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Sustainable Food Recovery Programs: Making Connections To Redirect Excess Food To The Needy

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Submitted to the Program of Organizational Dynamics
in the Graduate Division of the School of Arts and Sciences
in Partial Fulfillment of the Requirements for the Degree of
Master of Philosophy at the University of Pennsylvania
Advisor: Alan Barstow

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Sustainable Food Recovery Programs: Making Connections To Redirect Excess Food To The Needy

Abstract
Food waste is a significant problem of both social and environmental proportions. For myriad reasons, much of the food produced never makes it to market – but is sent to landfills – where it consumes limited landfill space and contributes to greenhouse gas emissions as it decays. There is much excess food (especially nutrient-rich produce) in the greater Philadelphia region to be captured for the needy, and there are motivated individuals to help in that effort. Food banks must strive to capture this food by creating strong relationships with growers and overcoming barriers to donations through effective planning, increased investment in logistical capability, a high service orientation to donors, and a local focus which harnesses motivated individuals and embraces collaborative partnerships. They must also consider creative approaches such as vertically integrated projects with agricultural schools to capture more produce. Success will spawn new programs. This paper details my effort to create relationships and pilot programs to capture fresh produce that would otherwise go to waste between January and September 2011.

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SUSTAINABLE FOOD RECOVERY PROGRAMS:

MAKING CONNECTIONS TO REDIRECT EXCESS FOOD TO THE NEEDY

by

Steven M. Finn

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in the Graduate Division of the School of Arts and Sciences
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Philadelphia, Pennsylvania

2011

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MAKING CONNECTIONS TO REDIRECT EXCESS FOOD TO THE NEEDY

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ABSTRACT

Food waste is a significant problem of both social and environmental proportions. For myriad reasons, much of the food produced never makes it to market – but is sent to landfills – where it consumes limited landfill space and contributes to greenhouse gas emissions as it decays. There is much excess food (especially nutrient-rich produce) in the greater Philadelphia region to be captured for the needy, and there are motivated individuals to help in that effort. Food banks must strive to capture this food by creating strong relationships with growers and overcoming barriers to donations through effective planning, increased investment in logistical capability, a high service orientation to donors, and a local focus which harnesses motivated individuals and embraces collaborative partnerships. They must also consider creative approaches such as vertically integrated projects with agricultural schools to capture more produce. Success will spawn new programs. This paper details my effort to create relationships and pilot programs to capture fresh produce that would otherwise go to waste between January and September 2011.

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CHAPTER 1

INTRODUCTION

Background

Hunger is all around us in the United States. The Under Secretary of the U.S. Department of Agriculture recently commented that we are seeing people on food assistance now that never thought they would need it. Many of the poor are unable to obtain sufficient quantities of fresh produce – which goes beyond hunger and leads to additional health problems. Paradoxically, we are a nation that wastes enormous amounts of food. While many of us do not often stop to reflect on these issues, at times we come face to face with them and they have tremendous impact. In my case, I was struck by the significant amount of food waste at a local supermarket, followed shortly thereafter by the need to assist a woman who was unable to afford more than two dollars of produce at a farm stand.

These experiences led me to research the issue of food waste and to begin to grasp the enormity of the problem. That work led to a paper in which I laid out a general framework for local communities to redirect excess food to the needy with the twin goals of reducing hunger and reducing environmental externalities (Finn, 2011). That work was theoretical, however, and I was left with the desire to go further.

Purpose of Thesis

This paper is the continuation of a personal journey and builds on my prior research. At its heart is my desire to do something tangible to reduce food waste and simultaneously create relationships that facilitate positive change to reduce hunger.

I started by creating a relationship of my own – reaching out to Philabundance, a regional food bank, and volunteering to work toward their goals of capturing more nutritious produce for their constituents while also assessing the potential for gleaning and donation programs in our area.

The ultimate goal of this work is to "connect the dots" by bringing together local growers with excess produce and charitable food organizations such as Philabundance; creating lasting donation and pick-up relationships that will spread to others, and creating a donor mindset by making donations easy and redirecting excess food to the needy rather than to the landfill.

Toward that end, I began by assessing the potential for recovery of excess produce from local counties for Philabundance through a survey and through conversations with several farmers. I also reviewed logistical issues involved in effectively recovering food through gleaning operations. I then contacted farmers in the Bucks County area and sought to establish pilot programs to recover food this year, with the hope of 1) establishing sustainable relationships that would carry forward, and 2) generating additional relationships following successful implementation. On a larger scale, I looked into the possibility of setting up a creative on-site partnership with a local agricultural school (Delaware Valley College), and developed a proposal for building a social mission component into the school's overall mission by growing crops directly for the food bank system with labor for harvesting and distribution to be provided by Philabundance. I developed additional ideas for pilot projects for organizations like Philabundance to pursue in attempting to collect more fresh produce from our region, and also provided a number of recommendations to bring farmers, communities, and

charitable food organizations together in the effort to capture excess food and redirect it to those in need.

Clarification of Terms

In this paper I often use the terms "food insecurity" and "hunger" as well as "the needy." The Food and Agriculture Organization (FAO) defines food insecurity as a condition where individuals "lack access to sufficient amounts of safe and nutritious food, and therefore are not consuming enough for an active and healthy life" (www.fao.org, 2011).

The World Hunger Education Service (WHES) notes that hunger has three meanings – the uneasy or painful sensation caused by lack of food, the want or scarcity of food, and a strong desire or craving (www.worldhunger.org, 2011). This definition focuses on a lack of quantity of food. There is another important element beyond quantity, and that is a lack of quality food with the necessary nutrients to support a healthy life. As the WHES notes, individuals lacking quality food can suffer from malnutrition – which results in health and development problems. One form of malnutrition stems from a lack of protein (from sources such as meat) and food that provides energy (from the basic food groups). Individuals require protein for critical body functions and muscle development. A second form of malnutrition stems from a lack of micronutrients (vitamins and minerals) – items that are prevalent in fresh produce (www.worldhunger.org, 2011).

A related problem is the issue of obesity – in which individuals are not suffering from a lack of total calories but a lack of quality calories (www.worldhunger.org, 2011).

Obesity leads to serious health problems and is a growing problem for the poor who often cannot afford the quality calories obtained from items such as fresh fruits and vegetables.

In using the terms “hunger” and “food insecure” and “the needy” throughout this paper I am referring to less fortunate individuals who are getting insufficient quantities of food and who lack access to sufficient “quality” calories. These individuals would benefit from projects that can successfully capture excess fresh produce from local farms and redirect it to charitable food organizations.

My discussions with members of several food organizations revealed the urgent need for fresh produce. These individuals recognize that many of their constituents are not getting sufficient amounts of quality calories to support a healthy lifestyle, and they are very interested in learning how to capture more fresh produce donations while also overcoming logistical challenges and spoilage issues. It is relatively easy to capture donations of boxed and packaged food. It is much more difficult to capture fresh produce, transport it, and redistribute it in a safe manner before it spoils.

CHAPTER 2

SCOPE OF THE PROBLEM

Food insecurity in the U.S. is a serious problem, and it is growing worse. The needy lack access to sufficient food, and more importantly, they lack sufficient access to nutritious produce – a fact which became clearer to me as I toured the Philabundance facility in Philadelphia earlier this year. While I noted many pallets of donated processed foods, such as breads, cereal and even cakes, I also noted the shortage of fresh fruits and vegetables.

Linked to the issue of food insecurity, and making it even more painful, is the serious issue of food waste. A recent report by the United Nations' Food and Agriculture Organization noted that approximately one third of the edible portion of food produced annually is lost or wasted throughout the food supply chain – a staggering 1.3 billion tons of food. The report noted that more than 50% of fruits and vegetables (high nutrition items desperately needed among the food insecure) in North America and Oceania are lost or wasted as well (Gustavson, et. al., 2011). These alarming statistics corroborate a prior study which estimated that 50% of all food produced is wasted between field and fork (Lundqvist, 2008).

Large amounts of nutritious produce go to waste in farm fields, get discarded as imperfect for markets, or perish at various stages of the food distribution system. A report by the Economic Research Service (ERS) of the U.S. Department of Agriculture (USDA) details the substantial opportunities for waste throughout the food marketing chain. Food waste starts at the farm, for reasons such as inopportune weather (droughts or floods), pest infestations, damage by machinery, and blemishes or irregular sizes

making the food less than perfect for distribution to market. Additional waste occurs in the processing stage due to improper handling, improper temperature control, compliance with food safety regulations (such as food exceeding its "sell-by" date), and conversion of the raw food into other food products. Additional food is lost in stores due to overstocking or incorrect stock rotation, as well as package and label damage making the product less than perfect in the eyes of the consumer. Still more food is wasted in the consumer and food service sectors due to excessive portions that cannot be consumed at one time, over-preparation of food, expanded menu choices (which add complexity to planning), and cooking losses and spillage (Kantor, et al., 1997).

With severe hunger in the U.S. and around the world, coupled with massive quantities of wasted food, there is enormous need for successful projects to reduce this waste and divert that food, particularly highly nutritious produce, to the needy.

Hunger Statistics

When one considers the agricultural might and affluence of the United States, the statistics on hunger are shocking. In 2009, for example, more than 43 million individuals in the United States were in poverty, including nearly 21% of all children. Various statistics on hunger in the U.S. are provided in Exhibit 1.

It is very disturbing to note that Feeding America's network of food organizations now provide emergency assistance to 37 million individuals annually – a 46% increase over figures from the 2006 Hunger in America report. The 2010 report also indicates that 17 million children in the U.S. (nearly one in four) are food insecure – meaning that at times they lack access to sufficient food for an active, healthy life (Hunger in America, 2010). Further, the AmpleHarvest organization notes that one in six of all Americans

experience food insecurity today, despite the fact that there is sufficient food available for them. The problem, as the group notes, involves excessive waste as Americans discard over 100 billion pounds of food per year – or roughly a pound of food per person per day (www.ampleharvest.org, 2011).

While some view hunger as an inner city problem, it occurs all over, even in the rural state of Vermont – a region that conjures up images of plentiful food production. A recent report by Feeding America showed that one in seven Vermont residents accessed emergency food services – a 30% increase from four years earlier. Further, 42% of those individuals indicated that they had to choose between allocating money for food or for heat and utilities expenses (Vermont Foodbank Annual Report, 2009).

Closer to home, slightly more than one in ten adults in southeastern Pennsylvania have had to reduce the size of a meal or skip a meal in the past year due to insufficient financial resources, while many adults in the region may not be obtaining sufficient fruits and vegetables to meet their nutritional needs (Community Health Data Base, 2011).

