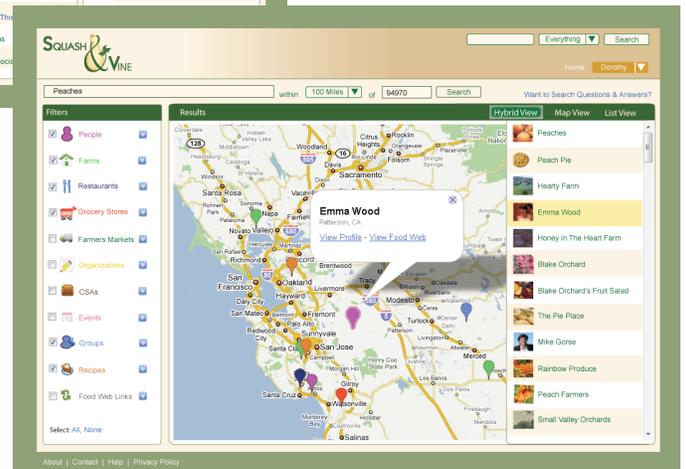




www.squashandvine.org

Connecting the Food Community



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ABSTRACT

At a time when our economy is weak, salmonella outbreaks are common, farmers are disappearing, and climate change threatens, it is more necessary than ever to critically examine our food system. The United States agricultural system has gradually evolved away from the celebrated system of sustenance envisioned by Thomas Jefferson, who once said, "Cultivators of the earth are the most valuable citizens" (Jefferson, 1785). Today, farmers rarely enjoy a profit, are disconnected from the people eating their food, and have no easy means to support or learn from one another. Additionally, consumers eager to eat fresh and healthy food are not sure where to turn, and retailers committed to sourcing locally face an upward battle finding producers and encouraging people to consider the value of food beyond its cost. Many of these problems stem from difficulties participants face connecting and sharing information throughout the food supply chain, and systems built to address these issues focus only on a small section of this exchange. This paper proposes a suite of tools focused around a new online social network to aid communication and information sharing between consumers, producers, and retailers (e.g. restaurants and grocery stores) involved in the food community. The methods we used to understand the space and define what problems exist are detailed, our goals are outlined, and our system, *Squash & Vine*, is presented. *Squash & Vine* will provide tools and new avenues for participants to share information and understand each other's connected problems while, at the same time, increasing transparency and accountability within the food system itself.

THE PROBLEM FOR SOCIETY

Although food is an industry which almost everyone in the United States supports daily, the modern food system is a far cry from the self-sufficient (i.e. healthy and secure) agrarian realm Thomas Jefferson and our country's other forefathers had in mind (Krall, 2002). The reality behind this industry is troubling. A lack of transparency and accountability in the food supply chain has led to negative health effects (e.g. outbreaks of salmonella, E. coli, and mad cow disease) that are difficult to contain or track to their source. National policies around food have conflicting goals. While the U.S. Department of Agriculture (USDA) recommends that everyone eat 4.5 cups of fruits and vegetables per day¹, the vast majority of farm subsidies goes toward sugars and animal feed. The health of our environment is also greatly affected. Taking into account long supply chains and transportation, field burning of agricultural residues, and land-use changes, the current food system contributes to approximately one-fourth of United States greenhouse gas emissions (U.S. Environmental Protection Agency [EPA], 2008). Additionally, at a time when our economy is weak, an abundance of cheap imported food² leads to consumers supporting foreign over domestic economies.

As a nation, neither our policies nor our eating habits align with a food system that supports the health of the people, their environment, or their communities. Consumers are increasingly addressing this misalignment by

¹ "Two cups of fruit and 2.5 cups of vegetables per day are recommended for a reference 2,000-calorie intake, with higher or lower amounts depending on the calorie level" (U.S. Department of Agriculture [USDA], & U.S. Department of Health and Human Services [HHS], 2005, January).

² Approximately 90% of lamb and mutton, 80% of our seafood, 30% of fresh fruits and nuts, and 13% of vegetables are imported from around the world (Jerardo, 2008, February).

becoming “locavores,”³ people who eat seasonal, locally produced food. This decision allows consumers to be part of a more transparent supply chain and connect with the people growing their food. It also provides a way for consumers to support their local economy.

In contrast to this consumer movement, however, the country soon may suffer from a lack of enough people who grow healthy food close to home. Ironically, at a time when many consumers are demanding fresh produce, we are losing farms at a frightening rate.⁴ Along with the nation's loss of farms comes a loss of the knowledge behind farming. Our current farmers are getting older⁵ and young people have very little incentive to start farming, knowing that they will likely face isolation and economic instability.

METHODOLOGY

While combating the issues outlined above will take a wide range of efforts spanning the realms of health, policy, and food security, any such actions are made more difficult by diverse and isolated information and communication pathways. With this in mind, we knew that in order to create a useful and successful solution we first had to immerse ourselves in the alternative food space and identify these information and communication gaps. To this end, we have been continually reviewing literature in the field and keeping up-to-date on food and farm policy issues. We have seen many documentaries and attended numerous workshops and panels and are always looking for new, exciting ways to expose ourselves to different perspectives of the local food system and adapt our designs to fit the needs of our target users. For further detail regarding these resources, along with a list of past and future events, please see our website.⁶

Integrating user research into our approach was a critical aspect of our development process. Products and services often fail not because of the technology itself, but because they are designed without proper consideration for the audience that will be using them. People and companies sometimes come up with “brilliant ideas” and implement them without speaking to potential users, only later to be puzzled by their end product’s lack of adoption. User research focuses not on creating solutions but on defining problems. As Mike Kuniavsky, founding partner of user experience design firm Adaptive Path, puts best, “When you know what problems people have, you are much less likely to create solutions that address the wrong problem, or worse, no problem at all” (Kuniavsky, 2003, p. 8).

Qualitative Research Study

With this in mind, we set out to understand the problems faced by different participants in the food system, interviewing 47 people ranging from farmers to chefs to direct consumers (see Appendix C for more information about our interviewees). We chose to focus our interviews on small-scale farmers (i.e. farmers who

3 The number of farmers markets reached 4,692 in 2006 (50% more than in 2001) and sales from those markets reached \$1 billion, the number of CSA (Community Supported Agriculture) programs increased over 300% between 2000 and 2001, and even Target is beginning to serve locally sourced options in their cafeterias (Gogoi, 2008, May 20).

4 Between 2006 and 2007 the United States lost 16,800 farms, which is almost 2 farms per hour (USDA, 2008).

5 The average age of a U.S. farmer increased from 55.3 in 2002 to 57.1 in 2007 (USDA, 2009, February 4).

6 See <http://www.squashandvine.org>.

operate direct marketing family farms and who do not grow Genetically Modified Organisms), retailers who source locally, and consumers interested in eating well. We believed that by focusing on this subset of people who were already interested in connecting with each other and working toward an improved food system, we would be able to create real solutions and eventually provide a space for a more extended community.

Corpus Construction

Consumers

We conducted interviews with 11 consumers. Most of our interviewees were from the Bay Area and they ranged in age from 23 to 37 years old. The majority of these interviews were face-to-face, conducted at a café or in the participant's home, although one participant but was interviewed over the phone due to logistical constraints. We selected a mix of people including those who primarily shopped at farmers markets, those who primarily shopped at grocery stores, and those who subscribed to CSAs. We also tried to select both people who felt strongly about eating locally and people who were interested in the idea, but had yet to convert that interest into concrete action.

Consumers were asked to explore such topics as: purchasing and cooking food, the farmers market, communication with local producers, seasonality, “organic” and “local” labels, and use of technology.

Producers

We conducted interviews with 15 producers and 4 apprentices. Most of our interviewees were from Northern California and they ranged in age from 22 to 59 years old. The majority of these interviews were face-to-face, conducted at the producer's farm or ranch but, due to logistical constraints, a few of these interviews had to be conducted over the phone. In order to select our producers we used a mixture of both snowball and theoretical sampling.

We began by interviewing some producers from our local farmers market, but then continued by selecting a broad range of producers to represent relevant groups across the possible space, making sure to talk with producers who grew different crops, used different distribution channels, lived in different areas, etc. While we focused on small-scale producers, we purposely sought out interviewees who may have held a different perspective than the ones we talked with previously, identifying people that could potentially counter our assumptions with an attempt to ‘sample for innovation’ (Becker, 1998, p. 87). For example, some producers had organic certification while others did not; some leased their land while others owned theirs. Additionally, we asked our interviewees to suggest potential people whom we could interview, a method called snowball sampling. This was especially helpful for finding apprentices since we were able to hear two sides of the same story from the view of both the apprentice and the producer. This was also helpful in our second round of interviews in which we focused on new producers based on suggestions from others.

Producers were asked to explore such topics as: motivation, problems/challenges and success, communication with other producers, communication with customers, distribution channels, “organic” and “local” labels, and use of technology.

Retailers

We conducted interviews with 18 retailers – 9 people associated with restaurants, 4 people associated with stores, and 5 people associated with other types of retail channels such as wholesale and home delivery. Our interviewees ranged in age from 27 to 56 years old and in experience with less than a year to 31 years of

experience working in their current position. All of the retailers were located in the Bay Area, primarily within San Francisco, Oakland, and Berkeley. The interviews were face-to-face and most were conducted at the retailer's place of business. Our selection of retailers, as with producers, was determined through theoretical sampling.

We began by interviewing a few chefs known for their mission involving local food or awareness of food issues, but then continued by selecting a broad range of retailers to represent relevant groups across the possible space, making sure to talk with retailers who had varied levels of experience, serviced different types of customers, were located in different neighborhoods, etc. For example, one retailer was in the process of opening a new restaurant while others worked at restaurants that had been established for many years; some were well-known for their food blog and online presence while others used the Internet primarily for research.

Retailers were asked to explore such topics as: motivation, problems/challenges and success, the logistics, challenges, and benefits of sourcing locally, communication with producers, communication with other retailers, communication with customers, distribution channels, "organic" and "local" labels, and use of technology.

KEY FINDINGS

Detailed notes were taken during each interview, and, as themes began to emerge, we coded each of our transcripts, applying a label to classify each piece of information. Through this process, more concrete and addressable communication gaps became clear. The central themes that emerged are listed below and a more in-depth analysis can be found in Appendix C.

Consumers feel **disconnected from the local food system** and **want knowledge about the people and growing practices behind their food**. In general, consumers do not have a clear conception of how food travels from farm to plate and, more specifically, they do not have a good grasp of seasonality and cooking techniques. As some consumers begin to eat seasonally, they struggle to cook unique vegetables that are unfamiliar to them and to find recipes that guide them towards seasonal dishes. Additionally, producers and retailers must go out of their way to sell less desirable seasonal produce or uncommon cuts of meat.

This disconnect among consumers stems from an **overall lack of transparency within the food system**. Without a sense of what is going on behind the scenes and under the ground, many consumers have little understanding of what producers do and the challenges they face. Additionally, clear links between producers and retailers are fairly uncommon since few retailers mention which farms their food comes from or provide any background information beyond the food itself. This lack of transparency and recognition leaves much to be desired from the consumers' end and leads to **producers feeling invisible and unappreciated**.

Although many consumers want to know more about the story and especially the people behind their food, they often **struggle to purchase food that reflects their values** (e.g. supporting local economies, preserving the environment, ensuring the freshest quality, and staying healthy). This struggle is often due to a **lack of appropriate metrics and quick, easy ways to access the desired information**. **Consumers want to feel good about what they buy** but their perception of current metrics such as organic certification are fraught with skepticism as many feel that large corporations have co-opted the metric and diluted its meaning.

While producers mentioned political issues as key challenges faced in their line of work (e.g. unfair farm subsidies, strict laws around organic certification, etc.), very few consumers seemed to be aware such struggles. **Consumers who would like to support their local food system must be aware of the broader issues facing producers, especially related to policy decisions.** The more that people feel connected to and a part of the farms they are supporting, and the more they see themselves as participants rather than as mere consumers on the receiving end, the more likely they are to take a vested interest in these broader issues.

There needs to be **more communication among producers and between producers and retailers:**

Since farming has its own unique challenges—both physical and financial—producer-to-producer communication is especially important and often very beneficial for exchanging ideas and advice, sharing resources (e.g. equipment or industrialized kitchens), and taking action as a group (e.g. increasing purchasing power or creating a new farmers market). Some of this communication currently happens via phone, fax, or email, **but many producers would benefit from a centralized space that encouraged more communication,** especially regarding issues like mapping routes in order to facilitate shared distribution efforts (e.g. one farmer could deliver his produce to a restaurant in another farmer's truck) and helping new producers who lack experiential, location-specific knowledge that comes easily to their more seasoned counterparts.

Currently retailers who source local ingredients have to spend a significant amount of time and effort interfacing with numerous local producers who have differing preferences and availabilities. Although **establishing these personal connections is enjoyable for most retailers, the everyday logistics of ordering are often overwhelming.** More efficient communications channels would allow retailers to spend more time on the aspects of these relationships that they enjoy and less time managing bureaucratic details.

GOALS

By drawing upon insights from our key findings we developed four high-level goals that we felt were the most important and feasible to address with Information Technology.

1. Promote Transparency and Lower Barriers to Eating Locally

Our solution should promote transparency by clearly linking all of the participants involved in a specific food sale, including producers, retailers, and distributors. It should lower barriers that consumers' face by helping them eat seasonally, connect to and communicate with producers whose practices reflect their values, and find retailers who source locally.

2. Support New and Struggling Farmers

Our solution should provide tools to help producers share resources and exchange advice and ideas, with an emphasis on encouraging new producers to participate and seek help.

It should also create clear channels of communication between producers, consumers, and retailers. This would allow producers to let others know of the struggles they face and to exchange information more easily with retailers to whom they sell. It would also encourage consumers to express their appreciation for the work put into their food, feedback that farmers both want and deserve.

3. Encourage Political Awareness

Our solution should promote discussion among all of the participants in the food system, allowing people to be more informed and aware of political barriers and their respective solutions. It should leverage both strong and weak ties and personal connections to help people become properly informed, organize around issues, and mobilize to take action.

4. Foster Delight

Our solution should emphasize the pleasure of personal connection and foster interactions that delight. It should allow people to explore the story behind their food in a fun, engaging way.

As design strategist Patrick W. Jordan emphasizes, people want “products that offer something extra; products that are not merely tools but 'living objects' that people can relate to; products that bring not only functional benefits but also emotional ones.” (2002, p. 6) Our solution should motivate people to participate and to support each other by bringing this emotional benefit to the surface.

CURRENT LANDSCAPE

Although other attempts have been made to address problems within the food system by improving information sharing and communication, an examination of the gaps and flaws in these respective strategies illuminates the need for our novel approach.

Some have tried to bridge the gap between consumers and producers by lowering the physical barriers between the two. Farmers Markets and CSAs⁷ are both methods developed to connect consumers to farms in their area and allow producers to sell their goods at retail value. While our interviews have shown that these methods are extremely valuable to both consumers and producers, there are still high barriers to entry for consumers, especially with CSAs (e.g. finding the right one, having too much food per share, going to pickup locations), and there is often not enough time for producers and consumers to interface with one another through these channels. These methods also leave out producers, especially new ones just starting out, who do not have the time or resources to start a CSA or sell at a Farmers Market. Additionally, neither Farmers Markets nor CSAs allow participants to see a broader picture of their food community.

Other approaches have concentrated on aggregating relevant information for consumers. For example, *GoodGuide.com*, a site developed at *University of California Berkeley*, recently extended its product database to include food in addition to personal care, household, and toy products. *GoodGuide* helps create transparency around corporate practices and provides health/nutrition, environmental, and social performance metrics for each product and company in its database. Though *GoodGuide* helps consumers align their purchasing decisions with their personal values, it does little to help consumers take the next step and utilize this information. For example, *GoodGuide* highlights the health benefits of fresh produce, especially in comparison to numerous packaged goods with low ratings, but it does nothing to help lower barriers to eating

⁷ A CSA (Community Supported Agriculture) program is a way for consumers to take on some of the financial burden of a farm. Consumers “subscribe” to a particular farm’s CSA program, paying a set amount to that farm for the season and getting a “share” of produce every week in return.

locally, lacking any information or tools to help consumers find or access such produce in their own neighborhoods.

LocalHarvest.org, an online portal of information about small farms, Farmers Markets, and CSAs, goes beyond *GoodGuide*, focusing on helping consumers find and access local produce, the vital step that *GoodGuide* lacks. Although an invaluable tool, it is simply that – a tool that lists information about farms. It does not encourage any type of community; consumers and producers have no incentive to stay on the site nor provide any kind of additional information, as evidenced by lack of activity around their review and rating systems.

Other sites such as *Foodzie.com* and *Farmsreach.com*, both launched in the past few months, focus on logistical aspects of this exchange, specifically facilitating ease of sale. *Foodzie* helps small and artisan producers sell directly to consumers while *FarmsReach* helps them sell directly to retailers (e.g. chefs and stores), streamlining producers' logistics and sales. However, both sites provide little, if any, information about the producers themselves. *FarmsReach* merely lists farm names in their search results without providing any information about the producers like their names or location. *Foodzie*, on the other hand, attempts to focus more on the producers themselves with background stories and photos, but the information presented is static, lacking the type of detail or dynamic nature necessary for consumers to feel connected to the producers. Although these sites could turn into valuable tools, which we could potentially integrate with someday, our present goals are distinct. While *FarmsReach* aspires to be “the Amazon of the local food movement,”⁸ our project will resemble “the Facebook of local food.”

Many existing online communities do address the important person-to-person connection around food, but do not include or highlight farmers or other producers as part of their community, leaving out key participants in the food system. For example, *Homegrown.org*, also launched recently, attempts to harness the fun of being involved in the local food system and provide a space for like-minded people to help and motivate each other but only involves consumers. Many recipe sites, such as *Nibbledish.com* and *Bakespace.com*, also encourage discussion and create excitement around food, but they have the same consumer-centric community. While such sites are fun to use and promote social activity, they are extremely focused and do not address certain goals that we feel are important, specifically inclusion of all of the participants and transparency throughout the entire food system.

As shown here, many websites have sprung up in this food-information landscape; however, none of them incorporate all of the participants in the food system while, at the same time, emphasizing consumer-to-producer/retailer, producer-to-producer, and retailer-to-producer connections. Unlike, *GoodGuide*, *LocalHarvest*, *FarmsReach*, *Foodzie*, and *Homegrown*, our solution will connect all of the different stakeholders throughout the food supply chain and highlight the *people*, the *activity*, and the *fun* of being involved in a food community. Without this kind of personal relationship, we believe that other systems will have a hard time convincing consumers that the local food system really matters.

⁸ Jennie Bowers, Lead Usability Tester at Om Direct, stated this as *FarmsReach*'s goal in a usability recruitment email.

PROPOSED SOLUTION

Our proposed solution is an information system that acts as a layer above and around the current local food system, connecting all of the participants involved and centralizing the information exchanged. This layer will take the primary form of an online community, *Squash & Vine*.⁹ As you can see from our homepage (fig. 1 below), we've designed the community to address the needs of the target groups we interviewed (producers, retailers, and consumers) and the goals of our project.



FIGURE 1. SQUASH & VINE HOMEPAGE

Our decision to focus our solution around Information Technology and the Internet is based on ease of collaboration, access, and the realities of geographic dispersion. According to our research, a large percentage of our participants are online, and nearly all use a cell phone for a large portion of the day.¹⁰

⁹ Our name was chosen for several reasons. Most importantly, we wanted something unique and memorable that would allude to our inclusive, cooperative spirit. We chose a hearty American fruit because many of the producers we spoke with stated a preference for growing "real," starchy crops, rather than just salad mixes and because it can be grown across the U.S. Also, our solution promotes support between all entities in the food system in the same way that the vine acts as a conduit for nutrients to the squash. Additionally, we liked that this fruit was one of the synergistic three sisters crops (i.e. squash, maize, and beans) grown by Native Americans throughout North America. These three crops were often planted together because the corn would provide a stalk for the beans to climb, the beans would enrich the soil with nitrogen and the squash's use of ground cover would mitigate an abundance of weeds ("Heritage Varieties of Corn, Beans and Squash," n.d.). *Squash & Vine* aims to allow its members to enrich each other's lives in the same ways these crops enrich each other.

¹⁰ When people think of the "agrarian lifestyle" they often envision a technophobic farmer; however, our interviews have not corroborated this. All of the producers we spoke with had a means of accessing the Internet and many who did not use a computer either had a cell phone or apprentices who were online. According to the 2007 U.S. Farm Census, 57% of farms have Internet access nation-wide (up from 50% in 2002), and this percentage is much higher in urban states-- states where consumers are more disconnected from farms, and where the farmer-consumer connection needs to be emphasized more (Bishop & Murphy, 2009, February 11). Also, this statistic is based on a farmer age of 57. Looking into the future, it seems likely that Internet access and cell phone use will only increase (Gross, 2009, January 8).

Our decision to create an online community instead of simply a website of information and tools is based on the importance of personal connection, feedback, and activity in engaging a group of individuals. Additionally, the value of online social networks has already been proven through sites like Wikipedia, Facebook, and Twitter.¹¹ Haythornthwaite et al., in *The Oxford Handbook of Internet Psychology*, writes about the value of online networks in that they provide individuals with more social capital by giving people the ability to activate weak social ties (Haythornwaite, 2007).

While we initially considered building upon an existing social network like Facebook or integrating with one of the current websites in this space like LocalHarvest, we decided against this idea because adapting such solutions to fit the unique needs of our target stakeholders and provide for all the necessary features would be inefficient compared to creating our own. An independent community built around food and farming that creates and harnesses excitement and energy specific to the food system is needed. Ravelry.com and Goodreads.com are successful examples of such thriving online niche communities, based around knitting and reading respectively. People join these types of communities because they know that all the members will be just as passionate about the given subject as they are and can provide advice and support. Additionally, these kinds of niche communities are important in order to allow people to control their identities and negotiate privacy among multiple social roles. Erving Goffman in *The Presentation of Self in Everyday Life* writes about strategic self-presentation and the theory that people selectively present different types of information to different groups of people (Goffman, 1956). Applying this to the design of online communities would suggest that simply creating one über-community with the capability to address every subject and share everything with everyone may not lead to the most successful solution.

Taking all of this into account, an extensible niche community focused on the food system seems most appropriate. The following sections will explain our solution in further detail.

Profiles

As our findings illustrate, there are many participants in our food system and each participant has multiple relationships with many others. In order to be successful, our solution must address all existing participants and relationships, not just by replicating them but by enhancing them. Squash & Vine's Entity-Relationship (ER) Diagrams for our back-end database (fig. 2 below) include all the entities and relationships that exist in our system.

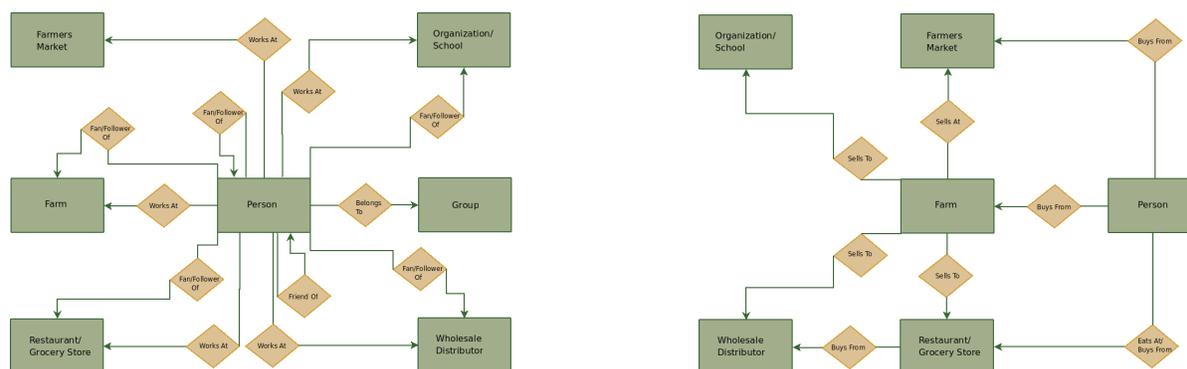


FIGURE 2. ENTITY-RELATIONSHIP (ER) DIAGRAMS

¹¹ Prominent researchers such as Ben Shneiderman are even calling for the creation of a "National Initiative for Social Participation" to leverage the power of these systems. (Young, 2009).

Each entity (illustrated by rectangles) in our ER diagrams represents a profile type within *Squash & Vine*. In order to provide a space for all the participants in the food system to interact, there needed to be a profile for each participant. Although not illustrated on the diagram, we also include food profiles, since food is the thread that connects all of our entities together. For our community we chose to create module-based profiles, where each module on the profile's main overview has another tab associated with it to "View more" (see fig. 3 below for an illustration of this structure on the profile for our sample producer Hearty Farm).

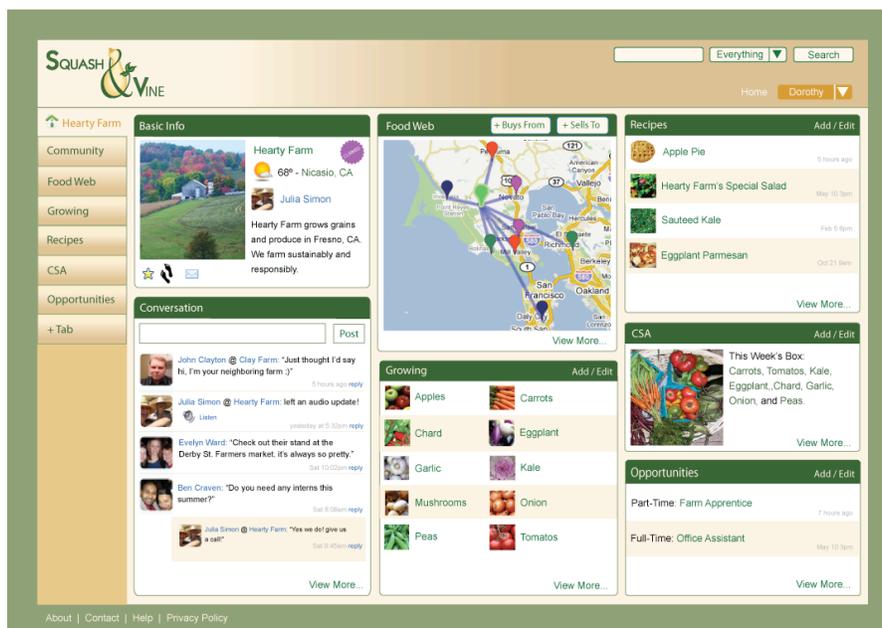


FIGURE 3. MODULE-BASED PROFILE FOR HEARTY FARM

We designed three tabs to be consistent across all entity profiles on *Squash & Vine* – the three that we felt were core elements of our community. These include the profile overview tab with the Basic Info module, the Community tab with the Conversation module and the Food Web tab and module. The Basic Info module displays all of the basic data about the entity including name, location, and weather in their area. We chose to include the weather¹² so that people would be more in touch with the seasons and the conditions affecting producers and others in the food system.

