

INCREASING FOOD SECURITY AMONG AGRICULTURAL WORKERS IN CALIFORNIA'S SALINAS VALLEY

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EXECUTIVE SUMMARY

Agricultural workers are the backbone of California's \$37 billion-dollar agricultural industry and are responsible for producing many of the fresh fruits and vegetables that feed our nation and the rest of the world. Nonetheless, many agricultural workers are food insecure and suffer from hunger and poor diet and nutrition.

Food insecurity is a major public health concern in the United States. At some point during 2008, 14.6% of American households suffered from food insecurity. This translates to 17 million households, or 32.4 million adults and 16.7 million children. The leading risk factors associated with food insecurity include: earning a below-poverty income level, living in a Hispanic or African-American household, and residing in households run by single mothers.

This project's objective was to identify strategies to increase food security among agricultural workers in the Salinas Valley (Monterey County). We began by administering a survey to farmworkers to assess food security status, fruit and vegetable consumption, interest in raising their own food, preferred locations for raising food, and interest in nutrition education. Additionally, we interviewed key informants to determine the feasibility of different approaches to improving food security among agricultural workers, including developing community gardens, providing access to land on farms where they can grow food for personal consumption, establishing gardens in apartment complexes, and providing free or low-cost inputs. The following report outlines the survey results and findings from the key informants along with recommendations for the future, including next steps for implementation.

SUMMARY OF FINDINGS:

Farmworker survey

- The participating Salinas Valley farmworkers reported high levels of food insecurity. Only 34% of farmworkers participating in this study were food secure. Sixty-six (66%) percent of respondents were food insecure. Fifty-three percent (53%) of participants had low food security while 13% had very low food security.
- About one-third (39%) of respondents had used food stamps in the past year, which is slightly higher than the percent of the food stamp eligible population who receive food stamps in Monterey County. Of the survey respondents with children younger than five years of age, 78% participated in the WIC program.
- Four in ten (42%) of farmworkers surveyed reported that their employer "always" or "almost always" allowed them to take fruits and/or vegetables from the farm for personal or family consumption. However, 38% of respondents were "rarely" or "never" allowed to bring home fruits or vegetables from the farm for personal or family consumption.
- Thirty-seven percent (37%) of respondents indicated that they already grow fruits and/or vegetables for personal or family consumption, while only 7% reported raising chickens or other small animals for the same purpose.
- Seventy-one percent (71%) of respondents not currently producing their own food were interested in growing fruits and/or vegetables for personal or family consumption. Nearly half (47%) of farmworkers not currently raising chickens or other small animals for personal or family consumption were interested in doing so.

- Fifty-five percent (55%) expressed interest in growing fruits and/or vegetables to sell and 45% indicated that they were interested in preparing food to sell.
- Survey findings indicated that participating farmworkers ate an average of 4.1 servings of vegetables per day, with a median of 3.8 servings. Seventy-one percent (71%) of survey participants ate less than five servings of fruits and/or vegetables per day, one-third (33%) of the respondents consume less than three servings of fruits and/or vegetables per day, with 16% of the respondents consuming less than two servings per day.
- A very high percentage (93%) of participants would like to eat more fruits and vegetables than they currently eat and the vast majority (96%) of farmworkers participating in this study expressed a strong preference for eating natural or organic foods, if they were more accessible.
- Farmworkers demonstrated a strong interest in a wide array of nutrition education topics including balanced portion sizes, nutrition for children, how to eat/prepare healthy food, types and quantities of healthy beverages, how to prepare healthy food inexpensively, how to eat to prevent and control diseases, and health benefits of specific foods.

Key informant interviews

- Key informants, including stakeholders and public officials, were overwhelmingly supportive of increasing access to food for farmworkers by setting up gardens (whether it be a community, school, or apartment garden). Several indicated interest in collaborating on the implementation of this idea. Stakeholders identified several possibilities for establishing or expanding gardens.
- Because we were only able to speak to a few growers, we are unable indicate the feasibility of the potential for growers to provide land for farmworkers to raise food for personal consumption. However, several concerns were presented in the few interviews conducted including limited amount of land not already in production, risk to organic certification, impact of seeds or weed pressure on adjacent crops, issues with liability, added expenses due to water, tools, and equipment.
- Employee gardens may be one potential strategy for growers to help with improving farmworker food security. While this approach may only provide access to farmworkers who work on specific farms offering this benefit, this strategy does provide a potential avenue to increase access to food and increase employee satisfaction at the same time.
- Key informants also pointed out the importance of including farmworkers in the planning and implementation of the project, locating the gardens in a convenient place for gardeners, including the larger community (elderly, children, non-farmworkers, students, experts, etc.).
- Finally, key informants emphasized the additional benefits that community gardens can provide the community at large including crime reduction, neighborhood beautification through cleaning up and functionally using dumping grounds or vacant lots, community building, leadership development, and youth engagement.

"(Farm workers) are involved in the planting and the cultivation and the harvesting of the greatest abundance of food known in this society. They bring in so much food to feed you and me and the whole country and enough food to export to other places. The ironic thing and the tragic thing is that after they make this tremendous contribution, they don't have any money or any food left for themselves." - Cesar Chavez (United Farm Workers 2006).

INTRODUCTION

The Salinas Valley with dark, rich soils highlighted by contrasting rows of greens invokes a picture perfect image of California agriculture. It has been nicknamed "the salad bowl of the United States," and grows an abundance of fresh greens and fruit. Despite this seeming abundance, the Salinas Valley is not a stranger to poverty and hunger. Back in 1937, John Steinbeck described hunger among the farmworkers of the time,

"The green grass spreads right into the tent doorways and the orange trees are loaded. In the cotton fields, a few wisps of the old crop cling to the black stems. But the people who picked the cotton, and cut the peaches and apricots, who crawled all day in the rows of lettuce and beans, are hungry. The men who harvested the crops of California, the women and girls who stood all day and half the night in the canneries, are starving" (Steinbeck 1966).

To gain insight into the current level of food security among farmworkers in the Salinas Valley, the California Institute for Rural Studies, in collaboration with the Agriculture and Land Based Training Association (ALBA) and the Monterey County Health Department, conducted the Salinas Valley Food Security Assessment and Planning Study. The study also assessed the feasibility of increasing food access through community gardens and other related activities.

BACKGROUND

Agricultural workers are the backbone of California's \$37 billion-dollar agricultural industry (California Department of Food & Agriculture 2009) and are responsible for producing many of the fresh fruits and vegetables that feed our nation and the rest of the world. Nonetheless, many agricultural workers are food insecure and suffer from hunger and poor diet and nutrition.