Additional Challenges

The economic downturn of the last few years exacerbates the hunger problem, with a record number of individuals in the U.S. (43.6 million, or one in eight) receiving food stamps in November of 2010 (Pooley and Revzin, 2011). Deteriorating economic conditions lead to a dual blow for food organizations such as Philabundance; they result in lost jobs and reduced disposable incomes while simultaneously forcing businesses to get lean and wring inefficiencies out of operations. As a result, demand for assistance from food banks is up, while donations to food banks are down.

Rising fuel costs represent an additional problem, as they put further pressure on organizations like Philabundance to allocate limited funds in purchasing and transporting fruits and vegetables to their facilities. High freight costs can force food banks to refrain from bringing in produce that they otherwise would have purchased, which negatively impacts the hungry and increases the potential for food waste at the grower's location.

Extreme weather and natural disasters are also taking a toll on global food production, and the impact trickles down and reduces the supply of food to charitable food organizations. In the U.S., excessive rain this spring delayed planting of crops in the Northeast, extremely dry conditions in the summer hurt production, and heavy rains from tropical storms took a further toll. Abroad, a record heat wave and drought conditions in Russia, dry conditions in Brazil, and epic flooding in Australia have contributed to what many are calling a global food crisis (Krugman, 2011). Such events eliminate excess production which previously had the potential to be diverted to food banks, a point which was clearly recognized by a contact at Philabundance in my initial tour. They also provide us with another reminder of the flattening of the world – as even local food banks quickly feel the impact of global weather events. As a result, foreign produce obtained by Philabundance declined by 66% from March 2010 to March 2011 (Lubrano, 2011).

Rising food prices are yet another large problem. In May of this year Tyson Foods' CEO Donald Smith noted that rising food costs were negatively impacting consumer confidence and challenging corporations, noting that Tyson had a "wall of costs" coming at it (Rappeport, 2011). Increasing costs are particularly problematic in the developing world, as the World Bank noted that rising global food prices pushed 44

million more individuals into extreme poverty since June (Pooley and Revzin, 2011). Even when purchased, food waste in developing nations remains a serious problem. IBM estimates that 30% of the food purchased in developing nations goes to waste (www.ibm.com, 2011). At home and abroad, rising food prices have a devastating impact on lower income families, and only serve to increase the importance of reducing food waste and redirecting it to the needy. We simply cannot afford to waste food at a time when we are not effectively feeding millions. However, we have not even scratched the surface in terms of capturing the excess as less than three percent of food waste in the U.S. is recovered (www.epa.gov, 2011).

Liability concerns and logistical challenges also contribute to food waste. Some farmers with surplus produce may elect not to donate due to fear of liability, while others may feel that it is simply less expensive or less onerous to discard their excess.

Environmental Issues

Last, beyond the human impact, food waste poses significant environmental problems. Discarded food consumes scarce landfill space, while the disposal process consumes fossil fuels and pollutes the air. Further, and unknown to many, food decaying in landfills creates an even greater problem. Rotting food releases methane – a greenhouse gas which the Environmental Protection Agency estimates traps 23 times more heat in the atmosphere than a comparable amount of carbon dioxide. With landfills receiving so much food waste, they generate 34% of methane emissions in the United States (Oliver, 2008).

Thus, capturing and redistributing excess food not only helps the hungry, but it provides tremendous environmental benefit as well.

CHAPTER 3

THE PROCESS

Determined to do tangible work on this topic, I approached Philabundance, a regional food bank, with an offer to build on my prior research and look into ways to overcome obstacles and increase food donations from grocers and supermarket chains. During those discussions I learned of the difficulties that charitable food organizations face in capturing sufficient quantities of fresh, nutritious produce for their constituents on a consistent basis. Given the abundance of farmland in the greater Philadelphia region, I decided to look further into how to capture excess produce that would otherwise go to waste and redirect that food to Philabundance through gleaning programs or other creative donation programs. In addition to helping Philabundance serve its constituents, I hoped to unearth some lessons that would be relevant to any charitable organization involved in the fight against hunger.

My work unfolded in a three-step process which included 1) assessing the potential supply of excess food in our region, 2) researching the efforts of other food organizations to effectively glean or otherwise capture food, and 3) drawing on this information to formulate plans for capturing produce from local farms with an eye toward establishing long-term, sustainable donation relationships. I theorized that the success of such pilot projects would breed success and prompt others in the agricultural sector to capture and donate excess food over time as well.

Assessing the Potential Supply

Assessing the potential supply of excess produce involved a two-step process. The first involved meetings and conversations with several farmers in Pennsylvania,

while the second involved a survey mailed to 81 farmers in Bucks, Montgomery, and Delaware counties.

The conversations involved first explaining my mission, and then gaining an understanding of the individual farm's business model – what they produced, how much, and whether they often had excess produce. They also involved discussing whether the farmers had donated to charitable food organizations in the past, whether they would consider donating to Philabundance in the future, and whether they would consider an on-site program (such as gleaning, planting an extra row of a specific crop, or sharing produce from a specific tree) to capture nutritious produce and fruit for Philabundance. Perhaps the most encouraging aspect of these conversations was that individuals in the farming sector seemed very interested in helping others if possible, and it was clear to me that they were not motivated by monetary gains (such as tax deductions) but by a genuine concern for the well-being of others.

These conversations were the initial step in establishing relationships with local farmers.

Survey Results

The second aspect of the supply assessment involved a written questionnaire (see Exhibit 2). This survey was mailed in May of 2011 to 81 Pennsylvania farms in three counties within an eighty mile radius of Philabundance. That radius was selected as a cut-off point as pick-ups beyond that distance were deemed too costly. The sample was chosen from a database of farm markets maintained by the Pennsylvania Department of Agriculture, with a focus on farms that were active produce growers.

The survey consisted of eleven questions designed to assess whether the farmers routinely had excess produce, the amount and type of that excess, and whether they would consider donating (or even selling) that excess to a food bank such as Philabundance. It also asked whether the responding farm had the potential for a gleaning crew, whether they would allow Philabundance to arrange for a gleaning crew at their location on occasion, and whether they had suggestions to facilitate a donation or gleaning program. Further, the survey asked whether the respondent would consider other creative options to get fruit and vegetables to the needy through Philabundance, and invited comments as to how Philabundance could best serve them to get a donation or gleaning program started. A brief summary of survey highlights is provided in Exhibit 3.

The results of the survey were encouraging and supported the positive responses from conversations with local farmers. The mailing generated a 20% response rate – which seems especially strong when considering the incredibly busy nature of a farmer's day. Also encouraging from a supply perspective was the fact that 40% of the respondents indicated that they had excess amounts of nutritious produce on hand, and *all* of those respondents indicated that their excess occurred periodically throughout the growing season as opposed to a one-time basis. The excess produce listed included items highly desired by charitable food organizations like Philabundance, including corn, tomatoes, squash, and apples. Extrapolating these results to all farms within the Bucks, Montgomery, and Delaware county region indicates high potential for scheduled pick-ups of excess produce on a repetitive basis. In other words, the supply is there. Further, with 33% of respondents indicating that they have greenhouse operations, there is potential to

capture excess food beyond the typical growing season. This is particularly attractive for charitable food organizations seeking to provide nutrient-rich foods on a year-round basis.

Also encouraging was the fact that 33% of respondents stated that they would be willing to allow Philabundance to conduct gleaning operations on-site to capture excess crops, while 60% of respondents indicated they have donated to charitable organizations such as Philabundance in the past. These facts indicate a willingness in the local farming community to help redirect excess food to the needy.

Logistical Issues - Organizational Effectiveness

Satisfied that there seemed to be a sufficient supply of excess produce in the region, and a willingness on the part of many farmers to help capture it for Philabundance, I focused on the organizational issues central to effective donor programs. This involved researching documents developed by individuals in the charitable food sector, discussions with point people at various food banks, and drawing on lessons learned at the 5th Annual Conference on Hunger in Vermont in May of 2011.

An overriding theme quickly emerged – farmers are extremely busy people. They can be difficult to contact, and lack the luxury of being able to talk for extended periods about donation programs. To establish a gleaning or donation program with a farm, and make it sustainable, it is essential that the food bank representative makes it easy for the farmer. Trust is also essential, and trust is created when the food bank consistently follows up on its commitments with the farmer.

Managing a gleaning operation is challenging, and requires considerable planning and organization. The gleaning coordinator must deal with issues of food safety as well

as liability concerns. Clear communication with the farmer is essential, yet farmers can be difficult to contact. Timing is critical as crops are perishable. The gleaning coordinator must have the resources on hand to capture the food efficiently, and the crops must be quickly transported and stored properly (www.thehungerforum.org, 2011). In addition, gleaning is hard work. The coordinator must ensure that gleaners do not disrupt the farmer's operation in any way. Gleaners must be on time and properly equipped with supplies, and there must be a sufficient number of volunteers to get the job done promptly. The coordinator must also handle the basic needs of the team, such as food and water, and must ensure that no one gets hurt.

One New England food bank representative quickly apprised me of a number of essentials for making a gleaning program effective. She noted that in order to guide planning efforts, the coordinator must first approach the field and assess the crop and the volume. Coordinators need to adapt to the personalities of different farmers, develop trust, and provide consistent service. They must effectively manage the volunteers, and they also need to understand packing and storage techniques – quickly getting the gleaned material to a cold storage facility. They also should aggressively seek donations of key supplies such as boxes, buckets, totes, and clear bags.

One local farmer emphasized reliability and the need for the food bank to supply storage bins. Another stated that the process must be simple, and noted that if the food bank could always guarantee the arrival of gleaners, every farm would plant an extra row. A third individual mentioned the need to be flexible and adapt to changing schedules as well as the importance of providing the farmer with documents that absolved him of any

liability. Clearly there are a number of organizational challenges to address in starting a gleaning or donation program.

The Chester County Food Bank (CCFB) addresses these challenges with strong organizational efforts. The group starts planning gleaning efforts each year in February, onboarding new volunteers, creating teams, and assigning leaders. Gleaners are educated on safety issues as well as how and when certain produce items should be picked. The organization has over 1,000 volunteers and roughly 150 gleaning teams, including established groups from local companies who return each year. Technology is used to address flexibility; if an issue arises that prevents a team from operating in a designated area, the team is quickly re-routed via cell phone and email. This commitment to organization has helped the Chester County Food Bank capture more than 250,000 lbs. of food through August of this year. The organization is also highly focused on minimizing its environmental footprint as it captures food.

Another New England food bank representative focused attention on farmers that she was engaging as donors. She provided boxes and containers in advance of gleans, provided copies of the Good Samaritan Act to those concerned with liability, and provided donor receipt letters for those interested in tax deductions. She sought to learn from farmers, frequently asking their advice on issues. She also sought to get some farmers on her planning committee to take advantage of their contacts and knowledge while expanding donation and gleaning programs. To maintain relationships, she elected not to refuse any produce, even if she had to discard it at her facility.

