meetings allow chefs to share their feedback about what worked, what didn't, and what products they want more of in the harvest season to come.[19]

Menu options with farm ingredients are advertised as such using a decal on digital signage and salad bar labels. When foodservice employees take patient orders at bedside, they note which options have ingredients sourced from the farm. The quality of the food at St. Luke's is a source of pride for the network as a whole.

Driven by Wellness

Center to SLUHN's culture is wellness — that of patients and that of employees. When the Anderson campus was established, staff envisioned it as a destination for the community as well as a place of healing. Establishing a farm was well aligned with this vision and was a vehicle by which SLUHN could invest in the health of the community. Believing that organic is safer and healthier for patients, employees, and the Easton community; striving to increase access to quality organic produce; and hoping to model change in how people think about healthy eating, St. Luke's was drawn to the idea of an on-site organic farm as an extension of its culture and vision for the Anderson campus.[20]

Indicators of Success

From its inception, Nawrocki believed in the farm and offered high-level support for the idea and its execution. Recognizing that the value of the farm was impossible to capture on a balance sheet, he supported the farm with no requirement for a business plan or expectation of profit generation.

Annually, SLUHN tracks quantitative metrics such as which hospitals received produce, how much each received, the total pounds of produce grown on the farm, and related financial metrics. But more compelling to St. Luke's are the immeasurable indicators of the farm's success. The value the farm creates is obvious in the caliber of and quantity of applications to its Family Practice and Internal Medicine residency and Lifestyle Medicine Fellowship.[21] The wellness the farm brings to employees and patients is clear in the compliments SLUHN food receives and community members' interest in volunteering. The healing the farm brings is also apparent — recently, cancer patients at St. Lukes were given the opportunity to work at the farm on Fridays.[22] It is a "source of inspiration," says Nawrocki, as St. Luke's University Health Network continues to imagine and reimagine the role of local, nutritious food in healthcare institutions.[23]

Integrating Healthy, Local, Sustainable Food at Scale: UC Davis Health

Sacramento, California • Farm established 2018

Key Points

- Despite its scale, 70 percent of the food served through UC Davis Health comes from local farms.
- Financial and technical support from government and nonprofit partners expedited UC Davis Health's local food integration.
- UC Davis Health emphasized clear and transparent communication with farmers while building its local procurement model.

In 2018, UC Davis Health hired Santana Diaz as executive chef. With Chef Diaz came a vision and commitment to transform hospital food, reconnect UC Davis Health with Sacramento Valley's flourishing farms, and encourage health and healing along the way.[24] UC Davis Health and Chef Diaz are now well on their way to achieving their goal of sourcing most of the entire food program from within 250 miles of the hospital campus and pioneering a local food procurement model for healthcare institutions.[25]

Transforming Sacramento's Second-Largest Production Kitchen

UC Davis Health's production kitchen is the second largest in Sacramento, serving more than 6,500 meals a day across its three Sacramento campuses — about 2.4 million meals annually.[26] By 2021, more than 70 percent of UC Davis Health's

food came from local, sustainable farms[27] While the transition has not been simple, the promise of reducing food miles and fuel consumption; fostering local economic benefits by keeping local dollars local; and modeling healthy eating through fresh, nutritious, and delicious food for patients, employees, and guests was motivation enough.

UC Davis Health's local food integration work was exponentially progressed with a grant from the California Department of Food and Agriculture (CDFA) to expand opportunities for small and midscale specialty crop (e.g. fruits, vegetables, nuts) growers to partner with UC Davis Health.[28] The grant also aimed to pilot a communication process for sharing UC Davis Health crop purchasing projections with regional producers and providing technical assistance for growers and food hubs to sell to institutional buyers. Coupling financial support from the CDFA with the partnership of UC Davis Health Food and Nutrition Services, UC Sustainable Agriculture Research and Education Program (UC SAREP), Center for Good Food Purchasing, Community Alliance with Family Farmers, and Healthcare Without Harm, UC Davis Health was able to increase its sourcing of all fresh specialty crops grown in California — specifically those grown within 250 miles of Sacramento — 377 percent between 2019 and 2022.[29]

Keys to Transformation: High-Level Support and Transparency

Upon joining UC Davis Health, Santana Diaz and the network's executive leadership dedicated themselves to transforming hospital procurement systems. "We decided if we really wanted to make a difference, we'd need to look at the existing program, create and support a new plan, and then build a new food procurement model," says Chef Diaz.[30] In undertaking this work, UC Davis Health understood that its task was to create a new hospital food procurement model and that success hinged on the unified support of executive leadership, Chef Diaz, and their teams.

UC Davis Health also prioritized its relationship with local farmers by trying to create a more transparent purchasing program. UC Davis Health forecast its produce volume needs and communicated those needs early enough to farmer partners so farmers could plan and play ahead.[31] The program also accelerated procurement of 12 specialty crops. Over the course of the CDFA grant, California sourcing of these crops increased 70 percent.

Farming in Untapped Urban Spaces: Boston Medical Center's Rooftop Farm

Boston, Massachusetts • Farm established 2017

Key Points

- Boston Medical Center transformed unused rooftop space into a bustling farm providing food and education to patients, employees, and the Boston community.
- Produce and flowers are grown in 2,300 milk crates.
- Production scale, dedicated staff support, and strategic design are crucial components of rooftop farms.
- Beyond food, the farm supports BMC's sustainability goals and has garnered national attention, including that of the White House.

At Boston Medical Center (BMC), David Maffeo, senior director of support services, and Robert Biggio, senior vice president of facilities and support services, envisioned building food resilient infrastructure within their community.[32] In 2017, BMC transformed its power plant building's rooftop with a farm buzzing with the sounds of happy pollinators and bursting with fresh produce for the community. Today it grows approximately 5,000 pounds of fresh produce, valued at $18,000.[33] The farm supplies fresh produce to BMC's Preventive Food Pantry, Demonstration Kitchen, and cafeterias.[34] The farm serves as an example for all that food can be grown in the heart of a city as bustling as Boston, Massachusetts.