Monterey County is the third highest grossing agricultural crop producing county in the US (USDA National Agricultural Statistics Service 2009a)¹, with sales of \$3.8 billion in 2008 (Monterey County Agricultural Commissioner 2009). Despite this agricultural bounty, Monterey County has the highest rate of adults in food insecure households out of all California counties, with a ranking of 58th in the state (California Food Policy Advocates 2010). There are approximately 51,000 individuals, or 49% of adults, in this county with incomes lower than 200%

¹ Monterey County ranks fifth highest among all US counties for total market value of all agricultural products (including livestock, poultry and their products), but third highest for crops only including nursery and greenhouse (USDA National Agricultural Statistics Service 2009a).

of the Federal Poverty Level who are food insecure (California Health Interview Survey (CHIS) 2007).²

FOOD SECURITY DEFINED

Food security is a measurement of an individual's or household's access to food. According to USDA, "food security for a household means access by all members at all times to enough food for an active, healthy life. Food security includes at a minimum (1) the ready availability of nutritionally adequate and safe foods, and (2) an assured ability to acquire acceptable foods in socially acceptable ways (that is, without resorting to emergency food supplies, scavenging, stealing, or other coping strategies)" (USDA Economic Research Service 2009). In 2006, the USDA changed the subsets of food insecurity. Now "food insecurity without hunger" and "food insecurity with hunger" are known as "low food security" and "very low food security," respectively. Low food security occurs when individuals express "reduced quality, variety, or desirability of diet [with] little or no indication of reduced food intake". Very low food security is defined as "multiple indications of disrupted eating patterns and reduced food intake" (USDA Economic Research Service 2008a).

FOOD INSECURITY IN THE US

Food insecurity is a major public health concern in the United States. At some point during 2008, 14.6% of American households suffered from food insecurity (Nord, Andrews et al. 2009). This translates to 17 million households, or 32.4 million adults and 16.7 million children (Nord, Andrews et al. 2009).³ The leading risk factors associated with food insecurity include: earning a below-poverty income level, living in a Hispanic or African-American household, and residing in households run by single mothers (Nord, Andrews et al. 2009).

FOOD INSECURITY IN CALIFORNIA

It is ironic that in California, with its abundance of agriculture, the prevalence of food insecurity is barely below the national average; between 2006 and 2008 an average of 12% of Californians were food insecure (Nord, Andrews et al. 2009). The prevalence of food insecurity is disproportionate by socioeconomic status, with high levels affecting low-income populations. Approximately 2.9 million (35%) of adults throughout California whose income is less than 200% of the Federal Poverty Level confronted food insecurity in 2007 (California Health Interview Survey (CHIS) 2007). And, as previously mentioned, food insecurity rates in Monterey County are even higher than statewide levels.

² This figure equates to 12.4% of the entire population for Monterey County based on the US Census Bureau's 2009 population estimates (United States Census Bureau 2010).

³ It is important to note that children in food insecure households are not always as adversely affected by food insecurity as the adults. According to the USDA report on food insecurity among US households, "The food security survey measures food security status at the household level. Not all children residing in food-insecure households were directly affected by the households' food insecurity. Similarly, not all children in households classified as having very low food security among children were subject to the reductions in food intake and disruptions in eating patterns that characterize this condition. Young children, in particular, are often protected from effects of the households' food insecurity" (Nord, Andrews et al. 2009).

FOOD INSECURITY AMONG LATINOS

Since the majority of farmworkers in California are Latino, a closer look at the rates of food insecurity among the Latino population merits some attention. National rates of food insecurity among Hispanic households in the US are substantially higher than average with a rate of 26.9% compared to 14.6% among all US households. Two additional studies have explored food insecurity among low-income Latinos in California. One study evaluated food security status among low-income Latino families from six different counties in California; out of a sample of 212 families participating, a total of 61% families were food insecure: 45% food insecure without hunger, 13% food insecure with moderate hunger; and 3% food insecure with severe hunger (Kaiser, Townsend et al. 2004). Another study among 630 low-income Latino, Vietnamese and Cambodian legal immigrants in California, Texas and Illinois found that a total of 81% came from households that were food insecure: 40% food insecure without hunger, 27% food insecure with moderate hunger and 14% food insecure with severe hunger (Kasper, Gupta et al. 2000).

FOOD INSECURITY AMONG FARMWORKERS

Few studies have evaluated food security among farmworkers and those that have been done reveal above average levels of food insecurity. In California, a food security assessment of farmworkers conducted in 2007 revealed that nearly half (45%) were food insecure (Wirth, Strohlic et al. 2007). Indigenous farmworkers from southern Mexico, many of whom live in the Salinas Valley, appear to be at even higher risk of food insecurity. Results from a sub-sample of Mixteco-speaking farmworkers conducted as part of the above assessment showed 76% of respondents were food insecure during the winter months, when employment is limited and household incomes are low. Nearly half (48%) experienced 'food insecurity with hunger' during that time. Income, documentation status, and use of food stamps were all found to be important predictors of food security. Additionally, another study featuring focus groups with indigenous farmworkers in California's Central Valley identified trade-offs between basic needs such as food, rent and medical care, particularly during the winter months (Moos 2008).

Food security assessments among farmworker populations in other states also found high levels of food insecurity. In North Carolina, four studies were conducted on food security among Latino immigrants, most of whom had a farmworker in the household (Quandt, Shoaf et al. 2006). The results from these studies, conducted from 2002 to 2004, indicate that among the 371 households surveyed, rates of food insecurity ranged from 49.1% to 71.3%. The variations of food insecurity reflect the different sample characteristics including geographic location in which the survey was administered, food insecurity time frame (6 months or 12 months), eligibility criteria, survey site, and sampling frame.

Farmworker food security was also evaluated in Texas. Of the 100 migrant and seasonal farmworkers surveyed, 82% of the respondents were food insecure, with 33% "food secure without hunger" and 49% "food insecure with hunger" (Weigel, Armijos et al. 2007). This study also investigated the link between food security status and several health outcomes and indicators; members of food insecure households were more likely to be affected by health challenges including mental health disorders and symptoms associated with gastrointestinal infection.

Two additional studies on farmworker food security have been conducted in the US with mixed results. A Virginia study conducted among 49 farmworkers revealed staggering rates of food insecurity, with 98% of respondents reporting food insecurity (Essa 2001). However, another study conducted in Pennsylvania among 401 migrant farmworkers reported only 8% of respondents with low levels of food insecurity (Cason, Nieto-Montenegro et al. 2003).

FOOD INSECURITY AND HEALTH

In addition to hunger, farmworkers exhibit high rates of diet-related disease, including high blood pressure, high serum cholesterol and iron deficiency. Despite their youth and the physical nature of their work, farmworkers are also more overweight than both the general population and other Hispanics. Findings from the California Agricultural Worker Health Survey (Villarejo, Lighthall et al 2000) indicate that 81% of male and 76% of female agricultural workers are overweight, while 28% and 37% respectively are obese. Additionally, respondents from the Fresno Food Security Assessment reported poor dietary status, with 86% consuming a high-fat diet and 42% eating less than three servings of fruits and vegetables per day (Wirth, Strohlic et al. 2007). This parallels previous research indicating that farmworkers suffer from high rates of nutrition-related diseases, poor nutritional intake, and inadequate consumption of fruits and vegetables (Kowalski, Hoffman et al. 1999). In this study, 89% of respondents reported inadequate fruit and vegetable consumption.