Many food banks have documents on how to organize gleaning and donation programs. If not, they can reach out to other charitable food organizations or access

documents on the internet and add to them as desired. One such document that provides information on gleaning basics is the "Let's Glean" toolkit developed by the Center for Faith-Based and Neighborhood Partnerships at the USDA. Selections from that document are shown in Exhibit 4. Selections from a second document developed by a volunteer at a northern California food bank, entitled "Starting a Gleaning Program at Your Food Bank" are shown in Exhibit 5.

In sum, there are several issues for organizations like Philabundance to consider in establishing gleaning and donation programs with farms. Overall, the key is that once the relationship is established, the charitable food organization must adhere to its commitments. People and trucks must arrive on time, liability concerns must be eliminated, and produce must be efficiently captured without disruption to the farmer's operation. Otherwise the farmer will quickly determine that the effort is cost prohibitive.

Establishing Relationships - Initial Pilot Projects

Armed with knowledge of potential supply and the knowledge that many farmers are willing to help, along with knowledge of key considerations in successfully operating gleaning and donation programs, I turned my attention to the third and most important phase of this project – establishing relationships and developing pilot projects. Establishing strong relationships with farmers and growers is critical for charitable food organizations; these relationships serve as the connective tissue which allows for the successful capture of produce with the potential to spread to other farms in the tight-knit farming sector. After contacting several farmers to introduce myself and describe my research, I followed up with visits to several farms in Bucks County – some of which include Solly Farms (Ivyland), Rook Farms (Ivyland), Rushland Ridge Winery

(Rushland), Tall Pine Farms (Rushland), Maximuck's Farm (Doylestown), Shady Brook Farms (Yardley), and Snipe's Farm (Morrisville). I also followed up with calls to survey respondents who indicated a desire to provide excess food to Philabundance, such as Skippack Creek Farm (Souderton) and Tabora Farm (Chalfont).

While there is potential to capture excess food from many of these local farms, I will focus on two pilots established at Solly Farms and Rook Farms.

Solly Farms

Solly Farms produces apples and peaches from its orchards, and grows other fruit and vegetables as well. I approached Bob Solly in early April of 2011 with the idea of capturing vegetables and possibly apples for the needy. I arranged a subsequent meeting at the farm with Philabundance. These initial conversations were representative of conversations to follow with other farmers in several ways. First, like many farmers I met, Bob indicated that he would be willing to help capture some extra produce for Philabundance. He stated that no farmer likes to waste food by plowing it under. Second, Bob noted that donations would be a challenge for many reasons – predominantly the issue of weather. He stated that two years ago he had considerable excess tomatoes and potatoes, while last year he had no surplus. Third, he suggested another person in the area to contact for gleaning opportunities – which led to a very productive conversation and yet another lead for sources of produce. This reinforced the idea that the local farming community is tight; all of the farmers know one another and that closeness can be very beneficial in attempting to set up donation programs.

Bob mentioned that he would be willing to provide some extra corn and potatoes, and he was amenable to a gleaning program if we could guarantee that gleaners would be

available when needed. Reliability was essential. In discussing the details, he mentioned that he would even be willing to utilize his own cardboard boxes – which was just one of many indicators of the generosity of members of the farming community.

While on the farm, Bob pointed out five trees of a particular varietal of apple (Summer Rambo) that ripened in August and indicated that Philabundance could have the majority of that harvest. In August, I followed up and offered to arrange to pick the apples, but Bob stated that the process would go quickly if he used his own people and generously picked and boxed the apples for us. As a result, we captured 1,395 lbs. of fresh apples which Philabundance distributed to the needy in our region.

Beyond the value of that initial donation, we have established a solid relationship with a caring farmer upon which to build – with the potential for more apples and produce this fall as well as extra rows of corn next year.

Rook Farms

After making an initial contact, I arranged a meeting in late April between Philabundance and another Bucks County farmer – Rook Farms. The Rooks are large growers of sweet corn and pick daily starting at about 2 AM to get their corn to local markets early. They have donated in the past to a mission organization.

In discussing the potential for a gleaning operation in which we would provide individuals to sort through “seconds” of corn (the less developed second ear on the stalk which did not qualify for market but was scattered in the fields), Bob Rook noted that reliability was the key – it was essential to be on time and consistent. When I inquired about liability concerns, Bob noted that we didn’t need any fancy paperwork, and that if his word was good enough for me, mine was good enough for him. His response was

truly refreshing, and indicates the solid values of members of the farming community. The Rooks recognized that many people are hurting (like the tornado victims in the south) and that many in our own area are hungry – and they are happy to help others if they can.

We arranged to return later in the summer when the corn was being harvested. In late July, I returned to the Rook farm along with two members of Philabundance for a gleaning test. The Rooks had generously sorted the morning's non-market grade sweet corn into three large bins, which they claimed was little in the way of extra work for them, and we sorted through this corn to capture high quality pieces for the food bank. Our recovery rate was approximately 40% that morning, and over four hours we captured one large bin of corn as well as a portion of another. After our initial test, Philabundance arranged to send a truck to the Rook farm three times a week and sort the corn at the food bank. After four days, we had collected roughly 6,400 lbs. of nutritious sweet corn for food bank constituents. In addition, an added bonus occurred as the Rooks began including market grade corn in the donations when they had excess quantities on hand, further increasing the quantity and quality of the produce.

Through August, the Rooks had donated 38,306 lbs. of sweet corn to Philabundance for distribution to the hungry. While excessive rains from hurricane Irene have temporarily put the project on hold as the fields are too wet to harvest effectively, we have established a solid relationship with the Rooks that can lead to additional donations this fall and next year.

These two pilots indicate how success can quickly build. For example, once the donation process was in place, the Rooks quickly began including market grade corn

when they had excess quantities on hand rather than letting it go to waste. In addition, at one point Bob Solly offered to drive his apples over to the Rook farm so that the driver of the Philabundance truck only had to make one stop.

In addition to these two pilots, I arranged a meeting between Philabundance and a local winery (Rushland Ridge) to discuss the potential for capturing excess fresh grapes. Rushland's owner had previously expressed interest to me in helping the needy if she had excess grapes on hand. Rushland produces several varietals of wine, and while these excess grapes would not be as sweet as those that one typically purchases at the market (the winery could also make them into grape juice but has chosen not to do so) they are fine for consumption and Philabundance expressed interest in capturing them for its constituents. Not surprisingly, Rushland's owner noted that their production is heavily tied to the weather. Due to state regulations, the amount of wine they can produce for resale is limited, so in good years they can have large quantities of excess grapes.

On the plus side, they typically harvest their grapes once a week (on Saturday afternoons) in September and October – which provides a consistent window for Philabundance to consider in arranging for pick-up and transport. Philabundance would simply have to provide a pair of individuals to load the grapes into boxes and transport them back to their facility.

As with the Rook farm, we had planned to have a test session at Rushland Ridge in early September. The weather interfered, however, as a hailstorm hit the winery in July and damaged a large portion of the crop. There is little recourse when such crop damage occurs, the damaged grapes cannot be salvaged in any meaningful way and are used for compost in the vineyard. While our plans to capture grapes this year are on

hold, we have established a relationship that can lead to donations of grapes next year. Similarly, contacts made with other farmers and survey respondents also have the potential to lead to additional donations next year.

CHAPTER 4

A VERTICALLY INTEGRATED APPROACH TO A PILOT PROJECT

My research into ways of effectively capturing excess food for the needy involved conversations with individuals at the Vermont Foodbank. The Vermont Foodbank is a dynamic organization whose mission is to gather and share high quality food while also nurturing partnerships in order to eliminate hunger in the state. The Foodbank serves 280 food pantries in all counties in the state, and recently distributed more than 7.5 million pounds of food in one year to 86,000 Vermonters in need (www.vtfoodbank.org, 2011).

I was impressed with the Vermont Foodbank's focus on the importance of promoting connections. The organization does not necessarily seek to bring all donations into its main facility, but recognizes that it might be much better to make a connection between the donor farm and a local food shelf. Such connections promote relationships at the local level; relationships which can be developed further for future donations and which minimize the environmental impact involved in transporting the excess food.

In addition to discussing the effectiveness of gleaning programs, I learned of the VTFB's key agricultural program, Kingsbury Farm, and considered how to develop that concept further in Pennsylvania.

Lessons from Kingsbury Farm

As noted on the Vermont Foodbank's website, the 22-acre farm (located in Warren, Vermont) is the result of a partnership between the Vermont Foodbank and the Vermont Land Trust. The Vermont Foodbank acquired the property from the Land Trust in 2008 with the intention of tying the farm's production to the charitable food system, which coincided with the Land Trust's mission (www.vtfoodbank.org, 2011).

The VTFB leased the farm to a farming couple under creative terms. The couple agreed to produce 30,000 lbs. of fresh produce for the Foodbank's network of food shelves in the region. In return, the farmers have access to the land, buildings, and equipment and are able to retain all revenue gained from the sale of crops (to outside parties and through the on-site farm market) beyond the 30,000 lb. quota. The farmers have the incentive to produce efficiently to maximize their revenue, and the food bank system benefits from their efforts at the same time.

The farmers produced about fifteen different products in the first year. After working with the agencies and discussing both what they could grow best and what the agencies wanted, production was narrowed to about eight crops – including nutritious root crops with a longer shelf life. They avoid highly perishable items such as lettuce. The food shelves also communicate the quantities they can handle, which allows the farmers to plan production effectively. The relationship between the farmers and the food shelves is important. Aside from guiding production decisions, many of the people working at the pantries are customers of the Kingsbury Farm market – so the sense of community is enhanced in interactions on site.

The farmers work about six acres at a time and pack boxes of produce for food shelves in the area that pick up the food weekly. The VTFB also sends a truck weekly to pick up the remaining produce after the local food shelves have been served. The couple treats the land as if they own it, managing it in a sustainable way so as not to deplete the soil. They have little food waste, and use culled crops for baking items sold in the market. While touring the farm I also noted youths from a juvenile detention program working on a barn – giving them an opportunity to do productive work.

My conversations with the farmers made me think that Kingsbury Farm is a great example of a triple bottom line project – with a focus on people, planet, and profit. The farm is driven by its social mission, and the farmers manage the farm with great respect for the environment. Yet they also recognize that the farm has to work financially, and I was impressed with the efficiency of the operation and the volume of production. This led me to consider the viability of similar vertically integrated projects to benefit the food bank system in our region.