From Unused Rooftop to Flourishing Farm

Atop BMC's power plant, 2,300 milk crates house 30 different crop varieties, including tomatoes, radishes, and lettuces, across 7,000 square feet of space. In addition to its many crops, the farm has flowers blooming all season long and houses beehives painted by BMC's pediatric patients.[35]

Over 72 percent of the hospital's patients are considered underserved, and likely have limited if any access to healthy, organic, local food.[36] The majority of produce grown here also is distributed through BMC's Preventive Food Pantry, Demonstration Kitchen, and Farmers Market.[37] The Preventive Food Pantry is a free food resource serving BMC patients who have been specifically referred by their primary care providers. Many of the pantry's patrons have cancer, HIV/AIDS, diabetes, obesity, heart disease, and other chronic conditions.[38] In 2019, more than half of the food grown was given to the pantry.[39] Produce given to BMC's Demonstration Kitchen is used in cooking classes for patients and staff, covering topics ranging from Cooking 101 to Cooking for Cancer Survivors.[40] The farmers' market, occurring weekly through the harvest season, is located in BMC's main Shapiro building lobby. The market sells the farm's produce at a subsidized price.[41]

In addition to supplying produce, the rooftop farm supports BMC's sustainability goals. The farm utilizes a smart drip irrigation system that saves water by shutting off when rain is forecast and delivering water directly to crops' root systems.[42] Additionally, the farm reduces stormwater runoff, using rainwater for crops rather than simply letting it wash away; increases greenspace in the city; and reduces energy use by cooling the rooftop and minimizing the distance food travels and the time it needs to be stored.[43] As BMC touts, food from the farm travels 1,000 to 3,000 *feet* to its distribution points, rather than the 1,500 to 2,500 *miles* the average vegetable travels.[44] Accordingly, the produce delivers maximum freshness and nutritional value to the people who eat it.

Accolades and Advice

Despite BMC's success, BMC farmer Annabel Rabiyah notes that urban agriculture is not without its challenges. To those looking to follow in BMC's footsteps, Rabiyah emphasizes three things: scale, staff support, and design.[45] Urban farms, particularly rooftop farms, are limited by their space, and production expectations should be set accordingly. While 5,000 pounds of produce annually is significant, it's not nearly enough to feed the whole of BMC's demand. These operations must also be supported by full-time staff, as processes are too intricate and intensive to rely on volunteer support alone. Finally, rooftop farms require strategic design considerations. Not only must the selected roof be able to bear the weight of the farm and its inputs, but it must be easily accessible to the public.

Nevertheless, the farm draws quite the crowd — more than 1,000 people come to visit each year.[46] In 2022, those visitors included members of the White House's food insecurity team.[47] The team honored BMC's rooftop farm as an exemplary model of ways healthcare institutions can address food insecurity in their communities.

Supporting Senior Longevity: Cornwall Manor's Trailside Organic Farm

Cornwall Manor Woods Campus, Cornwall, Pennsylvania • Farm established 2021

Key Points

- Cornwall Manor's Trailside Organic Farm expands what it means to provide comprehensive care for retirement communities.
- Responding to research on improving wellness and longevity, the farm combines community with healthy eating.
- The farm offers fresh produce, flowers, and volunteer opportunities to its residents.

Cornwall Manor is a 190-acre, nonprofit senior community that is home to scores of retirement residents.[48] In March 2021, it also became home to the Trailside Organic Farm, a 1-acre operation run in partnership with Rodale Institute.[49] In doing so, Cornwall Manor became the first care community to integrate a local farm, serving as a model to other retirement communities and expanding what it means to provide comprehensive care and community to retirement residents.[50] The farm brings the community together, engaging people in activities and food that encourage longevity and wellness.

Driven by Data and Quality Living

Cornwall Manor firmly believes that each resident is "entitled to enjoy and maintain the highest level of health, dignity, independence, and activity."[51] Statistics suggest that retirement community residents live, on average, two years longer than those who live alone, owing to an environment rooted in health, well-being, and community. Other studies have also shown that organic foods, combined with healthy eating habits, work to prevent disease and improve overall health.[52] The Trailside Organic Farm is an extension of this belief and a manifestation of evidence-informed programming. It is an effort to improve the wellness and longevity of its community. The farm provides the combined benefits of organic food and farming, layering those benefits onto the community and resources that distinguish Cornwall Manor.[53]

Expansions and Updates

Since its inception, the farm has doubled in size, and in January of 2021 it broke ground on a new 3,840-square-foot barn. The barn will be used as a packhouse and provide walk-in cooler space, crop storage, an office workspace, restrooms, and storage for equipment and restrooms.[54] This is another exciting marker of the farm's growth, following 2022's addition of a caterpillar tunnel to expand the growing season and the implementation of a volunteer program for Cornwall Manor's residents.[55] These expansions are of no surprise given the Trailside Organic Farm's productivity and popularity. According to an annual farm update capturing the 2022 season, the farm grew approximately 3,035 pounds of produce, harvested 8,193 total flower stems, held 22 farmers' markets, hosted resident volunteers for 118.5 hours, and offered 10 resident workshops and farm tours.[56]

A Network of Gardens and Community Support: Springfield Community Gardens

Springfield, Missouri • Established 2020

Springfield Community Gardens (SCG) is a nonprofit organization that offers community kitchen gardens, a farm incubator, a test kitchen, and more to meet the comprehensive needs of residents in Springfield, Missouri. While SCG operates independently, its partnership with CoxHealth exemplifies the potential of community-informed healthcare partnerships.

Key Points

- Springfield Community Gardens (SCG) is a network of community gardens, farm incubators, and more supported by CoxHealth.
- Partnerships are key to SCG's expansion and multifaceted offerings.
- Listening sincerely and responding wholeheartedly to Springfield's community needs motivates SCG's successful projects and strategy.

Growing Food and Community

Seeking to create a community where all have healthy, local food access, SCG's work focuses on increasing economic opportunities, food security, and environmental flourishing in tandem. Within its Springfield ecosystem, SCG has 16 community gardens, three urban farms, a community food forest, a farm incubator, and a test kitchen.[57] To have any one of these programs is a commendable achievement and asset to any community. Springfield Community Gardens is an excellent example of what is possible through grassroots organizing, professional execution, and an unflinching dedication to community-informed needs.