Winkleby, Kim et al (2006) corroborated higher risk of obesity among farmworkers and found that the prevalence of obesity increased “about 50% for community men and about 90% for [farm] labor camp men over [a] 10-year period” between 1990 and 2000. Findings from the Monterey County Hispanic Behavioral Risk Factor Survey (Monterey County Health Department Division of Health Promotion nd) confirmed that “men in the agricultural camps...are much more likely than men and women in the community to eat red meat, fried food, fast food, and high-fat snack foods.”

In addition to agricultural work, food insecurity is also related to obesity and other health concerns. Although research findings are inconsistent as to the precise nature (linear or non-linear) of the relationship, low food security status has been associated with being overweight or obese (Olson 1999; Townsend, Peerson et al. 2001; Adams, Grummer-Strawn et al. 2003; Kaiser, Townsend et al. 2004; Wilde and Peterman 2006; Dinour, Bergen et al. 2007; Kim and Frongillo 2007; Martin and Ferris 2007; Gundersen, Lohman et al. 2008; Webb, Schiff et al. 2008). The primary explanation for this paradox is that low-income populations cannot afford to buy fresh, healthy food, and instead are left with low-cost, energy-dense food (Dietz 1995; Adams, Grummer-Strawn et al. 2003; Basiotis and Lino 2003; Drewnowski and Specter 2004). Data on women in particular demonstrate this association (Olson 1999; Townsend, Peerson et al. 2001; Adams, Grummer-Strawn et al. 2003; Kaiser, Townsend et al. 2004). Olson found that food-insecure women were, on average, two body mass index (BMI) units heavier than women in food-secure households (Olson 1999). This sex-specific relationship may exist because most research has focused on women. “Maternal deprivation” is an alternative explanation, hypothesizing that mothers sacrifice their portion of food so that their children will be less affected (Basiotis and Lino 2003).

BARRIERS TO HEALTHY EATING AND FOOD SECURITY AMONG FARMWORKERS

In addition to contributing to obesity, food insecurity may result in other long-term health problems. Low or very low food security has been associated with chronic conditions such as

heart disease, diabetes, and high blood pressure as well as mental health issues including major depression (Vozoris and Tarasuk 2003; Sullivan, Clark et al. 2009). Furthermore, being food insecure presents individuals with difficult choices between paying for basic needs such as housing or medical care (including medications) or food (Sullivan, Clark et al. 2009).

In addition to factors associated with food insecurity and diet-related disease among low-income populations in general, farmworkers experience a range of additional barriers to healthy eating. These include:

- residence in rural "food deserts"
- lack of stability in income due to migratory status
- inadequate housing and cooking facilities
- lack of transportation to distant grocery stores
- high rates of seasonal unemployment
- lack of legal documentation status
- low utilization of food assistance programs.

Farmworkers are among the poorest of all US residents. Findings from the National Agricultural Worker Survey (Aguirre International 2005) indicate that 75% of individual farmworkers and 52% of farmworker families in California earn less than \$15,000 per year. Furthermore, between 2003 and 2004, approximately 43% of farmworkers and 30% of farmworker families in California had an annual income of less than \$10,000, with 22% of farmworkers earning less than \$9,573 (the federal poverty line). In spite of financial eligibility, less than one-third took advantage of needs-based services. Similar results were found in Monterey County among the general population of income-eligible participants: approximately two-thirds (66%) of those eligible for food stamps do not participate in the program (California Food Policy Advocates 2010). Although some non-utilization can be attributed to a lack of documentation status, numerous other factors affect these rates as well, including confusion about eligibility status due to seasonally fluctuating incomes.

POTENTIAL INTERVENTIONS FOR FARMWORKER FOOD SECURITY

Farmworkers are aware of the problems associated with food insecurity and poor diet/nutrition and have expressed interest in addressing these issues. When asked about possible interventions to improve their food security, approximately two-thirds (65%) of respondents to the Fresno Farmworker Food Security Assessment (Wirth, Strohlic et al. 2007) expressed interest in access to land to grow food for personal and household consumption, while 40% expressed an interest in raising small animals such as chickens. Farmworker interest in growing their own food is also associated with high levels of interest in organic food, which is perceived as healthier but unavailable or unaffordable. Farmworkers in the Salinas Valley also cited a desire to maintain their culture of land stewardship and pass that on to their children (Boyer, Dillon et al 2006).

Approximately 50% of respondents in the Fresno Farmworker Food Security Assessment (Wirth, Strohlic et al. 2007) also expressed high levels of interest in nutrition education programs. Given rising food prices and stagnant incomes, it is likely that farmworker interest in growing their own food has increased significantly in the past three years. For example, two communities participating in The California Endowment Agricultural Worker Health Initiative (2009) implemented community gardens as a strategy for improving the health and well-being of agricultural workers.

Additional ways to increase food security and improve diet/nutrition among farmworkers and their families include increasing access to food assistance programs such as food stamps, WIC, food banks and school-based programs, which many farmworkers do not access for a variety of reasons. The ability to bring home food from the farm is also associated with improved diet and nutrition; findings from the Fresno Farmworker Food Security Assessment (Wirth, Strohlic et al. 2007) indicate that the ability to do so was associated with a 10% increase in the likelihood of being food secure and resulted in nearly one additional serving of fruits and vegetables per day.

PROJECT OVERVIEW

This project's objective was to identify strategies to increase food security among agricultural workers in the Salinas Valley (Monterey County). We began by administering a survey to farmworkers to assess food security status, fruit and vegetable consumption, interest in raising their own food, preferred locations for raising food, and interest in nutrition education. Additionally, key informants were interviewed to determine the feasibility of different approaches to improving food security among agricultural workers, including developing community gardens, providing access to land on farms where they can grow food for personal consumption, establishing gardens in apartment complexes, and providing free or low-cost inputs.

RESEARCH METHODS

ASSESSMENT LOCATION

The Salinas Valley was selected as the site for this study for a few reasons, including:

- The very large number of organizations actively working on improving the food system in Monterey County specifically and the Central Coast in general;
- The importance of agriculture and size of the farmworker community, both in terms of total number and proportion of overall population; and
- The high level of food insecurity and need for interventions to improve food security among the community's most vulnerable populations.

1. *Organizations:* Monterey County is home to numerous projects and programs focused on the improvement of the local food system. The Monterey County Farm to School Partnership (MCFTSP), Nutrition and Fitness Collaborative of the Central Coast consisting of over 50 organizations, CSU Monterey Bay community garden program, Ag Against Hunger, Central Coast Hunger Coalition, Clinica de Salud, Food Bank for Monterey County, Second Harvest Food Bank, Soledad Street Community Garden Project, Steps to a Healthier Salinas, and the Monterey County Health Department to name but a few. In particular, ALBA and the Monterey County Health Department have worked extensively to improve the diet and nutrition of low-income residents in the region through Steps to a Healthier Salinas, research on farmworker diet and nutrition, implementation of farmers' markets throughout the valley, and other longstanding efforts to address food systems issues.