The Community tab appears as the Conversation module on the profile overview and provides a venue for easy Twitter-style comments including status updates from the workers at the entity associated with that profile and commentary from the greater community around the entity. When the user chooses to "View more" in the Conversation module or clicks on the Community tab, they are taken to a more detailed version (see fig. 4 on the following page) which includes all of the conversation and activity by and around the entity. For example, in our mockup, the tab not only contains updates from workers at Hearty Farm and comments left by other users, but it also shows that Angle Whitney, a worker at Hearty Farm, posted new photos of the Hearty Farm Intern Welcome event. Additionally, this detailed view lists all of the people associated with the profile. In this case, this includes all of the past and present workers and the fans and followers of Hearty Farm (fans and followers are explained in more detail in the Connections section following).

¹² The weather will be automatically displayed once the location is submitted, and dynamically updated each day.

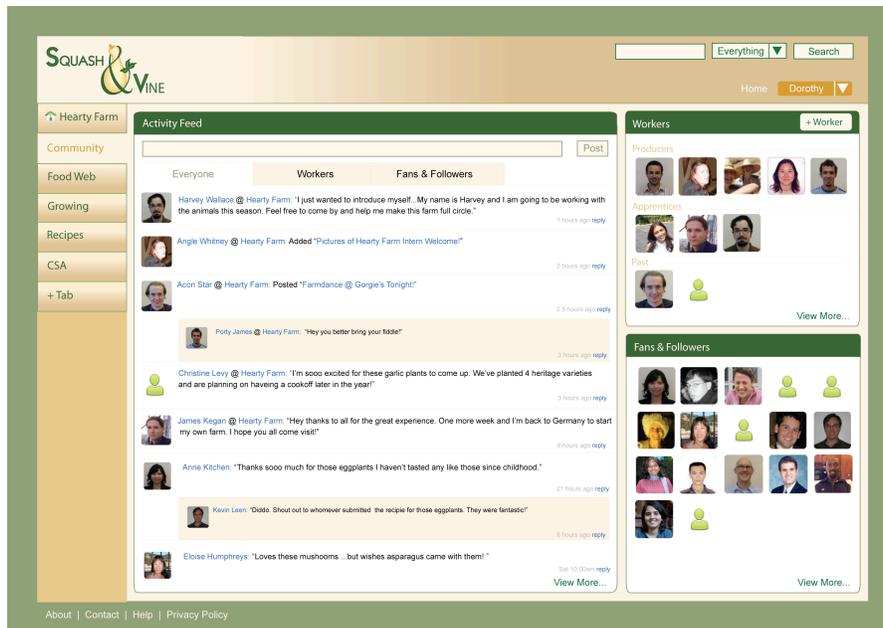


FIGURE 4. HEARTY FARM'S COMMUNITY TAB

The Food Web module displays the people who buy and sell from the entity and will be explained in more detail in the Connections section below.

Although all our profiles have these three core modules, the other modules can be chosen by the owner based on relevancy to the business, with the “+ Tab” link, where certain modules are available to every entity, and others only to particular entity types. In the restaurant profile, for example, you can see that Chez Henri has chosen to include a Mission module, a Recipe module and a Testimonials module, all available to other entity types as well (see fig. 5 below).

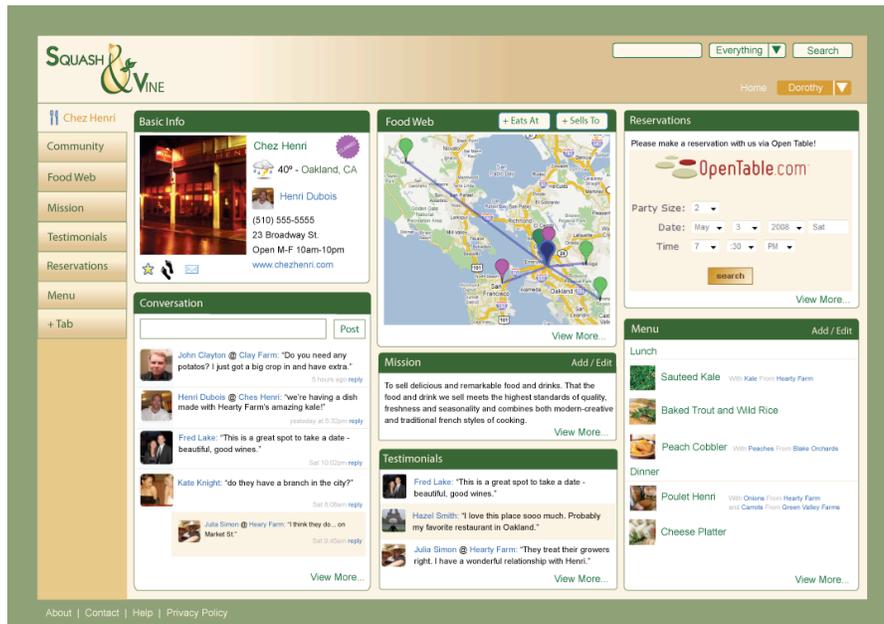


FIGURE 5. RETAIL PROFILE FOR CHEZ HENRI

The Testimonial module is easy to populate, as the owner can simply mark something from the Conversation module to be included in the Testimonials. Chez Henri also has a Reservations module which displays their Open Table widget and a Menu module, both of which are specific to restaurant profiles.

Our food profiles are slightly different from our other profiles, although they also are module based and include the Basic Info and the Community tab (see fig. 6 below). On a food profile, instead of a Food Web we have a Growers Map which, in this case, shows all the peach growers in the USA. The food profile also includes a module for Varieties and modules for our users to contribute information about how to grow the food and how to select it at a market or grocery store.



FIGURE 6. FOOD PROFILE FOR PEACHES

While we have profiles for retail establishments, farms, and others, it is important to note that these profiles can be associated with more than one person and that everyone on *Squash & Vine* registers as a person and has their own individual profile (see Appendix E, fig. 31 for an example of a user profile), not as a producer or retailer. In this way, more than one person can indicate that they “work at” a specific establishment. We chose this method so that our members would not be inextricably bound to their place of work and could explore and contribute to *Squash & Vine* without a continuous association. This way, members could also be associated with more than one establishment (i.e. if they currently work at more than one place). They could also use the establishment's profile to share information with other people at their place of work, which will be elaborated upon later.

Direct Connections

There are several ways for our members to draw connections between profiles (refer back to fig. 2 to see these connections in our ER diagrams). These options include: connecting profiles on the Food Web, adding people as “friends,” “following” entities, “fanning” entities, and adding tags.

Food Web

The food web is an important part of *Squash & Vine* as it provides more transparency regarding the purchasing path of food, and allows people to see the story of where their food comes from and goes, and who interacts with it along the way. Each member's Food Web will be displayed as a map module on their profile, which can be viewed in more detail (and in list view) by clicking on "View more" or the associated tab (see fig. 7 below). It is important to note that a user will be able to see the Food Web from more than one hop away. For example, in the mockup shown, our user Dorothy is currently viewing all of the entities that buy from and sell to Hearty Farm; however, if she wants to see who buys from and sells to the entities on the web she's viewing besides the farm (i.e. other farms that sell to the establishments Hearty Farm sells to, or people that buy from the establishments), she can click "See 2 hops away." More detailed options for viewing the Food Web can be seen by clicking on the blue down arrow to the right of "Food Web Links." Additionally, we wanted to make the Food Web as relevant to the user as possible, so if any of Dorothy's connections are on the food web, meaning they buy to or sell from Hearty Farm, we call out this fact in the right-hand corner (in this case, 2 of them are).

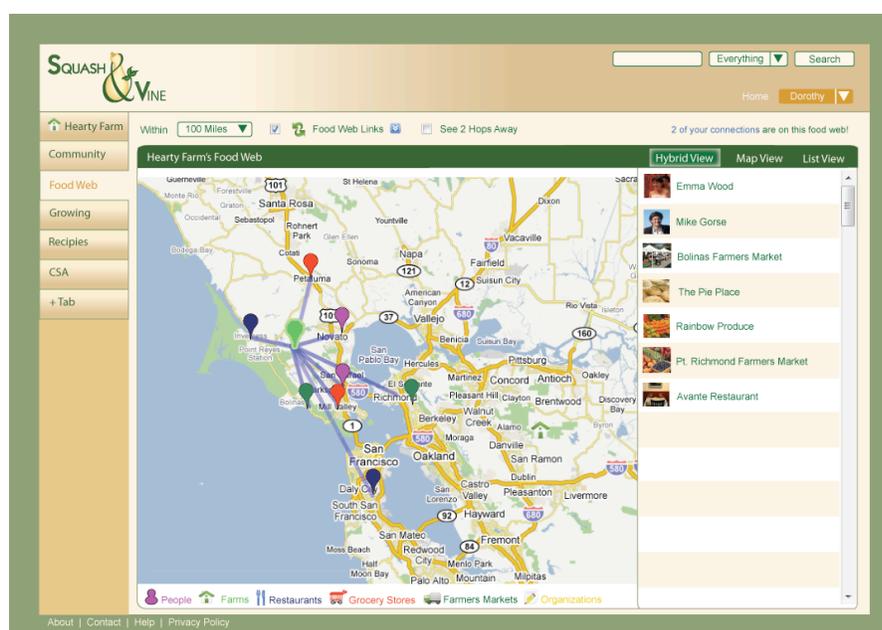


FIGURE 7. HEARTY FARM'S FOOD WEB TAB

Friend, Follow, Fan

While the Food Web illustrates connections involving direct transactional purchases, we also wanted to allow for less formal connections within *Squash & Vine*, so we introduced "friend," "fan" (represented by a star) and "follow" (represented by footprints) (see fig. 8 to the right).

The "friend" option, indicating a friendship between two members, is only a person-to-person connection and does not involve any other entities. A user makes this connection using the "+ Friend" button which we intentionally chosen



FIGURE 8. INFORMAL CONNECTIONS

instead of just an icon since this is the only one of these three connections which requires a confirmation by the other user. While our “friend” option is much like *Facebook’s*, we deliberately decided that unlike *Facebook*, a *Squash & Vine* user does not automatically receive updates whenever they friend someone. In fact, users do not receive updates about anything or anyone unless they explicitly “follow” the person or entity. When a user “friends” someone, they are then asked if they would also like to follow the person, and, if they do, they receive updates from them. Unlike “friending,” users can “follow” any type of entity on the site, not only people, which amounts to subscribing to their “activity feed,” and having this activity show up on their home dashboard (see fig. 9 below).

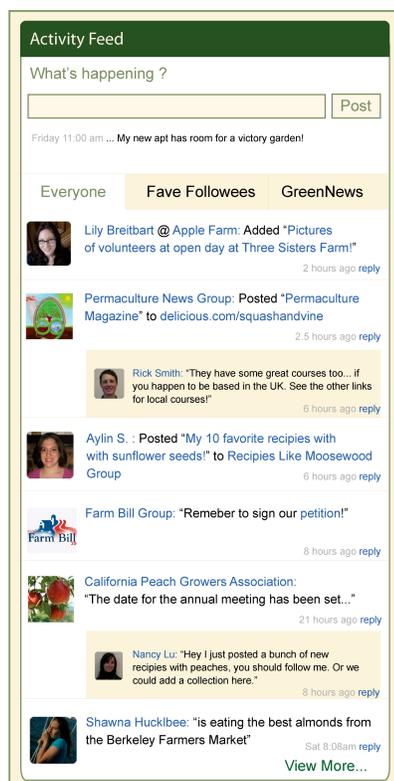


FIGURE 9. A USER'S ACTIVITY FEED

In order to provide users with maximum control over their activity feeds, we have created filters which they can customize. For example, in the mockup shown Dorothy has created a “FaveFollowees” filter in which she has included her favorite people and entities like farms and restaurants that she is following as well as a “GreenNews” filter. When she clicks on “FaveFollowees,” she only sees updates from the people or other entities in that designated filter. Her “GreenNews” filter allows her to quickly see updates from all of the news-related groups she belongs to.

We believe that not all users will want to subscribe to an entity, group, or food. They may prefer not to have hundreds of updates on their activity feed, but they still may want to show others that they are “fans” of particular entities. For example, a user may want others to see that they adore peaches, but they may not want to receive updates whenever something happens on the peaches page. Additionally, a user may move to a different city and no longer wish to receive updates from a particular farm or restaurant, but they still may want to show support for the establishment that they adored for so many years. The “fan” option is a way for users to navigate these complexities.

Users can also follow items that are *not* people or other entities. For example, they can follow food pages, which allows them to keep up-to-date on information about their favorite food, including such things as whenever a grower joins who grows the particular food, whenever anyone posts a recipe with the food, conversation around the food, etc. Additionally, *Squash & Vine* allows users to create interest groups (i.e. Peach Farmers, Vegans, etc.) to find and communicate with like-minded users within the community. Joining groups is an important part of creating and maintaining one’s “social self,” since such affiliations are a form of what Goffman calls expressions “given” or intentional signals used to present oneself (Goffman, 1956). Though we recognize this importance, we have specifically designed groups to be active spaces that promote discussion and help facilitate mobilization efforts rather than merely act as “identity badges.” In order to encourage this type of active space, when users join a group the group’s activity automatically appears in their activity feed (i.e. a follow relationship is automatically created which can then be opted-out of through user settings), so they can keep up-to-date on the group’s activities (e.g. when a new member joins, when a new message is sent, when a new event is created, etc.). Hopefully this will encourage groups to become vital and dynamic parts of the *Squash & Vine* community rather than merely static identity badges that users forget or ignore.

If a user works for a farm, restaurant, or other organization, she can follow on behalf of herself or on behalf of the establishment she works for. As mentioned before, this allows the user to maintain her own identity outside of her place of work. Perhaps more importantly, it allows workers to share information with each other. This activity is then viewed and managed on the user's home dashboard. For example, if our farmer Julia (who is connected with Hearty Farm) follows the activity of a chef on behalf of Hearty Farm, anyone else associated with Hearty will also see that chef's activity. In order to not be overwhelmed by this activity, however, Julia can filter out the farms' subscriptions or her own using the toggles on the Activity Feed (see fig. 10 to the left).

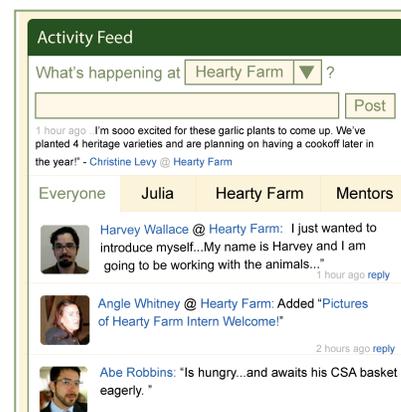


FIGURE 10. A FARMER'S ACTIVITY FEED

Tagging

Another way that users can explicitly connect profiles is through tagging. Some tagging is implicit and some of this is explicit.

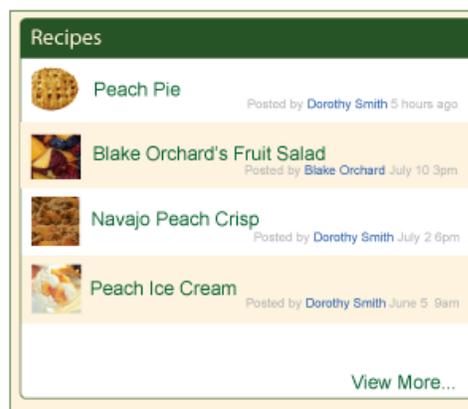


FIGURE 11. IMPLICIT TAGGING EXAMPLES

Implicit tagging occurs mainly with food; for example, if a farmer lists the food that they grow, this list is automatically linked to that particular food's page. Also, the farmer is automatically added to the Grower's Map on the food profile page (see fig. 11 above).

Similarly, when a user simply lists ingredients during the process of uploading a recipe, the food pages for those ingredients become automatically tied to that specific recipe which then is displayed in the Recipe module on the respective food pages (see fig. 11 above for the Recipe module from the Peach page).

Explicit tagging occurs mainly in free-form modules like the Journal module (see fig. 12). Here, the user has written a journal entry about her activities at her local farmers market and tagged all the entities she mentioned.



FIGURE 12. EXPLICIT TAGGING EXAMPLE

Facilitated Connections & Finding Information

In addition to networks formed through explicit connections between profiles, we provide avenues for users to contact each other, get help, share news, and find information. These avenues include a Question & Answer (Q&A) module, and search, among other things.

Question & Answer Module

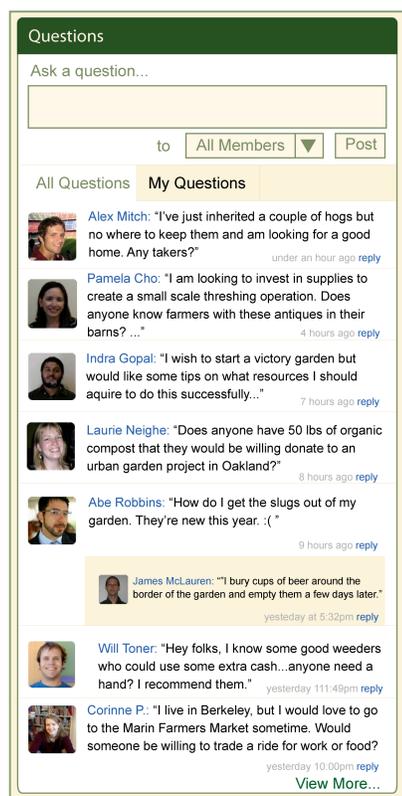


FIGURE 13. Q&A MODULE

As shown in our findings, many producers mentioned a desire to have more ways to connect and share information with other producers. Additionally, consumers and retailers wanted to know all kinds of things about farms and food. To address this need, we created a Q&A section of *Squash & Vine*. This module appears on the user's home dashboard just to the right of their activity feed (see fig. 13 to the left).

The basic idea behind the Q&A module is that a user can quickly type in a question, and have it automatically displayed in the “questions” section of the Q&A module on the home dashboard of other *Squash & Vine* users without feeling like they are burdening these users. A key element of this module is that users can send their questions to particular subgroups of the *Squash & Vine* community, to allow for targeted queries. As you can see in the mockup, we provide a drop-down menu with the possible subgroup options. These subgroups already include “All Members,” as well as “All X” where X is each entity type (i.e. “All Farms,” “All Restaurants,” etc). So for “All Farms,” the question would be sent to every worker of every farm on *Squash & Vine* and for “All Restaurants” it would be sent to every worker of every restaurant on *Squash & Vine*. “All Friends” and “All Fans & Followers” will also be an option in the dropdown. As with the filters, a user can also create their own customized subgroups of people and entities to show up as options in this drop-down menu. Additionally, when a user creates a filter for their activity feed, this filter group is automatically added to their Q&A drop-down menu (this of course can be undone easily if the user prefers not to have this).

Search

In addition to specific tools for users to share information, we also provide detailed search functionality so that users can find and explore the information created in our system.

Search is not only extremely useful, but necessary on the web, as shown when Bernard Jansen and Udo Pooch refer to the Internet as a “whole new searching environment.” The user interface for search also makes a big difference in providing effective results. Internet users now expect free-form search boxes (Resnick & Vaughan, 2006) which is useful but can be limiting since they seldom use boolean operators or links for “advanced searches” (Jansen & Pooch, 2001). Therefore, we chose to include a free-form search box to create a comfortable environment for our users but also to provide selectable categories and filters on the main search interface for easy search refinement.

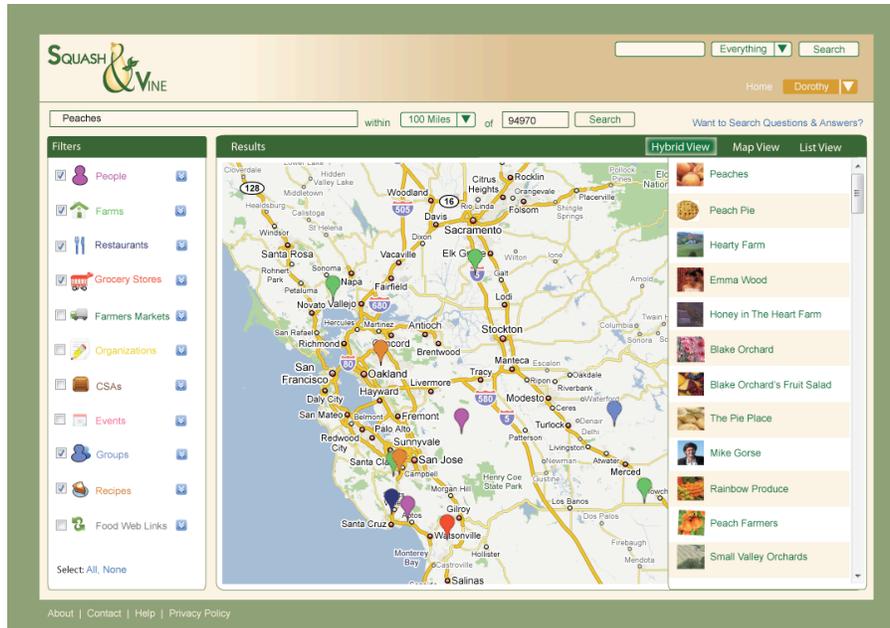


FIGURE 14. SEARCH FOR “PEACHES” WITHIN 100 MILES OF 94970

Our search page can be accessed through the search bar on the top right corner of the site, which, by default, returns everything within 100 miles of the user's location (or, if the user is not logged in, within 100 miles of the location that maps to their IP address). The default search results are displayed in a hybrid map/list view, however complete map and list views are available. We decided to include a map in the display of our default search results to help tie our users to the geographic community around them and to associate the food system with the land on which it relies. If the user would like to see more detail she can access the list

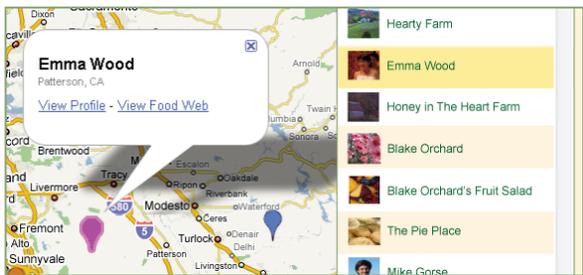


FIGURE 15. SELECTED ENTITY IN SEARCH

view which shows more information for each result. Once a user is viewing the search page, she can conduct a more pointed search to see only the entities she is interested in (for example, in the mockup, our user Dorothy is only interested in People, Farms, Restaurants, Grocery Stores, Groups, and Recipes). If a user clicks on an entity in the map, she can easily go to the entity's profile or Food Web (see fig. 15).

Users can also choose to filter in more detail by clicking on the blue boxes to the right of each search category. For example, if Dorothy is interested in CSAs but wants to find CSAs that are a particular price or run for a particular season, she can click on the blue box and refine her search with the provided filters (see fig 16).

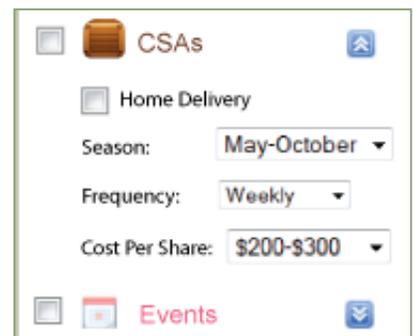


FIGURE 16. SEARCH FILTERS

Data Flows

While we provide connections and the ability to find information on the *Squash & Vine* website as described above, it is important to note that *Squash & Vine* goes beyond a site only accessible on the web via www.squashandvine.org. When it comes to the design of information systems, ease of use and the utilization of many platforms and tools is essential.

We will enable people to connect to the rich body of data created on *Squash & Vine* through many interfaces (see fig. 17 below). Ready access to the right information, in the right form, at the right time (e.g. at the point of sale) and the ability to add to this body of information quickly and easily (e.g. while at the farmers market) are important to continued activity and engagement in our community. We aim to make *Squash & Vine* a valuable addition to the existing food-information landscape and intend to integrate with as many existing tools as are helpful and available.

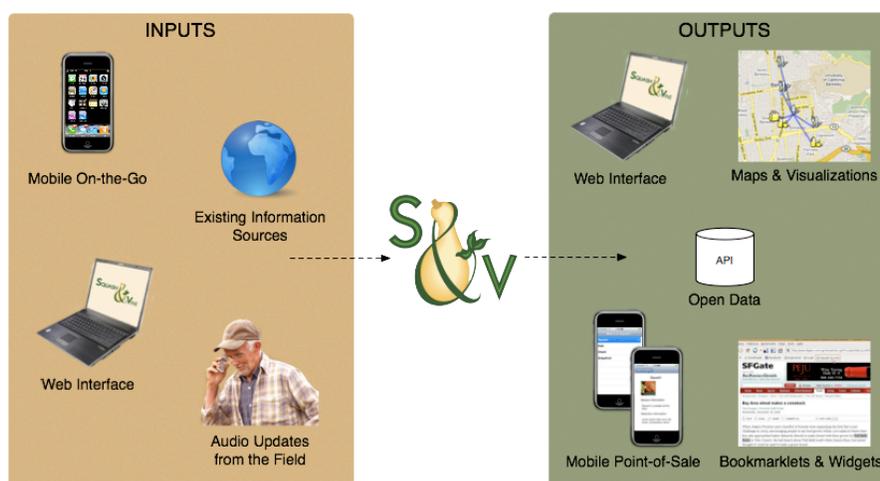


FIGURE 17. DATA FLOW DIAGRAM

Inputs & Data Collection

The usefulness of many of our proposed features depends on a critical mass of both data and users. We plan to initially populate our database with stubs for farm profiles drawn from already existing online databases of small farms including the *University of California Small Farm Center* and *LocalHarvest*. Certain attributes of these farm profiles can then be fleshed out by any member of *Squash & Vine* until the producer claims ownership of the farm profile.

In general, the process of ownership and data contribution around profiles will work as follows: Any member of *Squash & Vine* can add a “stub” profile of a farm, a retail outlet, an organization, or a food (and as mentioned above with the farms, some of these stubs will be populated by *Squash & Vine* via data capture from existing information sources). This stub will include, at the very least, the name and location of the business or organization. At that point any member of *Squash & Vine* can contribute to the majority of fields on the stub profile including commentary, metadata, and photos.

If a business owner or producer sees their business on *Squash & Vine* as a stub, they can “claim ownership” of the stub through a validation process similar to *Yelp.com*'s. In this model, a business owner first creates an account on *Squash & Vine* and then identifies himself as an owner of the specific profile. At this point *Squash & Vine* calls the owner at his business number to verify ownership. Once he is validated, the profile is marked as “Claimed” and the owner is shown in the Basic Info module (see fig. 18 below). At this point, the owner can set permissions around what information can be publicly edited, although certain modules such as Conversation will remain perpetually public.



FIGURE 18. UNCLAIMED (LEFT) AND CLAIMED (RIGHT) RESTAURANT PROFILE

Any member of *Squash & Vine* can initiate a "buys from" or "sells to" relationship in order to populate the community with this valuable data. If one or both of the profiles involved has been claimed by the business owner, then the relationship must first be confirmed by each owner before it is publicly available. However, if it is initiated by one of the business owners involved in the relationship, then the initiation itself is considered confirmation on that owner's behalf and, unless the other profile page has been claimed, the data will be publicly available immediately.