In partnership with local healthcare network CoxHealth, SCG established an urban farm and farm incubator location and a test kitchen. The 5-acre farm, Amanda Belle's Farm, grows organic produce with additional regenerative practices 22 weeks of each year.[58] The farm-fresh produce feeds patients with special dietary needs, is used in CoxHealth cafeterias, and is sold to employees through a CSA program.[59] The farm also serves as one of SCG's farm incubator sites, which removes barriers for new farmers by providing temporary, exclusive, and affordable access to small plots of land, infrastructure, and training. A majority (55 percent) of the labor is provided by volunteers, while an internal team oversees distribution.[60]

CoxHealth also leases affordable industrial kitchen space to SCG to serve as a test kitchen. The kitchen offers Springfield community members a place to develop their value-added products and businesses. Beginning farmers can use this space to develop products such as jams, syrups, and quiche to diversify income streams; students can partake in food safety training; and entrepreneurs can utilize the space to develop

businesses like food trucks and restaurants. The kitchen is leased to SCG at a price of $400 per month, and community members can take advantage of this asset at little to no cost.[61]

Keys to Success

Essential to the organization's success is the staff's constant attention to the community's needs.[62] Maile Auterson, SCG's founding executive director, will refer again and again to their practice of "listening" — listening to the community's needs, listening to the resources organizations are able to offer, listening to groups' limitations. The organization's success hinges on maintaining its unwavering commitment to the growth of others, and considering its own needs only through that context. What expertise the organization has employed, added to its board, and sought in grants and other funding is motivated not by heightening the excellence of the organization itself but by heightening and celebrating the excellence of the Springfield community.

Second to this external commitment is a constant practice of utilizing what resources and expertise already exist in the community. This practice led to SCG's relationship with CoxHealth, which allowed one of SCG's first farms to be established on valuable land across from its hospital, created a synergistic relationship between Cox College students and leadership and SCG, and provided an opportunity to establish SCG's test kitchen.[63]

SCG's success is a symptom of understanding its community — its strengths, needs, and potential — thoroughly and compassionately. CoxHealth's partnership models the potential for grassroots partnership, creatively leveraging resources, and the immense impact of food-growing initiatives amid urban landscapes.

Springfield Community Gardens, Our Local Community Gardens, Digital, accessed November 1, 2023, https://www.springfieldcommunitygardens.org/gardens.

A CSA Model to Care for Hospital Employees: St. Luke's University Health Network Employee Wellness CSA

St. Luke's University Health Network, Anderson Campus, Easton, Pennsylvania • Established 2015

Wellness, specifically that of its employees, has always been important to the St. Luke's University Health Network (SLUHN). While the network's on-site, 15-acre organic farm is one manifestation of its emphasis on lifestyle and wellness, it is not the only example. In 2015, SLUHN established a community-supported agriculture (CSA) program that brings local produce from the surrounding area to its employees.

Key Points

- Executive buy-in to properly resource the CSA program is fundamental to its success.
- The CSA program and shares themselves are used to educate consumers about healthy eating, seasonality, and their local food options.
- Participating farmers are each responsible for supplying shares for one or two drop sites. However, prices and similar details are kept as uniform as possible across sites.
- Communication with farmers is kept simple and straightforward.
- Farmer partners are selected based on their proximity to share sites, eagerness to participate, and reliability.

Operating a CSA

The Employee Wellness CSA grew out of a response to SLUHN's annual employee health assessment. In 2014, the assessment found that few employees were eating at least five servings of fruits and vegetables each day, as recommended.[64] To address this nutritional deficiency among its own staff, Bonnie S. Coyle, M.D., began a CSA for SLUHN employees.

Since its origins, the CSA program has seen significant expansion — claiming 572 CSA members supplied by seven different local farms.[65] At the start of every CSA season, employees sign up for available shares and can either pay for the season in full or pay on a week-by-week basis (their commitment is still for a full season of shares). This option is available because St. Luke's pays for the CSA season in bulk up front and is reimbursed as employees pay for their shares.[66] The farmers in the CSA network are each given one or two drop-off points for their CSA shares. Each week, they send an email to the Employee Wellness Team, which now oversees the CSA program, detailing what is included in each share. Communication is intentionally kept simple and straightforward.[67] Those details are sent to the participating employees before they pick up their shares at their hospitals' defined pickup locations. Share prices and sizes are standardized throughout the network.[68]

In addition to the produce, SLUHN's Employee Wellness Team takes steps to bring information about seasonal, local produce to the CSA's participants. Educational

efforts revolve around explaining what a CSA is and how it supports local agriculture and produces variation relative to produce found in grocery stores (for example, an heirloom tomato versus a standard globe tomato). Information is also shared about how to prepare, store, and use fresh produce — recipes are included! All included recipes focus on nutritious meals that emphasize plant-based eating, in accordance with St. Luke's values.[69] As a part of its educational efforts, the Employee Wellness Team makes use of Buy Fresh Buy Local's produce information sheets (found in Appendix D). All this valuable information is distributed through flyers in shares, weekly CSA email updates, and the individuals overseeing share pickup sites as they interact with CSA participants.

Community-Supported Agriculture (CSA)

CSAs allow consumers to purchase shares of a local farm. In return, participants receive fresh, seasonal produce regularly throughout the harvest season. Shares are purchased for the season in whole, giving the farmer upfront payments and a steady demand for goods. They are typically picked up from the farm or from a more conveniently located pickup point. The contents of weekly shares depends on what the farm does or does not have in season — consumers do not get to select what they do and don't want included in their share. This is exciting for consumers who are eager to experiment with new produce, eat seasonally, or find creative ways to use an abundance of seasonal products.

Made Possible by Buy-In, Adequate Resourcing, and Reliable Partners

St. Luke's Employee Wellness CSA has seen the success it has because it is managed with a focus on simple processes and straightforward communication. As the Employee Wellness Team describes it, cultivating and leveraging buy-in, building a trusted team, and choosing the right farmer partners have been the biggest hurdles to their success and what they suggest organizations looking to follow in their footsteps focus on as they build their program.