Delaware Valley College – Partnership Proposal

Delaware Valley College (DVC) had been mentioned in conversations with local farmers as we discussed the issue of excess food. One farmer noted that in prior years the school had planted a considerable amount of crops as part of the educational process for students, and that produce went to waste after the students completed spring classes and were no longer available to tend the crops. He also felt that there had been a disconnect in the past between what was grown and what was sold in the associated farm market, thus leading to surplus. However, he felt that due to budget constraints, the school was now cutting back on production in order to minimize costs.

In considering these comments in view of the Kingsbury Farm model, I sensed an opportunity for a partnership between DVC and Philabundance – something like a "super-glean" program in which the College grew nutritious produce directly for the food bank, and Philabundance supplied the labor to tend it, harvest it, transport it, and store it for ultimate distribution to the needy in the region.

I developed a written proposal outlining my vision (see Exhibit 6) which I delivered to the Interim Dean at DVC in July. In that proposal, I described the twin

problems of hunger and food waste and pointed to the Kingsbury Farm model as a program to address both. I then outlined my thoughts for a similar "direct production" program at DVC in which the College would continue to grow vegetables and fruit rather than cutting back, and Philabundance would assist with the maintenance and harvesting of those crops. I pointed out a number of benefits to such a partnership for DVC. The College would be doing the "right thing" by producing food for the needy, and students and staff would take great satisfaction in that. I pointed out that the school could potentially generate some revenue from the program through farm market sales, and that more importantly, the school could attain significant "good press" from this partnership as community members applauded the effort.

Further, the project would allow the College to engage in a cutting edge sustainability program and learn from it – providing the opportunity to consider how to incorporate sustainability and social mission themes into other programs. The project would take advantage of the school's existing structure and help DVC contribute to the growing local food movement. It would also potentially assist in attracting talented students in the future, and would be a source of pride for current students who might then be encouraged to engage in other projects with a social mission.

Like the Kingsbury Farm model, I felt that this proposal had a triple bottom line aspect that would appeal to many.

Benefits for Philabundance included a steady quantity of fresh nutritious produce that is so desperately needed for its constituents. Like DVC, Philabundance could learn from this creative partnership and apply the lessons toward implementing similar projects elsewhere. Philabundance would also get good press from this venture, which could lead

to additional contributions and donations to help the organization in its mission to fight hunger.

I closed the proposal by commenting on cost and liability issues and requested an opportunity to bring representatives from DVC and Philabundance together to discuss a potential partnership.

Results

The partnership proposal was well received by the Dean at DVC, who called to thank me for my efforts and for raising ideas that were consistent with those that he had been advancing at the school. The Dean was interested in discussing the idea in more detail, so I met with him and another DVC employee along with three representatives from Philabundance on July 28th. In preparation for that meeting, I developed an initial document for the meeting to guide the discussion and reinforce the potential benefits to both parties from the proposed partnership (see Exhibit 7).

The meeting was extremely encouraging. The Dean clearly recognized the need to combat hunger and realized that the College had resources which could be used for such critical social causes. He also noted that the timing of the proposal is right, as the school is thinking holistically about how to use its resources (which include the recent donation of a 398-acre farm property) and that it fits with the school's overall mission. Also encouraging was his comment that while DVC's core mission involves making their students marketable, that mission also involves what the students do on their land – and that a positive social mindset is important.

In summary, the Dean stated that the concept was right, the timing was right (coming at a rare moment in DVC history to do something like this), and that he

supported the concept in principle. He noted that he had to ensure that there remained a link between the curriculum and the crop in this effort, and he felt that labor issues would be critical to resolve. In addition, he felt that other costs (such as fencing, irrigation, and seed) would be important to address with Philabundance.

He concluded by saying that he thought such a project was feasible, and that he had work to do in advancing the topic with others at DVC. He also thanked us for "just asking" for help on this issue. He suggested that we reconvene in October to reassess the situation. Philabundance is now taking steps to prepare for that meeting.

Overall, this relationship has the potential to capture a substantial amount of produce for the hungry. It also provides many other benefits for both DVC and Philabundance and could spawn other creative programs to fight hunger in our region.

CHAPTER 5

OTHER APPROACHES FOR PILOT PROJECTS

Pursuing Land Donations

During one of my visits in which I was discussing the Kingsbury Farm model, one local farmer mentioned that the ability to grow food is all around us in Bucks County, suggesting that individual landowners could be a potential partner in the effort to grow nutritious food for the food banks. As an example, she mentioned a friend with thirty acres of land who was only using one to two acres of that land, and suggested that individuals such as this might be open to projects in which they allowed organizations like Philabundance to establish pilot farming operations on a piece of their land.

Such pilots are a natural extension of the proposal developed for Delaware Valley College. In addition, they would likely be attractive to some landowners due to the tax deductions that could be gained from the arrangement. I believe Philabundance could seek out landowners who would be interested in experimenting with such a project, perhaps starting with a posting on its website or advertisements in Bucks County papers. This option could be pursued once the DVC project is further underway, and is a fine project for an intern at a local university. As with the DVC project, such an effort could be a case where “just asking” results in access to land for producing nutritious food directly for the food bank.

Also regarding land donations, I considered the same concept with regard to the Heritage Conservancy – a conservation organization based in Doylestown. Knowing that the Heritage Conservancy is focused on open space preservation and has an interest in sustainable projects, I arranged a meeting to pursue the vertical integration approach. I

outlined my prior research, discussed the Kingsbury Farm model, and questioned whether Heritage would be interested in considering a partnership in which they made some land available for Philabundance to grow produce directly for its constituents. I outlined some of the benefits to Heritage, including the good press that would result from such a venture and the lessons that could be learned and applied to other projects. Heritage indicated that they do have some small parcels of land close to populated areas which could serve as sites for such a project. They were interested in reviewing a detailed plan that would include the ability to generate some revenue which could be used to fund its other operations. While the revenue aspect presents a challenge in that it would require selling some of the produce (as well as the infrastructure and controls to make that happen), I think there is room to revisit the option of a pilot opportunity on a Heritage site in the future following successful implementation at DVC. This is another project worthy of an intern or a college student looking for a service project.

Harnessing Local Growers

Community gardens are on the rise in our region and provide opportunities for organization like Philabundance to form relationships and capture produce. In Doylestown, for example, a caring individual formed the Sandy Ridge Community Garden on the grounds of a church. The Garden has a dedicated group of workers with varying skills, and a Facebook site to keep everyone updated on progress. The Garden had a successful start and provided hundreds of pounds of fresh produce to a local pantry this summer.

I donated a small amount of my time at the garden this summer spreading compost and was impressed with the dedication of the small group of volunteers on hand.

Their spirit was inspiring, and was another example of the power of action by a small group. As with Kingsbury Farm, I watched the efficiency mindset emerge in a meeting of volunteers as one of the gardeners asked a food shelf representative what specific types of produce should be grown for the charitable organizations. I was also struck by another vertical theme in this situation, as the founder of the Garden was a landscape designer who channeled her job-related skills (along with her social mindset) into the growing effort.

I also met with members of the Health Promotion Council to discuss their Cultivating Communities Campaign (CCC). The goal of this program is to establish up to twenty-four community and school gardens over the next few years to provide fresh produce to the needy in Montgomery County. Philabundance could pursue a similar effort with schools and urban enterprises to capture additional produce.

Another approach would involve partnering with Community Shared Agriculture (CSA) organizations in the area. The idea would be to establish a relationship so that farmers could provide an option for individuals to buy a full share of produce, but split it so that half went to the food bank each week. This would be a fine option for many individuals for whom a full share is too much, allowing them to actively seek to reduce food waste and donate to a good cause at the same time. Second, not all CSA owners are able to pick up their share of food every week. Philabundance could work with the farmer to structure the process so that CSA owners had the option to “check a box” giving the farmer authorization to donate their share to the food bank if not picked up by a certain point each week. This approach has a logistical advantage; it allows the farmer to consolidate multiple shares for an efficient pick-up by Philabundance.

Harnessing Local Individuals

Food banks such as Philabundance should look beyond farms to harness the power of individuals, as passionate people can accomplish a tremendous amount (and their efforts will spread to others). A prime example involves Anna Chan and her work in northern California. Chan was raised by a single mother with limited finances and subsisted for years on canned goods donated by organizations such as the Salvation Army. To Chan, the fresh fruit that many take for granted was a luxury. Those memories inspired her to action years later. Startled by the amount of fresh fruit (oranges, lemons, and apricots) rotting on trees in her neighborhood, she began collecting the fruit daily in her own vehicle and delivering it to food banks – earning the name "the Lemon Lady" in the process (Pham and Young, 2011).

Chan's efforts indicate the power of the individual, and the power of "just asking" for assistance. Seeing nutritious fruit going unused, she crafted a simple letter that she would drop on the doorsteps of homeowners asking if she could pick their unused fruit and deliver it to the local food pantry. Many homeowners responded positively, and in her first year Chan gleaned $90,000 worth of fresh, highly nutritious produce – fruit that would have otherwise gone to waste. Her success led her to expand her efforts. She established relationships with farmers and captured their excess produce at the end of farmers' markets. She also harnessed her passion for gardening, launching a community garden and teaching low income individuals how to grow nutritious food. Chan also inspires others by sharing her story in her blog – motivating others to capture excess food and distribute it to the needy (Kivirist, 2010).

Another charitable effort illustrating the power of the individual is Willing Hands, a small non-profit group serving the Upper Valley region of New Hampshire and Vermont. Willing Hands was formed in 2005 by Peter Phippen, an employee of a food store who was upset by the amount of nutritious produce that was discarded each day. Phippen left his job to do something about the problem.

Willing Hands is a small but effective organization dedicated to capturing excess nutritious food and distributing it to those in need. The group utilizes one van which runs seven to eight hours every day; picking up food from more than 25 donors and quickly distributing it to more than 50 organizations in need. Willing Hands captured and delivered more than 200 tons of food in 2010 – the vast majority of which was comprised of fruits and vegetables which are so urgently needed by many (www.willinghands.org, 2011). The group has its own organic garden which it uses as an additional source of produce for the needy. Executive director Heather Bagley believes in "the power of small" and their results show just how much excess food can be captured by a few dedicated individuals.

Embracing New Growing Methods

While pursuing partnerships involving land donations for growing produce, Philabundance should also look into new agricultural growing techniques which present the opportunity to capture food. Individuals are constantly developing new methods of growing food. More gardens are sprouting up in small lots and on rooftops in the city. In addition, people are making use of innovative techniques in hydroponics and aeroponics to grow vegetables and greens on water or in the air. As with everyday greenhouses, such growers can have excess, and it would benefit organizations such as Philabundance

to seek out relationships with them. Philabundance could benefit such growers by increasing their visibility with postings about them on its website.