2. *Population of Farmworkers:* The Salinas Valley, often considered "the salad bowl of the United States," is located in the heart of Monterey County. Monterey County specializes in producing high-value fresh fruit and vegetable crops. Producing high-value fresh fruit and vegetable crops is a very labor-intensive process. Consequently, agriculture is the largest employer in Monterey County, employing 30% of the private industry workforce (EDD California Regional Economies Employment (CREE) Series 2008). Additionally, for several years agriculture has been consistently the fastest growing industry in Monterey County (Monterey County 2006). Therefore, it is no surprise that Monterey County ranks fourth among California Counties for hired farm labor (USDA National Agricultural Statistics Service 2009b).⁴

3. *Need for Intervention:* Despite the agricultural bounty of this region food insecurity is the highest in the state, affecting approximately 51,000 adults, or 49% of adults in low-income households in Monterey County (California Food Policy Advocates 2010). Residents of Salinas Valley's agricultural communities suffer from particularly high rates of poverty. Between 24% and 42% of the residents of these communities are employed in agriculture and related occupations (Table 1) and poverty rates are correspondingly high. For example, nearly one in

⁴ It should be noted that according to the USDA National Agricultural Statistics Service figures (2009b), 26,181 farmworkers (5.8% of overall hired farmworkers in California) worked on Monterey County farms. This does not take into consideration the number of farmworkers that are hired through labor contractors (i.e. custom harvesters, contract farm services, farm labor contractors); estimates indicate that at least 37% of California farm laborers are hired by labor contractors rather than directly hired by the farm (Aguirre International 2005). Due to the highly labor intensive crops grown in Monterey County this figure is likely much higher. Another approach for estimating contract labor is to look at production costs for farm operators; for 2007 farm operators in Monterey County report spending over 41% of their total labor costs on contract labor (USDA National Agricultural Statistics Service 2009b).

four (23.6%) individuals in the 93905 zip code of Salinas – an area in which 29% of the population is employed in agriculture – live below the federal poverty level. Given census undercounts of agricultural workers, the percent of farmworkers in these communities – and corresponding rates of poverty and food insecurity – is likely higher.

Table 1: Salinas Valley Communities: Percent Employed in Agriculture and Percent of Individuals and Families Living in Poverty

Community	Employed in Farming, Fishing and Forestry (%)	Individuals Below Federal Poverty Level (%)	Families Below Federal Poverty Level (%)
Chualar	35.1	15.0	12.4
Gonzales	23.6	20.2	15.0
Greenfield	41.6	21.6	17.1
King City	33.0	20.8	16.9
Salinas (93905)	29.0	23.6	21.5
Soledad	39.8	18.4	16.3

Source: (US Census Bureau 2000)

Higher than average unemployment rates contribute to these high poverty rates (USDA Economic Research Service 2008b) The Monterey County annual unemployment rate was 11.9% for 2009 (US Department of Labor 2009). The seasonality of farm employment can explain some of this unemployment. For example, according to the USDA NASS data (2007), 53% of hired farm laborers worked less than 150 days per year in 2007.⁵

FARMWORKER SURVEY

Survey Design

One of the primary elements of this planning study was a farmworker survey. In an effort to limit the amount of time required for participants to complete the survey interview, the survey was designed to be as short as possible while maintaining its effectiveness in addressing the issues of food security and other objectives of this study (see Appendices A and B for the English- and Spanish-language survey instruments). Although sections of the survey included validated instruments, we added non-validated questions including questions from the Fresno Farmworker Food Security Assessment questionnaire (Wirth, Strohlic et al. 2007). Prior to administration, the survey instrument was piloted and edited to reflect linguistic preferences among the farmworker population and to adjust questions that may have caused confusion for surveyors.

The USDA Six-item Short Form of the U.S. Household Food Security Survey Module was one of the validated instruments included in the survey. This shortened version of the USDA Food Security Module was developed as a brief tool to identify food security status among the general American population (Blumberg, Bialostosky et al. 1999). A Spanish-language version of the complete 18-item U.S. Household Food Security Module was developed at University of California, Los Angeles (Harrison, Stormer et al. 2003). Our final survey instrument used the

⁵ However, this data does not take into account that some farmworkers may work on more than one farm during the course of the year.

validated short form with the translations provided by Harrison et al. Based on participants' responses to the six questions, they were given a household food security raw score of zero to six following the format outlined by the USDA (USDA Economic Research Service 2008c). The raw score, in turn, corresponds to one of three food security status categories: high or marginal food security (0-1), low food security (2-4), and very low food security (5-6) (USDA Economic Research Service 2008c).

The second validated instrument included in our survey was a Spanish-language version of a dietary fruit and vegetable screener developed at the University of California, Berkeley. This instrument was used to assess diet quality (Wakimoto, Block et al. 2006). Wakimoto's Spanish-language screener is intended for Mexican-Americans and asks how many times per week participants consume a variety of fruits and vegetables. These results can then be converted to the number of fruit and vegetable servings per day.

In addition to these two instruments, our survey included questions regarding participants' usage of food assistance programs and reasons for non-use as well as questions created to assess demographic characteristics. We also included questions about farmworker interest in nutrition education, access to food from employers, current gardening or food production activities, interest in raising food for personal or family consumption, and interest in raising and preparing food for sale. As previously mentioned some of these additional questions were used in the Fresno Farmworker Food Security Assessment (Wirth, Strohlic et al. 2007). Additional questions were developed in consultation with our project partners, The Agriculture and Land-Based Training Association (ALBA) and the Monterey County Health Department.

Survey Administration

A total of 97 farmworkers were interviewed in-person between June and September 2009. Four surveys were removed due to incomplete data or concern among surveyors regarding the accuracy of the data provided by the survey participants. All farmworkers participating in this survey were working and/or living in the Salinas Valley (Monterey County) at the time of the study. Survey administrators included community-based health outreach workers from the Monterey Health Department, interns from ALBA and CIRS, and graduate and undergraduate students from the University of California, Davis and the University of California, Santa Cruz. All interviewers were trained in survey administration.

Surveys were collected in communities in the Salinas Valley with high concentrations of farmworkers including Salinas, Gonzales, and Greenfield. Each survey, administered in Spanish, took approximately 15 to 25 minutes to complete.

Participants were approached using a convenience sampling methodology. Interviewers waited in locations where farmworkers were likely to congregate, such as public parks, laundromats, farmers' markets, and community events (e.g., Day of the Family in Salinas and Day of the Farmworker in Greenfield). Surveys at the Day of the Family in Salinas, the Day of the Farmworker, and the Greenfield Farmers' Market were administered at the Network for a Healthy California Latino Campaign nutrition education booth.