Without buy-in for the program, little else can be accomplished. Starting a CSA, particularly one that meets a community's comprehensive needs, can be a resource-intensive affair. These programs often require a dedicated staff to coordinate and manage them and financial resources specifically marked for the program's use.[70] They also require flexibility for when logistics change or harvest irregularities occur. St. Luke's Employee Wellness CSA credits its success to the buy-in of SLUHN as a whole — especially from high-level leadership responsible for allocating resources.

The Employee Wellness CSA necessitates adequate resources, particularly when it comes to staff. To ensure smooth processes, staff is dedicated to unlocking doors for share deliveries, setting up, managing share pickup sites, overseeing farmer communication, and preparing for future seasons.[71] While volunteers can be useful, their presence is not as regular and reliable as full-time staff.[72]

Finally, the Employee Wellness CSA emphasizes trusted farmer partners. SLUHN chooses farmer partners based on their proximity to share pickup sites, but also based on their reliability. The farmer partners contributing to the CSA are eager to participate and set up to do so. They are ready to communicate weekly and deliver shares consistently and regularly. They have also demonstrated a strong willingness to work with St. Luke's, specifically when it comes to agreeing to St. Luke's reasonable prices so SLUHN can keep share prices consistent across the various pickup sites.

An Effective Veggie Rx and Mobile Market Program: Lehigh Valley Health Network

Lehigh Valley Hospital–17th Street, Allentown, Pennsylvania
• Program Dates: Spring 2020–Fall 2020

The USDA recommends that adults eat 5 cups of produce — 3 of vegetables and 2 of fruits — daily. Few Americans follow this advice regardless of their economic resources, but this recommendation becomes even less attainable for food-insecure families.[73] Without consistent, regular food access, treating noncommunicable diseases like diabetes and obesity with food and lifestyle change becomes nearly impossible. In 2021, the Lehigh Valley Health Network (LVHN), in partnership with Rodale Institute and Valley Health Partners' Children's Clinic, conducted a food pharmacy pilot study to determine if providing fresh, free produce to food-insecure families would increase their consumption of healthy ingredients and foods.[74]

Piloting a Veggie Prescription Program

Recruited for the program were 25 pediatric patients, each diagnosed with type 2 diabetes and/or obesity and each living in households identified as food insecure.[75] Each week, caregivers could redeem $20 vouchers for organic produce from the Rodale Institute Mobile Market, located

Key Points

- Lehigh Valley Health Network's Veggie Prescription Program proved that affordable access to fresh produce increased fruit and vegetable consumption.
- Transportation was one of the greatest obstacles for participants in the program.
- Participants preferred to choose their produce themselves and have simple, familiar produce options.
- Healthcare providers have a unique opportunity to provide fresh produce access in a space that is approachable and familiar.

at the Lehigh Valley Hospital on 17th Street on Fridays and at the YMCA on Saturdays.[76] Situated in the heart of urban Allentown, these locations were easily accessed by Allentown's most food-insecure populations. Accordingly, these sites were conveniently located for produce pickup and the regular health check-ins at which participants would receive their weekly produce vouchers.[77] Note: Since Spanish was the preferred language for 91 percent of participants, a bilingual community health worker was selected to coordinate the program.[78]

Participant feedback and tracked metrics were overwhelmingly positive. Over the program's duration, approximately 2,317 pounds of produce was distributed, averaging about 105 pounds per week. The vast majority of participants (86 percent) participated three times a month.[79] Most importantly, the percentage of participants who reported eating fresh fruits and vegetables four or more days a week jumped from 33 percent pre-survey to 77 percent post-survey—a 133 percent increase.[80] The success of this program suggests that supporting food-insecure families with affordable access to fresh produce would increase produce consumption.

The Significance of Space and Structure

In addition to the program's optimistic results, the following lessons about enabling produce access to food-insecure communities became clear.

Transportation proved one of the greatest hurdles to participants' regular participation. While the mobile market was conveniently situated, the market was not always convenient enough to ensure that participants could visit every week. To address this, the community health worker coordinating the program began delivering foods directly to some families to ensure that their vouchers were put to good use and no produce pickups were missed. Participants were extremely receptive to this.[81]

The program was started as a veggie prescription program in which participants had little to no freedom to choose what produce items they wanted. Participant reception to the program increased a great deal when participants could choose what they did and did not want to spend their voucher on.[82] This was coupled with feedback that participants wanted straightforward options, rather than unique, experimental, or highly culturally specific options.[83]

Part of the program's success was due to the hospital's unique ability to create food purchasing space separate from socioeconomic class. Whereas some communities do not feel welcome or do not feel invited at local farmers' markets and health food stores, LVHN's Mobile Markets created a space without strong class and cultural connotations. LVHN was able to welcome people in, unintentionally lowering unnamed social barriers that prevent people from purchasing produce elsewhere.

Collaborative Organizational Structure

Each organization contributed resources or expertise. Rodale Institute provided organic produce, local farm value-added products, and other specialty foods. LVHN provided nutritional coaching, medical students to conduct health screenings and distribute vouchers, and data collection and analysis support. Participants were recruited from the Valley Health Partners' Children's Clinic. Overall, the program was funded by LVHN, a USDA/FMLFPP grant, the Baker Foundation, a Pool Trust Award for Transformational Excellence, and private donations.[84]

Appendix A:

Directory of Supporting Resources and Organizations

NATIONAL ORGANIZATIONS

American Farmland Trust
American Farmland Trust seeks to protect farmland, keep farmers on their land, and connect farmers in need of land with the appropriate resources. American Farmland Trust also works to promote sound farming practices.
farmland.org

Center for Good Food Purchasing
The Center for Good Food Purchasing is a California-based center that works to establish supply chain transparency and encourages institutions to adopt values-based purchasing models. The organization also unites stakeholders throughout food supply chains around good food values.
goodfoodpurchasing.org