Working the Food Bank into the Business Model

Last, Philabundance should consider approaching a core group of farmers with the idea of making the food bank part of each farmer's business model. The California Association of Food Banks notes several ways that farmers benefit from its Farm to Family program – specifically regarding cases in which farmers receive some modest payments for excess produce (www.cafoodbanks.org, 2011). Although farmers in our area are clearly operating on a much smaller scale than the typical California produce farm, small payments, when available, may make a big difference to small farmers. Even without payments, establishing a relationship in which a farmer knows that Philabundance will consistently pick-up significant quantities of specific crops may allow him to plan on increasing his production, and potentially increase his revenues. If the farmer is confident that he will not bear substantial costs in disposing of any excess, but will instead earn tax deductions for it, he may plan on donating a certain percentage. Philabundance should consider identifying four or five farmers that specialize in a particular desirable crop, such as root vegetables. By enabling each farmer to plan on growing an amount beyond his normal production, Philabundance might be able to capture a sizeable variety of root vegetables with substantial shelf life.

CHAPTER 6

LINKING FARMERS, COMMUNITY, AND FOOD ORGANIZATIONS

My research leads me to believe that there are many caring individuals and farmers in the Philadelphia region who would be interested in partnering with charitable food organizations like Philabundance to help capture more nutritious produce for the needy. A number of recommendations to promote that linkage are listed below.

Establishing Relationships

The establishment of relationships is a key aspect in attempting to capture excess food. Charitable food organizations need to seek out food donations from farmers and growers in their regions. Farmers need to understand the benefit of such relationships. Community leaders and socially conscious citizens can help to promote them. Food banks should pursue relationships with local farmers in a number of ways.

First, food organizations like Philabundance should initiate proposals for donation or gleaning programs with a small number of *established* farms in their area. This should be done in the fall, allowing each farmer to plan over the winter and effectively build such a process into his business model. The food bank should explain the many benefits of a donor program to the farmer (doing good, good press, tax deductions, ability to reduce disposal costs, ability to help the environment, recognition on the food bank's website which can help their overall sales, etc.). The food bank should start small, and allow success to drive expansion.

Second, the food bank should identify some *new* farms, and take the same approach. More individuals from varied backgrounds are entering the food sector,

seeking to reacquaint themselves with the land and make a positive contribution to society. These are people that are struggling to make ends meet in their new venture, and they have a social mindset. For example, a recent article in the Philadelphia press covered the story of Landon Jefferies and Lindsey Shapiro, two individuals in their mid-twenties with degrees in political science and sociology, who scraped together meager savings to start their own farm – the Root Mass Farm in Oley, PA. These individuals are part of a new generation of farmers learning on the fly and using the internet and social media in their effort (Watson, 2011).

New farmers need help. The University of Vermont Extension's Center for Sustainable Agriculture recognizes this, and provides a wealth of information on production, marketing, and partnership opportunities to help them succeed through its New Farmer Project (www.uvm.edu/newfarmer, 2011). Vermont's Women's Agricultural Network seeks to help women farmers through its Growing Places program (www.uvm.edu/wagn, 2011). Similarly, new farmers in our region are great potential partners for food organizations like Philabundance. They are struggling to earn revenue, they need to learn more about various crops and farming techniques, and they could benefit from positive press. A food bank such as Philabundance is in a great position to help these new farmers. By arranging for donations of excess crops, the food bank can provide tax deductions which can be very helpful financially to a struggling new farm enterprise. In some cases a food bank can pay a low rate for produce, giving the farmer occasional minor revenue. By publicly recognizing the new farm's donations on its website, the food bank helps improve the farmer's standing in the community and potentially creates future customers. Importantly, by requesting specific produce, the

food bank can help the new farmer *learn* about planting and harvesting certain crops that he or she might not otherwise have planted. Such "on the job" learning would be extremely beneficial. Taking a cue from the Women's Agricultural Network, the food bank can also host seminars on growing techniques or business aspects of farming in order to help new farmers succeed. Further, the food bank might be able to obtain seed for the farmer through grant programs, and might also arrange for volunteer labor to help the farmer harvest a crop which could be split between the farmer and the food bank.

Food banks can also help new farmers create markets with local schools. For example, Vermont's Northeast Organic Farming Association (NOFA-VT) seeks to build relationships between communities, schools, and local farmers – one aspect of which involves working to increase the amount of local food served in schools daily (www.nofavt.org, 2011). By establishing relationships with new farms, Philabundance could seek to build on existing relationships with community and school officials and develop educational programs for students that would include topics such as the importance of local food production, environmental and sustainability issues, and social mission. Beyond the educational aspects, these relationships could well breed new revenue sources for the new farmers as school and community officials increasingly realize the value of sourcing locally.

Third, food banks should advertise on their websites for local farmers, and even smaller growers, that are interested in establishing a relationship to capture their excess and redirect it to the needy.

Through all of these approaches, the food bank can expect to establish some relationships with farmers that will lead to needed produce for its constituents, and those

relationships can be cultivated to generate more nutritious produce in the future. The point is to take the steps to create the relationships. As Anna Chan counseled me, "you need to knock on your neighbor's door, it's incredible how much you can get if you ask, but if you don't ask, you don't get." Food organizations should heed this advice and reach out to farmers as I did in this study to make the critical connections that lead to attainment of produce.

Website to Promote Linkage

Another item to help connect farmers and growers with excess food to the food banks, shelves and pantries that need it is a website. I have outlined such a website, tentatively entitled "PA Food Link-Up," in Exhibit 8. The purpose of the site is to provide an exchange platform to bring donors and charitable food organizations together with the goal of redirecting excess food to the needy. Donors can post information on excess produce that they have available on the site, listing key information such as location, type of produce, estimated quantity, and the time that the produce is available for pick-up.

Charitable food organizations like Philabundance would monitor the site daily looking for desired food donations in their area. Upon seeing a desired posting, an organization would "claim" that food by entering its organizational information and an intended pick-up time on the site. Entry of this information would signal a commitment to pick up and utilize the food for the needy. It is critical that the organization physically picks up the material after claiming it, as failure to do so not only inconveniences the farmer (and potentially dissuades him from continuing to use the system) but also results in a lost opportunity to channel that food to those who are food insecure.

Each entry on the site is a transaction, and the transaction is closed when the donation is claimed by a charitable organization. Unclaimed transactions are purged from the website if not claimed by a certain date specified by the donor.

The entry format on the site is deliberately basic in order to avoid bogging down busy farmers with data entry and potentially discouraging them from using it. The same holds true for the right side; it should be easy for charitable organizations to claim their donation so that they can focus on the important work of picking up the food and distributing it to those in need.

In sum, the website is a place in which the two key parties in the effort to redistribute excess food can come together, and the advantages to both parties are many. The site allows farmers to start planning for how to do something good with their excess food by building donations into their schedules. By using the site, farmers no longer have to physically transport donation material elsewhere; if claimed, the charitable organization does that work for them. If a donation is not claimed by a certain time, the farmer knows that he can proceed with other steps such as converting the excess food into compost or livestock feed. The site also provides an element of support for tax deductions for donated material that is picked up. On the other side, charitable organizations can effectively use the site to “shop” for desired produce in their area. The use of an alert feature for keywords such as “apples” or “tomatoes” or for specific zip codes can make this process even more effective. Charitable organizations can plan pick-ups into daily schedules, thus increasing efficiency and minimizing their environmental impact. Further, they can establish meaningful relationships with multiple farmers and

growers through the pick-up process – relationships which can deepen over time and help divert more food to the needy.

Building on Successful Pilot Projects

The pilot projects with local Bucks County farms are showing initial success. Philabundance and other food banks should capitalize on that success, looking to slowly add additional farms in a controlled manner that does not jeopardize the consistency with which the existing farmers are served. The tight nature of the farm community should help in that regard. The additional produce gained results in more efficient pick-ups, lowering the transportation cost per pound.

Further, food banks should continue pursuing creative donor approaches such as the proposal for Delaware Valley College. Such proposals have the potential to create numerous beneficial relationships while providing lessons to be applied in other programs.

Successful programs provide an opportunity to pursue additional donations as well. Food banks should capitalize on successful donor programs, particularly those that are well received by the community, and use the momentum to obtain additional resources (such as fuel-efficient vans, tools, seed, land, and additional volunteers) to aid in the effort to capture produce, reduce food waste, and bring the community together.

Increasing Partnerships

Food banks like Philabundance should continue to seek out partnerships that will help capture nutritious produce. In addition to the relationships with farms and Delaware Valley College created as part of this research, there is room to pursue relationships with individual landowners who might be willing to “lend” some acreage in the form of small

farming projects. Pursuing a similar relationship with a land trust such as the Heritage Conservancy is also a viable option for the future, and also a potentially great project for a college student looking to partner in a sustainability effort involving food.

Further, organizations like Philabundance should use their contacts with city officials to create urban gardens on urban properties that have been seized for taxes. For example, officials in Multnomah County, Oregon offer properties seized for back taxes to community organizations to establish gardens (Severson, 2011). Thinking along these lines might well lead to other possibilities for land to be made available to grow nutritious produce for the needy.

Partnerships with environmental groups have strong potential as well. These groups would be interested in taking action to reduce food waste by diverting it to the needy for the environmental benefits of reducing greenhouse gases and reducing landfill usage.

Eliminating Redundancy – Promoting Local

Establishing relationships and capturing food doesn't mean that all of that food needs to be transported back to a regional food bank like Philabundance. As became clear in my discussions with the Vermont Foodbank, often the best thing to do is to promote a relationship between the farmer seeking to donate and a food shelf or pantry in his area. Such action quickly gets the food to a location where it is needed, reduces the handling and environmental costs involved in transport, creates local relationships that can last, and ties all parties together in a cooperative fashion. Wal-Mart has recently begun more aggressive local food sourcing efforts in order to reduce fuel costs and reduce the potential for food spoilage (i.e. waste) in transit (Bustillo and Kesmodel, 2011).

It is important that charitable food organizations think similarly. When discussing donation possibilities, one farmer expressed a desire to route his excess produce to local pantries rather than have it transported several miles away to Philadelphia. While there is room to do both, the "local" theme should be encouraged to avoid redundancy.

Recognizing the Power of the Individual

Anna Chan's work shows clearly how one passionate individual can have a profound impact in channeling excess nutritious food to the needy. In just three years Chan has contributed 5,000 hours of her own time to her cause, using her own vehicle to collect over 300 tons of fruit and vegetables from urban trees and farmers' markets (Chan, 2011). Chan has gone further and rallied urban gardeners to the cause on her blog, offering to pick up their excess garden produce for free seven days a week. Her story and her efforts are important for food banks and pantries to embrace.