Three screener questions were administered to determine participant eligibility. These questions confirmed that the participant was at least 18 years of age, currently lived and/or worked in the Salinas Valley, and had at least one family member who worked in agriculture in the previous year. Upon completion of the survey, respondents were offered small incentives,

including packets containing information on food assistance programs and healthy eating, a cookbook or t-shirt promoting the 5-A-Day message, and a DVD, titled “La Flor del Sin Nombre,” which is a Spanish-language telenovela (soap opera), developed by CIRS in collaboration with UC Berkeley, and the Network for a Healthy California, to promote healthy eating and utilization of food assistance programs.

KEY INFORMANT INTERVIEWS

Key informants were selected using snowball sampling methodology, a standard practice in sociological studies. In snowball sampling, the sample is drawn from recommendations of people who share a characteristic of interest (Birnacki and Waldorf 1981). Initially, key informants were identified by staff at CIRS, ALBA, and the Monterey County Health Department. Subsequent key informants were identified via a question included in the interview protocol regarding recommendations for additional key informants. Additional key informants were identified through key word searches using the Google search engine.

Key informants were categorized as follows: community garden experts, other community stakeholders, public officials, growers who provide access to land and/or food, growers who may be interested in providing access to land and/or food, housing complex managers, and agricultural input supply (seeds and fertilizers) companies. A total of fifteen community garden experts, twelve stakeholders, six public officials, two housing complex managers, fourteen agricultural input companies and five growers completed an interview.

A generic interview introduction and organizational background was developed as a guide for explaining the project and providing context to the interviewee at the beginning of each phone interview. Interview protocols were designed to provide semi-structured interview questions tailored to each group with revisions after the initial community garden expert interviews. We decided to establish a three-call protocol, in which the key informants were telephoned at different times of day on different days of the week. Key informants who had not answered the phone or returned our messages after three calls were coded as unreachable and not contacted again. Interviews lasted anywhere from ten minutes to approximately an hour (see Appendix C for the Key Informant Interviewees).

DATA ANALYSIS

All variables were entered into and analyzed using Statistical Package for the Social Sciences (SPSS) (SPSS Inc. 2009).

RESULTS

FARMWORKER SURVEYS

Demographics

Compared to the overall population of farmworkers in California described by the National Agricultural Workers Survey (NAWS), the study participants were similar in age but included a much higher proportion of female, married and accompanied farmworkers (Table 2). Possible explanations for this discrepancy could be: surveyor selection (female surveyors might have been more comfortable approaching females than males), participants' self-selection (women

might be more interested in the project or more knowledgeable about household food purchasing and consumption than men, etc.), or convenience sampling methodology (women may have been more likely to visit the types of locations chosen). Furthermore, since participants were not selected as part of a random sampling and instead the surveys were collected using a convenience sampling method at laundromats, farmers markets, and festivals, the results should be viewed as exploratory, rather than representative of all farmworkers in the Salinas Valley, California, or otherwise.

Table 2: Selected Demographic Traits of the Salinas Valley Farmworker Food Security Assessment (n=93) Compared to Demographic Data for California Farmworkers from the 2003-2004 National Agricultural Workers Survey

	Salinas Valley Farmworker Food Security Assessment (2010)	CA NAWS (2003-2004)*	National Profile of Hired Farmworkers (2008)**
Gender	42% Male 58% Female	73% Male 27% Female	81% 19%
Age	Median: 33	Median: 32	Median: 34
Marital Status – married	86%	64%	53%
Spouse living in household	73%	28%	N/A
Children under 18 in HH	80%	N/A	36%
Indigenous population	17% ⁶	16-20% ⁷	N/A

*Source: (Aguirre International 2005)

**Source: (Kandel 2008)

Food Security Status

Only 34% of farmworkers participating in this study were food secure (Figure 1). Sixty-six (66%) percent of respondents were food insecure. Fifty-three percent (53%) of participants had low food security while 13% had very low food security. We found substantially higher rates of food insecurity among participating agricultural workers in the Salinas Valley compared to many of the previous studies, including low-income adults (Table 3). This might be an outcome of our sample, or it might underscore the difficulties faced by low-income farmworkers.

⁶ Self-reported language data provides the basis for this figure. In response to the question “Do you speak another language such as Mixteco, Triqui, etc.?” sixteen respondents indicated several languages including: Triqui (8%), Mixteco (7%), Otomi (1%), Zapoteco (1%), and one additional indigenous language speaker from the Colima area in Mexico (1%). An additional 11% of the respondents indicated that they speak English.

⁷ According to the 2003-2004 NAWS data, only two percent (2%) of the farmworkers in California indicated that they speak an indigenous language. However, estimates from the CA NAWS indicate that 20% of California farmworkers are of indigenous origin. According to NAWS researchers, “It is believed that many indigenous Mexicans report that they are Spanish speakers on surveys such as the NAWS.” Therefore, rather than rely on self-reported language data, the CA NAWS estimates the number of indigenous farmworkers by calculating the population statistics from sending states in Mexico with a high proportion of the population that is of indigenous origin. Using this method, a conservative estimate is 16% of California farmworkers are of farmworkers of indigenous origin is with a broader estimate of 20% (Aguirre International 2005).

Figure 1: Food Security Status of Farmworkers Participating in the Salinas Valley Farmworker Food Security Assessment (n=93)

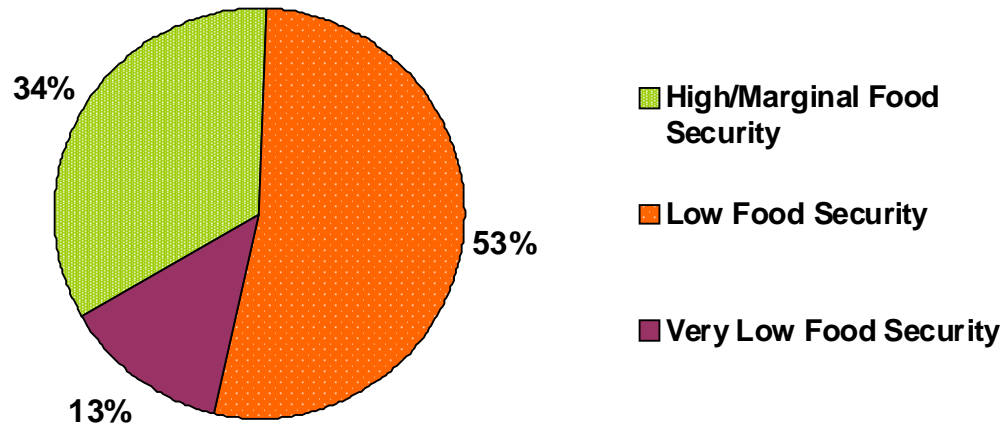


Table 3: Food Security Status of Farmworkers Participating in the Salinas Valley Farmworker Food Security Assessment (n=93) Compared to Data from the Current Population Survey (2006-2008) and the California Health Interview Survey (2007)

	Salinas Valley Farmworker Food Security Assessment (2010)	USDA Household Food Insecurity as reported in Current Population Survey (2006-2008)*		CHIS Food Insecurity among Adults living below 200% FPL (2007)** ⁸	
	Participating farmworkers in Salinas Valley	National	California	California	Monterey County
Prevalence of Food Insecurity	66%	15%	12%	35%	49%

*Source: (Nord, Andrews et al. 2009)

**Source: (California Health Interview Survey (CHIS) 2007)

As previously described, food security status was assessed based on participants’ responses to the Six-item Short Form of the U.S. Household Food Security Survey Module. The percentages of affirmative responses to questions concerning adult food security are presented below (Table 4).