Health Care Without Harm
Health Care Without Harm aims to transform healthcare institutions by mobilizing their influence around ecological sustainability, equity, and health. They strive to do so by protecting public health from climate change, transforming supply chains, and building leadership for environmental health. Health Care Without Harm provides resources, networks, and support to organizations that are committed to shared values and goals.
noharm-uscanada.org

Institute for Agriculture and Trade Policy
The Institute for Agriculture and Trade Policy (IATP) has created a comprehensive guide for hospitals interested in integrating locally procured, sustainable food into their food offerings. This guide can be found at the following link:
iatp.org/documents/connecting-sustainable-farmers-hospitals-hospital-focused-report

Kitchen Sync Strategies
Kitchen Sync Strategies provides consulting and brokerage services to regional, sustainable food suppliers, buyers, and supporters. The organization can provide growth plans, research and communication support, technical assistance, brokerage services, and more.
kitchensyncstrategies.com

Kitchen Table Consultants
Kitchen Table Consultants provides consulting services to farmers and food artisans, enabling them to build lasting, profitable, locally focused businesses. Services include individual coaching for small producers, hands-on project management, bookkeeping services for agricultural businesses, interim or virtual management, digital marketing, and a Farm Business & Finance 101 curriculum.
kitchentableconsultants.com

National Young Farmers Coalition
The National Young Farmers Coalition works to promote policies and programs that foster health in our food systems and in agricultural practices. Specifically, the group trains, supports, and connects young farmers to foster a new equitable and sustainable generation of farmers.
youngfarmers.org

Practice Greenhealth
Practice Greenhealth is a membership and networking hub for sustainable health care organizations. Practice Greenhealth was created through the partnership of Health Care Without Harm, the American Hospital Association, the US Environmental Protection Agency, and the American Nurses Association. Beyond membership and networking, Practice Greenhealth can provide practical, cost-effective programs to educate, motivate, and engage the healthcare sector in sustainable practices.
practicegreenhealth.org

Rodale Institute
Rodale Institute's consulting team can provide regenerative organic system planning and certification assistance, on-farm consultations, weed management, and other guidance for organizations or farms transitioning to or actively producing food with organic practices.
rodaleinstitute.org/consulting

Sustainable Agriculture Research and Education
Sustainable Agriculture Research and Education (SARE) is a government-funded USDA program providing grants and research support to promote sustainable agricultural practices in the United States. SARE has free resources pertaining to local food procurement, sustainable agricultural practices, and more available on its website.
sare.org

US Department of Agriculture
The US Department of Agriculture (USDA) is the federal agency responsible for overseeing policies, programs, and grants relevant to agriculture, natural resources, and rural development. USDA programs relevant to farm-to-healthcare institution projects include More, Better and New Market Opportunities; the Food and Nutrition Service; and the Natural Resources Conservation Service, among others.
usda.gov

Resources for Farms, Farmers' Markets, and Gardens

Community Gardening Toolkit
The University of Missouri Extension has collected links and resources describing community gardens, steps to establishing a community garden, and supporting resources.
extension.missouri.edu/publications/mp906?p=1

Guide to Good Agricultural Practices (GAPs)
The Farmers Market Coalition has compiled this brief introduction to Good Agricultural Practices, including a description, criteria, and compilation of resources for more information.
farmersmarketcoalition.org/wp-content/uploads/gravity_forms/1-66fc51da018bd946fb1dfb74f4bea1e7/2018/11/Iowa-GAPS-Overview.pdf

Sample Farmers' Market Budget
This free, downloadable farmers' market budget spreadsheet template was created by Mandy Moody of Chicago's Green City Market and is available through resources provided by the Farmers Market Coalition.
farmersmarketcoalition.org/resource/open-book-management-budget-template

Sourcing and Sourcing Standards

Food- and Beverage-Related Eco-labels/Label Claims
The guide to third-party certified eco-labels eveloped by the Institute for Agriculture and Trade Policy (IATP) includes each certification's logo, a brief description, and a list of availability of certified items by foodservice category.
iatp.org/sites/default/files/2013_12_11_Toolkit02_EcoLabels.pdf

Food Purchasing Criteria
Health Care Without Harm/Practice Greenhealth has put together a list of vetted third-party certifications and label claims for Practice Greenhealth's value categories: environmental sustainability, local and community-based economies, animal welfare, valued workforce, and community health and nutrition.
practicegreenhealth.org/topics/food/food-purchasing-criteria

The Good Food Purchasing Values
The Center for Good Food Purchasing has developed this list of purchasing values, including local economies, environmental sustainability, valued workforce, animal welfare, and nutrition.
centergfpp.wpengine.com/program-overview/#values

A Guide to Food Safety and Certification for Food Hubs and Food Facilities
UC Davis Health's guide to food safety and certification, tailored to the needs of food hubs and facilities, includes an overview of the food safety audit process, how to begin pursuing food safety certification, and how to prepare for that certification. The guide aims to address barriers preventing institutional sourcing from regional farms.
health.ucdavis.edu/precision-medicine/precision-nutrition/food-safety-certification-guide-english.pdf

Integrating Sustainability Requirements into Health Care Food Service Contracting
Health Care Without Harm's brief guide is intended to help healthcare institutions implement environmentally friendly practices in partnership with their food-service contractors. It includes information specific to food and beverage procurement; paper products, packaging, and disposable food ware; cleaning products; pest management; and recycling, waste reduction, and composting.
noharm.org/sites/default/files/lib/downloads/food/Integrating_Sustainability_FoodService.pdf

A New Story for Contracts
Mad Agriculture's guide to producer contracts provides practices and suggests approaches to establishing contracts that strive to align power between producers and buyers, guarantee fair pricing and standards for both parties, and design win-win situations.
stage.madagriculture.org/assets/files/a-new-story-for-contacts.pdf

Request for Proposal for Farm-to-School Fresh Produce
This request for proposal (RFP) from organizations wishing to provide fresh locally and seasonally available produce was used by Minneapolis Public Schools in School District Number 1 for the 2016–17 school year. It provides useful language for other institutions looking to integrate local produce.
nutritionservices.mpls.k12.mn.us/uploads/mps_rfp_farm_to_school_fresh_produce_16-2.pdf