In regards to other parts of the profiles, as mentioned before, any *Squash & Vine* user can contribute data until the entity has been claimed. This capability is simple and easy to use, visible via “Add / Edit” links at the top of each editable module (see fig. 19 below). Based on our findings, producers and retailers were very

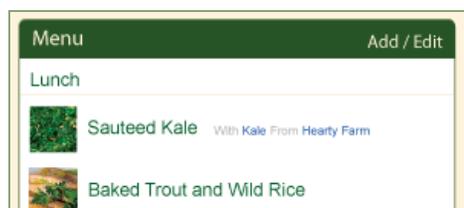


FIGURE 19. ADD / EDIT LINK

busy people and most had little free time to devote to creating a site from scratch, so we wanted to lessen the burden of creating and constantly maintaining their profile by encouraging all users throughout the *Squash & Vine* community, especially consumers, to contribute. Since the success of our community is highly dependent upon the contribution and activity of its members, we needed to include ways to incentivize such efforts.

This encouragement is beneficial because communities such as *Squash & Vine* are “public goods” that could be subject to the problem of “free-riders,” people who receive the benefits but do not contribute to the public good in return. This type of situation occurs since public goods, by definition, are non-excludable, meaning anyone who could benefit does, even non-contributors (Olson, 1965). The specific benefit of an online information pool is that this public good is also non-rivalrous, meaning that one’s use of the information does

not reduce the amount available to others (i.e. if I am reading reviews of Hearty Farm’s CSA that does not limit another user from accessing that same information). While this is a huge benefit for information sharing in general, the fact remains that since this information is non-rivalrous, “when a given individual shares information, she must contribute while knowing that her contributions are made at some small loss, and that they do not directly affect her current information gains” (Cheshire & Antin, 2008). This can result in a potential loss of incentives, and in order to combat this issue, we have designed simple ways to incentivize users to make such contributions. These include easy access, number of questions answered, and publicly visible contribution badges (see fig. 20).

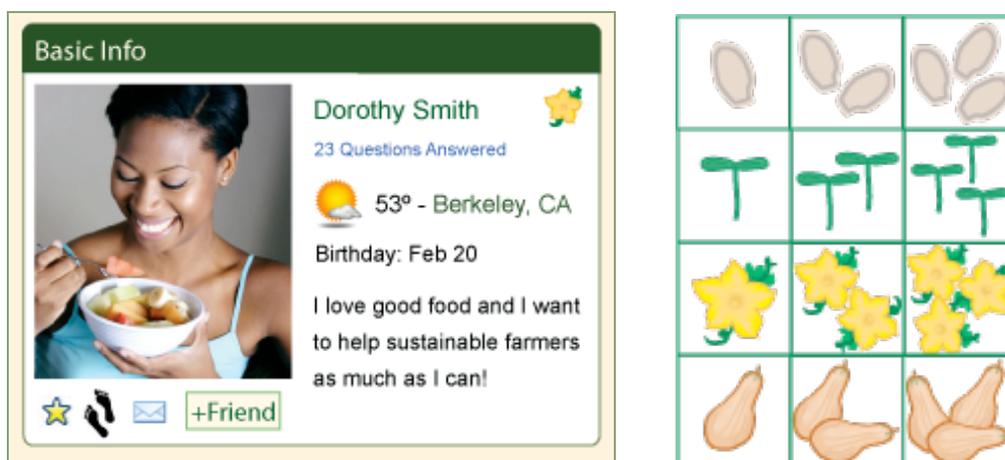


FIGURE 20. CONTRIBUTION BADGES

These badges change from “seed” to “sprout” to “flower” to “squash” based on the amount of information users have contributed as well as how many questions they have answered. In order for users to quickly see the impact of their contributions, and “level up” more readily, we also made three different versions of each stage. These badges serve a dual purpose throughout the community. First, they are a means of acknowledging users and showing appreciation for their contributions, behavior that might otherwise go unnoticed. Prior research has shown that providing such feedback to users thanking them for their contributions encourages participatory behavior (Ling, 2005). Second, these badges provide a form of reputation visible to other users on *Squash & Vine*, illustrating how involved and open users are to answering questions and sharing information.

While most of the details discussed above refer to input via our web interface, eventually this input can also be contributed with our mobile application which will allow users to log into their *Squash & Vine* account with their smartphone and post photos and commentary to entity profiles while on-the-go. Use cases include consumers shopping at a farmers market (e.g. they can take a photo of a specific farm's produce and upload it directly to the farm profile), consumers eating at a restaurant (e.g. they can take photos and upload the latest menu items), or farmers in the field (e.g. they can quickly and easily take and upload a photo of their farm or send a text regarding their farm status).

Additionally, *Squash & Vine* allows for simple audio updates via a normal mobile phone, another feature that existing online social networks do not offer. Our research has shown that many producers do not send text messages let alone own smartphones, so it would be much easier for them to update their status from the field with a simple phone call. This would also provide a more intimate connection for consumers who would benefit from experiencing this added media. In this way, producers and others who are not often in front of a

computer or do not have access to a smartphone can notify people in their community when they have a question or comment by simply calling *Squash & Vine*'s phone number (see fig. 21).¹³



FIGURE 21. AUDIO UPDATE FEATURE

Outputs & Extensibility

Where and how people access the data once it is in our system is also of significant importance. We have already discussed many ways for users to access the data on *Squash & Vine* through our web interface (e.g. the food web, search, questions and answers, etc); however, only allowing this kind of data access would be limiting. We plan on implementing several other interfaces with which to access this data, including via our mobile application, a bookmarklet, and eventually an API.

The mobile application mentioned in the Input section will not only provide ways to contribute information, but it will also provide avenues for easy access to data. As mentioned in our findings, many consumers wished they had more information at the point of sale. Our application will allow a consumer to find information about food and farms when they are out grocery shopping. For example, a user shopping at their neighborhood grocery store could check and see which producers source to that particular store, what their farms and growing practices are like, and what they currently have in season. They could also recommendations and comments posted by other *Squash & Vine* users.

The *Squash and Vine Bookmarklet* will allow easy access to our entity profiles (e.g. producers, retailers, consumers, and organizations) while a user is browsing the web. A user can highlight a piece of information on any website, click on our bookmarklet, and be directly taken to the search results on *Squash & Vine* with that highlighted text used as the search query. This would be useful if the user was reading an article in which a farm, person, or business was specifically mentioned. The user could highlight the name, then simply click on our bookmarklet to find more information about the business, its connections throughout the food community, and what the *Squash & Vine* community has to say about it. Once the *Squash & Vine* search components are built, development of this bookmarklet would be trivial.

Eventually *Squash & Vine* will also provide an Application Programming Interface (API) so that other developers can customize their experience on *Squash & Vine* or use our rich dataset to create applications of their own. People will be able to use our API to create customized modules for their specific entity profiles on *Squash & Vine* and then share these modules with other users who may also be interested in using them. Creating a well-documented API to help facilitate this customization is key since it allows passionate *Squash & Vine* users to develop desired features that could be potential value-adds when attempting to draw in new members rather than requiring us to do all of the work implementing such features. Also, they would be able to use our rich repository of aggregated data to build their own visualizations or external widgets to extend

¹³ Note that their phone number will already be associated with their *Squash & Vine* account. This will be set up by the user if they want to be able to provide audio updates.

information from within the *Squash & Vine* community outside. In the end, we are providing the platform for others to extend *Squash & Vine's* functionality both within the community itself and out to other external sites since we want as many people as possible to be more aware of the food system around them.

Addressing Our Goals

In the end, we feel that *Squash & Vine* addresses the needs and desires of the participants we interviewed. We kept our interviewees and goals in mind throughout our design process, and our end solution is closely tied to the people it was created for. *Squash & Vine* promotes transparency by visualizing the path food travels on our food webs and giving people access to information about the people behind their food. It lowers barriers to eating locally by providing a comprehensive search of farmers markets and CSAs, providing space for users to upload seasonal recipes, and giving consumers access to value-centered metrics about their food when they need it. Our solution encourages new and struggling farmers by providing easy ways for them to ask questions to more experienced farmers in their area, and share their struggles and stories with their community of consumers. *Squash & Vine* promotes political awareness by connecting the people that are affected by food and farm policy (the producers) with the people that vote on these policies (consumers and retailers). It also provides easy ways to get up-to-date information about policy and news through subscriptions to groups and dynamic display of activity on user's home dashboards. Finally, we designed *Squash & Vine* to be aesthetically pleasing and a pleasure to use. Hopefully this proves true.

USAGE SCENARIOS

The following table is a list of potential scenarios and how they would be addressed with current tools as compared to *Squash & Vine*. Extended scenarios can be found in Appendix E.

Scenario	With Current Tools	With <i>Squash & Vine</i>
<p>Consumer searching for a store that sources locally.</p>	<p>Consumer looks online or in a phone book to find all of the stores in her neighborhood, then calls all of the stores to see if they buy local food.</p> <p>Alternatively, the consumer looks up farms in her area on <i>LocalHarvest</i>, then calls the farms to see if any of them sell to local stores.</p> <p>The clerk at the grocery store does not know if they source locally, and the farmer does not have the time to answer such questions by phone.</p>	<p>Consumer logs into <i>Squash & Vine</i>, where she immediately is presented with a visualization of the participants in her food community, including farmers and retailers, and the business ties between them. In this way the consumer can see all of the stores in her area that source locally and who they source from.</p> <p>Alternatively, the consumer looks up the profile of her favorite grocery store, and sees which, if any, local farms they source from.</p>
<p>Chef who sources locally wants to keep track of seasonal ingredients to use in her dishes, including those from people's backyards.</p>	<p>Chef calls her producers to find out what ingredients will be at peak freshness in the upcoming weeks and has them fax her their list of produce for that week.</p> <p>Chef also walks around Berkeley looking for backyard suppliers of rare ingredients and asks her friends and customers for suggestions.</p>	<p>Chef logs into <i>Squash & Vine</i> and subscribes to updates from all of the producers she sources from which appear on her home dashboard. She gets up-to-date information about what her producers are growing and how the crops are doing.</p> <p>Chef sends a message to all of her fans on <i>Squash & Vine</i> asking if any of them have produce growing in their backyards that they would want to see incorporated into a dish at her restaurant.</p>
<p>Farmer has a question about crop yield for his location.</p>	<p>Farmer attends events in his community or networks extensively to get to know other farmers in his area. He then calls up the farmers he feels would not mind his call and asks for advice.</p> <p>Unfortunately, the farmer he calls does not know the answer to his question, but connects him with a different farmer he now has to contact.</p>	<p>Farmer logs into <i>Squash & Vine</i> and posts a question without having to direct it to any specific farmer. This question is sent out to all farmers in his area. A farmer who knows the answer to his question directly answers it and the answer is available for everyone else to access.</p>

FUTURE WORK

From the beginning, our plan for *Squash & Vine* was extremely ambitious in scope. The basic framework for the community outlined above only scratches the surface of the possibilities we envision for the system.

Above all, we want to launch *Squash & Vine* and move from a detailed design to a well-implemented system. To be most effective, we would eventually like our system to be available to all communities across the United States, and, with that growth in mind, we have designed *Squash & Vine* to be scalable. We have worked hard to ensure that we are providing a service that is unlike any available but desperately needed.

Initially, we will focus on launching *Squash & Vine* in the Bay Area. This area is a generous starting market for our online community,¹⁴ and since most of our interviewees are locals, we already have a significant number of enthusiastic contacts with whom to test our implementation. Overall, we believe that our entry into this market is incredibly timely and we can catch the momentum of the burgeoning local food wave. Seeking out pesticide-free food, supporting local U.S. farmers and minimizing food miles are en vogue and have reached the radar of the vast segment of United U.S. consumers.¹⁵

Before beginning implementation, we must first refine our ideas and flesh them out with all of the stakeholders involved, getting their feedback on the functionality and features that we have designed. We plan to take our prototypes back to some of our interviewees as well as show them to new participants in order to identify new issues, concerns, and desired features. After integrating this feedback into our designs, we will then focus on implementing our community and make the jump from design to functioning system. We will first launch as a private beta, giving us time to further improve our system through both beta and usability testing.

After launching, we will continue expanding the features that *Squash & Vine* has to offer, creating a more valuable community for all of the participants involved. We are already considering several additional features that include, but are not limited to, visualizations, farm journal and crop planning tools, tools to facilitate logistical coordination, a personalized mobile interface, and both internal and external widgets.

Visualizations

We have started to utilize visualizations like the Food Web in order to help consumers explore connections within the food system, but we hope to create more visualizations allowing users to see the impact of their choices and provide them with appropriate data to make better, more informed decisions. Some possibilities include adding exploratory functions to the Food Web like allowing users to directly compare food miles traveled when buying from one producer/retailer versus another. We also hope to use visualizations in order to explain components of the food system, simplify complex policies like the Farm Bill, and illustrate the natural cycle of the seasons and how this cycle affects the growth of food, the health of consumers, and the lives of farmers.

¹⁴ Journalist Andrew Martin recently stressed the importance of the Bay Area, explaining, "While the idea of sustainable food is creeping into the mainstream, the epicenter of the movement remains the liberal stronghold of Berkeley, Calif" (2009, March 21).

¹⁵ "Locavore" was even the New Oxford American Dictionary's 2007 word of the year (Oxford University Press, 2007, November 12).

Farm Journal & Crop Planning Tools

We also plan to take a more in-depth look at farm journals and crop planning schedules in order to implement online versions of these tools to assist new producers. Some new producers we spoke with said that farm journals were helpful because they could look back and see what they had done in previous years and learn from their mistakes. We could exponentially increase the usefulness of such farm journals by providing new producers with the ability to share and aggregate their journals with the journals of other producers. We could extend the existing “Journal” module to integrate weather data, support aggregation across seasons and across different producers in the area, and facilitate sharing.

With this aggregated data, we could also create interactive tools for crop planning that would help new producers determine the best time to plant and harvest certain crops, depending on their data from previous seasons or data shared by other producers growing similar crops in the area. Such tools could have built-in features to help producers focus their attention during critical times (e.g. The system may send an alert warning a producer that “The last time it was as cold as forecasted for tonight your tomatoes all died!”) and actively improve their crop planning during the off-season.

Tools to Facilitate Logistical Coordination

In addition to creating specific tools to aid producers with the logistics and planning of growing, we also will explore tools focused on helping retailers manage the logistics of buying from numerous local producers. This could take the form of a centralized space for retailers to manage all of their orders, track who they ordered from and when, track what and how much they bought, and receive updates with lists of producers’ offerings for that week.

Personalized Mobile Interface

Extending *Squash & Vine* to a mobile interface not only facilitates data entry and ease of access at the point of sale, like we mentioned in the outline above, but also provides the potential to offer unique, location-based services in the future. For example, we plan to develop services that would allow a user with the *Squash & Vine* mobile application to receive personalized recommendations for restaurants and grocery stores that source locally and are located along the user’s daily commute or recommend CSAs based on delivery locations closest to spots the user frequents (i.e. the application would track the user’s location for three weeks and then compare their most traveled routes with data from *Squash & Vine*).

Internal & External Widgets

As seen in the Reservations module with *Open Table*, *Squash & Vine* profiles will integrate widgets from external sources into our module structure. We could eventually create a more flexible tab and module environment by allowing users to add an “empty tab,” where they can simply paste in the widget code from any existing site that provides it such as *Twitter* or *GoodReads*. We could also support the addition of any outside RSS feed easily within a module, which would allow any person or entity who already had a blog, bookmarking feed, or news site to quickly add it to their *Squash & Vine* profile.

In addition to creating widgets inside *Squash & Vine* to incorporate valuable external services, we also plan on extending the *Squash & Vine* community out to other websites like *Facebook* or our members’ personal websites. Through an external *Squash & Vine* widget or *Facebook* application we would be able to provide an easy way for our users to show their support for the food movement while extending our community to a wider audience and leveraging the power of weak ties.

These features are by no means the end to our vision for the future; we see opportunities to use this type of communal space to facilitate seed saving and sharing, discuss urban and rural land-use in cartographic detail, and coordinate policy design.

Though we have many ideas, we recognize the need to first develop an initial framework to support our community and address the basic requirements of our stakeholders. After this first iteration, we can gradually begin to integrate these additional features ourselves or through partnerships with other like-minded organizations. It is our hope that *Squash & Vine* will provide a growing space for new farmers, passionate chefs, activists, and burgeoning foodies to explore, communicate, and take action. With such a dedicated user base and an accessible and flexible platform, the possibilities for *Squash & Vine* are endless.

CONCLUSION

Although the food system is one in which everyone invests in daily, the reality is a world where producers struggle to make ends meet, retailers spend a significant amount of time coordinating the logistics of sourcing locally, and consumers remain disconnected from the story behind their food. Although others have put forth relevant and valid solutions to address the issues in our modern agrarian system,¹⁶ building an online social network for the stakeholders in our food community is an efficient, low-risk, and high-return approach to facilitate and magnify their efforts.

Squash & Vine will provide a suite of tools to address key information barriers among participants working to realize a healthy and secure food system. It requires significant time and effort to explore and discover how the food system affects what is on one's plate. *Squash & Vine* provides a space to efficiently aggregate this information. It is difficult to communicate with others to tease out the nuances of farm and food-related political issues, learn about good farming practices, or express appreciation. *Squash & Vine* provides a space to create community discussion groups, ask questions, and update our cultural image of farmers. Coordinating action to promote change requires access to a critical mass of people open to learning about the issue. *Squash & Vine* provides a space where people hungry for political involvement can join relevant groups and get urgent information in a timely fashion. The progression of this movement to mainstream awareness is important: it will determine the health and well-being of our children and grandchildren. We hope that *Squash & Vine* can be a driving force in facilitating this awareness.

¹⁶ A variety of suggestions are located here: (Pollan, 2008, October 12); (Bradbury & von Tscharnen Fleming, 2008, September 15); (Truit, 2009, April 15)

WORKS CITED

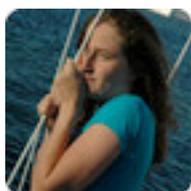
- Becker, H. (1998). *Tricks of the Trade: How to Think About Your Research While You're Doing It*. Chicago, IL: University of Chicago Press.
- Bishop, B., & Murphy, T. (2009, February 11). Broadband Connection Highs and Lows Across Rural America. *Daily Yonder*. Retrieved March 11, 2009, from <http://www.dailyyonder.com/broadband-connection-highs-and-lows-across-rural-america/2009/02/11/1921>
- Bradbury, Z. and von Tscherner Fleming, S. (2008, September 15). The key political, economic, and cultural needs of young farmers. *Grist Magazine*. Retrieved May 5, 2009, from <http://www.grist.org/article/we-young-farmers-all-over-the-world-we-are-citizens>
- Cheshire, C., & J. Antin. (2008). The Social Psychological Effects of Feedback on the Production of Internet Information Pools. *Journal of Computer-Mediated Communication*, 13 (3).
- Goffman, E. (1956). *The Presentation of Self in Everyday Life*. New York: Doubleday.
- Gogoi, P. (2008, May 20). The Rise of the 'Locavore.' *BusinessWeek*. Retrieved January 31, 2009, from http://www.businessweek.com/bwdaily/dnflash/content/may2008/db20080520_920283.htm
- Gross, G. (2009, January 8). Obama includes broadband, smart grid in stimulus package. *IT World*. Retrieved May 5, 2009, from <http://www.itworld.com/government/60362/obama-includes-broadband-smart-grid-stimulus-package>
- Haythornthwaite, C. (2007). Social networks and online community. In Joinson, A., McKenna, K., Postmes, T., and U-D. Reips (Eds.) *The Oxford Handbook of Internet Psychology*. Oxford, England: Oxford University Press.
- Heritage Varieties of Corn, Beans and Squash (n.d.). *Evergreen*. Retrieved March 21, 2009, from <http://www.evergreen.ca/en/lg/h-corn.html>
- Jansen, B. J., & Pooch, U. (2001). A review of web searching studies and a framework for future research. *Journal of the American Society for Information Science and Technology*, 52(3), 235-246.
- Jefferson, T. (1785, August 23). *Commerce and Sea Power* [Letter to John Jay]. Retrieved March 15, 2009, from <http://etext.virginia.edu/etcbin/toccer-new?id=JefLett.sgm&images=images/modeng&data=/texts/english/modeng/parsed&tag=public&part=33&division=div1>
- Jerardo, A. (2008, February). What Share of U.S. Consumed Food Is Imported?. *Amber Waves*. Retrieved March 18, 2009, from <http://www.ers.usda.gov/AmberWaves/February08/DataFeature/>
- Jordan, P. W. (2002). *Designing Pleasurable Products: An Introduction to the New Human Factors*. CRC.
- Krall, L. (2002, March 1). Thomas Jefferson's agrarian vision and the changing nature of property. *Journal of Economic Issues*.
- Kuniavsky, M. (2003). *Observing the User Experience*. San Francisco, CA: Morgan Kaufmann.

- Ling, K., Beenen, G., Ludford, P., Wang, X., Chang, K., Li, X., Cosley, D., Frankowski, D., Terveen, L., Rashid, A. M., Resnick, P., and Kraut, R. (2005). Using social psychology to motivate contributions to online communities. *Journal of Computer-Mediated Communication*, 10(4), article 10.
- Martin, A. (2009, March 21). Is a Food Revolution Now in Season?. *The New York Times*. Retrieved March 22, 2009, from http://www.nytimes.com/2009/03/22/business/22food.html?_r=2
- Olson, M. (1965). *The logic of collective action; public goods and the theory of groups*. Cambridge, Mass: Harvard University Press.
- Oxford University Press (2007, November 12). Oxford Word Of The Year: Locavore. *OUPblog*. Retrieved March 22, 2009, from <http://blog.oup.com/2007/11/locavore/>
- Pollen, M. (2008, October 12). Farmer in Chief. *The New York Times Magazine*. Retrieved May 5, 2009, from <http://www.michaelpollan.com/article.php?id=97>
- Resnick, M., & Vaughan, M. (2006). "Best Practices and Future Visions for Search User Interfaces." *Journal of the American Society for Information Science and Technology*, 57 (6).
- Truit, G. (2009, April 15). The American Farmer Needs a Cowboy Image. *The Irresistible Fleet of Bicycles*. Retrieved May 5, 2009, from <http://thegreenhorns.wordpress.com/2009/04/15/the-american-farmer-needs-a-cowboy-image/>
- U.S. Environmental Protection Agency. (2008). *Draft Inventory of U.S. Greenhouse Gas Emissions and Sinks: 1990-2007*. Washington, DC: National Service Center for Environmental Publications. Retrieved March 19, 2009, from <http://www.epa.gov/climatechange/emissions/downloads09/07Inventory.pdf>
- U.S. Department of Agriculture. (2008). *Farms, Land in Farms, and Livestock Operations 2007 Summary*. Washington, DC: National Agricultural Statistics Service. Retrieved March 2, 2009, from http://usda.mannlib.cornell.edu/usda/nass/FarmLandIn//2000s/2008/FarmLandIn-02-01-2008_revision.pdf
- U.S. Department of Agriculture (2009, February 4). *2007 Census of Agriculture Demographics Fact Sheet*. Washington, DC: National Agricultural Statistics Service. Retrieved March 13, 2009, from http://www.agcensus.usda.gov/Publications/2007/Online_Highlights/Fact_Sheets/demographics.pdf
- U.S. Department of Agriculture, & U.S. Department of Health and Human Services (2005, January). *Dietary Guidelines for Americans, 2005*. 6th Edition, Washington, DC: U.S. Government Printing Office. Retrieved March 22, 2009, from <http://www.cnpp.usda.gov/Publications/DietaryGuidelines/2005/2005DGPolicyDocument.pdf>
- Young, J. R. (2009, May 4). Researchers Call for National Strategy to Adapt Social Networks to Public Good. *The Chronicle*. Retrieved May 5, 2009, from <http://chronicle.com/daily/2009/05/17280n.htm>

APPENDIX

Appendix A: Team Bios

Our team is small enough to be flexible, varied enough to be effective, and dedicated enough to get the job done well. Having team members from the *School of Information* began as a necessity and has resulted in being a primary strength. As a group we contain complementary service design experience, an array of local food community knowledge, and roots that span the United States. Although not farmers ourselves, we hope to mirror our work ethic from theirs and bring the same kind of passion and dedication to our project that they bring to the land.



Shawna Hein is a second-year master's student at the *University of California Berkeley School of Information* focusing on Human-Computer Interaction and Product Development. She graduated in 2006 from *Oberlin College* with an undergraduate degree in Computer Science and a minor in Sociology. Last summer she worked as a User Experience and Product Development Intern at a start-up in Tiburon, where she helped design an online social network to connect producers and buyers of media. The seed for *Squash & Vine* was planted through extensive conversation with her sister, who recently started Honey in the Heart Farm in the Sierra Nevada Foothills. Through her sister and her own native Californian roots, Shawna has connections to farmers throughout California, and is excited to contribute to other eaters' awareness and support of local growers.



Hazel Onsrud is originally from a small town in Maine. She presently resides in Berkeley, CA and is a second-year master's student at the *University of California Berkeley School of Information*. Her background in International Development Studies, World Literature & Culture Studies, and Geomatics gave her the opportunity to explore a range of agrarian issues, sustainable development practices, and approaches to land and resource management. She came to the *School of Information* because of its practical approach to academia, balancing appropriate analysis with action and addressing real world problems with or without technology. Next year she intends to continue exploring the intersections of human and environmental systems as a master's student in the *Energy & Resources Group*. Overall, she likes to eat, drink and be merry and would like to secure those same activities for anyone who desires them.



Aylin Selcukoglu is a passionate foodie and an aspiring cook with an appreciation for good food that started at a young age, influenced greatly by her mother's amazing home cooked meals. She hails from the great Prairie State where she braved quite a bit of snow in order to receive her B.S. in Computer Science with an emphasis in Human-Computer Interaction and Social Computing from *University of Illinois at Urbana-Champaign*. Now a second-year master's student at the *University of California Berkeley School of Information*, she is amazed at the abundance of farmers markets and fresh local produce available in the Bay Area. Her interest in this space was initially motivated by working on a project aimed at visualizing the complexities of the Farm Bill which helped her realize the flawed nature of our current industrialized food system. Through her work with *Squash & Vine*, she hopes to leverage her background in user experience and apply her knowledge of user research practices to encourage people to be as passionate about food as she is. In the future, Aylin, a Midwesterner at heart, hopes to extend *Squash & Vine* to her own hometown and help fellow Chicagoans eat locally and connect to the story behind their food.

Faculty Advisor: Jenna Burrell, Ph.D. is Assistant Professor at the *UC Berkeley School of Information*.

Appendix B: Acknowledgements

We would like to thank our advisor, Jenna Burrell, for her invaluable guidance and support. Our project would not have been possible without the time and valuable insights generously contributed by all our interviewees, which we are immensely grateful for. We would also like to thank the following people for sharing their expert knowledge in this field: Michael Pollan, author and food activist; Annie Shattuck, Policy Analyst at Food First; Jeannine Jones Willett, Crop Consultant; and Ralph Kelliher, Illustrator. Additionally, several professors at the *School of Information* guided us through different aspects of our development and for this we are extremely grateful: Brian Carver, with intellectual property law; John Chuang, with data collection; Robert Glushko, with business and service design; Tapan Parikh, with user interface design; and Michael Schaffer, with business consulting. Finally, a shout-out to the other fabulous UC Berkeley students who have worked on components of *Squash & Vine*: Nick Doty, Michael Manoochehri, Laura Paajanen, Travis Pinnick, Nick Rabinowitz, Connor Riley, and Sarah Van Wart.