⁸ As Mines, Hausman et al. (2005) pointed out, “the CHIS under-represents the more disadvantaged farmworkers and over-represents the more settled part of the farmworker population that enjoys greater access to U.S. institutions. While the statewide health telephone survey (CHIS) succeeded in interviewing a significant number of farmworkers, the sample that was reached is not fully representative of the entire population. The population that is partially excluded is lower income, has lower educational attainment, has lower rates of health insurance coverage, has less secure immigration status, has lower enrollment in public safety net programs and lower utilization of medical and dental service. The under-represented population faces higher barriers in numerous areas.”

Table 4: Percentages of Affirmative Responses from Salinas Valley Farmworker Food Security Assessment Participants to Select Questions Related to Adult Food Security on the Six-item Short Form of the US Household Food Security Survey Module (n=93)

US Household Food Security Survey	Percent Reporting
Food bought just didn't last and didn't have money to buy more	69%
Couldn't afford to eat balanced meals	69%
Cut the size of meals or skipped meals because there wasn't enough money to buy food	20%
Ate less than you felt you should because there wasn't enough money to buy food	33%
Hungry but didn't eat because there wasn't enough money for food	20%

Of the 20% (19) respondents who indicated that they “cut the size of [their] meals or skipped meals because there wasn't enough money for food during the last 12 months,” 16% (3) responded that this had happened “almost every month” and 37% (7) indicated that this was the case for “some months, but not every month.”

Access to Food Assistance Programs

In addition to food security status, participation in food assistance programs including food stamps and the Special Supplemental Nutrition Program for Women, Infants, and Children (WIC) was also assessed. About one-third (39%) of respondents had used food stamps in the past year.⁹ These participation rates are comparable to Monterey County participation rates as a whole in which 34% of income eligible individuals participated in the Food Stamp program (California Food Policy Advocates 2010). A higher rate of farmworkers participating in this survey took advantage of WIC. Of the survey respondents with children younger than five years of age, 78% participated in the WIC program (Table 5).

Table 5: Percentage of Respondents from the Salinas Valley Farmworker Food Security Assessment Participating in Food Assistance Programs in the Last 12 Months (n=93)

	Salinas Valley Farmworker Food Security Respondents (2010)
Heard of Food Stamps	88%
Heard of WIC	100% ¹⁰
Participated in Food Stamp Program	39%
Participated in WIC Program	78%

⁹ The estimate presented for food stamp usage among participating farmworkers in the Salinas Valley includes both eligible and non-eligible individuals. This estimate would be higher if non-eligible farmworkers were excluded from the calculation.

¹⁰ This percentage is based only on respondents who 1) have children less than 5 years of age and 2) are currently living with them.

A variety of reasons were cited for not using food assistance programs. Among respondents who are not using food stamps, reasons stated for non-use include: simply had not tried to apply for food stamps (38%), did not qualify due to income criteria (earn too much money) (12%), issues with the paperwork process (12%), and documentation status (did not have papers) (7%), (Table 6).

A few respondents provided some explanation for their responses, indicating that “I am working” or that “I didn’t ask due to lack of time.” Other respondents explained, “I just got here about four months ago” or “I am only here for five or six months per year.” One respondent had only heard people talk about food stamps, but did not understand the program benefits while another participant mentioned that she does not receive food stamps because her husband “doesn’t want to.”

The reasons for not using WIC were similar to the reasons cited for non-use of food stamps. Among participants with children under five living with them who do not receive WIC, the most common reasons for not participating in the WIC program include: not qualifying for income criteria (6%), documentation status (2%), concern that receiving WIC would impede citizenship in the future (“public charge”) (2%)¹¹, and simply not having tried to apply for WIC (4%). Interestingly, none of the respondents cited fear of Immigration and Customs Enforcement (ICE), or “la Migra,” as a reason for non-use of food stamps or WIC.

Table 6: Reasons Given by Salinas Valley Farmworker Food Security Assessment Participants for Non-participation in Food Stamp Program (n=93)

Reasons given for non-participation in Food Stamp Program	Percent Reporting
Simply have not tried to apply for food stamps	38%
Do not qualify due to income criteria (earning too much money)	12%
Issues with the paperwork process	12%
Documentation status (do not have papers)	7%
Do not perceive a need for them	5%
Do not qualify for unknown or unstated reason	5%
Do not know enough about them	4%
Do not want them	3%
Receive other form of assistance	3%
Do not know where to get them	2%
Do not have kids	2%
Concern that receiving food stamps would impede citizenship in the future (“public charge”) ¹¹	2%

¹¹ Immigrants receiving certain forms of public assistance “may face adverse immigration consequences” (inability to become a permanent resident or receive citizenship) often referred to as “public charge” status. Consequently, there is widespread fear of incurring “public charge” status among immigrant populations. Although participation in food assistance programs does not result in “public charge” status, many farmworkers misunderstand this issue.

Access to Food

Bringing home fruits or vegetables from the farm for personal or family consumption has been shown to influence dietary quality; as such, this study sought to assess the prevalence of farmworkers allowed to take food home from the farm. While the Fresno Farmworker Food Security Assessment found that farmworkers who can bring fruits and/or vegetables home eat approximately one serving more of fruits/vegetables per day than those not allowed to bring produce home (Wirth, Strohlic et al. 2007). Interestingly, this study found almost no difference in fruit and vegetable consumption between these groups. In this study, both groups of farmworkers eat an average of 4.1 servings of fruit and/or vegetables per day.

Four in ten (42%) of farmworkers surveyed reported that their employer “always” or “almost always” allowed them to take fruits and/or vegetables from the farm for personal or family consumption. However, 38% of respondents are “rarely” or “never” allowed to bring home fruits or vegetables from the farm for personal or family consumption (Table 7).