Sustainable Food Purchasing Guide
This comprehensive guide from Sustainable Agriculture Research and Education (SARE) clarifies purchasing practices and standards to encourage sustainable local purchasing for institutions and individuals.
sare.org/wp-content/uploads/Sustainable-Food-Purchasing-Guide.pdf

Sustainable Food Scorecard
Developed by Kaiser Permanente and Health Care Without Harm, this scorecard helps organizations gather sustainability practices from potential vendors while they develop food-related contracts.
noharm-uscanada.org/documents/sustainable-food-scorecard

Using Written Protocols to Guide Direct Procurement of Food from Sustainable Farmers, Producers
This guide from the Institute for Agriculture and Trade Policy (IATP) helps institutions develop written sustainable food purchasing protocols. It includes a sample protocol for hospitals looking to source sustainable produce directly from farmers and producers.
iatp.org/sites/default/files/2013_12_11_Toolkit01_Protocols.pdf

Food Service Resources

Balanced Menus Recipe Toolkit
Health Care Without Harm's tool kit includes entrée recipes approved by healthcare facilities throughout the country, with accompanying sustainability notes and nutritional information for each.
noharm-uscanada.org/sites/default/files/documents-files/471/Balanced_Menus_Recipe_Toolkit_0.pdf

Frozen Local: Strategies for Freezing Locally Grown Produce for the K–12 Marketplace
The Institute for Agriculture and Trade Policy (IATP) has prepared this guide for K–12 institutions on freezing and storing locally grown fruits and vegetables for future use. While the guide is tailored to K–12 schools, the procedures and recommendations captured are applicable to any institution integrating local foods past harvest season.
iatp.org/documents/frozen-local-strategies-freezing-locally-grown-produce-k-12-marketplace

Finding Local Food

Local Farm Directory
State-by-state listing of farms, farmers markets, CSAs, and events.
localharvest.org/locations

USDA Food Hub Directory
National directory of food hubs and local food distributors.
usdalocalfoodportal.com/fe/fdirectory_foodhub/?source=fe&directory=foodhub&location=&x=&y=

USDA Local Food Directories
National directory of food hubs, farmers' markets, and similar local food actors.
usdalocalfoodportal.com

USDA Organic Integrity Database
Maintained by USDA, this database is a registry of USDA Organic certified producers.
organic.ams.usda.gov/integrity/Home

NSAC State by State Resources for Finding Local Sustainable Food
National Sustainable Agriculture Coalition's (NSAC) list of websites, guides, and directories to help find local food.
sustainableagriculture.net/blog/national-guide-to-finding-local-food

Appendix B: Seasonality and Harvest Charts

Seasonal Food Guide
Online resource that helps users discover what produce is in season for a particular month, depending on the user's state. This simple platform can also help users understand when certain produce items are seasonally available in their state.
seasonalfoodguide.org

Appendix C: Sample Farm Manager Job Description

Job Title: GSFP Farm Manager

Unnamed Entity is a non-profit organization providing temporary housing and extensive support services to the homeless and those in recovery in Santa Barbara County. *Unnamed Entity* is excited to now have a unique opportunity to initiate a program that will allow them to grow their own vegetables and fruit in an ecologically sustainable way. This would enable them to serve their clients a healthier diet of fresh food and provide an opportunity for some of their clients to learn job skills.

Description

The *Unnamed Entity* seeks a full-time, benefited Farm Manager for its essential farm program. The Farm Manager will lead the entire operation of the *Unnamed Entity*'s food production program and farm training program as well as restore, manage, and maintain the necessary farm infrastructure and equipment.

Duties
Like similar roles at other farms and ranches, the Farm Manager will at times supervise a small team (~2–5 people) to carry out their responsibilities. Unlike similar roles, the team is often composed of clients housed in the Emergency Housing Shelter who work limited hours and likely have no prior agricultural experience.

The Farm Training program for some of the Emergency Housing Shelter residents is an important component of this project. A primary responsibility of the Farm Manager during the first phase will be to develop and lead a training program for clients from the shelters giving them the opportunity to successfully engage in their own food production. The curriculum would need to be designed for trainees with no prior farming experience.

The Farm Manager will be successful through careful maintenance of equipment and efficient operation of the farm largely without outside supervision. Their impact on the *Unnamed Entity* will be measured by their operational success (growing food) and demonstrated ability to improve the farm, manage their budget, and build healthy relationships with clients. This position is a rare and rewarding way to impact a local community's most vulnerable residents. Although not currently certified organic, the farm's long-term goals are rooted in stewardship and improvement of the land. While extensive farming experience is preferred, we welcome any candidate who can accomplish the delegated responsibilities, including those whose primary experience is in row crops and horticulture. This position may be a great opportunity for a farmer early in their career seeking to build experience establishing and managing small scale vegetable production. The position may also be a great fit for an experienced farmer looking to share their knowledge with a grateful community without the stress of sales and marketing.

Most importantly, *Unnamed Entity* is seeking an individual that feels stimulated and energized by this special opportunity and challenge to shape the *Unnamed Entity* from the ground floor and to develop and guide it to its full potential.

THE FARM:

In the long ago past, this farmland overlooking the Santa Ynez river was planted with dry farmed fruit trees. More recently, but still a while back, greenhouses were built and maintained in commercial operation until about 20 years ago. All of the (3) greenhouses and their irrigation system are now in disuse and disrepair and will require an ongoing effort over the first year or two to salvage and rebuild. The acreage outside the greenhouses has been entirely reclaimed by nature and will be a challenge to demarcate from production areas, much less actively farm. Decisions will need to be made about how and where to begin farming at the same time as repairs are underway. A multiyear budget and farm plan is required in order to allocate funding and time according to the priorities recommended by the Farm Manager. An agronomic consultant from Rodale Institute has been retained to advise the Farm Manager on all steps along the way as well as to prepare an application for Organic Certification.