APPENDIX C: Extended Findings

Consumer Findings

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INTERVIEWEE TABLE

ID	Age	Gender	Profession	Neighborhood	Key Quote
C1	37	Female	Administrative	Downtown Oakland	<i>"To me, it's outrageous that people would even shop at Whole Foods."</i>
C2	29	Female	Assistant Professor	Oakland (Jack London)	<i>"I am trying to get away from processes that are meant to produce the cheapest food as efficiently as possible."</i>
C3	25	Female	Student: Linguistics	Berkeley (Ashby)	<i>"Convenience is key."</i>
C4	27	Female	Massage Therapist	Oakland (Westlake)	<i>"If something is grown in the same air that I'm breathing and soil that's grown on the same soil I'm living on, the more appropriate it's going to be to my life."</i>
C5	29	Male	Student: Information Science	South Berkeley	<i>"I think that the last 50, 60 years has brought kind of a disassociation, people don't know where their food comes from."</i>
C6	24	Female	NGO Project Consultant	North Oakland	<i>"I will not eat a tomato out of season. It's not the same fruit."</i>
C7	30	Male	Student: Information Science	South Berkeley	<i>"Cooking is the most creative thing I do on a day to day basis." or "I like to support local businesses, I care about caring about where you live and the people around you."</i>
C8	26	Male	Student: Computer Science	North Berkeley	<i>"I don't have good metrics for a lot of the things I would like to see quantified...really any information about how the thing was grown or raised either in the packaging or in some other way. It's the kind of thing I already look for...more data for the most part I am always a fan of."</i>
C9	23	Female	Professional Babysitter	San Francisco (Mission)	<i>"It's part of this whole idea of community that you're participating in, either the world community or one that you're in every day."</i>
C10	24	Female	Student: Geography	Madison, WI	<i>"I don't like: one the packaging, and two the commercial foods, and three commercialism in general."</i>
C11	28	Male	Web Developer	Oakland (Rockridge)	<i>"I had already become kind of skeptical about what organic meant and the foodie movement, but reading [The Omnivore's Dilemma] was crystallizing the importance of local food and what you should be aware of and the limitations of trying to engineer your diet."</i>

IMPORTANCE OF FOOD & COOKING

Since our consumers were selected because of their known interest in food, it is no surprise that **most of them spoke of food and cooking as an important and integral part of their lives.**

Some consumers talked about the creativity and fun cooking injected into their daily lives. C7 said that he liked cooking, and that it *“is the most creative thing I do on a day to day basis.”* C8 said that *“even on the occasions when I’m not really into [cooking] or not really excited about it I still don’t think of it as a chore.”*

Others expounded upon the joys and benefits of “good food,” the definition of which was expanded upon later in the interview to include metrics such as quality, sustainability, and other factors. C9 said that *“it’s really important to put good food into your body it makes you a happy person.”* C4 said that *“good food makes you feel good, good food is delicious.”*

Several of the consumers we spoke with also mentioned enjoying talking about food. C4 said, *“I just want to talk about how much I love food all the time.”* C8 mentioned how he enjoyed thinking about and articulating his food philosophy. C10 said that at the Farmers Market, *“you know there’s conversations about food going on all the time which is nice.”*

SOCIAL NATURE OF COOKING

Besides simply enjoying cooking, **our consumers overwhelmingly mentioned friends and family as an integral part of the equation for an enjoyable cooking experience.** Many times, the people were mentioned even before the food, as with C11, who said that the perfect meal involved *“people, first and foremost.”*

Others mentioned involving people in the cooking process and actually making food with their friends as key to an enjoyable cooking experience. C6’s perfect meal was full of *“fresh things that get made in my kitchen with a bunch of other people.”* C10’s was *“good food and good people around.”*

Some said that they did not necessarily need to cook **with** other people, but that cooking **for** people was very important to them. For C7, cooking for others was more than just a fun experience, it also was a way to connect with loved ones. He said, *“I like the act of preparing food for other people...It is a nice way of interacting and showing people you care about them.”*

AFFORDIBILITY VERSUS ‘FEELING GOOD’ ABOUT FOOD CHOICES

While some consumers mentioned **affordability** as a key component of food shopping, this did not seem to be the main factor when making food choices. This was surprising, given the fact that the majority of our consumers were young and either students or young professionals. Others mentioned that they felt that they were willing to spend more money on food than their friends or coworkers.

People mentioned **the cost specifically of organic food.** C2 talked about her *“uncomfortable relationship”* with organic food due to expense, and C7 regularly shopped at the farmer’s market, but said: *“I don’t really buy organic at the farmers market because I can’t really afford it.”* Also, affordability sometimes came into play when deciding whether or not to buy local or organic on each individual shopping trip, for example, C10

mentioned “if I feel like I’ve spent a lot on other things than I will not necessarily choose the local flour over other plain flour. But if I feel like I haven’t spent a lot then I will choose the local organic flour over regular flour.”

Although most consumers at least mentioned cost as a factor, they tended to say that **slightly higher costs were “worth” feeling good about what they bought**. C8 said, “I’m not willing to pay premium in a store but I am willing to pay premium if it’s something I knew came from a local dairy.” C4 said that at the farmers market “I’ll pay full price ‘cause now I’m in love with the way good food feels.” Sometimes it even seemed that as long as they could feel good about one factor of their buying process, other factors did not matter as much. For example, C7 mentioned “I’ll occasionally buy organic at the farmers market. I often buy the non organic version...I guess there is a sort of feel good benefit from the farmers market and organic...but don’t need to necessarily do both.”

SKEPTICISM OF ORGANIC FOOD

While many consumers appreciated the original intent behind organic certification, most of the consumers’ perceptions of organic food in general seemed to be fraught with skepticism.



The tag cloud to the left (see fig. 22) shows the words consumers immediately thought of when given the phrase ‘organic food.’

Many people felt that **the term ‘organic’ had been co-opted by large corporations** (i.e. C6: “It’s being bastardized by Walmart organic” and C1: “organic has become a catch phrase”) and that it was being **used by these corporations simply as a means to make money** (C5: “and so people are seeing [organic] as a way to bump up the price, but still engaging in agricultural practices that have the market bottom line as their focus”).

FIGURE 22. ‘ORGANIC FOOD’ WORD ASSOCIATION

Some consumers felt that **‘organic’ no longer meant very much** (C11: “I’m skeptical about what the label means”) and that it **did not stand for consumers’ values** (C7: “I’m suspicious of things that label themselves as organic. Doesn’t seem to be as good an indicator of the things I care about”, and C6: “people have appropriated the technology but not the philosophy of organic”).

Other people also mentioned that they knew farmers who farmed organically but were not certified organic, because the process was simply too difficult. C8 stated, “It’s something I’ve always sort of been, not necessarily suspicious of but I grew up around farmers and there are plenty of farmers that aren’t organic according to the letter of legislation.”

tastier." A few of our consumers even said that they bought most of their produce from farmers markets because they were so disappointed by the taste of produce in larger grocery stores. C6 even said, "I will not eat a tomato out of season. It's not the same fruit."

VARYING DEFINITIONS OF LOCAL

Local is an ambiguous term and can mean different things to different people. When asked what local meant to them, our participants gave a variety of answers.

Unsurprisingly, many participants' definition of local centered around proximity, although the distance varied. Some simply said that the closer something was, the more local it was, and that if they had a choice at a grocery store, they would simply buy whichever item was grown closer, even if it was out of state (C5, C11). Several said that buying food from within their own state (in this case California), was what shopping locally meant to them (C6, C7, C8). C10's definition changed throughout the course of the interview, first saying "over 100 miles that's not local anymore," and then later "I would probably say [local food is] within the state that you're living in." C9 defined local in less precise way, saying simply that if a customer could "go to the farm," than it was local.

To some local was not so much about proximity as it was about knowing the people who grew the food. C4 said that even though a certain farm she bought from was "hours away in the truck," she knew and loved the farmers and thus felt good supporting them.

WANTING A CONNECTION WITH FARMS & FARMERS

Along with people's desire to support local growers came their **desire to have more of a connection with the farmers and their farms.** This was reflected by C8: "I feel like I could certainly be interested by something that would establish a little bit stronger relationship between me and some farm." This need for connection was also **sometimes framed in terms of the lack of connection many people currently had with their food.** C5 said, "I think that the last 50, 60 years has brought kind of a disassociation, people don't know where there food comes from." C2 said that "you have to get your food from somewhere, and if we become more distant from our farmers, there might be a problem with diversity of our lives in society."

The tag clouds to the right and below show the words consumers thought of when given the words 'farm' (see fig. 25 below) and 'farmer' (see fig. 24 to the right). Interestingly, you can see that nearly all of our consumers mentioned "overalls" in connection with farmers.

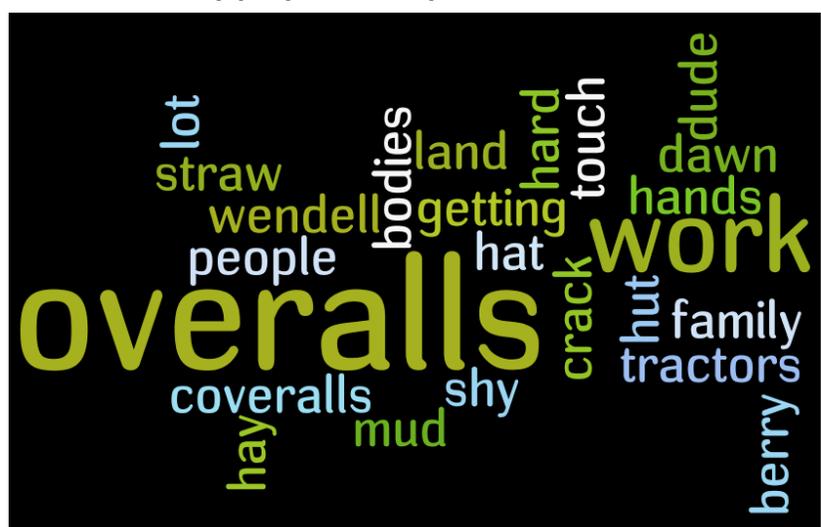


FIGURE 24. 'FARMER' WORD ASSOCIATION

that it felt right to them to buy from smaller businesses. C8 said, *“I always have this gut feeling that I’m interested in supporting small, local things.”* Some consumers mentioned small farms in the same sentence as “family farm” and “young farmers.” **It was clear that they believed that family farms and new, young farmers were worthwhile people to support, and that these people would only have small farms.**

The importance of supporting small farmers was sometimes tied to labor issues. C6 said that *“I sort of hope that by buying local from small farmers that you’ll circumvent labor issues... If you’re working for yourself, you’ll treat yourself right.”* C4 talked about her dislike of large corporations who sell organic, saying that these companies *“make me want to puke. The way they treat their workers and the land is not loving.”*

Some consumers also mentioned wanting to support farms that cared for their land and their animals. C11 said, *“I want to know that they have some respect for the landscape and the local wildlife.”* C9 phrased the importance of humane treatment of animals in terms of flavor, saying, *“I want to know that the animals were happy... and then they’ll taste better!”*

BARRIERS & LACK OF KNOWLEDGE ABOUT FOOD

While many of our participants valued local food and wanted more of a connection with farms and farmers around them, the majority did not go out of their way to find this information, visit farms or to make sure the food they bought was local.

Though some even had dreams of living or working on a farm (i.e. C4: *“I’m always teasing them that I’m going to move to the farm... I have romantic notions”*), **very few of our participants had actually visited a farm. Some had no idea where the farms were in their area.** When asked if he knew of any farms in the Bay Area, C5 said *“none that I could name, no.”* C2 said that not knowing where the local farms are makes her uncomfortable because she wants to buy from farmers near her, but she does not know which farms those are, and there is a lack of clarity. C6 said that when it came to knowing where her food came from *“I feel like I should but I don’t.”*

Additionally, some of our participants **mentioned not having the time to research about what went into their food.** C9 said that she probably spent about fifteen minutes a week learning about the story behind her food, or *“the amount of time I’d [take to] read the [CSA] newsletter.”* C2 said that while sometimes she searched for food events online, she did not read up about farmers. One participant (C11) said that he tended not to think about food when around a computer so he did not do very much research around food.

Part of this hesitancy around our participants’ attempting to learn more about local farms was the lack of easy ways to access this information. C8 said that he had a hard time deciding what to buy, because *“for a lot of places there’s not really any more guidance than [stickers and labels] and I don’t know if I’m making informed choices.”* C1 worked with a co-op, and talked about how, though they were committed to buying locally, it was difficult to find and connect with local producers. She wondered, *“why isn’t there a website that’s a collective of all the smaller producers?”* C6 also mentioned having a hard time finding information about farms, and said, *“I’m excited about having a centralized resource for food and farms.”*

Although one of our consumers religiously read food packaging (C8), for the most part, **our participants did not scrutinize packaging and instead relied on trusted retailers, including grocery stores and farmers markets to ensure the food they bought was local.** C9 said that she liked shopping at the grocery store near her because they care about local food and *“when you walk into the store and buy something you don’t*

have to check.” Others acknowledged their assumptions about farmers market, but were uncomfortable about it, including C4, who said, *“I feel like anything that’s at the farmers market is a local farm but that’s not true.”*

WANTING INFORMATION AT POINT OF SALE

Consumers were interested in learning more about where their food came from, and **some were specifically interested in learning more about their food at the point of sale.** The information people mentioned wanting at the point of sale included the size of the farm, what produce they had, where they were located, and who the producers were. Other metrics included information about whether or not they partnered with other farms, the farm’s carbon footprint, and how the animals were raised. C8 said he would like to see *“really any information about how the thing was grown or raised either in the packaging or in some other way...more data for the most part I am always a fan of.”*

C7 said that for him, more information would be *“most meaningful at the point of sale. I think some of the farms do a relatively good job of that. Berkeley farmers market itself does it ...but the stands don’t print brochures.”*

C8 said that he would like to see more information about his food, and that it would be helpful if the information on the packaging itself, since he looks at the packaging before buying anyway.

Some of the consumers mentioned wanting more information wherever they ate food, including restaurants and grocery stores. C5 said, *“any place that food is, any food outlet is an opportunity to generate awareness about the means of production.”*

FINDING CSAS & THE IMPORTANCE OF DELIVERY

Several of our consumers were members of Community Supported Agriculture (CSAs). The features that seemed to be mentioned the most in regards to CSAs seemed to be delivery, fear of waste, feeling a connection to the farm, and serendipity.

Nearly every consumer who was a member of a CSA had found their CSA through word of mouth, recommendations from friends, or random web searching.

C3 said that she had heard about her CSA from a friend, and then did research on the farm’s website about what kind of vegetables the farm had, whether all the items in the box came from one farm, and whether or not the farm delivered. She liked what she saw, so she decided to get the box C6 also heard of her CSA through *“word of mouth,”* and simply trusted her friends to know.

C9 said that when she decided to join a CSA, she knew she wanted one that delivered every month of the year *“and had vegetables that were intriguing to me.”* So she looked on Yelp to see what others recommended, and did a Google search on “CSA SF.” In the end, she said that *“I think other than that we just got lucky... I didn’t do that much research... I was like, I kind of like that name.”*

C5 said that if he were to join a CSA, he would look for whether or not they were organic, the price versus the amount delivered, if the food was delivered or if he could pick it up in a central location, and something about the farm’s history and *“how they came to do what they did.”*

Some CSAs were delivered directly to people's houses, while others had to be picked up. **Many said that direct delivery to their home would be the preferred mode of receiving their produce, and that the lack of this was a barrier to entry.** C3 paid extra for in-home delivery. C1 and C4 both canceled their CSA subscriptions because of difficulty involving pick-up. C4 said that not only was it hard to pick up the food, also her household would forget to pick it up when it was not delivered to their home. C7 said that one of the reasons he was not a member of a CSA was because he did not own a car and would have difficulties getting the produce.

Another benefit of the CSA box was simply that it was less time shopping for the consumer, and participants did not have to make a shopping list. C9 said that CSAs are “pretty convenient, you don't have to think about what you're buying you don't have to plan these things just come to you.”

FARMERS MARKETS – A PLACE FOR COMMUNITY, COMMUNICATION, & INFORMATION SHARING

Many consumers went to their local farmers markets. Many commented on how they enjoyed the community aspect of these farmers markets, and the interactions they had with other consumers and the farmers.

People spoke of the farmers market as being more of an enjoyable “event” for the community than a place to transact business. C8 said that a trip to the farmers market “feels like more of an outing than anything else... a lot of times it's a much more pleasant environment for shopping than going into a store....more festive and generally relaxed atmosphere.” C6 said that it “feels like you have a community inside a city when you go to a farmer's market.” C4 said that she socialized all the time at farmers markets: “I just shoot the breeze with people. I am just talking with people, interacting with people the whole day.”

Some consumers said that they spoke to other consumers while at the farmers market. These conversations tended to be centered around how to cook certain vegetables, which stand they got a particular item, or conversations around food in general. C6 said “sometimes I chat it up with people about vegetables,” and C7 said that sometimes he would ask other customers how to cook something that he would see in their basket.

Some people mentioned the phenomenon of “eavesdropping” as a way conversations started at the market. For example, C4 detailed times when he was at the farmers market when two consumers started talking about a certain vegetable within hearing distance of others, and others started to jump in and say things like “oh really?” and give advice. C10 also had a similar story involving apples. She said that there were people behind her in line talking about whether or not the apples that were wrinkly were still good. She said that she turned around and told them that they were. This resulted in a conversation around the cooking and eating of these particular apples.

Our consumers also would sometimes interact with the farmers at the stands. C4 said that she had specific vendors that were her favorite and in fact cared so much about who she bought from because she could not “separate the quality of the food from the people selling it.” C7 mentioned speaking to farmers and asking them questions about vegetables that he did not recognize, what produce they preferred to eat, and whether or not certain vegetables were “fresh” and “new crops.” C5 and C11 also mentioned asking farmers for recommendations, C11 told a story about asking a rancher if he had bacon, and the farmer answering “I

have this bacon and its the best bacon you'll ever have." C11 bought the bacon, and, after eating it, realized that it really was the best bacon he'd eaten

SEASONALITY

Several consumers said that they felt that eating seasonally was important. C7 said, "I like the idea of cooking seasonally. I don't necessarily know all the reasons but it just feels like it is better. It feels like a simple solution that solves a lot of problems." C2 mentioned that she liked eating seasonally in California because of the otherwise "absence of seasons." It reminded her of living on the East Coast where there were "real seasons." This gut reaction regarding seasonality was shared by C8 as well.

There seemed to be an even mix between consumers who felt they were aware of what vegetables were in season, and those that did not have a grasp of such knowledge. Some mentioned that they knew what was in season because of growing up on a farm, while **others' sense of seasonality was based on what was available at farmers markets.** One of our participants, C2, said that she had started a "nerdy list" of what she saw at her farmers market, so that she could have a document of what was in season throughout the year in her neighborhood.

Some consumers mentioned wanting seasonal recipes.

RECIPES

Many consumers used others' recipes when preparing food. Some used recipes from books, **but most used the Internet to find recipes. When asked what sites they used to find recipes, the majority of consumers said that they did not use any particular site,** like C5 who said, "I don't have one that actually stands out." C11 said that he used to belong to recipe sites, but that he stopped visiting the sites because his friends were not there. **Most usually simply searched on Google** to do a "quick web search." (C8) **for recipes.** C2 said that while she usually randomly searched online, she was "trying to be more discerning" about which online recipes she used.

Some consumers mentioned enjoying using recipes from CSA boxes, or finding recipes off of farm websites. C5 said that he'd "seen places where [farms] provide recipes for stuff that they grow and that definitely seems more trustworthy than Epicurious." He also felt that "it would be more compelling" to try a recipe from someone who had sold him his food. **Others said that they would enjoy recipes that used seasonal food,** like C11: "what I would want is more recipes that I know that I really like that are based on the seasons."

THE IMPORTANCE OF AESTHETICS

Some consumers spoke about the beauty of food, and how much they enjoyed the aesthetics of farmers market stalls and heaps of produce. C1 said that the food at farmers markets “*aesthetically suits*” her. C6 said that one of the things she loved about her CSA was the “*beautiful baskets brimming with delicious produce*” that she received. C4 said that if we created any kind of online system, she would go to the site if we “*visually made it really easy to eat.*”

It was clear that consumers loved farmer’s markets and CSA boxes not only because of the reasons mentioned in other sections, but also because the visual element of boxes and bins of fresh food made them feel good.

THE IMPORTANCE OF SERINDIPITY & TRYING NEW THINGS

Many consumers said that they enjoyed shopping at farmers markets and being members of CSAs because it allowed them to cook things they might not otherwise have bought and try new kinds of food.

While one consumer mentioned going to the farmers market with a shopping list (C5), a larger number said that they would go and simply buy what was there. C4 said “*I just buy whatever looks good and then when its time to cook I bring out all my vegetables and fruit and think 'what can I make with this?'*” C7 said that his cooking was very “*European based*” because he would go to the farmers market, see what looked good, and then decide what to cook from that.

Several consumers said that they would “make a first pass” through the farmers market to see if there was anything new they had not seen before. C11 said “*usually I do one circuit and scope it out and sort of see what people are selling, see if there’s anything different or new or something I haven’t seen before.*” C7 said that “*I go to the farmers market hoping to see things I don’t recognize and hope to buy then and eat them. If I was a farmer I would want to promote those.*” C1 mentioned being interested in a “*weird kind of kale*” she saw at a stand that she had never tried before. C5 mentioned buying brussels sprouts on a stalk (something he had never seen) as an “*impulse item.*”

When it came to CSA boxes, the majority of our participants liked the surprise of not knowing what they would receive, and being “forced” to try new things and cook whatever came in their box. Though seasonally aware consumers might be able to guess what was coming in their box and plan around it, most of our participants liked the surprise and did not even mention this possibility. C6 said that she liked it when “*we got things [in the CSA box] that were totally surprising that I would never have ordered or buy.*” C4 said that for her the box was “*like Christmas*” because it was a surprise every time. C1 said that getting unexpected produce in a CSA box “*stretches me creatively.*” C9 said that the CSA box “*makes you think about things to cook... like you have three weeks of pumpkin and you have to decide what to cook.*”

Sometimes this surprise aspect of CSAs or farmers markets would lead people to wonder what to do with certain vegetables. When our participants were at farmers markets, they would often simply ask the farmer. Other participants said that this inability to determine what to do with certain vegetables would simply lead them not to buy them. C2 said that she enjoys seeing “*all the interesting peppers*” at the farmers market, but since she does not know what to cook them in, she does not buy them.

VARIETY

Along with our consumers' interest in trying new things came **an interest in having a variety of food to choose from**. C8 said that when he chooses where he's buying from, *"if someone has a slightly different variety than I had before I'd probably be more likely to go there."* C5 and C6 both mentioned preferring a specific grocery store because of their *"wide variety"* of food.

While most of our participants liked variety, **One consumer mentioned being overwhelmed by variety:** *"I frankly find [his neighborhood grocery store]'s produce section awesome but overwhelming"* (C11).

CONCERN AROUND WASTE

Our participants were on the whole quite concerned about waste, which included being leery of too much packaging, and trying not to waste food.

C10 said that she would not shop at certain stores because they had too much packaging, and that she preferred buying in bulk because she's *"not creating all the waste that goes into it."* C4 said that she was more likely to buy a food item if it *"doesn't have a label or a box."*

Not wasting food seemed to be a high priority for many of our consumers. Several mentioned that they were not members of CSAs or stopped being members because they simply received too much food, and much of it would go to waste (C1, C3, C4). C11 told a story about *"having a fridge that was just full of melons"* and many of these melons going to waste because he could not eat all the melons that came in his CSA box. C2 said that she grew lettuce on her porch, not particularly because she liked to garden but because it was *"a waste issue."* She said that when she bought lettuce at the store she could never go through it all, but when she grew it she could simply take what she needed.

FREQUENT INTERNET USERS

On the whole, our participants kept in touch with people in their lives via all forms of communication, including face-to-face, phone and email.

The Internet and email seemed to be a large part of most of our participants' lives. At least half of our participants seemed to be online all the time, and to use the Internet for a large variety of reasons. C11 said *"I use it for everything except being outside."* C7 said he was online *"all the fucking time."* C5 used the Internet *"every day and it seems like for everything,"* and C6 said that she was online probably around eight hours a day.

Even people who reported that their primary mode of communication was face to face or phone, also used email quite often. This was true for both C1 and C5, with C5 stating that he used email quite often, but *"it's not ridiculous, maybe 10 to 25 messages a day."*

Producer Findings

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INTERVIEWEE TABLE

ID	Age	Gender	Experience (years)	Items Sold	Acres Farmed	Organic Cert.	Area	Key Quote
P1	38	Male	4	Asian pears, apple	14	Yes	Sonoma County	"If you truly are sustainable, you're a successful farmer."
P2	51	Male	35	Peaches	26	Yes	Butte County	"[There needs to be] someone like me in every area that knows all the farmers in that area."
P3	59	Male	18	Stone fruit	60	Yes	Fresno County	"I wouldn't be farming if I was just putting it in a box and shipping it."
P4	58	Female	18	Stone fruit	60	Yes	Fresno County	"[Success is] three generations of farmers, the kids interested in being involved long-term, and creating something viable for the next generation. The kids give us hope."
P5	31	Male	18	Stone fruit	60	Yes	Fresno County	"People need to understand where their food's coming from in a more intimate way."
P6	59	Male	15	Grain	10	No	Yuba County	"People don't even know the questions they would ask mostly... in my newsletter I want to explain about the evolution of modern wheat. They wouldn't know to ask that, so I'm saying I think this is interesting and this is why we grow modern wheat."
P7	51	Male	11	Produce	5	No	Nevada County	"You know what a dentist does, as a child or an adult you have a concept of what that occupation is... 'oh I want to be a doctor, a firefighter, a grocery store owner, a seller of solar panels,' ...but how many people have the experience of a farmer?"
P8	51	Male	8	Produce	5.5	No	Nevada County	"We provide that connection to people to come hang out, have fun, work hard, and take something with them. This is a whole connection to farming. This is the whole social kind of action."
P9	57	Male	34	Produce	4.5	No	Nevada County	"The best crop we can raise is a new generation of farmers."
P10	31	Male	5	Produce	18	No	New York: Dutchess County	"To me farming is this great opportunity where information could be shared better and have really rich effects from that."

P11	56	Female	16	Cheese	---	Yes	Marin County	"[Organic certification is] still not a guarantee but it's the only thing we have. I don't want to make another set of rules. I know there's issues with scale, but I'd still rather have a Muir Glen organic tomato in a can than a Del Monte with pesticides."
P12	56	Male	38	Pork, lamb, poultry, eggs, wine grapes, asparagus	75	No	Marin County	"It's important to me that people understand that meat doesn't come from a package and milk doesn't come from a carton."
P13	31	Male	2	Produce, flowers	25	No	Sonoma County	"I just enjoy the lifestyle...being outside, to do well, have customers, to have people who like to buy your produce and come to you week in and week out to buy what you have...definitely make money, not that it is the goal but not losing money too."
P14	27	Female	4	Produce, flowers, herbs	2	No	Sonoma County	"I have never been so overcome with the generosity and general support that this community has offered."