Table 7: Responses Among Salinas Valley Farmworker Food Security Assessment Participants for Current Access to Food from Farm (n=93)

Farmworker Access to Food from Farm	Percent Reporting¹²
Always allowed to take fruits/vegetables from farm for personal/family consumption	27%
Almost always allowed to take fruits/vegetables from farm for personal/family consumption	15%
Sometimes allowed to take fruits/vegetables from farm for personal/family consumption	17%
Rarely allowed to take fruits/vegetables from farm for personal/family consumption	23%
Never allowed to take fruits/vegetables from farm for personal/family consumption	15%

Survey participants were encouraged to explain their answers; one of the respondents indicated that they can bring home food such as “lettuce or greens that they cut during the harvest” and another said that they could bring home food “once a week,” while another explained that they could buy fruits and vegetables from work. On the other hand, a few respondents explained that “they don’t let us” and “we are permitted little or no times” to take home food. Other comments included: “we do not want to take food home” and “there are no vegetables.”

With respect to food access, participants were also asked if they currently grow fruits and vegetables for personal or family consumption and if they raise their own animals for personal consumption. Thirty-seven percent (37%) of respondents indicated that they already grow fruits and/or vegetables for personal or family consumption, while only 7% reported raising chickens

¹² Two percent of respondents indicated “not sure.” Percentages do not add up to 100% due to rounding.

or other small animals for the same purpose (Table 8). One survey participant said they grew cilantro and radishes, while a few respondents, who did not grow or raise their own food, commented that they could not do so because they “live in an apartment” or “do not have the space.”

Table 8: Responses Among Salinas Valley Farmworker Food Security Assessment Participants for Current Access to Food at Home (n=93)

Farmworker Access to Food at Home	Percent Reporting
Already grow fruits/vegetables for personal/family consumption	37%
Already raise chickens/small animals for personal/family consumption	7%

Seventy-one percent (71%) of respondents not currently producing their own food were interested in growing fruits and/or vegetables for personal or family consumption. Nearly half (47%) of farmworkers not currently raising chickens or other small animals for personal or family consumption were interested in doing so. Several respondents, who expressed interest in growing or raising food for personal consumption, cited reasons why they were unable to do so, including: no access to land, a lack of space, and lack of permission to do so in living situation (apartment rental).¹³

Additionally, farmworkers were asked about the extent to which they are interested in growing and preparing food to sell. Over half (55%) expressed interest in growing fruits and/or vegetables to sell and 45% indicated that they were interested in preparing food to sell (Table 9). Although respondents were not specifically asked about community gardens, it is important to note the high level of interest in growing food either for personal consumption or for sale – whether it is grown in a community garden, apartment garden, school garden, or on farmland.

Table 9: Percentage of Affirmative Responses (Interest) in Growing or Selling Food Among Salinas Valley Farmworker Food Security Assessment Participants (n=93)

Farmworker Interest in Growing or Selling Food	Percent Reporting
Grow fruits/vegetables for personal/family consumption	71%
Raise small animals for personal/family consumption	47%
Grow fruits/vegetables for sale	55%
Prepare food for sale	45%

Farmworker Fruit and Vegetable Consumption

In addition to gauging food security status and access to food, another goal of the survey was to evaluate the extent to which farmworkers are eating a healthy diet rich in fruits and vegetables. Survey findings indicate that participating farmworkers eat an average of 4.1 servings of

¹³ Only one respondent who stated they did not have any interest in growing or raising food provided an explanation for their answer, indicating that they were not interested because “there is no time.”

vegetables per day, with a median of 3.8 servings. This is slightly lower than the recommended dietary guidelines published every five years by the US Department of Health and Human Services (HHS) and US Department of Agriculture (USDA). The 2005 Dietary Guidelines for Americans recommend that adults eat “two cups of fruit and 2½ cups of vegetables per day” for a 2,000-calorie daily intake (USDA Department of Health and Human Services 2005).¹⁴

Seventy-one percent (71%) of survey participants ate less than five servings of fruits and/or vegetables per day. This figure corresponds exactly with the 2007 adult fruit and vegetable consumption trends for California found by the CDC’s Behavioral Risk Factor Surveillance System (BRFSS) (CDC Behavioral Risk Factor Surveillance System 2007). Furthermore, the Salinas Farmworker Food Security Assessment survey findings reveal that one-third (33%) of the respondents consume less than three servings of fruits and/or vegetables per day, with 16% of the respondents consuming less than two servings per day (Table 10). One respondent with very low fruit and vegetable consumption (<2 servings per day), provided an explanation for their low fruit and vegetable consumption, “We drink water instead of juice...currently we are not working enough, there is not enough work like in the past...sometimes that is all we can afford.”

Table 10: Comparison of Fruit and Vegetable Consumption Between Salinas Farmworker Food Security Assessment Participants (n=93) and the General Population

Fruit and Vegetable Consumption Per Day	Salinas Farmworker Food Security Assessment (2010)	General CA Population	General US Population
Consume less than 5 (<5) servings	71%	71%*	75%*
Consume 3 or 4 servings	38%	34%*	36%*
Consume 1 or 2 servings	31%	32%*	35%*
Consume less than 2 (<2)	16%	37%*	40%*
Mean servings	4.1	--	3.4**

*2007 Behavioral Risk Factor Surveillance System (BRFSS) Source: (CDC 2007)

**1994-2000 Behavioral Risk Factor Surveillance System (BRFSS). Source: (Serdula, Gillespie et al. 2004)

Farmworker Interest in Healthy Eating and Nutrition Education

A very high percentage (93%) of participants would like to eat more fruits and vegetables than they currently eat (Table 11). Additionally, the vast majority (96%) of farmworkers participating in this study expressed a strong preference for eating natural or organic foods, if they were more accessible. “I would like to eat more organics” and “I am very interested in eating more natural” were a few of the respondents’ comments. Additionally, one participating farmworker explained that they would like to raise their own chickens or other small animals “because you know what they eat and they are healthier.”

¹⁴ These guidelines vary depending on age, gender, and activity level.

Table 11: Percentage of affirmative responses (interest) in natural food & healthy eating among Salinas Farmworker Food Security Assessment participants (n=93)

Interest in Natural Foods and Healthy Eating	Percent Reporting
Want to eat more fruits and vegetables	93%
Prefer to eat organic, or natural food (without pesticides) if more accessible	96%

Farmworkers participating in this study were interested in learning about a wide array of nutrition topics (Table 12). When asked if there was anything else related to nutrition or food about which they would like to know more, respondents identified several additional topics, including balanced portion sizes, nutrition for children, type and quantity of healthy beverages as well as foods' health benefits. Several participants re-emphasized the topics already mentioned, particularly how to prepare healthy food and how to eat to prevent and control diseases.

Table 12: Percentage of affirmative responses (interest) in nutrition education topics among Salinas Farmworker Food Security Assessment participants (n=93)

Interest in Nutrition Education Topics	Very Interested	Somewhat Interested
Nutrition in general	69%	21%
How to eat/prepare healthy food	77%	18%
How to eat/prepare food to control/prevent diabetes, high blood pressure, and/or high cholesterol	81%	12%
How to eat/prepare food to lose weight	73%	18%
How to eat/prepare healthy food inexpensively	82%	13%

KEY INFORMANT INTERVIEWS

Key informants were interviewed to determine the feasibility of establishing gardens as a means of improving access to food among farmworkers in the Salinas Valley. Community garden experts provided valuable information on the workings of gardens, while community food system advocates, public officials, housing complex managers, agricultural input supply companies, farmers, and other community stakeholders provided beneficial insight to the communities of interest.