RESPONSIBILITIES:

The Farmer must have the experience and skills necessary to independently carry out all responsibilities listed below:

- Operate, maintain, assess and repair small tractors, and implements
- Operate, maintain, and repair pumps, plumbing, irrigation lines, and sprinklers
- Design and implement effective farming techniques to ensure healthy production
- Work with Shelter chefs to help determine produce production
- Managing and directing volunteer and hired laborers
- Leading Farm Training Curriculum
- Perform all tasks in accordance with the GSFP's Safety and Wellness Protocol and responsibly work to enhance that program
- Other duties as assigned by the GSFP Director
- Participate in the GSFP community outside of the farm operations, as described in the Staff Personnel Policy

Required Qualifications

- Employment Eligibility Verification
- Negative tuberculosis test
- Successful completion of background screening
- Negative Pre-Employment Drug Screening result
- CPR/first aid training
- Driving is an essential function of this position
- Must have valid CA Driver's License
- Must be able to qualify for Good Samaritan Shelter insurance coverage

Physical Demands

The physical demands described here are representative of those that must be met by an employee to successfully perform the essential functions of this job. Reasonable accommodations may be made to enable individuals with disabilities to perform the essential functions. While performing the duties of this job, the employee is frequently required to stand, sit, walk, stoop, talk, hear, reach above and below shoulders; use hand and finger dexterity, keyboarding and making and receiving telephone calls. The employee may be required on occasion to lift and/or carry up to 50 lbs.

EEO

Unnamed Entity provides equal employment opportunities (EEO) to all employees and applicants for employment without regard to race, color, religion, sex, national origin, age, disability or genetics. In addition to federal law requirements, *Unnamed Entity* complies with applicable state and local laws governing nondiscrimination in employment in every location in which the company has facilities. This policy applies to all terms and conditions of employment, including recruiting, hiring, placement, promotion, termination, layoff, recall, transfer, leaves of absence, compensation, and training.

Unnamed Entity is a non-profit, community-based organization and depends on every staff member doing what needs to be done to serve the community and clients. On occasion, you may be required to perform job duties outside of your normal assignments on an as-needed basis.

Full-Time Benefits to Include:

- Medical, life, dental, and vision insurance
- Paid time off
- Paid holidays
- 401(k) retirement plan with agency match

Appendix D: Sample Marketing Materials

Buy Fresh Buy Local Produce Flyers
Public resources including Buy Fresh Buy Local's "Fresh Right Now Flyers" that describe the health benefits of available produce, how to grow certain produce items, relevant information, and recipes. While information is specific to Pennsylvania's Lehigh Valley, these are an excellent example of produce flyers.
buylocalglv.org/resources/public-resources

Appendix E: Relevant Grants and Assistance

Community Food Projects Competitive Grants Program
Supports projects focused on meeting the food needs of low-income individuals through food distribution and community outreach to assist in federally assisted nutrition programs, increase food access, or respond to local food, farm, or nutrition needs of a community. Awards range from $25,000 to $400,000.
nifa.usda.gov/grants/funding-opportunities/community-food-projects-competitive-grants-program

The Gus Schumacher Nutrition Incentive Program — Nutrition Incentive Program
Supports projects aiming to increase the purchase of fruits and vegetables through point-of-purchase incentives for eligible consumers participating in the Supplemental Nutrition Assistance Program (SNAP). Awards range from $1,000 to $15,000,000.
nifa.usda.gov/gusnip-request-applications-resources-ni

The Gus Schumacher Nutrition Incentive Program — Produce Prescription Program
Supports projects demonstrating and evaluating the impact of projects on improving dietary health through increased fruit and vegetable consumption, reduction of individual and household food insecurity, and reducing healthcare use and associated costs. Awards range from $50,000 to $500,000.
nifa.usda.gov/grants/funding-opportunities/gus-schumacher-nutrition-incentive-program-produce-prescription

Local Foods, Local Places Planning Assistance Program
Supports cities and towns across the country to develop local food systems, preserve open spaces and farmland, boost economic opportunities for farmers and businesses, and improve access to local and healthy foods, particularly among disadvantaged populations. Support offered as technical assistance, not financial awards.
epa.gov/smartgrowth/local-foods-local-places

Local Food Promotion Program
Supports projects developing, coordinating, and expanding local and regional food business enterprises that serve as intermediaries between producer to consumer marketing, increasing access to and availability of locally produced agricultural products. Awards range from $25,000 to $75,000.
ams.usda.gov/services/grants/lfpp

Organic Market Development Grant
Supports the development of new and expanded organic markets, focusing on building and expanding capacity for certified organic production, aggregation, processing, storing, distributing, etc. Awards range from $100,000 to $3,000,000.
ams.usda.gov/services/grants/omdg

Regional Food System Partnerships
Supports public-private partnerships that develop local or regional food systems. RFSP offers three project types: two-year planning and design, three-year implementation and expansion projects, and farm-to-institution. Awards range from $100,000 to $1,000,000.
ams.usda.gov/services/grants/rfsp

Resilient Food Systems Infrastructure Program
Supports programs building middle food supply chain actors; increasing open market access to small farms and food businesses; and developing value-added products for consumers, fair prices, fair wages, and new and safe job opportunities. Awards range from $100,000 to $3,000,000.
ams.usda.gov/services/grants/rfsi

Appendix F: Common Farm Equipment

ITEM	PURPOSE
TRACTOR & IMPLEMENTS	
Kubota M6 Series (M6-131), 100-130 HP w/Front-End Loader Attachment	Main engine for all mechanized field work
Kubota M6060 Series, 60 HP w/Front-End Loader Attachment and Forks	Secondary engine for all mechanized field work, including cultivation of walkways between planting beds. Second tractor to evenly, more efficiently distribute work
Tilmor Cultivating Tractor	All-in-one cultivating (weeding) tractor that receives many different implements for cultivation
Tilmor Canopy	Shade/cover for tractor operator when working in sun for many hours
Tilmor Implement Hoist	A one-person tool for changing implements on the Tilmore tractor. Labor/time saving device
Basket weeder	Between-row cultivation implement for cash crops. A second unit for “stale bedding” prior to planting
Sweeps/beet knives set	Cultivation implement for weeding between rows of cash crops
48” pallet forks	For loading/unloading of anything requiring a tractor
96” Quick-Connect Bucket	Loader work. Soil, compost, etc.
Disk harrow	Initial tillage tool
Rotovator	Initial tillage tool