*** NOTE: P3, P4, AND P5 ARE DIFFERENT INTERVIEWEES FROM THE SAME FARM. ***

ID	Age	Gender	Experience (years)	Apprenticed At	Key Quote
A1	22	Female	0.25	P7's Farm	"My motivation was to get hands on experience with farming to teach it."
A2	24	Male	0.5	P8's Farm	"As long as we're enriching the soil, feeding people, and living well in the meantime, eating well and partying as much as we can...potlucks with like kids and grandparents."
A3	26	Female	4	P7's Farm + elsewhere	"I think that community is a big one for me because the more people you have the less stressful it is."
A4	24	Female	0.67	P9's Farm	"I think that everyone should work on a farm at some point in order to see where food comes from, how things are grown."

PASSIONATE COMMUNITY BUILDERS

All of the producers we spoke with were very **passionate about the work they were doing** and committed to the reasons motivating them to farm for a living. Though financial sustainability was important to our producers, as discussed in the next section, they were not motivated to pursue this line of work in order to gain fame and fortune but rather to help **strengthen the health of their communities and surrounding environment**. In the words of P12, *“You’ve got to love it, this isn’t the get rich quick scheme.”* P3 also touched upon this when he said *“I wouldn’t be farming if I was just putting it in a box and shipping it,”* illustrating the importance of the connection to people and intimacy created by family farming over greater financial gain often created by industrialized farming.

This commitment and motivation was often reflected in the producers’ personal definition of success within their line of work. P14 said that *“being a successful farmer means that you have developed relationships with your customers that have in turn made them healthier through being customers at your farm and buying fresh produce and incorporating it into their diet.”* Also A1 said that part of P7’s *“moral, his ethics”* was that *“he wouldn’t grow anything he wouldn’t want to eat himself.”*

Another producer, P8, said that *“feeling like what you’re doing is making a difference, that is what success is...in the community and on the planet,”* highlighting the importance of not just people’s health but also the health of the environment surrounding them. P1 also highlighted this dual philosophy, saying, *“Ecologically sustainable, financially sustainable, community sustainable. Those three things are important.”* A2 said he was motivated by knowing that *“people are getting fed the best food that is possible to grow and we’re doing it in a sustained manner,”* emphasizing the same dedication to the well-being of the entire community ecosystem including both people and place.

A2 referred to this philosophy as *“embedded agriculture”* meaning agriculture *“embedded in communities.”* This idea of **embedding their work within the community** reflected the outlook that many of the producers we spoke with shared. Their work was important to them and they were extremely dedicated to it. It was not just a job but a passion and a way of life. They were motivated during challenging times because they knew their work was a way to nourish the community around them, made up of the people they loved – their families, their friends, their friends’ families, and so forth. A2 said, *“the thought of spraying all your food that you’re going to feed to your best friends’ children”* was why he felt it was *“impossible to spray with pesticides.”* He believed that it was essential to have people, like himself, in touch with the land and *“connected to the natural cycles,”* otherwise, communities would *“lose grounding when they are disconnected from the earth as a life-giving, dirty, rich, beautiful, complex, pulsing thing.”*

A few of the producers we spoke with, like P2, also illustrated the **underlying tension between pursuing their line of work and what ‘society’ as a whole deemed valuable**, through statements like: *“The strength that the plants get and the nourishing that it gives everybody, this is what we were more meant to be rather than sitting in an office.”*

PHYSICAL & FINANCIAL CHALLENGES

Though the producers we spoke with were all very committed to their work, they **often faced many challenges ranging** from acquiring and keeping land to sourcing equipment (i.e. especially if trying to find used) to finding help (i.e. labor/workers).

The two most common challenges that our producers faced were **financial stability and the grueling physical nature of the work itself**. These challenges were especially apparent through the eyes of the apprentices who were often experiencing this way of life for the first time.

Financial Stability

Both P1 and P5 touched upon how they had to deal with challenges that were both **hard to predict and often beyond their control**, like losing crops to weird weather. As P1 stressed when he said, *"you're not just going to a cubicle and collecting a check every Friday," such variability made maintaining financial stability a constant struggle*. P5 stressed that *"one bad crop probably could have taken us out or been really really hard to recover from."* A4 said that she realized, *"You know you're not going to make a whole lot of money...This farm doesn't break even."* A1 even brought up a story about how *"there was a big drug bust for pot down the street"* which made her think about *"how much money those growers get while we get nothing for produce."* She even *joked about it, suggesting, "If we just made carrots illegal..."*

P10 also mentioned **the challenge that money posed for land ownership**, explaining, *"We rent all of our land. We don't own land. It's very expensive to buy land in our area...at this point it's a big liability for us that we don't have long-term assets to our land. It would be a huge bump in the road for us to have to move."*

Physical Nature of the Work Itself

All of the producers we spoke with enjoyed the physical work involved with farming, but that did not make the work any less **exhausting on a day-to-day basis**. Many of the apprentices, who were just getting used to such strenuous work, emphasized these issues.

A4 said, *"It's hard when we're weeding all day long. Shoveling compost across the farm all day long. It's kind of a wake up call. You just do the work and sometimes it is not like...every moment is not fulfilling. Sometimes it is just that routine. Sometimes it is hard for farmers and you're just working all the time."*

A3 also brought up challenges such as feeling isolated and having no free time when she said: *"I feel like a lot of farmers I know who have been doing it for a while work so hard and it's really hard on your body and it can get kind of lonely because you are so invested in your work and you don't have a lot of time for other things."*

P14 mentioned that *"farming by nature is a very exhausting and full-time job so there's not a lot of time to interface with other farmers"* and said that, *"the long-term sustainability of the farmer"* really depended upon *"setting limits for yourself...recognizing that there's always going to be more to do on a farm but you really need to set aside time every week to have a day of rest and do something different."*

THE INVISIBLE PRODUCER

Through speaking with all of our participants (producers, consumers, and retailers) it became clear that **the challenges producers faced often went unrealized by others**. Many of the producers we spoke with **felt unrecognized, receiving little support or appreciation for what they do**. P9 felt that *“local farmers are mostly invisible.”*

From the producer’s point of view, this feeling often stemmed from **people’s lack of understanding of the type of work involved with farming and the many factors that were beyond a producer’s control when growing food**. As P13 explained, *“The more informed they are about farming and the type of work it is and understand that crops fail...and not be mad to go a month without carrots...just to have that conversation with them is nice.”*

Other producers like P14 and A4 emphasized the **importance of having people physically see and experience growing food**.

P14 stressed:

“It’s really important to have people see where their food is being grown...Get people outside more and really being aware of now you know why the tomatoes aren’t ready in early June, they’re only knee-high...you’re not going to get the same response...‘you don’t have corn yet, you don’t have tomatoes’...you can point to them and say they aren’t ready.”

According to A4, *“They don’t understand how much work went into this...It’s why I think it is important for people to experience growing their own food. I think that everyone should work on a farm at some point in order to see where food comes from, how things are grown.”* Both of these producers touched on **the growing separation between themselves and consumers**, compounded by the introduction of industrialized agriculture and supermarket chains. Consumers often think of food as coming from a store rather than from beneath the ground or off of a tree, grown and nurtured by a producer.

P12 really emphasized this separation, saying:

“It’s about a paradigm shift...the consumerism that has developed over the past 50 years that is so divorced from reality...Not having ever had to go cut a tree or turning on your heater never having to chop firewood and heat a house with a wood stove. Or going to McDonald’s and never having made a hamburger and cooked it on a grill. There’s all these fundamental aspects of being a human being that we have divorced ourselves from.”

This “divorce,” as P12 calls it, clearly troubled the producers we spoke with and contributed to their feelings of invisibility. When they spoke of their ‘ideal customer’ they often mentioned things like *“the kind of customer who is grateful”* (P9) and *“one who understands what you’re doing”* (P3). It was through these descriptions that **our producers’ want to be recognized, supported, and understood** really surfaced. P13 shared these feelings, explaining how his ‘ideal customer’ was one who was *“genuinely happy to see you and understands what you’re doing for them...the one thing that everyone has to have is food. You want people to be appreciative of what you’re doing.”* A4 also mentioned how something as small as feedback from customers made a difference for her, when she recounted how *“last market people really thanked us and that felt really good.”*

CREATING CONNECTION FOR CONSUMERS

The growing separation between producers and consumers stems, from our producers' point of view, from the broader issue of **people's lack of connection to the food they eat**. P5 felt that "food has become a commodity" and stressed that "people need to understand where their food's coming from in a more intimate way." He explained how "there's a break between where it comes from and where it ends up, a large break. And closing that gap, being able to talk to people about what you're doing, you know answer questions and all that, it's kind of a luxury and it shouldn't be." P12 also referenced this "break."

He believed: "At some point back in the early 1900's, we lost sight of the connection to the land and started various refined stuff. Not only petroleum with food, but it was able to give us these synthetic fertilizers that could grow stuff like crazy that wasn't very good."

P12 went on to say, "I like promoting so people understand. It's important to me that people understand that meat doesn't come from a package and milk doesn't come from a carton." Through these comments P12 really highlights the gap and resulting disconnect created by our modern system of industrialized agriculture, a gap that he is actively working to close.

Educating consumers and working to help them connect to the food they eat is important for our producers because they feel that fostering this connection really makes a difference in consumers' lives.

P5 said that "being able to connect the production of the food with the consumption of the food" was more "nourishing" for consumers. He believed that people who had made this connection, like the clientele at the farmers market, were "really healthy and happy" and even "kind of glowing." "I think it's because of the connection," he said. P14 mentioned that these days, "the number of people that have had the experience of pulling a carrot out of the ground and tasting what total freshness is," is much smaller than in past generations, and she hopes to change this by bringing people closer than just the grocery store aisle to the production of their food. "I love farming because I'm doing it to educate people to live," she said.

CREATING CONNECTION THROUGH EDUCATION

Many of our producers mentioned that part of creating this connection between people and the food they eat involved **educating their customers about what produce was in season and encouraging them to try new things**. P8 said that part of the motivation behind creating his CSA was to encourage people to eat seasonally and "be in tune with what is going on with farming and the way farming flows." He said it was important "to introduce people in more of a natural way and easy way" to the cycles of the seasons, and he emphasized creating a visual connection for consumers: "Just seeing it," he said, "how a garden starts and how it proceeds through the season and eating accordingly."

In addition to eating with the seasons, **some producers often found they needed to actively encourage customers to step outside of the box and try something new**. P9 touched upon the reluctance he found among many customers to purchase uncommon foods when he said, "Many people are not into eating certain foods. It requires people to stretch their taste buds." This reluctance also became apparent through some producers' descriptions of their 'ideal customer.' By describing their ideal, they often hinted at their frustration with some current types of customers. For P9 it was "someone who is steady, and who is willing to buy a diversity of things" and for P6 it was "somebody who's enthusiastic about the product and interested in trying a variety of new things."

One producer, P11, focused not only on educating her customers about the seasons and her products but also on **encouraging customers to ask different kinds of questions, questions getting more at the story behind their food and the producer who grew or made it:**

“We’re training them to ask different questions than they’re used to asking. We really encourage them to taste cheese. Instead of saying I want a cheddar say well we have this other cheese, it’s not really a cheddar, it’s kind of made like a cheddar...but they’re using Jersey milk they only have 4 cows. We’re training them to ask about the cheesemakers and ask about the animals. They’re looking at it from the grass instead of from the style of cheese. ‘I want a washed-rind or a soft cheese.’ That’s part of it but we really want it to be the last question.”

CONNECTION FOR A SUSTAINABLE FUTURE

In addition to the difference it made in their customers’ lives, a few of the producers we spoke with were also motivated to educate their customers and help foster connection **because of the influence it had on the future of farming.**

These producers, like P10 and P7, believed that **if people were connected to their food** – connected to the producers who made it, familiar with the way in which it grew, and just informed about the entire story behind it – then **they would be more likely to help create positive changes on a per farm basis and, more generally, at a political/policy generation level.**

P10 believed:

“To me, I think one of the most useful possibly in terms of like getting customers to feel involved and supportive and interested in this movement and the farm is not necessarily to like dumb it down for them but to like just share, if there were more resources and farms communicating and sharing examples of what they’re doing and that was available to just people in general I think people would find it pretty interesting.”

He elaborated on this thinking, saying:

“First of all the more members feel connected and like they’re not just on the receiving end of the CSA but they’re participants in the farm in one way or another, whether it be by coming up and helping us plant onions or sharing recipes online with their members or just hearing more details in the newsletter about the farm, feeling like they know what’s going on and they’re part of that, the more we can do that, the more we can...well one thing is probably less turnover in members which is always helpful. And then yeah the more we can have them contribute like for trying to get land.”

P10 not only saw benefits to his farm specifically but also to **farming in a broader context.** “There are a lot of policy changes that should really happen to make what we’re doing more feasible,” he said, “and the more we can have members on board with being organized around that and informed and possibly take actions.”

P7 felt similarly stressing:

“The important thing is that people of all walks of life see what is going into a working farm know what places like this exist in the county. Next time a development proposal comes up to subdivide into three acre parcels, they may think it should not be approved and preserve the agriculture part of the land so someone can farm it someday.”

A2 also emphasized that “we need people to be concerned about soil availability...water conservation,” illustrating the importance of informing consumers about these widespread issues, their affect on producers, and how consumers can help.

Other producers we spoke with felt strongly about **educating children about their food and the story behind it and exposing them to farms, gardens, and ranches**. Producers like P7, P9, A1, and A4 felt that it was **especially important to educate children so that these future generations would have a better idea of what a farmer does and, through these experiences, hopefully be encouraged to become one when they grow up**.

“You know what a dentist does,” said P7, *“as a child or an adult you have a concept of what that occupation is...‘oh I want to be a doctor, a firefighter, a grocery store owner, a seller of solar panels,’...but how many people have the experience of a farmer?”* P7 continued to explain how he thought it was especially important for children to visit his farm, and that he specifically grows strawberries for kids to pick, in order to give them that experience. Similarly, A4 mentioned that in the future she wanted to provide a hands-on experiential learning space for children. She said, *“I think my ideal would be to have a piece of land and be some type of school place.”* A1 also thought that *“getting kids to understand their surroundings”* was important because natural experiences like *“life, death, and eating are the only common experiences.”*

For some producers, like P4, the children they were hoping to encourage were their own. She loved the fact that her children were *“interested in being involved long-term”* and said that *“creating something viable for the next generation”* was a key part of being successful because *“the kids give us hope.”* These producers really believed, as P9 put best, *“The best crop we can raise is a new generation of farmers.”*

ENSURING A HEALTHY ENVIRONMENT

As was mentioned earlier, all of our producers were motivated to ensure that they were **contributing to the overall health of their surrounding environment**. This, along with the health of the people in their communities, were the main factors **influencing our producers’ growing practices**.

P12 mentioned how there has been a *“paradigm shift”* leading people to *“recognize the value of natural resources and to not squander them as well as the value of the plant life and animal life and not to squander them.”* He said that *“part of that is how you utilize that, all of it, in a sustainable way.”* Along the same lines, P13 said that at his farm they were *“trying to make our little part of the world better”* by *“having healthy plants and a healthy ecosystem...knowing we’re not using anything that is toxic.”*

For some of our producers, a large part of being sustainable was focused on *“conservation of resources”* (A1).

This was especially true for P14 who said:

"I think what it means to be a successful farmer is developing practices on a farm that would make a farm a closed system and a living organism in and of itself. Being able to have the amount of land to grow the carbon that you would need to produce your soil...purchase as little as possible, being able to grow out your own seeds and produce that seed and those crops on your farm."

Looking at the bigger picture, for our producers a healthy environment was just one part, albeit an important part, of how growing food made a difference in the world. "There's so much you can address by growing your own food," said A3, "Environmental issues, food security issues, oil, wars in Iraq, it goes so far. So I really, I wanna keep doing that, whether it be farming or working on someone else's farm. I just really wanna keep pursuing that."

ORGANIC CERTIFICATION AS A BASELINE

Even though sustainable practices, like remaining pesticide-free, were important to all of our producers, **organic certification was not as universally valued and promoted.**

Some of our producers like P2, P3, P4, P5, and P11, all **believed strongly in organic certification.** These were producers of an 'older generation,' ones who had been farming for many years. In many cases, **they were one of the first producers to farm organically in their area, facing an uphill battle against many critics who believed such practices would not work.**

These producers **truly believed in what the certification was originally created to support,** P2 thought that organic certification was important because the practices it supported were a part of "how much you are influential in healing the earth" and P11 felt that it meant "you are taking good care of the land and the animals." P5 said that "organic is definitely a good thing, even if you produce less with an organic system. You've got a healthier system for a long period of time and it's the way that things were done for thousands and thousands of years before 1940, before we started using war chemicals on our food."

In order to have organic agriculture recognized, these producers had to fight hard to prove that such practices would work and that their crops would not die and to promote the certification, which they continue to do to this day. P2 stressed that "you have to be an organic farmer to be successful" and said that he would not work with people who did not "believe" in organic. He also mentioned that he "converted some pretty important people to organic." P11 felt the same dedication to the certification, saying that "organic is just a baseline, we don't even want to talk to you if you're not organic."

P11 went on to describe what organic really means to her and why she values and promotes the certification:

"It gives you a certain sense of ethics. You really pay attention to your ingredients and you never lie about them. I think that happens a lot in restaurants where there's an impression that everything's organic and everything's local. There's a couple things and there's an impression, but it's just...everything else comes from a commodity farm in the Central Valley. Cafe Vert really believed in organics, really found seeds and said grow these seeds. It's really different and Charles Meier* has that same ethic. He really believes in organic. It's a better way to take care of the animals. It's a better way to take care of the land. Charles* is like Cafe Vert*, he believes in it." (*names have been changed to preserve anonymity)*

Even with their staunch support of organic certification, **these producers did recognize that the system has its drawbacks, its flaws.** “Certification is a hassle,” P5 said, because of all the bureaucracy involved and the fact that paperwork is difficult and “doesn’t come naturally to the people who are growing organic.” But, he also said it was “a necessary evil.”

P11 felt that **the set of metrics organic certification provided was better than not having any at all**, even in light of existing problems with the system:

“It’s not a perfect system but it’s one that we have and we have a way to certify it. Unless you’re going to the farmers market and you can see that farm, how do you know if it’s a careful farmer. There’s no way of knowing. It’s still not a guarantee and it’s the only thing we have. I don’t want to make another set of rules. I know there’s issues with scale, but I’d still rather have a Muir Glen organic tomato in a can than a Del Monte with pesticides.”

BEYOND ORGANIC

On the other hand, some producers we spoke with, like P6, P12, and especially new/young ones like A1, P10, and P13, **knew that ‘organic’ (i.e. ‘sustainable’) practices worked and valued their importance, but they did not believe in nor support the certification.**

When we asked A1 about her feelings regarding organic certification she said, “I think it’s ridiculous...It’s not clear what it means. The label doesn’t mean anything.” She went on to say that it “allows for a certain amount of chemicals and most people don’t know that.” P6 felt that **consumers were becoming more aware of the real value, or lack thereof as A1 pointed out, of organic certification.** He thought that “enough people are reading the articles about local versus organic to be aware that organic doesn’t mean anything in some cases.”

Additionally, P10 and P13, who sell through a CSA program and at the Farmers Market respectively, both mentioned that **they see no benefit to certifying.** “We have an unbelievable demand for our stuff without certifying,” said P10, “and certifying would not increase our demand, so why bother.”

P13 explained how he **values buying locally above buying certified organic** and that the **certification is only of importance in situations where there is no-one to ask:**

“Our direct customers ask if it is organic and we say yes.. we don’t spray anything we don’t do anything...it is just as it is and it does fine. People at the Farmers Market they know, and if you go to the super market you have to see that label that has certified the product because that is the only way I know...you have no one to ask. I’d rather buy it from someone I know.”

Similarly, P6 mentioned that he looks at it in terms of the “priorities of [his] customers.” “It seems like local is more important to them than organic,” he said, “they occasionally ask if it’s organic but rarely ask if it was certified.”

P12, on the other hand, **did face some resistance when trying to sell his non-certified products.** For example, one grocery store would not carry his sausage because it was not certified organic and they also would not carry his asparagus because, as he said, “it’s organic but not certified organic.” “They’re really focused on that certification and I understand it gives them credibility,” P12 said. Most of his profits came from

selling to restaurants though, so it was not a huge loss for P12, because, as he said, “Certainly I don’t know of any restaurant that won’t take non-organic meat if it’s otherwise sustainable and local and they feel good about.”

Some of the producers, especially P12, talked about **practices that were ‘beyond organic,’ and emphasized true sustainability over certification.** P12 mentioned that his vineyard was close to being certified organic but he gave up because becoming certified meant using products that were worse for the environment overall. “I use Round Up which has glyphosate,” he said, “but the alternative is using a bunch of petroleum products in your tractor or a flamer. As far as I’m concerned the net detriment to the environment is worse using the organic methods of weed control for a vineyard.”

P12 further explained his outlook on organic certification, saying:

“I look at it very realistically. It has not been clearly shown that organic grapes are better quality nor in my mind that it’s better for the environment. I applaud the concept. I think it’s good and I probably will join up with them and get my pasture certified. I believe in the concept but I also believe that it’s more important to be sustainable than to be organic.”

ORGANIC CERTIFICATION CHALLENGES

The main reasons that some of our producers were not strong believers in organic certification is that, **for them, certification is both expensive and hard in terms of record keeping and bureaucracy.**

P13 felt that “it is such an extra headache, we’d have to hire someone to be in charge of certification.” P10 said that, “I know that a lot of organic farmers talk about how it’s this big pain, all the record keeping.” He elaborated, saying, “I think that there is some room for wrong interpretation of the requirements and some farmers keep records in different ways than others and some probably make them up.” Even P3 who was certified said that “It’s a death sentence growing organic, it can be very frustrating.”

P12 explained that he was not certified organic for various reasons. For his vineyards he said, “You know how much that would cost? It’s just not sustainable.” On the other hand, for his pastures he said, “I could be on my pastures and I went to the [organic certification] people to start that process a couple years ago, but they were too busy.”

Additionally, he raises numerous animals and explained the struggles he would face if he tried to get organic certification for them:

“It would be virtually impossible to get organic feed for rabbits. It would be extremely cost prohibitive. Even to get certified organic rabbit meat you have to have the processing plant be certified organic. For the pigs you have to have all the feed be organic and it’s not organic. Plus again I’d have to get certified organic on the slaughter. So the animals are extremely difficult.”

These producers’ feelings are best echoed through the words of P8: “Sustainability wasn’t really my main focus in the beginning but now it is our primary focus, to figure out what that means. Really a challenge. Easy thing to say. Hard to Do.”

BENEFITS OF COMMUNICATION AMONG PRODUCERS

All of the producers we spoke with mentioned the **benefits of communicating with other producers**. This communication was often in the form of **sharing resources, taking action together, exchanging information, ideas, and advice, and providing emotional support**.

Sharing Resources

Many of the producers we spoke with brought up the fact that **they often shared resources with one another from sharing machinery to organizing annual seed swaps to providing access to a commercial kitchen**.

A2 and A3 both mentioned how, if you want to sell preserves or create any other ‘value added’ product by processing food, then you are legally bound to make those in a certified commercial kitchen. Many producers do not have access to such kitchens though since they are financially burdensome. *“A lot of the stuff we do is illegal and we’re trying to make it legal,”* said A2. A3 also mentioned the same problem and how someone had just opened a commercial kitchen in her area to host cooking classes. *“It would be great if we could work out a deal with [the owner of the kitchen],”* A3 said.

Taking Action Together

Other producers we spoke with brought up examples of when **they mobilized other producers around a joint cause like increasing purchasing power or creating a new Farmers Market in the area**.

P7 said that since most farms were too small to have much purchasing power individually, he approached producers and suggested, *“if we can coordinate, we may be able to get additional discounts or negotiate better prices.”*

P11 mentioned how some producers in her area had approached the Farm Bureau and Agricultural Land Trust to fund a Farmers Market but received little support from those organizations who responded saying, *“We don’t have farmers in [the region]. We only have ranches.”* So P11 and the other producers took it upon themselves to create their own market. *“We put an ad in the newspaper that said if anybody wants to sell at the Farmers Market come to this meeting at the community center,”* described P11, *“We had 30 people show up and they were all backyard farmers.”* That meeting eventually led to the creation of a new association of farmers which still exists today.

Exchanging Ideas, Information, or Advice

In addition to sharing resources and taking action together, **many producers also exchanged information, ideas, and advice about issues like growing practices, grafting, or new approaches to farming**.

Some producers, like P8, felt that it was *“important to learn different ways of doing things.”* Others, like P9, said that *“sometimes it’s technical give and take.”* On the whole, most of our producers felt the same way as P6, who said, *“I think it’s really important, particularly in this realm of agriculture, to be able to share information.”*

An important part of this exchange included seeing how other producers were trying to solve some of the same problems. P2 mentioned how *“farmers love to see other farms,”* especially as a source of new ideas. A4 even told a story about how new ideas often came from other apprentices, like A2 who used an *“organization board”* to keep track of everything that had to get done on the farm. A4 saw this when she was visiting one day and liked the idea so she then implemented one at the farm she was apprenticing at.

One producer, P10, said that he really valued DIY “innovative farm hacks” from other producers. He strongly believed in the importance of “all these independent farmers all over the place who are coming up with very creative and innovative solutions to things...doing applied research on the farm in a very small uncontrolled way who are coming up with great ideas for new tools, how to fix old tools, and how to solve these problems.”

He even recounted a specific example of when a producer in his area shared this type of information. P10 referred to this producer as an “innovative thinker” who was “constantly assessing systems and coming up with new ways to do things and other ways to do things.”

According to P10:

“[The producer] came up with plans to convert a cultivating tractor, which is this very simple tractor that was built in the 1940’s to weed basically...and he came up with plans to convert those simply using off the shelf parts to electric. He made these plans very much with the goal of sharing them and making them accessible to the farm community. There are tons of people doing this conversion now and we did this conversion. It’s like super helpful and a major asset. They’re quiet, they don’t break down, they’re cheap to run. That was a great piece of information that I was able to get from someone that was totally useful to me.”

Providing Emotional Support

Given the physical and financial challenges that many producers faced along with the potential for their work to feel isolating, it is no surprise that **many said they used each other for emotional support.**

P7 believed, “Another benefit would be support. This is a really hard way to make a living, it doesn’t hurt when you’re feeling down...‘I’m having shitty year too’or ‘Have you thought about doing this?’ or whatever kind of emotional support.”

A1 called it “grower support” and said they were “helping each other out” and P9 said that, with other producers, “we bitch about things...sometimes we talk about our ideals.”