Charitable food organizations like Philabundance should seek out individuals like Anna Chan and utilize them – encouraging them to pursue their passion and assisting them in any way possible in order to capture more nutritious fruit and vegetables for their constituents. Using their websites to solicit such individuals, and publicly recognize their efforts, is recommended.

Recognition and Reward

Food banks should focus on rewarding donors and volunteers with genuine recognition, both one on one and on their websites. Willing Hands does an excellent job in this regard, listing financial contributors and donors on its website, and producing a newsletter in which the group recognizes the efforts of many individuals, including those who worked in the garden, drove the delivery van, and raised money for a new van. The

group also acknowledged the efforts of two Dartmouth students who raised over $5,000 (as well as considerable food supplies) for Willing Hands by getting fellow students to donate the leftover balances on their meal plan cards (www.willinghands.org, 2011). Not only does such public recognition motivate these individuals to continue volunteer efforts, it also motivates others to get involved and bring new creative ideas to the process. Organizations like Philabundance have a host of college students to draw on who could supply creative ideas for raising cash and food donations as the Dartmouth students did.

CHAPTER 7

CONCLUSION

As noted earlier, extreme weather conditions around the globe continue to hinder food production and create shortages of crops. At the same time, the world is "losing its ability to soften the effect" of such shortages, and must also provide food for an additional 219,000 individuals daily (Brown, 2011). Far too many individuals across the globe already lack adequate nutrition. Even with our vast resources, far too many Americans are food insecure while much nutritious produce goes to waste or resources are underutilized to produce food for the hungry. With as much as half of all food produced going to waste, there is an enormous need for successful projects in this arena.

I set out on this project to do something tangible to reduce food waste at the local level by diverting excess food to the needy. I worked to connect the dots by bringing local growers with excess produce together with a major charitable food organization (Philabundance) with the intent of creating lasting donation and pick-up relationships that can spread elsewhere. I also sought to create a donor mindset among growers by making donations easy.

My findings indicate that there is great potential benefit to connecting the dots at the local to capture excess food – and I believe it is essential to do so. In meeting with many local farmers and sending a survey to others, I found that a significant amount of excess produce exists in our region. Farmers have excess produce at many points throughout the growing season, and most of them are interested in helping individuals in need (many of them donate in some way now). So, the good news for organizations like Philabundance: the supply is there. In addition to the farmers, there are motivated

individuals who are willing to contribute their time and effort to help capture excess produce and deliver it to the needy – and these individuals need to be harnessed. The effort to effectively capture nutritious produce begins with the creation of strong relationships. Charitable food organizations must actively seek out relationships in local communities with growers including established farms, new farms, and even wineries. Food banks are in a great position to help such growers by providing good press through website postings along with opportunities to improve earnings through reduced disposal costs and tax deductions from donations. They can help create additional markets for these farmers, and they can even help new farmers expand their knowledge by requesting specific crops which they would not typically grow.

My work shows that there are also many opportunities for creative pilot projects to capture fresh produce, such as the proposal for a vertically integrated approach with Delaware Valley College. Other creative approaches include pursuing land donations, harnessing local growers (such as community gardens and CSAs), pursuing growers using new production methods (hydroponics and aeroponics), and partnering with farmers to work the food bank into their business models. Food banks should actively look to develop pilot projects like these at the local level and should apply lessons learned from them to new creative ventures. In all such cases, they should be aggressive in publicly recognizing the contributions of their partners.

While there is much potential to capture fresh produce in our region, and an increasing number of individuals in need of it, there are many barriers to overcome as well. Some of these barriers are beyond the control of charitable food organizations. Weather will always present a challenge, for example, resulting in feast or famine

situations where food banks either have excessive quantities of produce to handle in short windows or small quantities which create challenges for cost-effective pick-ups. High fuel prices provide additional challenges by making the food collection process more costly. Other barriers involve significant concerns that farmers have with food donations, including fear of liability as well as concerns over the ability of food banks to reliably provide gleaning crews or pick up donations promptly. Further, logistical challenges abound for charitable food organizations seeking to capture donated produce – such as obtaining needed resources (trucks, people, and supplies), coordinating those resources (for gleaning sessions, pick-up, and distribution of food), managing operating costs (such as labor, maintenance, and fuel), and moving the product through the system quickly enough to avoid spoilage. Overcoming these logistical challenges is essential for organizations like Philabundance, as a critical theme that emerged from this project is that farmers must be able to rely on the food bank to consistently adhere to its commitments. Farmers will quickly walk away from a donation program if the food bank fails to make pick-ups or provide gleaners on schedule.

To overcome these many barriers, organizations like Philabundance need to focus on several items. First, effective planning is essential. Meetings should be held with farmers in the winter months to establish donation agreements and iron out details such as the specific crops to be donated, anticipated quantities, the likely harvest period, the time slots in which the farmer would like pick-ups to occur, how communication will occur, etc. These meetings also give the food bank an opportunity to request that the farmer plant specific crops with a high nutrient content and or a longer shelf life.

Food banks should also increase their investment in logistics, and seek to hire individuals with logistics expertise, since relationships with growers will break down if the food bank cannot consistently pick-up donated material in the allotted time frame. On-site logistics experts will help the food bank live up to its commitments to growers by organizing viable and efficient pick-up routes. Such individuals can better address the challenges of picking up perishable produce in tight windows, and can reach out to motivated individuals in local communities for assistance in picking up material from donors. They can also prepare paperwork to protect farmers from liability.

Food banks need to adopt a customer service focus related to donors. They must be relentless in living up to commitments to service donors promptly. They must be nimble – able to react quickly from a logistics standpoint if the farmer requests a change to the pick-up schedule – and they must resist bureaucratic issues that prevent exceptional service to donor farms. Flexibility and a commitment to satisfying the donor are critical to maintaining the relationship – and food banks should maintain that service level with Zappos-like intensity. They must also assist donors with good press and prompt delivery of receipts for tax deductions.

Food banks should maintain a local focus – which reduces logistical complexity and increases the chances of effectively serving both donors and constituents. A local focus reduces the environmental impact of the food collection process, and also provides the opportunity to leverage relationships. For example, upon learning that the Philabundance truck was picking up corn at a nearby farm, another farmer offered to drive a donation of apples to that location to save a stop for the driver. A local focus should also include the realization that not all donated material should be transported

back to the food banks. In some cases, the food bank can provide more value by connecting the farmer to another local charitable group in the immediate area for prompt pick-up of smaller donations.

Organizations like Philabundance should harness the power of highly motivated individuals in local communities. These dedicated individuals, like Anna Chan, can be employed as coordinators for gleaning crews and can help maintain healthy relationships with farmers. They can also be used as drivers, picking up produce and delivering it directly to pantries or bringing it back to the food bank for storage and subsequent distribution. Motivated individuals in the educational sector are prime candidates as they likely have free time in the summer months, when produce donations are available, and they also have relationships with schools looking for potential service projects. As with donors, the contributions of these individuals should be recognized on the food bank's website.

Food banks should also maintain a collaborative focus, seeking partnerships with Universities and logistics companies as well as growers. Universities can provide talented students for creative project work in the effort to capture nutritious produce, while logistics organizations can provide valuable assistance in efficiently storing and distributing the food. Capturing excess produce has the added benefit of reducing greenhouse gas emissions and reducing landfill use, so partnerships with environmental groups have great potential as well.

In conducting this project I sought to increase awareness about the problem of food waste, while attempting to create relationships between local farms and food banks in the form of pilot projects to divert excess food to the needy. My intent, and hope, is

that success with these pilot projects will not only lead to sustainable relationships that will keep nutritious produce flowing to Philabundance, but will also increase in scope and spread to other farms and charitable food organizations.

Initial pilot projects with Solly Farms and Rook Farms have led to relationships that have resulted in the capture and transfer of roughly 40,000 pounds of corn and apples for the needy. Hundreds of needy individuals benefited from the food that was redistributed. These pilots have the potential to be sustainable programs which will lead to more nutritious food for Philabundance in the future. Contacts with other farmers in the greater Philadelphia region indicate the potential for additional successful pilot projects as well. With proper planning, a commitment to excellent service to donors, and a logistical focus, I believe that Philabundance can capture hundreds of thousands of pounds of highly nutritious produce annually from the tri-county area in the next few years.

The proposal and initial meeting with Delaware Valley College also has significant potential by creating a vertical link between the College and Philabundance designed to harness the resources of the school to produce food for the needy. In addition to mitigating hunger in the region, this program has the potential to benefit both DVC and Philabundance in many ways, and is a creative base from which other ideas (beyond those covered in Exhibit 6) can be spawned. Success at this level can provide valuable lessons for other charitable food organizations in how to partner with growers to capture food for their food insecure constituents.

One of my goals in this project was to do something tangible to reduce hunger. My initial efforts led to the capture of roughly 40,000 lbs. of nutritious produce for the

needy – produce which otherwise would have gone to waste. The lesson is that by creating relationships with local farmers and consistently adhering to commitments, food banks such as Philabundance can capture large amounts of desirable fresh produce for their constituents. By building on the success of these efforts with other farmers, and by seeking to implement other creative food recovery projects, food banks can capture even more fresh produce in the future to benefit both the needy and the environment.

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APPENDIX

Exhibit 1: Hunger and Poverty Statistics for the United States

Exhibit 2: Questionnaire for Survey of Local Farmers

Exhibit 3: Survey Results

Exhibit 4: Organizational Guidance for Gleaning/Donation Programs

Exhibit 5: Organizational Guidance for Gleaning/Donation Programs

Exhibit 6: Delaware Valley College (DVC) Written Proposal

Exhibit 7: Delaware Valley College Presentation for Meeting

Exhibit 8: PA Food-Link Website

Exhibit 1: Hunger and Poverty Statistics for the United States

General Statistics for 2009:

- 43.6 million people (14.3%) were in poverty
- 8.8 million families (11.1%) were in poverty
- 24.7 million (12.9%) of people aged 18-64 were in poverty
- 15.5 million children (20.7%) under the age of 18 were in poverty
- 3.4 million (8.9%) seniors 65 and older were in poverty
- 50.2 million Americans lived in food insecure households
- 17.4 million households (14.7%) were food insecure
- 8.8 million households (5.7%) experienced very low food security
- 7.8% of seniors living alone were food insecure
- 5.6 million households (4.8%) accessed emergency food from a food pantry

Children and Seniors:

- Nearly 14 million children are being served by Feeding America, and more than 3 million are five and under
- 20% of the child population in forty states and the District of Columbia lived in food insecure households in 2009
- 15.5 million (nearly 21%) of children in the U.S. live in poverty
- Nearly 3 million elderly persons are served by Feeding America annually
- In 2010, 7.9% of households with seniors (2.3 million households) were food insecure, and the number of food insecure seniors is projected to increase by 50% in 2025

Source: ***http://feedingamerica.org/hunger-in-america/hunger-facts.aspx***

Exhibit 2: Questionnaire for Survey of Local Farmers

Survey of Local Farms - Potential Food Donation Project Assessment (May 2011)

Dear Friend in the Local Farming Community:

Below is a brief questionnaire designed to assess the potential for establishing a donation and/or gleaning program to capture fresh local produce for distribution to the needy in the area through Philabundance. Please take a brief moment to complete the survey, add any other comments you might have, and return the survey to Steve Finn in the enclosed stamped envelope. Thank You!