ITEM	PURPOSE
TRACTOR & IMPLEMENTS (CONTINUED)	
Bed shaper	Implement that raises/shapes planting beds for better drainage
Water wheel transplanter	Low-tech implement for mechanizing the transplanting of crops with two to four people (transplanters) riding on back, placing plants in the ground
Planting wheels (water wheel accessories)	Wheels that aid in plant spacing when transplanting
Flail mower	Implement for the termination/mowing of cash crops as well as for general mowing and brush mowing
Plastic mulch layer (48" bed top)	Implement for the purpose of laying down plastic mulch (for weed suppression/water conservation). Labor/time saving. Tomatoes, peppers, eggplant, squash, etc.
Seed drill	Implement that sows mostly cover crop seed for increased fertility, erosion mitigation, and increased soil organic matter
Undercutter, crop lifter, mulch lifter	Implement to dig cash crops such as carrots, parsnips, garlic, sweet potatoes, etc. Also to remove and retrieve plastic mulch postseason
Potato digger	Implement to dig specifically potatoes and bring them to the surface. Has other uses: flower bulb digging, turnips, beets, etc.
Compost/manure spreader	Implement designed to spread compost and such over large areas of the field in an even manner
Tractor; hydraulic top links	Device for making fine adjustments to implements when attached to the tractors
Kubota Quick-Hitch System	Faster/safer system to attach implements to tractors with one person
Ripper, two-shank	Implement for deep tillage for increasing water/air infiltration into soil. Preseason and postseason

ITEM	PURPOSE
GREENHOUSE MATERIALS	
Greenhouse kit: frame & endwalls, plastic & louvres, etc. (30′x 96′)	1. Complete greenhouse with ventilation system for propagating transplants and plant sale plants on tables, in flats and containers, as well as for curing of crops and storage 2. Complete greenhouses for in-ground growing of cash crops directly in the ground
Baseboards (2″ x 12″ x 8′)	
Additional hardware, screws, tools	
HEATING & COOLING EQUIPMENT	
L.B. White 220,000 BTU Heater	Heaters for supplemental heating of crops to avoid freezing and hasten growth
Propane hookup parts to heaters (Amerigas, Farm & Home, etc.)	
IRRIGATION	
Water reel sprinkler/traveler	Large sprinkler that is pulled out and retracts as it irrigates; has a powered pump and hooks to water supply/well
Driptape (8 mil, 6″ emitter spacing, 7,500′/roll)	Plastic tape that emits small amounts of water directly at the base of plants; used under plastic mulch
Header/manifold “Blue Stripe” tubing (2″ diameter)	Hose to supply drip tape
Blue Layflat (3″ diameter)	Hose to supply drip tape
Other Parts (connectors, valves, pressure regulators)	

ITEM	PURPOSE
STORAGE, WASHING & REFRIGERATION	
Walk-in cooler (16′ x 24′ x 10′), 2 doors	Basic food storage that maintains 33° to 34° at all times
Wash station (pavilion/roof coverage, sinks, wash tanks, greens spinner)	Facility to wash and store cash crops and equipment/supplies
Concrete pad (unloading/wash area)	
Pallet jack and mini pallets	Specialized pallet system that fits the size of harvest bins for storage and organization
Brush wash line	Semi-mechanized system to wash heavy/clay soils from crops (carrots, parsnips, beets, peppers, turnips, winter squash, onions, etc.)
Harvest bins (tomatoes)	Cash crop harvesting
Harvest bins (greens/roots/ other)	Cash crop harvesting
Cooler outdoor housing/ structure	Covering for cooler against elements
SOIL MIX & SUPPLIES	
Potting soil (Pro-Mix MP Organic)	Potting soil for cash crops
Vermont compost	Potting soil for cash crops
Plug trays (128 Square)	Propagating cash crops
Plug trays (200 Square)	Propagating cash crops
Plug trays (50 Square)	Propagating cash crops

ITEM	PURPOSE
SEEDS/CUTTINGS	
Cuttings/planting stock	
FUEL & ELECTRIC	
Propane (500-gallon tank & installation)	Heating of greenhouses
Propane (initial fueling) Electrical (parts)	
Tractor fuel (diesel)	
GREENHOUSE BENCHING, CROP PROTECTION & MISCELLANEOUS	
Additional tools (shovels, rakes, bins, etc.)	
Greenhouse tables	Holding flats and planting trays for cash crops
Equipment repairs (parts)	
Consulting	Rodale Institute
Ground cover; AgriFab (15′ x 300′)	Weed suppression around greenhouses and other areas
Ground staples	To hold ground cover to ground
Wire hoops	To elevate row cover over cash crops
Row cover (83′ x 800′)	For covering certain cash crops for insect protection and temperature mitigation
USDA Organic certification & inspection	(Future)

ITEM	PURPOSE
GREENHOUSE BENCHING, CROP PROTECTION & MISCELLANEOUS (CONTINUED)	
Soil amendments (sulfur, initial fertility)	For adequate cash crop growth
Soil amendments (fertilizer, N-P-K)	For adequate cash crop growth
Soil amendments (compost)	For adequate cash crop growth
Discretionary expenses	
FENCING	
Permanent 10′-high deer fencing; 30 acres (4,572 linear feet)	To deter the habitual intrusion of deer on a nightly/daily basis
Temporary high-tensile fencing; 10 acres	To temporarily deter the habitual intrusion of deer on a nightly/daily basis; to be used until a full, permanent deer fence is installed

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About the Rodale Institute Regenerative Organic Consulting Service

Backed by 75+ years of science, our consulting service launched in 2019 to accelerate the shift from conventional to organic agricultural practices and production. We put trained agronomists and certification experts on farms in a one-on-one mentorship and personalized coaching model to advise transitioning farmers. When you're ready to begin your farm-to-healthcare journey, contact us to help guide the way.

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