INFORMATION BARRIERS FOR NEW PRODUCERS

In addition to the physical and financial challenges that our producers faced, all of **the new producers we spoke with also described information barriers that they struggled to overcome when first starting out.**

Some of the biggest challenges these new producers (P10, P13, and P14) faced was **a lack of experiential, location-specific knowledge.**

When first starting out, these new farmers **had to consider many different issues like:**

- what crops grow well in the area
- what the weather and growing season is like
- what the soil type is like, (e.g. soil testing to see if nutrient levels need adjusting via compost)
- how you will get water

- what equipment is available (e.g. consider if it will be a hand-scale operation or a size that warrants investing in tractors)
- where to get seeds
- what the market is like (e.g. as P14 said, “What is the competition in that area and how can you create a niche for yourself in growing food.”)

Lack of Experiential Knowledge

New farmers often lacked the experiential knowledge that older, seasoned farmers had.

As P10 said:

“In our circumstance, farmers who have under 10 years of experience, not from farm backgrounds, there are a lot of people out there who have that situation....so a lot of time there are questions that we have or information that would be useful to us that maybe we don’t have access to or we could ask the people we know but it’s not like necessarily that their going to have answers for us.”

Though new producers mentioned turning to books or seed catalogs, they stressed the limited utility of such resources. Much of the information they needed to be successful came over time and through direct experience.

P14 explained:

“As a new farmer you’re not going to really know how long it’s going to take, you can read in the seed catalog that it takes 60 days for maturity but you don’t know yield off the tomato plant, ‘how many pounds are you going to get?’ that’s all what you gather from experience, there’s not really a book you can turn it that’s going to tell you that.”

P10 also mentioned similar questions he had about yield and the limited answers provided by seed catalogs:

“When I make my crop plan like how many you know eggplants does a plant usually yield? Seed catalogs kind of have some information but you never know if they’re [right] or if you have to buy their seeds or things like that. There’s all kinds of general information that could be super useful to have out there and that someone like me would definitely take advantage of if it was made more accessible.”

Benefits of a Mentor

We also saw **a clear distinction in the information barriers faced by new producers starting from scratch compared to new producers who were working on the farm of a seasoned mentor.**

Whereas P10, who had started out on his own, felt that there was a great deal of information he wished was more accessible to someone in his situation, P13 felt that he received all the information and guidance he needed from the producer he worked for.

P13 worked on the farm of a producer who had a great deal of experiential knowledge since he had been farming for close to 23 seasons. As P13 said, “[The farmer I work for] has a pretty good idea of what to plant and when... he has done it long enough so that he doesn’t have to have it written out in clear form.”

P13 purposely chose such a situation, *“I have mentor,”* he said, *“I knew I wasn’t ready to just go and jump in and do it.”* P13, and others in his situation, are not faced with the challenge of making critical decisions with limited knowledge like P10. *“At this point [the farmer I work for] makes these types of changes,”* P13 said, *“for the most part he tells me how he wants it planted and that is what we do.”*

Though P13 did not face the same information barriers as P10, he did recognize this benefit and his lack of experiential knowledge: *“If I had a CSA I would keep closer track of what I’m doing because I haven’t been doing it as long,”* he said, *“At this point [the farmer I work for] kind of just knows. He just knows he has to order seeds and whatever he needs.”*

Lack of Location-Specific Knowledge

In addition to a lack of experiential knowledge, **new producers also struggled to find appropriate information for their specific region, weather conditions, and soil type.**

In order to combat this problem, one producer, P14, set up meetings with other local producers in the area when she was just starting out:

“I met with 5 to 6 different growers in the area and just picked their brain and got a good sense of the soil type and the weather patterns and what works well and what doesn’t,” she said, *“It’s great that I now have these connections and can call up these farmers that have more experience than I do and call them up for help.”*

P10 also said he was often faced with location-specific questions like: *“We have these cabbages in the field, it’s late fall, we want to hold on to them for as long as we can in the field because we don’t have room to store them. When is it too cold?”* Questions that he did not have the location-specific knowledge or adequate experience to yet answer.

Even P12, a seasoned producer, remembered struggling with this issue when he was just starting out in Marin County. He remembered how at that time one of his friends in the area *“was a really good resource”* because *“he just had knowledge he didn’t even know he had from just growing up in and around it.”*

Receiving Help

When faced with these information barriers, **all of our new producers received help from other producers** whether it was P13 who had a mentor or P14 who reached out to the local ‘farming community.’ Our apprentices, like A3, also mentioned struggling with these issues and how *“there’s a lot of small farms around here which is a great resource.”*

Even established producers who had been farming for years reflected on the same types of difficulties and **the help they received through communicating with other producers.**

P12 reflected back on his time starting out, saying, *“Initially I didn’t know anything about farming. I knew a little about horses....a bunch of my neighbors taught me about pigs, cows, the dairies that were here, a nice community that was really helpful.”*

P6 also said, *“I think, especially if you’re starting out, there is lots you can learn from other people.”*

P14 felt that *“there’s a bit of camaraderie of really wanting to support new and young farmers since they are so needed right now.”*

Possible Tools

Even though communicating directly with other producers seemed to be a successful way for our new producers to gain assistance and move past some of these information barriers, we believe that this is an area where the **creation of specific tools could be extremely beneficial**. For example, **farm journals, crop planning schedules (especially for starting a CSA), and pricing information/indexes** were mentioned as important tools and resources for current producers. Developing ways to aggregate this information from producers in a specific location into a publicly available resource, possibly paired with other existing data like weather patterns, could be extremely useful for new producers. These tools would have to be easy to use, integrate into producers' current practices, and provide a strong value proposition showing immediate benefit and utility (e.g. focus their attention, provide alerts, etc.).

P10 believed very strongly in the benefit of moving these types of tools online into a shared space, explaining:

"Everyone is planting their own crops at their own schedule with their own weather conditions and having their results. If there were ways to get a hold of some of that information better and be able to share it and mine it for research and things like that, that could be really cool."

Due to time constraints, we could not investigate the potential for these tools in as much depth as we had wanted. However, moving forward, we would like to explore this area by talking with more new producers, looking at various examples of farm journals and crop scheduling plans, and digging deeper into this space.

COMMUNICATION PRACTICES & BARRIERS

Even though our producers valued communication with other producers, they also mentioned **difficulties fostering this communication due to a lack of appropriate channels**.

This lack was especially apparent to our apprentices and new producers who needed and could benefit most from such exchange. A1 said, *"getting farmers connected, communication was one of the biggest problems I encountered this summer."* P10 felt similarly, saying, *"To me farming is this great opportunity where information could be shared better and have really rich effects from that."*

Even our more established producers who had been farming for many seasons, like P2, felt that they did not have a good way to communicate with each other. *"We could learn a lot more if we could talk more together,"* said P2, *"if we all embrace the whole thing, we're all going to go further."* P7 felt similarly, saying, *"I think there is a lot of room for more communication around production practices, scheduling... 'when do you think you can get away with planting earliest corn,' 'how do you store your potatoes,' 'what equipment do you use.'"*

Currently, this type of information is passed on through word of mouth, and most of the exchange happens through weekly encounters at the local Farmers Market.

Though word of mouth is a powerful force, it often leads to isolated information that is only found due to luck (i.e. being in the right place at the right time).

P10 explained: *"Information is usually shared by word of mouth and on a very local, regional level. The mechanisms for sharing that information being like okay well you visit your friend or you have an apprentice who works here and then came here and tells you about something."*

P10 also described how “a lot of growers share a lot of information at Farmers Markets and it’s a huge opportunity for people to ask each other questions and figure out price stuff.” Though this informal exchange is useful, it only benefits producers who can attend Farmers Markets. Some producers, like P3 and P4, do not have the time to attend every week and instead have community members helping sell for them. Other producers, like P10, chose to only sell through a CSA program. This could be, in part, due to the fact that some new producers struggled to gain acceptance to Farmers Markets, often having to wait for another producer to drop out in order for space to open up.

Also, P10 brought up the fact that **having information in the moment would be most useful for him, but that he did not want to bother other producers and burden them with his problems.** This hesitation is understandable given earlier findings regarding the exhausting nature of the work these producers do and the little free time they have to interface with one another.

P10 described his hesitation, saying:

“That’s the problem, in the moment I might want to and wish I had that person to ask right then but like I don’t want to bother them or they’re busy...things like that. So I usually save it up and if it seems like a real problem that I need to know then I get in touch with someone...I usually don’t like feel I could just call someone ‘cause everyone’s so busy. I wouldn’t want people probably doing that to me either.”

SHARING IN THE FACE OF COMPETITION

Among the producers we spoke with, **there was a range of thoughts on the existence of competition and the willingness to share.**

Most of our new producers expressed little concern with competition and were more open to sharing.

P10 felt that since there was so much demand competition was really a non-issue. he explained:

“My experience with it has been that there’s very little concern about that...I totally don’t see people being competitive, mostly I think ‘cause there’s so many in our area, there’s such a gigantic demand for this stuff, that it’s totally unable to be met at the moment by local farmers that I kind of feel like the more we can all, the more farmers there are doing this, the better we’re all doing, the better it is in terms of us having more resources in our community related to farming.”

He elaborated, saying: “If there were way more farmers doing what I’m doing or farmers growing commodity corn who were growing vegetables, I would see it as a total asset instead of as competition and I don’t envision that even if every farmable acre was being used in my region that it would be enough to satisfy the demand.”

P13 felt similarly, saying:

“For the most part, at least where we are, we don’t really have any competition...just not that many growers in the area. There is plenty of market out there...whatever it is 1 or 2 percent of the population that goes to the farmers market...I think the more knowledge you have and the better you can do, the better it is. My experience is farmers are very open to sharing what they’re doing and why they’re doing it.”

On the other hand, P14, another new producer, felt that producers were less open to sharing. She expressed some hesitation regarding sharing farm journals, saying, *“I feel like that is more of a like a personal thing. I’m not sure if people would be willing to.”* She also felt that not all producers would be willing to share their crop plan since, in her mind, *“it’s kind of proprietary information, it’s what you’re going to make your living off of.”* Personally though, P14 did choose to share her crop plan with 40 students at a college she taught at, claiming that *“it really just depends on the person.”* Even though P14 had some reservations about producers sharing tools such as farm journals and crop plans, she felt that **most were open to answering specific questions that she had:** *“I definitely asked some local farmers ‘what are your best varieties for carrots,’ ‘what salad mix varieties do you use?’”* she said, *“they generally tell you that stuff without any issues.”*

Some of the more established producers felt as P14 had thought some would, that competition was a real threat, limiting the potential for sharing among produces.

P5 mentioned how P3, who worked at the same farm as him, once asked one of their neighbors for cuttings, but the neighbor refused thinking it would result in *“direct competition.”* P5 went on to say that *“farmers are funny, they can be real personable and real non-personable.”*

P2 said that some of his competitors were *“a little more guarded”* and that *“farmers are private people, you know,”* though he was surprised by the willingness of some producers to share. *“Organic farmers are more open to explaining their tricks than I thought,”* he said. This may have been in part due to producers struggling together to ‘figure out’ organic and champion the cause, as explained previously.

P3 believed that there was a *“real range on competitiveness, some farmers are very helpful while others treat information as very proprietary.”* He went on to say that *“for the most part, other farmers are generous about sharing.”*

One of the apprentices we spoke with, A2, mentioned how, in his experience, the *“old guys”* who ran the farms in his area had already *“made their decisions about how they’re going to irrigate”* and other such choices which are now *“points of contention”* among other producers in the area. *“They get kind of uppity about it,”* he said and two of them do not even speak to each other anymore as a result of what he said was *“a lot of ego.”* A2 went on to say that part of this contention was because *“who you are is very public within the farm community”* and *“it’s very evident how well you’re doing”* since you easily compare pounds produced or see that *“that’s good looking broccoli or those turnips need more phosphorous.”*

Some of this **variation in thought on competition and sharing may actually be more of a result of where these producers live and the market in their area** than the fact that they are new producers just starting out versus established producers more set in their ways.

P14, one of the new producers, touches upon this point, saying:

“Sonoma County is saturated in organic farms but there’s still a huge need for people to be eating organic and nutritious food, so I think there’s a lot of room for growth. There’s competition but there’s room for growth, and I think it’s healthy for there to be competition, it makes everyone strive for better quality control.”

FACILITATING ALTERNATIVE DISTRIBUTION CHANNELS

Many of the producers we spoke with mentioned **struggling with distribution** because, as P1 emphasized, *“if you try to follow traditional channels of selling you can’t succeed as a small farm.”* He explained how small-scale producers had to **embrace community distribution channels** like Farmers Markets and CSAs rather than sell exclusively to grocery stores or other retail outlets (though some of our producers did this as well) in the fashion of big, industrialized agriculture.

Even though our producers encountered a range of problems, often differing depending on their scale and preferred method of distribution, it was clear that **a way to help centralize this distribution and support these variations was needed.**

For producers who sold at the Farmers Market, like P13, coordinating truck routes and sharing in this delivery process was one area for improvement.

He explained:

“All these small farmers have to truck to the city but how could we get down to the city together and just send two? There is no really good person who is bringing people together and bringing it to market, everyone has to go alone...everyone too busy to figure out how to coordinate and if you bring in a middle man they try for lowest price.”

For producers who only grew specific crops, like P1 who just grew Asian pears and apples, a CSA was not practical since they did not have enough variety. However, connecting these producers with other producers in the area who run CSAs that mainly have vegetables would be beneficial for both parties since P1 would be able to sell more fruit and the other producer would have value added to their boxes.

Other producers mentioned **helping customize distribution methods.**

For example, P7, who ran a CSA, mentioned customers often finding that the amount of produce in each box was too much for them. So he said that sometimes customers would split the box each week or alternate weeks receiving the box.

Some producers, like P6, felt that distribution channels like a CSA program were *“a lot of work”* and that, at his small scale, he *“would like to have people order periodically,”* directly from him than have to deal with a CSA or go to a Farmers Market. Assisting with this type of direct distribution to the customer could also be useful for new producers just starting out who sometimes struggle to get accepted to the Farmers Markets in their area, depending on room.

Additionally, some producers mentioned **not having an appropriate outlet to benefit from extra production.**

P13 stressed that such assistance needed to focus on helping the farmer: *“Not to make a buck off the farmer but make it easier...an easier distribution network. ‘What do we do with extra production?’ We can sell to Greenleaf, but they won’t give us much money for it.”*

P11 specifically mentioned a situation she thought would benefit from the creation of appropriate outlets to deal with extra or unusable production:

“For instance, we have these cheesemakers all over the state and sometimes they make a mistake and they don’t know what to do with their waste. I’m thinking of a hard cheese that has a rotten end to it, can they cut that off and shred it and then can we get that into the school lunch program at a discount or something like that.”

On the whole, **most of the producers we spoke with found the logistics of coordinating distribution frustrating and annoying**, especially producers who dealt with retailers like restaurants.

For example, P12 mentioned how it was difficult to take and organize orders from all of the restaurants he sold to and continually maintain the back and forth exchange of information with them, often on the phone or through fax.

He described some of the challenges he faced when trying to coordinate these logistics, saying:

“That’s a whole aspect of your business, taking orders and organizing it. Just ‘cause I take an order doesn’t automatically mean that that restaurant gets it. I have to make sure I have the animals, that they get to the processing facility, that they get to wherever it is in between the restaurant, and then that they get to the restaurant.”

Often, he had to **coordinate logistics with limited, fragmented bits of information**. He mentioned how once a restaurant called him asking where the pig they ordered was only for him to find out that the processing plant he was using had not called to tell him the USDA had shut them down for two weeks.

He reflected on all of these issues, saying: *“It’s a constant hassle because I would rather be focused on the animals and my vineyards and being outside, going and doing stuff and driving around and being with the animals and the plants.”*

APPRENTICESHIPS

The apprentices we spoke with **all found their apprenticeships through existing services** like ATTRA (the National Sustainable Agriculture Information Service), WWOOF (World Wide Opportunities on Organic Farms), idealist.org, **or through word of mouth** (e..g a friend of a friend).

From the producer perspective, P12 felt that *“an intern has a certain idea of what they want or what they need, what are they interning for,”* and this reflected the sentiments of our apprentices exactly. For example, A4 was interested in bringing a farm into a closed cycle with a focus on seed saving and having animals like goats and wanted to pursue these areas more during her next apprenticeship.

Some of the apprentices we spoke with, like A2 and A4, had great experiences that lived up to their ideas of what they wanted and needed and met, if not surpassed, their expectations.

On the other hand, others, like A1, mentioned that *“the description [of the farm] was incredible, though it just really didn’t live up to the name.”* A3 also mentioned how she, along with other interns, struggled while working at one farm because *“everything was in [the farmer’s] head.”* “He didn’t write anything down,” she said, “so there was no plan that we could all work towards, it was very disorganized.” She continued on to describe how

one apprentice really felt like she had no time to learn anything while working on that farm because the producer “wasn’t open to people exploring or taking time for their own projects.”

Similarly, producers had expectations of apprentices that the apprentices sometimes did not fulfill. For example, P7 said that he had to deal with “*issues about focus, efficiency, stamina, and, for lack of a better word, intensity*” regarding his apprentices. He found his interns mainly by word of mouth, but going forward he said that he wanted to “*cast a wider net*” to find “*people with clearer motivations and more experience.*”

Overall, the process of matching the right apprentice with the right farm/producer(s) and vice versa **requires parties on both ends to make decisions based on the often limited information that these existing services like ATTRA, WWOOF, and idealist.org provide.**

DESIRE FOR GREATER ONLINE COMMUNICATION

The **predominant method of communication among most of our producers was through the telephone** (i.e. mainly cell phone but some landline as well) while a few relied more on fax or e-mail.

P10 said that he felt the importance of cell phones was growing since it allowed producers to stay in touch while out in the field: “*I think every...there are a lot of old farmers who are anti-cellphone maybe, but I think for most farmers it’s now become like as valuable as your tractor because you’re outside during all business hours and so anything you’re trying to do related to that, you need to be in touch.*”

Some producers, like P14, said they preferred communicating over the phone or in person because “*when you’re able to talk to people you’re able to get more out of them and e-mail is a little more impersonal, not as easy to communicate.*”

P5 also emphasized the **importance of face-to-face interaction** when he said, “*I like real social interactions,*” implying that interactions online were less real and less valuable to him. P3 also touched upon this, saying, “*there’s something about the relationship of face-to-face communication [with customers]*” that he really valued and preferred.

Though online channels were not used extensively used for communication, many of the producers we spoke with mentioned **using the internet for research purposes** like to find information on how to grow unfamiliar crops (P13), what materials had been approved for organic use (P3), and if there were any good deals on machinery for sale (P6).

Additionally, many of our producers mentioned that they rarely updated their websites and some were even unsure of whether they had profiles on other sites, like LocalHarvest.org, or what information was present on them. Some of our **producers tended to lament that their online presence was not better maintained as a platform for communication, but expressed a lack of both time and resources to create such channels or keep them up-to-date.**

P2 just started a website but was not really using it. When asked if his farm had information on any other sites he said, “*I’m not exactly sure what’s on that website, we might be on there but we might not.*”

P3 and P4 did not have time to create and maintain a customer mailing list, saying, “*we use computers, but our generation is not as into that.*” P5, who worked on the same farm and also maintained the farm’s website said that it was “*a little out of date*” and had “*a lot of stuff that needs to be changed.*”

P1 also struggled to maintain an online presence in the face of many similar obstacles. His current website was homemade but he said that he “*can’t figure out how to update it.*” He also wished for a better website and mailing list but said there was “*no budget for that.*”

In addition to a lack of budget and resources, some producers like P8 also highlighted the fact that he **did not want to take the time to create a website but instead wanted to be out farming**. He stressed how, “*No one wants to do a website. They want to farm. They don’t want to sit in front of a computer to do a website. They want to farm.*”

Though some of the producers did not want to put time towards creating their own website from scratch, many of them **specifically expressed a desire to have more communication with customers, especially online**.

P10 said: “*I would like to have our website be more than what it is and be possible for our customers to maybe get...build more community through it and things like that. It’s more a matter of not having the resources to implement that.*”

He even felt that just exposing customers to communication between producers would be beneficial. He explained: “*To me it’s like the difference in how MTV used to show music videos and now it just shows ‘Behind the Music’ or whatever, but people seem to like ‘Behind the Music’ a lot better and that’s kind of like the equivalent of just putting out there the farmer-to-farmer communication resources for customers to learn from.*”

P3 also mentioned how his customers really wanted such interaction and exchange. “*It’s more than just fruit,*” he said, “*they want a good peach, but they want something else...interaction, information, and service.*”

Even though both producers and consumers valued interacting with each other and wanted to foster this connection, some producers like P11 highlighted the difficulty of this process. “*It’s really difficult to get the connections between them,*” he said, “*to fill those information lines between the producers and the final users. It’s very tricky.*”

One of the main barriers is that **no communication tool currently exists to connect all of the participants in the food system**.

P12 recognized this problem, explaining how he felt that the food industry needed a new tool to **connect all of the individual moving parts**:

“It needs to be one bigger umbrella that could be a go-to resource that could be electronic and not print...something that was better well-known and could be a forum, a place to interface within the food industry for restaurants, producers, consumers, cooks, ‘cause there really isn’t one. There’s Tablehopper but that’s pretty restaurant focused, there’s Sonoma County Wine Commission within the wine industry, there’s the UC Extension for certain things, so within the little niches there’s some pretty good ones but for the Bay Area as a whole there isn’t one.”

P10 felt similarly, stressing that any appropriate solution would have to **integrate as many different participants within the food system as possible**:

“It all has to come together. As you think about ways to try and contribute to the movement, I’d just encourage you to be aware of how many different things are going on and whenever you see the opportunity to bring other people into the fold or to promote the movement as a whole instead of just a silo of it...there’s a lot of work to be done.”

Retailer Findings

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INTERVIEWEE TABLE

ID	Age	Gender	Experience (years)	Title	Type	Size (workers)	Key Quote
R1	42	Male	12	Chef-Owner	Restaurant	20	"It's all about connection. I really want people to feel connected to the farms and know who's producing the food. When we live in a city we're cut off from that and we think food comes in a Styrofoam package covered in cellophane."
R2	29	Female	5	Sous-Chef	Restaurant	50	"I care about [the farmers] as people, we talk on the phone. For me, they are people in my life. I talk to some of them more than I talk to my parents and my friends. And then you become this person who they're thinking of...they know [the chef-owner here] has a special interest in pork and we sat talking to them on the phone for an hour, giving advice. It's a two-way relationship."
R3	30	Male	7	Chef	Restaurant	95	"It's just very personal, it's not like sitting in an office from 9 to 5... I could talk all day with these people."
R4	56	Female	28	Founder	Restaurant	95	"I know so many people that shop at the farmers market...and it's fresh food. Fresh food is an aesthetic, it's like a religion."
R5	44	Female	14	Chef-Owner	Restaurant	20	"They can trust that there is conscious purveying here. We don't use frozen ingredients, freezer or microwave. It is about integrity in food. Restaurants are often duplicitous. You walk into this place that is beautiful, then you find out it farmed fish or uses prepackaged Sysco/convenience food. My whole quest from the very beginning was to bring in the feminine energy and push out the evil large semi-trucks of prepackaged food."
R6	34	Male	1.5	Executive Chef	Restaurant	23	"Originally our intent was to start off very broad, be more organic and as we began to narrow it down we became more sustainable as well as organic. Of course Michael Pollan's book was a big impetus to all of that change. And as we kind of narrowed and narrowed we become more local and dealt directly with the individual farms."
R7	33	Female	0.42	Owner	Restaurant	20	"Nutritional foundation...that is our number one priority, to offer balanced wholesome meals and then sourcing and environmental impact and that impact on the health of the great community is important."
R8	37	Female	4	General Manager	Restaurant	220	"Just to like be in balance and not create more waste...the less we use the less that people have to make...we want to be organic and biodynamic and not just use it up to use it up."
R9	46	Male	13	Co-Chef	Restaurant	100+	"We are absolutely transparent in revealing all of our sources and we want people to learn to shop and cook the way that we do."

R10	26	Male	0.67	Butcher	Store	64	<i>"I think that from the butcher department we're looking for farmers that are, I don't know, I guess farmers that are working as hard as we are to do the right thing. People that are not going to take any shortcuts, they are going to do it the right way from start to finish because it is the right way, and it's something that's important to them."</i>
R11	31	Female	2.5	Marketing Director	Store	64	<i>"It was this amazing experience for me, I felt like I taught someone something and you just can't get that at Safeway. That's why I want to work there...that's expected of us and that's what people expect when they come in."</i>
R12	29	Male	2.5	Wine Buyer	Store	64	<i>"What makes it easier working with small [producers] is their relationship and knowing them, knowing their habits...and having them know you too and knowing that if you need something on a Friday afternoon and you call them they'll try to get it to you."</i>
R13	47	Male	27	Owner	Store	64	<i>"Get out of your own routine, walk into the field, and see what other people are doing...it takes away a lot of mystery."</i>
R14	40	Female	2.5	Worker / Owner	Other	35	<i>"I'm interacting with whomever is delivering so I don't know who actually grew it. I think this is too bad."</i>
R15	47	Female	13	President	Grocery Delivery	30	<i>"I love the food part, the feeding people part, I feel like I am nourishing people...all the other politics stuff about produce, I hate that."</i>
R16	40	Male	12	CEO	Grocery Delivery	30	<i>"Even though we are in this really crunchy green happy industry it's very cutthroat...everybody is clawing for every last penny."</i>
R17	27	Male	1.5	Market Manager	Farmers Market	27	<i>"I think getting people to eat seasonally is important...and learning how to cook...getting people to want to cook for themselves and their family and getting people to cross into the unknown and try beets for the first time."</i>
R18	56	Female	31	Purchasing Manager	Wholesale Distributor	95	<i>"I'd like to see a growing sophistication in the part of people who eat food (and that's everyone). Stop looking for simple solutions. It's not local is up and organic is down or driving is bad and bicycling is good. Not reducing everything to a sound bite. If we could teach each other... all of us educating everyone about how complex the food system is and how much food permeates our economy."</i>

*** NOTE: R3 AND R4 ARE DIFFERENT INTERVIEWEES FROM THE SAME BUSINESS AS WELL AS R10, R11, R12 AND R15 AND R16. ***

MISSION & PHILOSOPHY

All retailers had some kind of mission that they wanted to accomplish. Their passion associated with this mission drove their daily activities. **Although the specific mission varied among retailers, most retailers mentioned their desire to invest in the physical and emotional health of their community (including the individuals and environment within it).** Some retailers truly wished to facilitate community creation through their business, others concentrated on what they considered to be the healthful impacts of food (buying organic, from known small scale producers with less environmental impact), and still others focused on buying locally in order to support their neighbors' livelihoods.

R14 notes, *“Anyone in small artisan foods is doing this from a place of passion and wants to make a living. My whole goal to see if it can work – see if we’re still around in 5 or 10 years, and is providing families with healthy food and supporting local farms and helping to rebuild the local food economy.”*

R5 stated she practiced *“conscious purveying,”* and summed up her mission:

“[I] hope more people eat here because they eat fresh local food and experience the vitality in their body. Restaurant X is about bringing forth the best of our local fields, Restaurant X is a place where healthy and wholesome produce mean community, [and that] community has a place they can come for breakfast, lunch, or dinner and have food they can count on.”

R13, a distributor, was emphatic about the need for the industry to support families whom he considered ethical and hardworking:

“We focus on the individual that is doing the work”...there are people that have been doing things the right way for generations and we really feel that for us to abandon them we would not only be abandoning the entire industry to those mega [entities]...it would be so hypocritical of us to turn our backs on these people. I want to see them have a good life.”