1. Do you periodically have excess amounts of nutritious produce (fruits and vegetables) that go to waste (either by remaining unpicked in the field, disposal due to slight imperfections or size issues, etc.)?

Yes _____ No _____

2. If so, does that excess occur periodically throughout the growing season (ex. daily or weekly or monthly) or more on a one-time basis?

Periodically _____ One-time _____

3. If so, what types of vegetables of fruit do you have, and how much (rough estimate of pounds) or units?

Product	Amount	Frequency (Daily, Weekly, Monthly)

4. Would you consider donating (or perhaps selling) that excess to a Food Bank such as Philabundance (by planting an extra row, setting aside the produce from a specific tree, or contract farming)?

Yes _____ No _____

5. Do you have the potential for a gleaning crew to harvest excess crops that would otherwise go to waste?

Yes _____ No _____

6. Would you consider allowing Philabundance to arrange for a gleaning crew on occasion to harvest such excess crops at your location if there is no liability risk to you?

Yes _____ No _____

7. Do you have suggestions on how to facilitate a donation or gleaning process with you? If so, please comment:

8. Have you donated to Philabundance and/or local food pantries in the past?

Yes _____ No _____

9. Would you consider other creative options to build some production of vegetables and/or fruit for donation to the needy through Philabundance?

Yes _____ No _____

10. What is the rough size of your farming operation?

1-10 acres _____ 11-20 acres _____ 20-49 acres _____ 50+ acres

11. Do you have greenhouse operations?

Yes _____ No _____

12. Please list any other comments on how Philabundance could best serve you to get such a donation or gleaning process started:

Exhibit 3: Survey Results

Summary points from Survey (May 2011):

Total of 81 surveys sent; 6 returned undeliverable, 75 = base

In total, 15 of 75 responses were received (20% response rate)

6 of the 15 respondents (40%) said they periodically have excess amounts of nutritious produce

All 6 of those respondents indicated that excess occurred periodically throughout the growing season, rather than on a one-time basis

The excess produce cited included corn, tomatoes, winter squash, apples, peppers, basil, squash, and zucchini

27% of respondents said they would consider donating/selling their excess to a food bank such as Philabundance

20% of respondents indicated they have the potential for a gleaning crew - one commented this would be excellent, especially if the crew was comprised of adults only and prepared to work unsupervised; another just wanted to ensure that the correct crop was picked

33% of respondents would consider allowing Philabundance to arrange for a gleaning crew if there was no liability to them

More than half (60%) of respondents have donated to PHLB or food pantries in the past

33% of respondents indicated they have greenhouse operations

Of the 11 respondents that did not respond with a "Yes" to question 4 (regarding whether they would consider donating or selling excess to a Food Bank like Philabundance:

- 4 indicated they already take their excess to other food pantries
- 1 indicated they use their excess produce in their canning operation or for juice
- 1 indicated their excess crops go to their dairy cows

Exhibit 4: Organizational Guidance for Gleaning/Donation Programs

How To Start a Gleaning Program:

1. Find Donors
   - Seek out farmers, farmers' markets, community gardens, restaurants

2. Convince Potential Donors To Get Involved
   - Inform potential donors of the Bill Emerson Good Samaritan Act
   - Inform donors that their food donations can be tax exempt
   - Contact farmers during non-harvest months

3. Find a Food Bank, Pantry, or Soup Kitchen That Accepts Fresh Foods

4. Recruit Volunteers
   - Solicit volunteers; brainstorm for ideas
   - Assess availability, interests, and skills of volunteers
   - Remind volunteers of safety information and food handling protocol
   - Seek out regular volunteers who can build relationships with donors

5. Prepare for Your First Glean
   - Set goals and track progress
   - Obtain crates, boxes and necessary supplies
   - Confirm key details (time, location, etc.) with the donor

6. Maintain a Positive Relationship Between Donors and Gleaners
   - Respect the Produce
   - Use volunteers versus hired staff to do the gleaning
   - Bring token gesture of thanks to donor
   - Have volunteers arrive on time
   - Label crates for the donations
   - Do not rush the farmer
   - Create volunteer teams that can help build relationships with the farmers
   - Cultivate relationships between donors and gleaners

7. Make the Program Sustainable
   - Maintain good records

Source: http://www.serve.gov/toolkits/pdf/letsglean.pdf

Exhibit 5: Organizational Guidance for Gleaning/Donation Programs

Starting a Gleaning Program at Your Food Bank:

1. Locating Farmers for your Project

2. Approaching Farmers
   - Contact farmers during "off-months"

3. Anticipating Farmers' Questions
   - Inform potential donors of the Bill Emerson Good Samaritan Act
   - Consider additional waivers indemnifying the farmer

4. Gleaning Logistics
   - Obtain boxes and crates
   - Obtain harvesting tools

5. Volunteer Recruitment
   - Approach church groups, volunteer centers, schools

6. Leadership Development
   - Identify and recruit leaders
   - Collect key information on volunteers, including availability

7. Volunteer Waiver

8. Preparation Leading Up to the Day of Gleaning
   - Obtain key organizational information with farmer
   - Pass on information to your team
   - Bring food and water; arrive early

9. Transporting Gleaned Produce

10. Preparing Produce for Distribution
    - Wash/package produce as needed

11. Record Keeping
    - Maintain good records

Source:
http://www.northcoastnutrition.org/files/How%20to%20Start%20a%20Gleaning%20Program.pdf

Exhibit 6: Delaware Valley College (DVC) Written Proposal

May 15, 2011

To: Russell Redding

Interim Dean of Agriculture and Environmental Sciences

Fr: Steven Finn (Penn Organizational Dynamics)

Lisa Hodaei (Philabundance)

Re: **Proposal for Creative Partnership**

Summary

This document proposes a partnership between Delaware Valley College (DVC) and Philabundance in an effort to produce nutritious food for those in our region who most need it. The intent is to take advantage of the existing infrastructure and expertise at DVC in producing vegetables and fruit, and, rather than cutting back on plantings at this time, committing to plant a small amount of crops that can be harvested with the assistance of volunteer labor (organized by Philabundance) on a pilot basis. If successful, we would seek to expand the effort to produce a greater amount of fresh vegetables and fruit for the constituents of Philabundance the following year.

Background

We are currently in the midst of very difficult economic times. The recent recession has had a devastating effect on employment – leaving millions in the United States out of work. At the same time, home prices have plummeted, leaving many owing more on their home than it is worth. High energy costs have taken a further bite from Americans' disposable income, and food prices are on the rise. The combination of these and other factors has led to serious strain on household budgets, while increasing the number of individuals who rely on assistance from food banks such as Philabundance.

While demand for food bank assistance has increased, food bank supplies have decreased. The weak economy has forced businesses to "get lean" and increase efficiency like never before – reducing the amount of food material that in prior years would have been designated for donation. In addition, weather-related events have negatively impacted the production of various crops, some portion of which previously went to Philabundance and various food shelves. As a result, organizations like Philabundance find themselves in the

unenviable position of trying to provide meals for an increased number of people amid declining donations.

A serious challenge for organizations like Philabundance involves obtaining sufficient amounts of fresh, nutritious fruit and vegetables for its constituents. These individuals are in great need of highly nutritious produce to get the benefits of healthy eating.

Food Waste

One aspect of the problem of limited donations of nutritious produce involves food waste. One estimate indicates that close to 50% of produce does not make it from the farm to the table. In other words, it is lost "between field and fork" due to waste (Lundqvist, 2008). Some waste occurs due to a mismatch between production and consumer demand. Additional waste occurs due to slight imperfections in appearance or less than perfect size which makes the produce unsuitable for sale in the typical marketplace. Other waste occurs due to unexpected weather conditions and/or the perishable nature of fresh fruit and produce. Transportation delays are an additional problem – some material simply doesn't make it to market on time.

Reducing food waste is critical for a number of reasons. First, too many people are food insecure and need the food that is not making it to the table. Second, food waste is a serious environmental problem. Food that is discarded takes up critical landfill space, contributes greatly to carbon emissions as it decays, requires the use of costly fossil fuels in the transportation process, and involves wasted resources (such as water) in the production process.

Any program that successfully reduces food waste has serious social and environmental benefits. Americans must adopt more creative programs to reduce food waste and redirect that food where possible to the needy (or perhaps to alternative uses such as livestock feed and/or compost). One way to do so is to increase gleaning activities, in which farmers allow organizations serving the needy to harvest remaining fruits and vegetables from orchards and fields. Another is to collaborate with specific farmers to plant an extra row of a crop (or crops) and designate that produce for the food bank system at harvest. The same concept applies to fruit from orchards – farmers can earmark production from a certain tree (or trees) for food banks. Still more creative approaches involve donations of land for use by a food bank to produce fresh food directly for its constituents – a vertically integrated approach. An example of such an approach involves Kingsbury Farm and the Vermont Food Bank.

In 2008, the Vermont Food Bank acquired Kingsbury Farm from the Vermont Land Trust. The Vermont Food Bank then leased the Farm to a couple who agreed to produce 30,000 pounds of fresh nutritious produce for the Food Bank annually. The couple keeps all revenue obtained from their sale of the crops that they produce beyond the 30,000 lb. quota. Part of their revenue comes from sales to restaurants, while part comes from sales though the Farm's

on-site market. The farmers get the benefit of acreage, buildings, and equipment, and they have the incentive to produce efficiently to exceed the quota for the Food Bank and maximize their revenue. Links to the program are provided below:

http://www.vtfoodbank.org/OurPrograms/AgPrograms/KingsburyFarm.aspx

http://www.kingsburymarketgarden.com/index.htm

http://www.valleyreporter.com/index.php?option=com_content&task=view&id=1685&Itemid=38

Proposal For DVC

Vermont's Kingsbury Farm is a creative partnership between the Vermont Food Bank and farmers to efficiently produce nutritious food for the needy. The farmers are well-connected to several food shelves and have already altered their production to crops requested by individuals at those organizations – their "customers" for the 30,000 pounds of annual fresh produce. We have similar opportunities for creative partnerships in our own community. This document lays out a proposal to create a similar partnership between DVC and Philabundance which seeks to capitalize on DVC's existing infrastructure to produce food for the needy.

The concept is as follows. Each Spring, DVC students plant crops in their quest to learn about productive agriculture. They monitor those crops as they grow, but the semester ends and students depart for the summer before many crops are ready to be harvested. With tight budget constraints, there is incentive to reduce the amount of crops planted as there are no students on site for harvesting. Rather than cutting back on such vegetable and fruit production, this proposal seeks to reinstate it with the intent of harvesting the produce and donating it to Philabundance for direct distribution to the needy in southeastern Pennsylvania. In effect, this program goes beyond a traditional gleaning program in which leftover material in fields is gathered. It is a partnership that involves direct production for the food bank system, similar to the vertical integration aspect of Kingsbury Farm for the Vermont Food Bank. Such a program would enable Philabundance to obtain what it needs most – highly nutritious local produce – to make a positive difference in the diet of its constituents.

Benefits to DVC

What are the advantages of such a partnership to Delaware Valley College? First and foremost, the College and its staff and students would be providing direct assistance to those in need. All of these individuals can take great satisfaction in helping the needy – which is the *right thing* to do. The College can expect to benefit from the sense of goodwill that such a program will generate among DVC students and staff. During the interview process leading to this proposal, one farmer commenting on food waste and the potential for donations noted that "no

farmer likes to plow food under." That seems a valuable concept to instill in current students at DVC.

The second benefit concerns revenue. While DVC's non-profit status precludes the tax savings that would normally result from charitable donations, there may be potential to sell some of the produce in question for additional revenue – either through the College's market or at farmers' markets in the local area. Rough estimates of that additional revenue can be determined in the future. In addition, this program will promote additional emphasis on the concept of sustainability. Building sustainability thinking into everyday behavior can be expected to yield future cost savings in other areas.

Third, DVC can expect to obtain significant "good press" from this partnership. Community members will undoubtedly look favorably on the College as they learn of the partnership and its benefits to the needy in Pennsylvania. In addition, the College can expect to benefit from that good press at a broad level as others beyond the local community learn of the program.

Fourth, the school would be engaged in a cutting edge sustainability program and could learn from it – applying those lessons to other programs and expanding the concepts of sustainability and social mission within the curriculum. There is growing interest in the local food movement, with more and more consumers interested in sourcing locally to support local farmers while minimizing resource consumption in the transportation of food products. This program fits well with that growing interest. As such, it has the potential to make the school more attractive to prospective students, thus increasing enrollment and potentially the quality of future students. As noted above, it will also promote additional emphasis on sustainability thinking – a critically important concept that students expect to be part of their college experience.

Fifth, the project takes advantage of the existing structure that DVC has in place, and also makes a meaningful contribution to the growing movement involving local food production. For example, elementary schools in nearby communities are constructing gardens with the assistance of a non-profit agency to teach students the importance of local produce and nutrition. In addition, community gardens are sprouting up in many places – including DVC's home community of Doylestown. Consumers are embracing CSA (Community Supported Agriculture) programs to ensure that their families have continual access to fresh nutritious produce. Others are experimenting with growing some of their own food in personal gardens to save money and enhance their nutritional intake. By partnering with Philabundance in this manner, the College becomes a meaningful participant in a movement that will continue to grow.

This partnership has much potential for cultivating future students for DVC. Elementary schools with new gardens could be contacted to view the program at DVC, thus providing a

small source of volunteer labor but also creating a spark of interest in sustainable agriculture among some that might lead to future enrollment at the College. Similarly, high school students seeking credit for service projects would be interested in working on this project, and that work would provide excellent exposure to the College and might well lead to future motivated DVC students. The partnership and its multiple benefits could also be promoted with a "DVC and Philabundance Working Together" table at the school's A-Day event.

Last, DVC students would take pride in the program and the work that they contribute to it. As a result, the program can be expected to breed additional programs with a positive social mission. Such a process would provide added benefits for the students, the school, and the community.

Benefits to Philabundance

As noted above, Philabundance benefits from this partnership by obtaining a steady supply of fresh nutritious produce for the needy. In addition, Philabundance can learn from this pilot project and seek to use that knowledge to help implement similar programs elsewhere, thus laying the foundation for building a steady stream of highly nutritious produce for its constituents. Philabundance also benefits from the positive press associated with this program, which will help it to engage others in moving forward to reduce food insecurity in our region.

Costs and Operation

What are the costs of such a program? We are aware that these are challenging financial times for the College; thus, every effort will be made to minimize the costs of this program to DVC and make it a financial win. While this initial proposal is conceptual and has no numbers to back it up, the intent is to provide DVC with the opportunity for some limited revenue (perhaps through low-priced sales of certain crops to food banks when certain funds are available – or perhaps through the College's farm market or other similar local markets). Also, by promoting sustainable actions on campus, the school can be expected to save money in other areas in the future.

To address the problem of students leaving in April while the crops are growing prior to harvest, Philabundance would seek to organize a volunteer labor force to do basic tending of the crops, and to ultimately harvest them. The general idea is that DVC "lets go" of the crops when the students leave, and volunteers take over. Students seeking service credits would be one likely source of volunteers, as would members of local gardening clubs. Individuals in Church and service organizations with a desire to "give back" to the community would be another source of labor. Doylestown currently has volunteers contributing to the construction of a community garden, and such community-minded citizens would be perfect to help with the project at DVC. Undoubtedly, the work of the volunteers will not be perfect, but if a substantial

quantity of nutritious crops can be harvested with general weeding and watering and limited oversight, everybody wins.

Regarding liability concerns, DVC would be covered by the Good Samaritan Act, and Philabundance would have its volunteers sign an additional waiver freeing the College from liability in the unlikely case of an accident.

Philabundance would also seek support for seed and ancillary supplies to further help DVC achieve cost savings in exchange for partnering in this program.

At the risk of oversimplifying, we are seeking to do basic watering and weeding prior to harvesting while minimizing impact on the College and its operations. DVC could determine the amount of oversight warranted. We would seek to do a "pilot" on a small scale, address any problems that arise, and lay the groundwork to increase the size of the effort the following year. Essentially, we're looking to create a "super glean" by partnering with DVC to grow crops directly for the Food Bank along the lines of the Kingsbury Farm model.

Done successfully, this project could be a key innovative effort to successfully get more nutritious produce to those in great need of it, and it would likely lead to other creative programs. At the same time, it would provide substantial benefits to both DVC and Philabundance.

After reviewing this proposal, we would welcome the opportunity to discuss it with you.

References

Lundqvist, J., de Fraiture, C., and Molden, D. 2008. Saving water: From field to fork – curbing losses and wastage in the food chain. **SIWI Policy Brief**, SIWI.

Exhibit 7: Delaware Valley College (DVC) Presentation for Meeting

Slide 1

Proposal For Creative Partnership

DVC and Philabundance

PHILABUNDANCE

Driving hunger from our communities

Slide 2

Summary

- Address the serious problem of a lack of nutritious food/produce for many in our region
- Develop a partnership that combines DVC's strength in food production and PHLB's strength in directing food to the needy
- Pilot project: Plant crops at DVC that can be harvested with volunteer labor from PHLB

Slide 3

Background

- Challenging economy = double whammy
- Demand for food bank assistance is up
- Donations from supply chain are down
- Nutritious fruits and vegetables are in great need among many in the Philadelphia region
- Successfully redirecting excess food:
  - Helps the needy
  - Helps the environment

Slide 4

Creative Programs Needed

- New programs to capture excess food and redirect it to the needy are needed, such as:
- Gleaning
- Partnering with farmers and growers
  - Plant a row (vegetables)
  - Pick for your neighbor (fruits)
  - Donations of excess
- CSA donations
- Land donations – to grow for the Food Banks

Slide 5

Creative Example – Kingsbury Farm

- Vertically integrated approach
- Farm acquired by the Vermont Food Bank from the Vermont Land Trust
- Farm couple “leases” the land; commits to annual production target of nutritious produce for VTFB; keeps earnings from sales beyond their target
- Farmers have incentive to do well
- Farmers match production to desires of the needy
- Community involvement/goodwill
- Everybody wins

Slide 6

Creative approach at DVC

- Vertical approach linking DVC and PHLB
- DVC to continue with plantings in Spring rather than cutting back
- Allow PHLB to takeover crops for harvest after students leave with volunteers
- Produce harvested for direct distribution to the food bank system

Slide 7

Benefits to DVC

- Directly assisting the needy – the *right* thing
- Creates goodwill among students and staff
- Creates donor mindset among students
- Possible revenue source through sales at store
- Significant "good press" in the community
- A cutting edge sustainability program that can be leveraged within the curriculum
- Contributes to local food movement
- Attracts new students
- Breeds pride; can lead to other positive programs

Slide 8

Long-term Potential?

- If successful, possibly build into DVC's future development plans
- Expand sustainability concepts with curriculum
- Expand social mission within curriculum
- Possible opportunity for Ag. Training for specific groups (returning Vets, new citizens)
- Possible opportunity for Nutrition training program
- Possible expansion of partnerships with local organizations

Slide 9

Benefits to PHLB

- Steady supply of nutritious produce for the needy; helps alleviate food insecurity
- Opportunity to apply lessons from this program to other creative partnerships
- Good press; helps motivate others to join the effort to reduce hunger
- Additional partnership opportunities

Slide 10

Costs

- Our intent to minimize costs for DVC and PHLB
- Potential for some revenue, and intangible benefits (goodwill, etc.) intended to offset overhead costs to DVC
- PHLB handles the volunteer force, harvest, and distribution
- DVC exempt from liability

Exhibit 8: PA Food-Link Website

PA FOOD LINK-UP

The site designed to connect farmers and growers with charitable food organizations

Donor		Claiming Organization	
Donor	ABC Farms	**Claimant****	Helping Hands
	123 Main St, Doylestown, PA 18901		1 Main Street, Newtown, PA 18954
Contact Info:	215-123-4567	**Contact Info:**	215-456-7890
Posting Date	9/5/2011		
Term Date/Time*	9/9/2011 3:00 PM	**Pick-up Date/Time**	9/9/2011 4:00 PM
Food/Produce Available	Apples		
Estimated Amount	300 pounds		
Available Pick-up time	Tuesday after 3 PM		
Additional Comments	Fruit is picked, bring your own boxes	**Comments**	We will pick-up Tuesday at 4 with our van
	Call ahead to confirm pick-up time		
Purge date	9/10/2011		

(unclaimed transactions are deleted from the site as of this date)

** Donation offer expires as of this time*

*** By posting your contact information, you are committing to pick-up this food for charitable purposes in accordance with the donor's terms*