His devotion to this ideal was strengthened by his long-term relationship with these purveyors.

DEDICATION

Many retailers commented on the almost sacred, religious aspect of their dedication to their vision.

R8 explains:

“It’s a two way, it’s like...the reason I like buying organically is um....it’s just to me, it does a lot with the energy and the beauty of the process of...’cause I come from farmers...it’s just kind of that whole vintage....I don’t know how to explain it...it’s more like the whole custom and whole tradition of belief I have...I didn’t grow up with cough syrup; my mom would have a wax piece of paper, sugar ...[she would put snails from the backyard on the sugar]... and in the morning it would caramelize and that would be my cough syrup...to me that’s organic...I didn’t grow up with pills or TV dinners...the organic and simplicity of everything...I DJ and I still use vinyl...for me everything is organic in my life...it’s just the rawness of working with the Earth....everything I intake I feel all the chemicals, all the nastiness that’s out there...it’s just my beliefmy belief in the mom and pop industry....that’s why I check in if they are new

farms. I know they shut down organic farms once a day or once a week...for me we grew our own food...we had our animals in the front yard in downtown San Jose, for me it's important because it brings me back to family. It's the wellness, sustainability."

Additionally, the dedication of others in the local food community helped to fuel their enthusiasm, respect, and continued support for the retailers' missions.

R5 said:

"I love that there is so much dedication and that these farmers are working 52 weeks a year to nurture their land to produce crops and that they have visions that they learn about the challenges raising produce without chemicals or pesticides. I love seeing how people branch out and change. It is just totally inspirational to see people can devote their whole lives to this."

This type of dedication, allowed distributors like R13 (who described his environment, saying, "It's cold, it's hard, it's dangerous, it's exhausting") to feel satisfied and continue. He said, "It's really gratifying because we're working with really beautiful product...with incredibly talented chefs....it's nice to work with people that work so hard."

Although we were told of many avenues to maintain relationships, one recurring one was attendance to the farmers market. R3 and R4 both noted "We're pretty religious about going. It is critical for [our restaurant]. It is the thing that keeps us offering encouragement for us to continue these relationships with growers... keep the bonds and develop new bonds."

EXTENSION OF VISION & IMPLEMENTATION

Extending one's mission beyond merely food procurement and preparation to all aspects of the distributor's lives was common among the people to whom we spoke.

R2 said:

"I try to leave a small footprint, I just think it's the right thing to do....for me to open a business it has to have a social value element added to it, it's part of my philosophy....It has guided all my decisions with building the restaurant and sourcing the food..."

The culture of each establishment varied. Sometimes a chef or manager would be more passionate and adamant about political agenda than their staff or customers. Specifically, certain retailers would attempt to encompass their values by such varied methods as driving hybrids to cut down on greenhouse gasses (R5), using reclaimed wood in their restaurant (R1), or visiting farms to ensure they were able to hear the stories behind their food and ensure transparent operations (R15, R18, R3, R9).

R15 said:

"I feel like I have to investigate and I have to ask questions. A lot of times I'll ask 'Who are these guys?' and 'Do they have conventional land?' and 'How much is organic and how much is conventional?' They are in it for not the greater good, they are in it for the greater dollar."

Yet, all retailers understand the need to remain realistic idealists in order to stay in business and thus, it was generally accepted that not all staff or customers would necessarily be as involved in this mission. R4 explains, *"People always say they want to go to farms, but the reality is... they don't...they've got their lives." ... "We have some activists in our staff, but not a lot."*

RETAILERS AS BUSY SOCIAL PEOPLE

Regardless of their exact job titles and functions, it was blatantly apparent that retailers are busy people.

"I run the dish, I write the schedules, do a lot of menu writing, I teach people how to cook, I keep close inventory, spend lots of time talking to farms, farmers market, Monterrey Market, I do the menu meetings... I do everything... I go to Target if I need pens...etc" (R2).

Retailers are also social people. They communicate face-to-face with actors in the food community at weekly markets or events and are on the phone a lot. They spend a lot of their free time exploring other's menu's or listings, going to food-related events, and talking to their foodie friends. They care about the people from whom they receive food, their families, and the organizations or families to whom they distribute food. Indeed, it became clear that, because of the significant investment in time and enthusiasm required, the majority of retailers had to be social and cultivate trust between themselves, their purveyors and their customers, as an integral part of their strive for a successful venture. Success was defined in a variety of ways; see *Varied Priorities* for more detail. Most enjoy these interactions, but this popularity can sometimes become overwhelming. R5 notes that there are times she has to hide: *"I need to just make myself and invisible and get my work done."*

BASIC REQUIREMENTS & CHALLENGES

Retailers require reliable delivery and quality, fresh produce at a reasonable price. Quality in terms of aesthetics also matters. *"Presentation matters too. Wicker baskets are going to get you more sales than AstroTurf – you're going to get a better price if it looks like it's from the '50's, if you're walking in a vortex and it's like you're in the 1950's... – people are going to like it" (R17).* *"I know so many people that shop at farmers market... and it's fresh food. Fresh food is an aesthetic, it's like a religion" (R4).*

Yet, acquiring these simple demands can be difficult, because of unpredictable consumer demand and agricultural anomalies. R2 notes an example, *"We don't know how much business we'll get each week. I thought it would be slow last week, but Saturday we had a broccoli disaster and had to go to the farmers market."*

R8 explained further,

"Wanting to buy the best quality at the best price and just having so much availability...having so much out there...it's just a challenge...because I want to actually purchase from everybody...if I could purchase a little bit from everybody I would. ...The challenge is actually wanting to have a broader consumerism from other vendors...(keeping up on wanting to buy the best quality at the best pricing. It's usually great quality but it's the pricing)...I'm really conscious about our pricing."

Because ordering from small, local producers required a significant amount of coordination time, delivery was crucial. *“So really distribution and delivery is really the most critical. We all need some level of efficiency”* (R14).

Many retailers mentioned the **tradeoffs they had to make based on the requirements of their business, their mission and the needs of their customers**. R8 was very concerned about the cost of the ingredients she used, and the environmental impact of sourcing organic food from farther away, *“If we can get something cheaper from maybe two days away but to us if we can get it nearby...we’ll get something much closer so we don’t use fuel or order a little bit more so there is not like double trips.”* R9 reiterated how he made tradeoffs to meet the varying desires or requirements of the community he served, *“we’ll do a very nice product or local product and then we’ll have another product that will be less expensive and will be similar to the other product but a bit more affordable or not in as large a quantity.”*

Justifying the expense of the food was a concern of many retailers and the intensity of their concern seemed to be a function of their audience’s capacity to pay. R9 explained how the price of his restaurant’s food fit into part of his restaurant’s mission:

“Our restaurant does have to be expensive... but if we can show people how delicious a beet salad can be or a salad of arugula that they can get at the farmers market, maybe they won’t get it here all the time, but they can make it at home. That passing on of knowledge and technique can encourage people.”

R2, from another restaurant, explained how she attempts to meet a variety of people’s needs, *“There are certain formulas... We always try to have chicken on, typically we spit roast it, the question becomes what we serve with the chicken or how we change that.”* R5 noted another type of monetary difficulty, *“We are trying to take it down to local produce all the way down to having local jam. Things like ketchup are harder.. Everyone expects free ketchup.”* R15 addresses the common exclamation of, *“Oh my god organic produce is so expensive,”* with reasoning, *“on the shelf it looks like a complete difference but when you add up health cost and cancer and water cleanup...all those things...Those are real costs; those aren’t made up costs.”* A few retailers mentioned the issue of hidden costs of food cultivated in certain ways, whether shipped for long distances or sprayed with pesticides.

Although retailers had difficulties accomplishing their missions, they were willing to go to great lengths to attempt to achieve them, because they truly understood the impact they could have, the needs of their providers and consumers, and enjoyed the interaction they had with their purveyors and their ability connect with the people in their community.

TRADE OFFS

Most retailers weighed the benefits of each interaction based on **their basic needs** (ex: quality of the food, distribution frequency etc.), **the requirements of their customers** (ex: affordability or organic etc.) and **their priorities of “nice to have’s”** (ex: dry farming techniques, support of a variety of farmers, etc.). Because we interviewed such a range of retailers with a variety of consumers, **we found that priorities varied**. For example, while R3 stated *“We want to go organic, but our main thing is going local;”* another retailer, R7 noted, *“Nutritional foundation...that is our number one priority, to offer balanced wholesome meals and then sourcing and environmental impact, and that impact on the health of the greater community is important.”* R8, a distributor, explained that she first looks to make sure her purveyor is “local,” then examines what packaging is used, then looks at the pricing per lb, and then considers the size of the farm. Each of these elements is weighed according to the specific circumstance of the farm, in a qualitative fashion. Although most retailers made commitments to the people behind the food and the practices that those people implement, one commitment would not always trump the other.

During interviews different retailers each explored unique avenues of their criteria. **Some mentioned their distrust in certification and their willingness to believe a producer who they trusted.**

R1 said:

“First is quality and taste. I mean organic is definitely a plus but I know that a lot of the farms I am working with are beyond organic and a lot of them don’t get certified since it’s so time consuming. For the eggs – that’s always...I find the eggs to be the most difficult thing, there’s so much confusion over all the different labels...the best ones are the ones you get from the farm, they are truly free range. A lot of the time the labels are misleading. I don’t follow labels as much as I follow talking to the farmers directly. The same goes for livestock and how they are raised. I know there are labels though like pastured and grass fed and free range.”

Others discussed the meaning of local like R2 who said:

“It [local food] supports the local economy, theoretically is greener, it will be fresher and more in season and the flavor of this land we’re on and that is what we want to be serving. For produce is really where I am the most strict about trying to get stuff. I don’t really have a mile meter—but could you drive there and back in a day? But there are other things you just can’t get locally.”

Still others discussed how they were willing to support local economies (craft industries) in other areas of the world to get the best Parmesan cheese or olive oil. However, **some retailers were not.** R5 explained her philosophy: *“I vote with my dollars that way...I am not interested in factory organic, Australian organic. We are so interested in our local organic farms and we’re so lucky here.”* Everyone had a reason for their decision, like R18 who said, *“You buy whatever you can, as close to home as you can, as much of the time as you can. Then you run into problems about servicing your customers, and if your customer wants blueberries from Chile in the wintertime than who am I to tell them that’s wrong?”*

Sometimes their decision depended on the type of food, R2 explained:

“Meat is far more complicated than produce. There are grazing animals and not grazing animals, and in CA we have a lot of grassland...and here that is easy for us to do. But pork, that is a whole other issue, because pigs eat corn. (They don’t have to eat grain but you cannot support a large scale pig farm on leftover apples and carrot tops and diet makes a huge difference in the quality of the meat in the end.) Eight times the weight of the pig had to come here or we can just ship the pig here. Out there, that is what those folks do in the Midwest...just like that grandma who knows how to make pasta [in Italy]. They have an entire infrastructure set up; nothing goes to waste. There is a company that turns intestines into sausages etc. No part of that animal goes to waste...that is another part of respecting your food. In California we don’t have that infrastructure. To go to slaughter we/they have to travel three hours up the coast- and there is no person to turn the hide into something and make lard etc...”

Most had a plethora of reasons for each choice. On sourcing locally, retailers noted that despite the difficulties of sourcing locally, they enjoyed the experience. *“It challenges you to cook it and use it in a different way. It makes it interesting, that’s kind of the beauty of working with fresh produce, it’s different every day...probably more dramatically than meat or fish, it really varies a lot as the weeks go on”* (R2). Others mentioned how they enjoyed sourcing locally, because daily variety and seasonal cooking kept the chefs entertained. *“There’s a certain amount of nerve that it takes to put something on the menu when it hasn’t arrived yet”* *“that’s part of what I get paid for...being able to figure out what we should do”* (R9).

A few retailers mentioned that they disliked wasting food or packaging. *"I like to buy products that are not in plastic bags" (R8). "It is really satisfying when we're actually using up what we're ordering... it doesn't feel good when you go to all this work to get these fresh ingredients and then they languish in the walk-in" (R4). "Just to like be in balance and not create more waste...the less we use the less that people have to make...we want to be organic and biodynamic and not just use it up to use it up" (R8).*

We found that, as R2 stated, **there is "No 100% black and white answer" to what people passionate about food are willing to use**, whether as "quality cheese" or "local produce." **Instead the decision system distributors and chefs use to choose what to use involves a series of priorities, tradeoffs, and an intimate understanding of the issues surrounding that specific type of food and the circumstance of the producer who provided it.**

RETAILERS AS NAVIGATORS IN A POSITION OF TRUST

Retailers often guide their consumer's decisions about the food. R15 notes the importance of her position, *"I do feel a great sense of responsibility to people who are spending money here...I would not want to lead them wrong or ever make bad decisions for them."* Once, when she was unsure of her constituents' responses, R15, a distributor, sent out an email to her customers explaining that she wanted to buy from a certain producer, because she liked him, but that he was not certified. 99.9% of customers wrote back and said *"we completely trust you."*

Retailers were **less concerned about their producers' labels or certifications** because they had established a trusting relationship with their producers and, in turn, with their customers.

R1 said:

"First is quality and taste. I mean organic is definitely a plus but I know that a lot of the farms I am working with are beyond organic and a lot of them don't get certified since it's so time consuming. For the eggs – that's always...I find the eggs to be the most difficult thing, there's so much confusion over all the different labels...the best ones are the ones you get from the farm; they are truly free range. A lot of the time the labels are misleading. I don't follow labels as much as I follow talking to the farmers directly. The same goes for livestock and how they are raised. I know there are labels though, like pastured and grass fed and free range."

This creation of trust was often enhanced because of retailers' careful attention to the transparency of their operations and distribution of relevant information to their customers and producers. A dialog directly with producers (to discuss quality, certifications, or daily logistics) allowed retailers to work with the producer to meet their needs, and informing consumers of their practices allowed retailers to explain their tradeoffs and choices. R14 explains, *"I think mostly people have a sense of safety that we're sourcing well, as well as we can. We have a few customers who are crazier and stricter than we are. (My work has sort of been out there too [so] we sort of started off with this body of trust.) Transparency comes in for those people."*

COMPLEX TIME-CONSUMING LOGISTICS

The interactions between producers and retailers consist of many to many relationships. The complexity of the interaction increases with the more producers a retailer supports because of the time that must be invested into each interaction and personal relationship. We interviewed people who were heavily involved in the local food community, and as a result had strong motivations for seeking out and supporting local farmers and passing on the costs of those interactions to consumers who had similar cares.

Thus, **as a function of who we interviewed, many interviewees saw few ways to improve the relationship between retailers and producers, because they cared enough to put in the extra effort to call producers, track down ingredients, adapt their daily menu and charge appropriate prices.** Some went as far to note that good is not supposed to be easy. *"Sometimes it is not always about the easiest way to do something. I wish there were not minimums but I understand why there are"* (R2). *"For me there's no problem really...the things that I love about it are things that could be a deterrent for people"* (the uncertainty, the time factor) (R1). Yet, others noted that centralizing communication could make their daily chores easier (everything by email, etc.), and helping people with the distribution of food (have people share trucks) would allow more farmers to market to restaurants. **The distributed nature of these processes can result in inefficiencies.** R1 notes, *"Each purveyor...every single wine company purveyor needs a credit application and every meat provider and produce...I've filled out at least two dozen credit applications."*

R2 explained:

"Every farm has a list of what is available each week, most just fax it over, some email it. Some farms are small disorganized or cuckoo or whatever, and then they just call...Or the ones who really drive me nuts just come by. Most farms you talk to on Mon or Tues for the rest of the week...Everyone has their day. Everyone is different. We talk the day before or a couple of days before. There are some farms that go away seasonally, I don't know ...over time you get a rhythm. I still make mistakes every week."

Despite these difficulties, not all restaurants were interested in centralizing components of these logistics.

R1 explained:

"The obvious improvement would make it more centralized...but then you just end up with [a service like an existing distributor]. There's something that's nice about how sort of...disorganized it is. It's just the way it is. The best improvement for me would be some sort of online system where you could place orders directly with farmers. They would still be handling the distribution...it's just a way for communication...we need to centralize communication more than the distribution."

Other distributors explained how they appreciated or may appreciate some aspects of centralized communication service, such as seeing what was available, or would be available from each farmer. *"That would be the best thing for me...what's in the ground and when do you expect it and how has the weather affected the crop this year...is it going to be on time, what's the quality like, that kind of thing"* (R1). **Other restaurants expressed interest in being able to consolidate and reappropriate delivery routes.** *"One thing that would be awesome would be if we actually could get their food more often."* (R3).

COOPERATIVE RELATIONSHIP BETWEEN PRODUCERS AND RETAILERS

When they had them (and were not part of the minority retailers who did all of their ordering through a distributor), the **retailers' relationships with producers were personal, long-term and strategic.**

R2 explained:

"For me they are people in my life. I talk to some of them more than I talk to my parents and my friends. And then you become this person who they're thinking of.... we know [a producer] has a special interest in pork and we sat talking to them on the phone for an hour, giving advice. It's a two way relationship."

The majority of the retailers we spoke to really cared about the individuals with whom they interacted (ie. those who grew the food, or delivered the produce). Sometimes these individuals were invited to each other's weddings, other times their relationships were maintained through a weekly hello at the farmers market. "A lot of these growers I've hung out and had a beer with... it's not like calling up another business, it's a more personal relationship" (R3). Although these relationships were not developed for an explicitly strategic purpose, often these **long term relationships worked in the favor of both the retailers and producers.** Often, a retailer would try to order from a producer all year long, despite the difficulties meeting the minimums and hassle of sourcing from multiple producers. Knowing this commitment, a producer may be willing to reduce their minimum. Retailers need things constantly and are competing against other retailers and farmers market, so this relationship is really important because it assures quality, consistency, and occasional favors to enhance this service. For example, we were told of cases where a farmer may have some unique item and know a particular retailer will want it, so they will save it for them and call them. "What makes it easier working with small [producers] is their relationship and knowing them, knowing their habits...and having them know you too and knowing that if you need something on a Friday afternoon and you call them they'll try to get it to you." (R12). Alternatively we also heard retailers relating stories of how certain producers give retailers a heads up on what is going to be 'coming,' (R2) and that certain retailers buy produce from producers working towards organic certification to support them (R5), and producers may agree to grow special crops for certain retailers (R1). R2 explains, "You invest time, but you get a lot back from that.... It is like having a boyfriend, you give them a little, you get a little."

COOPERATIVE LOCAL FOOD ENVIRONMENT

Although located in a highly populated area, **the Bay Area local food community seems to be very close-knit and knowledgeable of each other.** Most people we interviewed had an association with Chez Panisse and everyone seemed to know everyone. Most were involved in Slow Food SF, all monitored and used each others' services, and a few have "foodie" blogs.

Yet, we received mixed reviews regarding the cooperative nature of the local food community. **Overall, the majority of retailers noted that people in the local food ecosystem want each other to succeed.** For example, when we asked how retailers found producers initially, we were often given a common example of how, if a producer did not have a certain product that a retailer was inquiring about, the producer would refer a retailer to someone else and even potentially share a route to market with their producer friend (R14). People are friends; they have long-term, trusting relationships with their business partners and they support each other.

However, entry into the Bay Area local food market could potentially be challenging. It may be that a retailer who did not become involved in this scene could miss out on valuable knowledge about the support network of farmers, new ingredients, distributor favors, seasonal variations, opportunities for showcasing talent or celebrating accomplishments. R1, a new retailer, described how producers asked questions about him to know if he was “worthy” of their produce: “Who is he? Where does he work? What’s the concept?” These tests for quality also take place in the opposite direction.

R10 said:

“I think that...from the butcher department we’re looking for farmers that are, I don’t know, I guess farmers that are working as hard as we are to do the right thing. People that are not going to take any shortcuts, they are going to do it the right way from start to finish because it is the right way, and it’s something that’s important to them.”

However, not everyone expressed such harmony. Certain retailers who were attempting to compete with larger competitors explained that certain aspects of the industry were quite competitive. “Even though we are in this really crunchy green happy industry it’s very cutthroat...everybody is clawing for every last penny” (R16). “I love the food part, the feeding people part, I feel like I am nourishing people...all the other politics stuff about produce, I hate that.” (R15). R15, a distributor, describes the difficulties she had buying from established, medium-sized, local farms: “Produce is very political...People don’t think about it.” Originally she thought, “Why can’t I go to Joe Farmer and get carrots...?” Yet, when she asked, some farms said, “Oh I’m very sorry you have to buy my stuff through the other [established] distributor.”

Overall we found that people were willing to freely share a large amount of information with each other, even if exchange of physical goods, or actual sourcing, between those two entities would not take place. “You don’t want to hog somebody or keep that from somebody else...you want everybody to profit from the business or the exchange...you would never hog or covet a relationship” (R10). “I’m always telling people if I find something good...call up this person they are great to work with” (R12). “We’re paying less attention about what other people are doing than about what we’re doing ourselves.” “It’s not just because we want to be better than Whole Foods we just want to be better” (R11).

VARIED PRIORITIES

Many retailers respectfully mentioned the variation of reasoning in the local food community; acknowledging that different missions had their place. While making small choices to eat “better” with a greater understanding of the impacts one had on one’s individual health, community well-being and environmental prosperity, may not be as ideal as acting within certain ideological confines, it were certainly considered better than the common route. Some gave examples of why they felt “local” food was more important than “organic” food (or vice versa), or why some retailers use distributors only as a last resort, and for others, distributors are a fantastic option. In general, retailers tended to understand each others’ ideologies and just concentrated on finding a place for themselves in the local community. R18 explained her organization’s approach in light of one debate: “There are a lot of debates about ‘how big do you get before you’re bad?’ It’s not about being big to us, it’s about ‘how much do you stand by your values?’”

R14 explained how her organization fit into the local food community:

“[Currently, There is an] emphasis on production; producers and consumers are the focus. People were not paying attention to how the food gets from market to dinner...For many people this is a huge unknown. We not only have factory farming, we have factory food processing. Preserving all those types of things - they are not fun to do by yourself. (If you do, you’re really a hobbyist)...What would be in between? What would be something that would have efficiency, community, and be a fun experience? Communities need farms and communities need kitchens.”

Yet, these same retailers understand the hassle involved in accomplishing these goals and why other retailers may not have the money to spend on a forager, time to use calling producers, or desire to be that flexible in their menu. They also recognize that that not everyone can afford the fresh, organic produce and the required mark-up they must attach to it. Thus, **many retailers see themselves as a very specific component of the food community, with a target audience and strict mission.**

RETAILER AWARENESS, ADAPTATION, & PEER EDUCATION

It became obvious that **retailers working in the local food community are very aware of food issues, engaged in the local food politics, work hard to further educate themselves about issues associated with food and adapt their mission based on their evolving understanding.**

R5 explained how she utilizes her network and the fun associated with this process, saying:

“What have you seen that I’ve missed? What is going on in Santa Cruz? We always look at each other’s menus. Sometimes I’ll be somewhere and discover something... heirloom beans or [a purveyor]’s chilies. [Discovery happens] there, but also through the community and through friends.”

R6 nicely summed up one of his restaurant’s transitions, explaining:

“Originally our intent was to start off very broad be more organic and as we began to narrow it down [to be] more sustainable as well as organic...Of course Michael Pollen’s book was a big impetus to all of that change...And as we kind of narrowed and narrowed to become more local and deal directly with the individual farms.”

The range to which retailers engaged in community outreach varied, but most sponsored or attended certain events, and all were aware of their existence.

CREATING CONNECTIONS

Many retailers expressed the importance of connection between actors in the food system, and in inherent difficulties in making them. Although the degree of desire varied, **most retailers expressed a need for connection with people in the food community and the food itself, its story and history.** *“[It’s] all about connection...I really want people to feel connected to the farms and know who’s producing the food...when we*

live in a city we're cut off from that, and we think food comes in a Styrofoam package covered in cellophane" (R1).

Despite this desire for connection, forming initial sourcing relationships and general connections could be difficult simply because of the complex many-to-many relationships involved. Time and effort was required to contact all the retailers, find the information to do so, and sort through the information about people's products, ideology, seasonal variations and delivery routes. Additionally, once aggregated, all this information had to be appropriately redistributed by the retailer to make sure it could be used as needed. In sum, set up for this was time consuming, intimidating, and required continued maintenance. Many retailers relied on working for retailers with such established connections prior to attempting to set up their own operation. Additionally, many of them met their initial purveyors at the farmers market.

For the majority of retailers, the farmers market acts as a monitor, a pulse of the season, especially important for chefs who plan and prepare their meals by the season. "To be connected to farmers and farmers markets is the most natural thing in the world a chef can do...talk to other people, not just chefs, people who go to farmers markets who just like to cook" (R4). Yet, retailers also noted a lot of time is required to create this connection. **Although excursions to food sources are delightful for some, they require effort.** R4 explained, *"I used to be very overwhelmed going to the Ferry Plaza Farmers market... a lot of people say that... and then I realized I had to do it."* In contrast, R18 noted, *"I love to go out and work hands on with people."* R13 concurred, *"Get out of your own routine, walk into the field, and see what other people are doing... it takes away a lot of mystery."* R4 explained, *"People always say they want to go to farms, but the reality is.... they don't...they've got their lives... We have some activists on our staff but not a lot."*

ILLUMINATING THE STORY, CREATING EXCITEMENT

Some retailers wanted to incite excitement among their customers and help them have an experience that extended beyond the mundane necessity of food consumption but instead that created a worthwhile, enriching experience for body and mind.

R10 noted:

"[Our store] creates a very proactive atmosphere for someone who is interested in shopping with vigor...and they are not just trying to hit their budget and get in and get out...they're here to see some stuff, taste some things, have some interaction with the deli...that's where the well-set staff is there to guide you."

Part of creating this excitement about what people are eating requires illuminating a more of the story behind the food. R9 views this as a crucial component of consumer education: *"We are absolutely transparent in revealing all of our sources and we want people to learn to shop and cook the way that we do."*

R17 explained:

"Oh yeah, they love it...they love getting stories. They love having that story evolve. If they know more about your farm, what's going on at the farm, if you share that with them, they love it!...One week he [a farmer] forgot to bring eggs and so he told the customers when they asked for eggs that 'oh the coyotes got the chickens...' and the people were totally excited they were like 'oh that's so...real!...Some farmers

do really well with but others don't get it...The stories make a big difference where people are willing to spend and what they are willing to buy."

A few retailers spoke about their position in the food chain as a matchmaker, trying to appropriately reconcile a variety of needs and create the best outcome for all the people involved in the interaction. R18 elaborated: "We've always felt that we're not just selling the food, we're selling the information behind it...It's building that farm intimacy, we're trying to match the product to the right customer, how it was grown, where it was grown."

R2 expands on her more personal view as a retailer, explaining:

"I care about people and their stories. The way I look at cooking or food is extreme in comparison to a lot of people. 'How to do good by that ingredient?' This is a tomato; it is grown in this way. I want to respect this in the highest way I can. I don't want to do something and be disrespectful. I think that naturally lead to an interest in the person who grew that thing. I spent a lot of time with farmers and befriended a lot. They are my family ...my friends. These are people you're interested in."

EDUCATION & ADVERTISEMENT

All retailers to whom we spoke **have a specific audience whom they directly serve and for whom they cater and concentrate their service, and these power users provide the bulk of their emotional and monetary encouragement.** However, **retailers also care immensely about educating other people**, who are not necessarily part of their primary audience, with the aim to make these people aware of the impact of their food related actions and encourage a variety of dialogs about what choices to make and why. R11 explained a teaching experience, saying, "It was this amazing experience for me, I felt like I taught someone something and you just can't get that at [another store]. That's why I want to work there...that's expected of us and that's what people expect when they come in." The act of educating is also a crucial part success for many retailers. "[Customers] love getting stories. They love having that story evolve. If they know more about your farm, what's going on at the farm, if you share that with them, they love it!"(R17). A butcher explained his specific difficulties, "We can't just bring it in and put it in the case and make it look good. We have to sell it to the customer, 'let's have a dialogue about what you're going to do with that so you get the best possible end product'" (R10).

Despite this genuine desire to educate the public, retailers also expressed the plethora of barriers they have to overcome to do just that. Sous-Chef R2, explains the difficulties associated with information exposure:

"Other Restaurant Y lists their purveyors on the menu. Some people are imitated by that [they] think it is snooty and pretentious. So we quickly learned that this is the not the best route to take. I think it is important to give credit to who raised this etc. but this is also a business and we have to do our best to make money. 'Why is it so much for a hamburger?' They don't know how much work it is to raise that cow, to use it, to caramelized the onions for four hours and make the pickles by hand and how we processed it. We are always happy to give more information about this to others, but...all some people want is lunch. They don't want politics etc..."

Even if people do want more information, retailers have little time, advertising space, and insufficient external resources that cater to each customer's individual interests while providing them a glimpse of the whole political, economic and social morass. The story of our modern day food system, its history, effects and alternatives is complex and relating this expansive topic to an individual's meal is daunting.

R18 reiterated the difficulties with trying to explain the complex topics associated with food:

"I'd like to see a growing sophistication in the part of people who eat food (and that's everyone)...Stop looking for simple solution...It's not local is up and organic is down or driving is bad and bicycling is good...not reducing everything to a sound bite...we could teach each other...all of us educating everyone about how complex the food system is...how much food permeates our economy. I would like to see a growing awareness of how complex food systems are in the general public, in every level of society. To understand that we are in a system and how political food is and how vulnerable and delicate the planet is. A lot of people still are not really aware of it."

This process can be frustrating. R13 elaborated:

"One of the difficult things is telling the story over and over...trying to make it sounds relevant and fresh. He's been telling the story...[but]...It feels like 'don't you guys know this stuff already?' The story: about sustainability, what is the difference, why you need to be concerned about it...So many people are short sighted in what they think about when they purchase things that it's a little frustrating...("Having to tell this story over, and over and over and over")...but you can't go down that road, sometimes you gotta sit down with your kids and explain it to them."

POTENTIAL FOR CHANGE & THE POWER OF HOPE

Retailers in the local food community have vision; they see the potential for change and reinvigorate their passion with the power of hope. R13 explained, *"If I don't reach out to you, than the story will be lost. I want people to be interested, I want people to understand this stuff...I think we're at a turning point and there's lots of energy in the air to address these things. This makes it [his hard job] worthwhile."* R18 elaborates, *"[We're] trying to lead the way to doing business in a different way...when I first started here I was like, 'we're here to save the world!' We're very passionate...and very committed."*

DOMINANT FORMS OF COMMUNICATION

On the whole, our participants kept in touch with people in their lives via all forms of communication, including face to face, phone and email. Retailer's preferences varied; some liked using the phone because of poor internet connectivity in the fields other like R1 noted, *"I personally like to use e-mail more."* **Yet, although adept at many forms of communication, the majority of retailers were willing to use whatever the dominant form of communication producers preferred in order to contact them. Sometimes, this act required daily hours of commitment and extreme flexibility.** Although people were willing to deal with drop-bys, they did prefer a standard form of communication with each buyer to maintain an ease of interaction. Phone and fax were the primary methods of receiving inventory and placing orders; however, some purveyors did use email, and many distributors expressed thoughts that email would be more likely in the future.

Appendix D: Mockups



FIGURE 26. HOMEPAGE

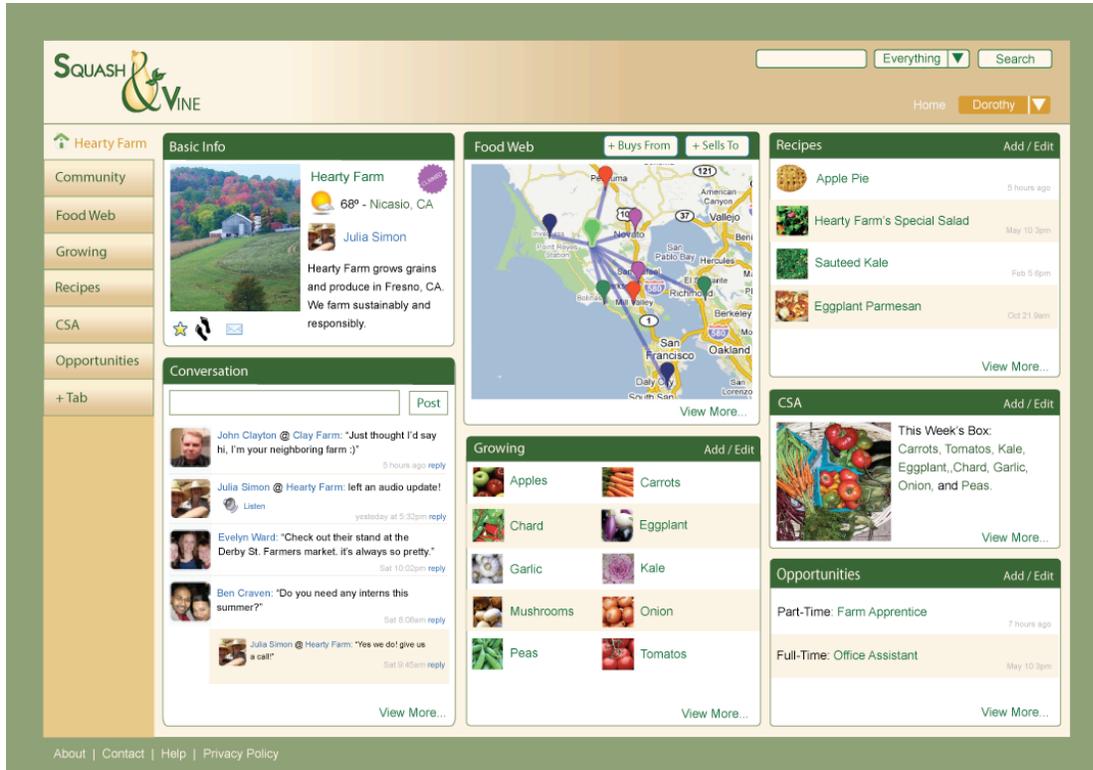


FIGURE 27. FARM PROFILE OVERVIEW



FIGURE 28. COMMUNITY TAB

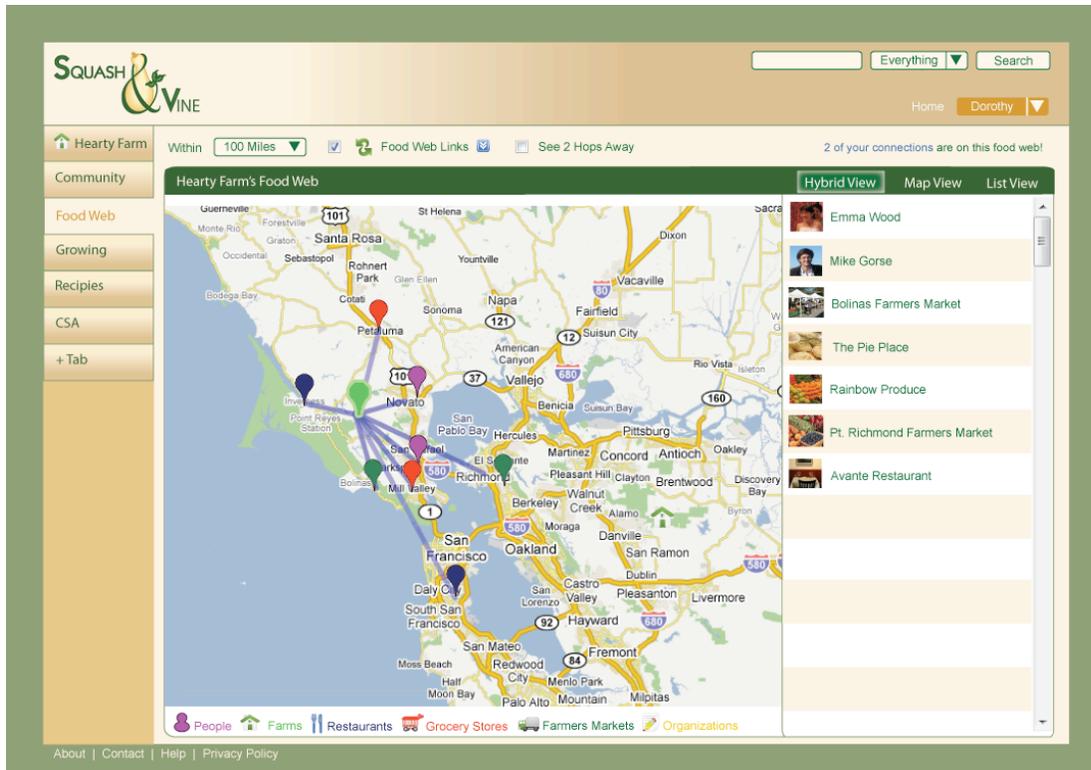


FIGURE 29. FOOD WEB TAB

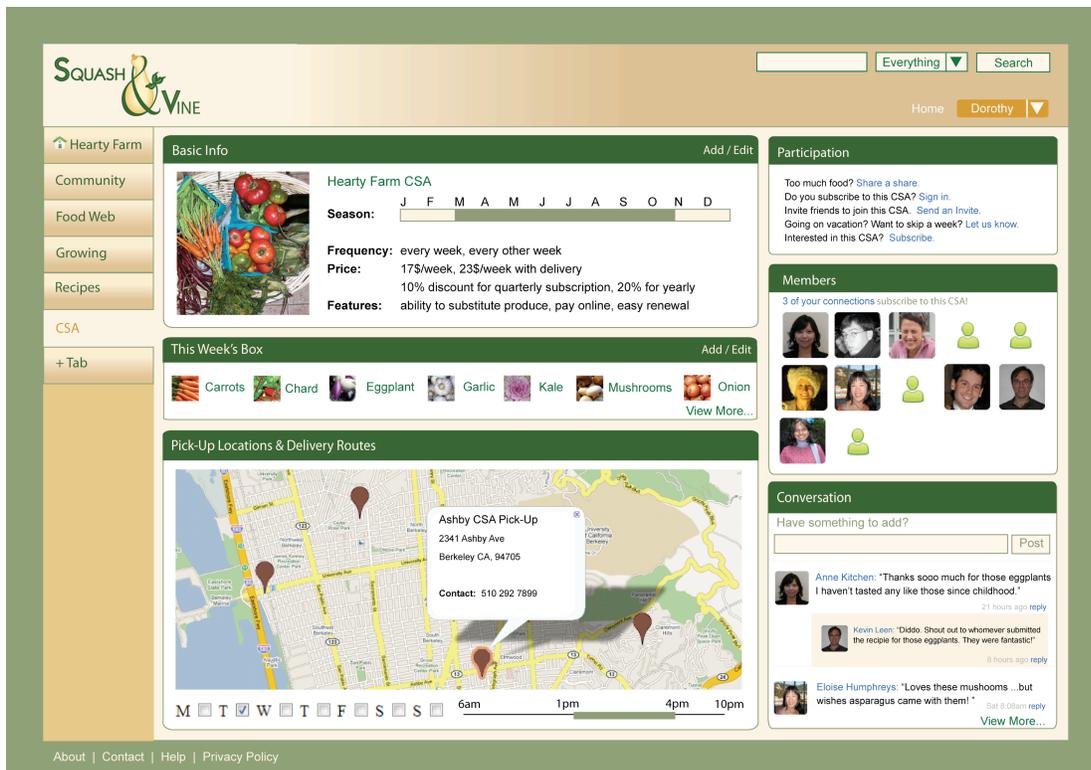


FIGURE 30. CSA TAB

The screenshot shows a user profile for Dorothy Smith. The profile includes a navigation menu on the left with options like Community, Food Web, Garden, Recipes, Journal, and + Tab. The main content area is divided into several sections:

- Basic Info:** Dorothy Smith, 23 Questions Answered, 53° - Berkeley, CA, Birthday: Feb 20. A bio states: "I love good food and I want to help sustainable farmers as much as I can!"
- Food Web:** A map of Berkeley, CA, with various locations marked by colored pins.
- Recipes:** A list of recipes including Peach Pie, Mom's Special Salad, Navajo Peach Crisp, and Peach Ice Cream.
- Journal:** A text entry dated May 10, 2008, about a visit to Rainbow Produce and the Derby St. Farmers Market.
- Conversation:** A list of recent messages from other users like Mary Brown, Hazel Smith, Evelyn Ward, and Ben Craven.
- Garden:** A list of garden items including Chard, Eggplant, Garlic, Kale, Onion, Peaches, and Tomatoes.

FIGURE 31. USER PROFILE OVERVIEW

The screenshot shows a restaurant profile for Chez Henri. The profile includes a navigation menu on the left with options like Community, Food Web, Mission, Testimonials, Reservations, Menu, and + Tab. The main content area is divided into several sections:

- Basic Info:** Chez Henri, 40° - Oakland, CA, Henri Dubois, (510) 555-5555, 23 Broadway St., Open M-F 10am-10pm, www.chezhenri.com.
- Food Web:** A map of the San Francisco Bay Area with pins indicating locations where the restaurant eats or sells.
- Reservations:** An OpenTable.com reservation widget with fields for Party Size (2), Date (May 3, 2008), and Time (7:30 PM).
- Menu:** A list of menu items including Sautéed Kale, Baked Trout and Wild Rice, Peach Cobbler, Poulet Henri, and Cheese Platter.
- Mission:** A statement: "To sell delicious and remarkable food and drinks. That the food and drink we sell meets the highest standards of quality, freshness and seasonality and combines both modern-creative and traditional french styles of cooking."
- Testimonials:** A list of user reviews and comments about the restaurant.

FIGURE 31. RESTAURANT PROFILE OVERVIEW

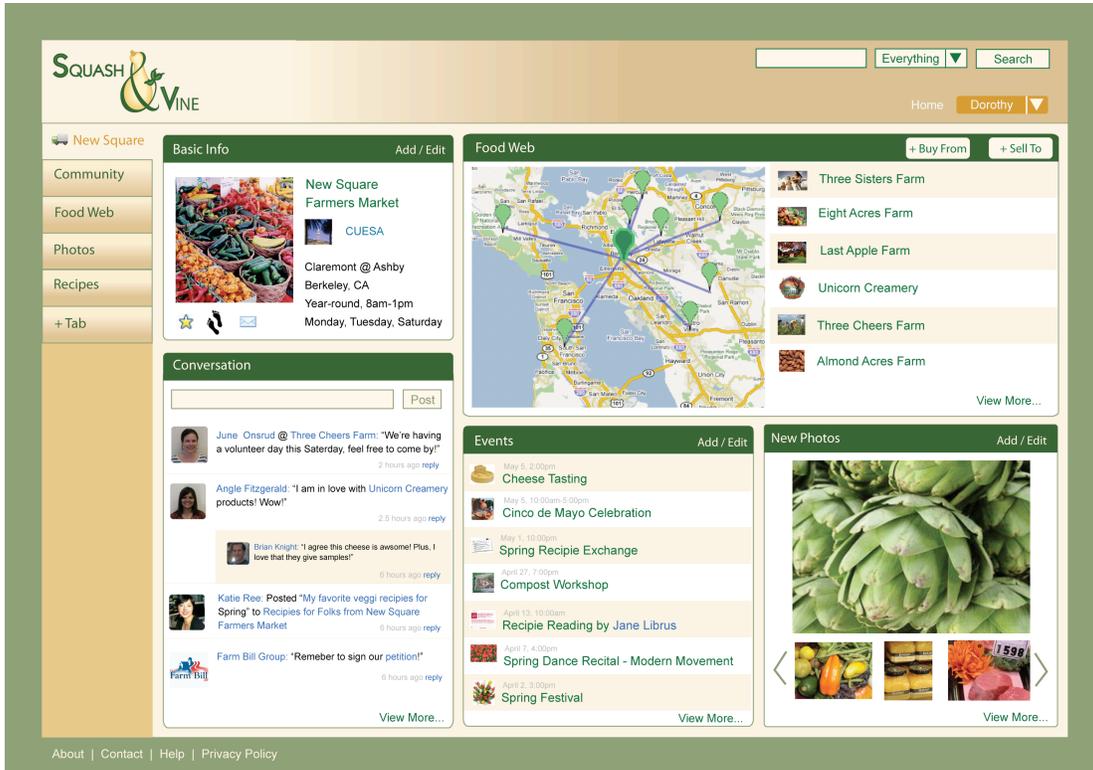


FIGURE 32. FARMERS MARKET PROFILE OVERVIEW



FIGURE 33. FOOD PROFILE OVERVIEW



FIGURE 34. USER HOME DASHBOARD



FIGURE 35. FARMER HOME DASHBOARD

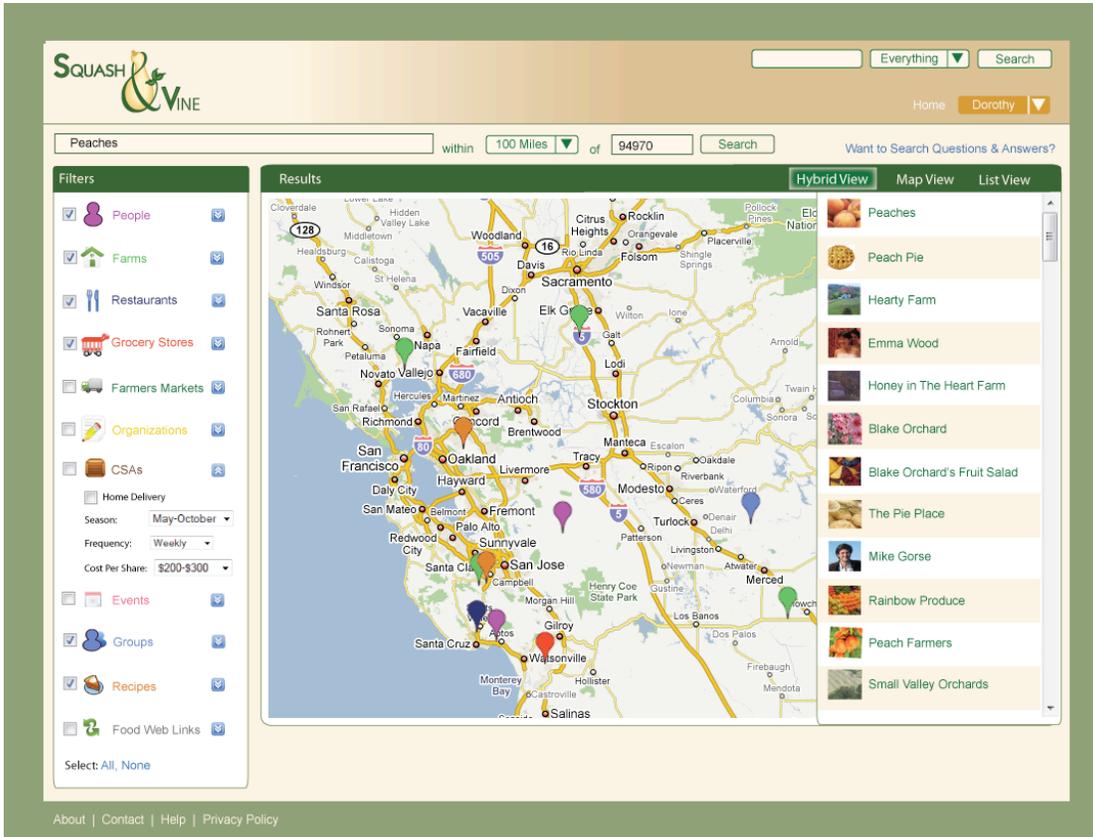


FIGURE 36. SEARCH WITH FILTERS EXPOSED

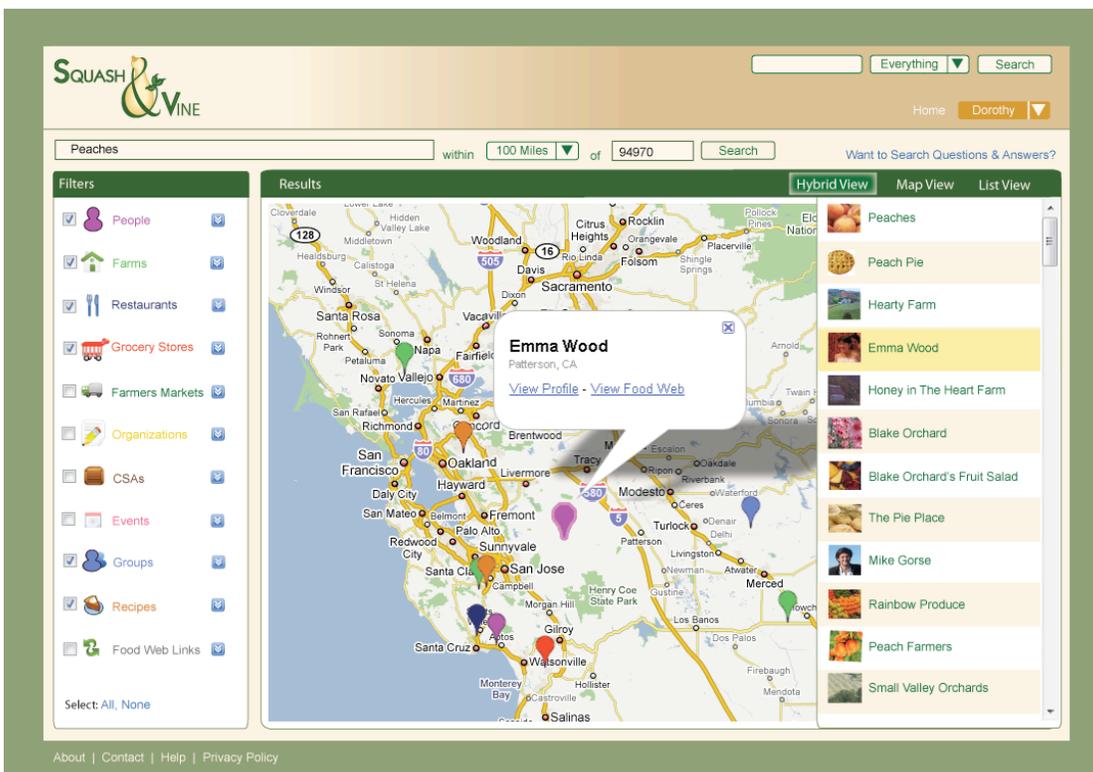


FIGURE 37. SEARCH WITH RESULT SELECTED

Appendix E: Extended Scenarios

The following are extended scenarios illustrating how a user would interact with *Squash & Vine*.

Consumer

Mary is a young professional working in San Francisco. She cares about eating well and supporting her community, though she doesn't go out of her way to shop locally and doesn't know anything about her local farms. Mary recently moved to a new neighborhood and heard that there was a farmers market nearby.

Curious, she logs into *Squash & Vine*, which detects her location and gives her an overview of the farms, farmers markets, retailers, and consumers in her new neighborhood. Mary quickly finds the farmers market closest to her, and is able to see which farms attend this farmers market, as well as commentary, pictures, and lists of items at the farmers market. One of the farms, Star Valley, catches her eye, so she clicks on it and learns all kinds of things about the farm, including who works there, what they're doing (Bob is weeding the strawberry bed), the weather, and even that her friend Nick who lives in Berkeley is a fan of the farm and regularly eats their peaches.

Mary's excitement is peaked. The next day she goes to that farmers market, finds the Star Valley stand, and asks Bob how the weeding went the day before. She then takes a picture of Bob's amazing peaches with her cell phone and posts it to Star Valley's profile (and of course sends a copy to Nick).

When she gets back home she goes back to *Squash & Vine* and looks at the map that shows to whom Star Valley sells. She sees that they sell to a corner store 20 feet away from her apartment and one of her favorite restaurants, Chez Henri. She glances at Chez Henri's profile, looks at their current menu, and sees that they have peach cobbler. She calls up Nick to tell him about the cobbler and then makes a reservation at Chez Henri for the next weekend so they both can try the cobbler made with Star Valley peaches before the menu changes to feature a different dessert.

Producer

Bob recently started Star Valley Farm in Sonoma. He has several years of farming experience, though all of that experience is from a farm in New York state. In order to successfully start his farm, Bob must make a plan. He must find out what water is available in his area, what the soil is like, what the growing season is, etc.

While Bob knows there are a few farms nearby, Bob is not a very outgoing person and is hesitant to bother his neighbors. Instead, he logs into *Squash & Vine* and is able to view the farms in his area. He then asks a question ("Do carrots grow well in this soil?"), which is automatically displayed on the home page feed of all his neighboring farmers. Any farmer who is so inclined can answer. Eve answers that they do and invites him to look at her crop plan, which she has made publicly available on *Squash & Vine*.

Alice, a chef who lives in the neighborhood, sees that Bob is asking questions about carrots. She often bemoans the lack of good local carrots, since she regularly makes carrot cake. She messages Bob and says that she would be interested in buying carrots if he decides to grow them.

Retailer

The Local Store is committed to sourcing local food. Glenn, the produce buyer, has established personal relationships with a variety of producers, some of whom he met at the farmers market, others whom he found by searching for ingredients or local farms on *Squash & Vine*.

Previously, he had to work hard to educate his customers about the importance of local food and spent time researching the farms he sourced from and then explaining the same things over and over again to his customers. After creating a *Squash & Vine* profile for The Local Store and linking to the producers he buys from he is now able to simply direct interested customers to this profile. These customers, especially ones adamant about knowing the location, stories, growing practices, and certification status of the producers, often return to the Local Store and fill the employees in on the latest happenings at the farms they source from. (I.e. "I hear Jane from Blueridge is trying a new dry farming technique – I hope you'll be sure to purchase her tomatoes if they turn out. I really want to support that type of agriculture, as we are suffering from a drought you know. Just trying to do my part!")

In part because of the extensiveness of The Local Store's customized *Squash & Vine* profile, a few chefs now regularly shop there when they run out of their ordered ingredients and several new growers have approached the Local Store to ask them to stock their products. One of these products is locally grown and butchered beef, which the Local Store was hesitant about carrying since they were unsure if they could sell the whole animal. But, through *Squash & Vine*, they were able to join groups and connect with chefs and local individuals who expressed significant interest in purchasing shares of the cow. *Squash & Vine* even provided a variety of recipes for less common cuts of meat. With this information available via *Squash & Vine*, the Local Store is now able to regularly buy whole cows and sell them for a premium price.