Key Informant Interest in Improving Food Security among Farmworkers

As a whole, key informants were supportive of the idea of establishing community gardens as a means to improve food security among farmworkers in the Salinas Valley. Several commented that “this is a great idea.” One key informant remarked, “It is a fantastic idea to supplement people’s need for better nutrition and food.” A few noted that gardening as a means to improve farmworker food security is logical “because these people know how to garden.” Key informants with experience in creating or working in gardens for low-income populations qualified their

responses, emphasizing that community interest and buy-in is critical for a garden's success. One community garden expert described the process as "challenging but rewarding."

Several key informants expressed interest in potential future collaboration on some type of gardening or food access project. Several participants were engaged in some type of community food project and expressed interest in expanding or building upon those projects to further engage the farmworker community. A few stakeholders in particular were also interested in the nutritional education aspect of this project. Multiple interviewees offered to help either by providing lessons, supplying pamphlets and other literature, distributing educational materials created specifically for farmworkers, or helping with start-up and organizing.

GARDEN MODELS

Multiple garden models emerged throughout the course of interviewing community garden experts. In addition to the traditional community garden model, there are gardens in apartment complexes, schools, churches, and other innovative community gardening models including gardens located at community centers, food pantries, etc. Each garden model has its own unique set of benefits and challenges (Table 13).

Community Gardens

The traditional community garden model (a garden located on public land with plots available for rent) typically provides year-round access for any interested community members. Unfortunately, the start-up costs can be high and time-intensive. Several community garden experts mentioned garden security as a serious issue—vandalism, thievery, and in one case, the garden was set on fire. At minimum, a fence with a lock is required for garden security. Unlike schools and churches, vacant lots or other possible community garden sites rarely already have a fence, adding to the start-up cost.

Location is critical to a garden's success, a point emphasized by a key informant who had started a community garden for farmworkers and then later realized that no gardeners were able to travel to the garden site. Ideally, a community garden will be located near places frequented by the gardeners' such as their housing (preferable) or work. However, gardeners may or may not have much control over the location of the garden as it depends on where vacant lots are located and if the owner is amenable to starting a garden on the property (Table 13).

Apartment Gardens

Apartment gardens have the primary benefit of being conveniently located with year-round access. In addition, edible landscaping (planting fruit trees, etc.) is an option. An example of a housing complex with an apartment garden with edible landscaping is located in Sacramento. The garden was started in 2003 by the Sacramento Hunger Coalition in a Mercy Housing unit. Although the apartment complex population is transient (residents generally move every two to three years), the garden is flourishing. Edible landscaping provides an additional means of increasing food security. However, it is not a short-term fix. As trees take years to fruit, residents may have moved on before the fruit is even available. Many other examples of gardens located at low-income and farmworker housing complexes exist throughout the US. (See Appendix E for a list of garden projects).

The primary downside of this model is that apartment gardens are typically limited to complex residents. Also, the start-up costs could be high, depending on what the apartment complex already has in terms of landscaping and watering system. Apartment gardens also may be less spacious than community gardens. Both housing complex managers voiced concerns over not having enough space for a garden in at least some of their units; however, one manager suggested the potential for using a vacant lot adjacent to some of those units (Table 13).

School Gardens

An entire network of school gardens is already in place in Monterey County. Although most are limited to school affiliates (parents, teachers, administrators), there is strong interest in community outreach. School gardens have the added benefit of actively including the younger generation in food production. Additionally, as one community garden expert pointed out, schools provide a certain measure of security.

Unfortunately, access to gardening space would most likely be limited to the summertime when school is not in session (as schools might be hesitant to have community members on school property when students are present). As with community gardens, school location may or may not be convenient for farmworkers to have plots of land. Finally, although there is strong interest in community outreach in the Alisal School District (East Salinas), this is no guarantee that schools elsewhere in the county will welcome community members on school property (Table 13).

Church Gardens

Church gardens are also possible. Like school gardens, church locations add a measure of security to the garden. The primary disadvantage of having a church garden would be if the church limited participation to parish members. However, there is some interest in community outreach in North Salinas. The Community Garden of Salinas specifically did not mention Saint George's Episcopal Church in its title so as to not exclude any community members. The Community Garden of Salinas is a large lot across the street from the church; however, space may be an issue at other churches (Table 13).

Other Innovative Approaches to Community Gardens

A few additional community gardening strategies deserve mention. Some key informants mentioned projects around the country that have gardens planted in conjunction with other community based organizations and institutions, including: hospitals, clinics, community centers, non-profits, YMCAs, food pantries and food banks.

Current Gardens in the Salinas Valley

Only one operational community garden was identified in the Salinas Valley. The Chinatown Unity Community Garden, near downtown Salinas, has been functioning for three years. This garden began with the help of homeless persons who were hired through job-training programs to build the garden; now the garden is a true community project, with gardeners ranging from homeless persons to more affluent local Salinas community members.

One key informant mentioned that she has been working with the Monterey County Housing Authority for nutritional education projects and is currently in the beginning phase of building gardens at five apartment sites: one in Salinas, two in Gonzales, and two in Soledad. The Community Housing Improvement Systems and Planning Association, Inc. (CHISPA) started a garden at a housing unit designated for seniors, but does not currently have gardens at any of their multi-family low-income housing units.

As previously mentioned, there is an extensive network of school gardens throughout Monterey County, with ten school gardens in the Alisal School District (East Salinas) alone. The University of California, Santa Cruz will be starting a local research garden soon. Finally, Saint George's Episcopal Church is currently in the beginning phases of construction of the Community Garden of Salinas in North Salinas (Table 13).

Garden Possibilities in the Salinas Valley

Stakeholders identified several possibilities for establishing or expanding gardens. There are vacant lots in Salinas, Greenfield, Gonzales, and King City where community gardens could potentially be built. The Monterey County Farm-to-School Partnership is very interested in collaborating for community outreach. One stakeholder familiar with the communities thought that schools would be the best garden model in Soledad and East Salinas as security can be an issue and school gardens are already established. The South County Housing Neighborhood Developer and CHISPA Community Services Coordinator both expressed interest in setting up gardens in at least some of their apartment complexes. Finally, one stakeholder suggested that a Catholic church in Greenfield might be interested in starting a garden (Table 13).

It should be noted that several key informants remarked on the relative lack of community organizations and support in the South County (south end of the Salinas Valley) while pointing out that there were a few key organizations working in those communities. Furthermore, a few key informants mentioned that much of the outreach conducted in the South County is actually done by organizations based elsewhere in the County. These findings suggest that there is a perfect opportunity to collaborate and focus outreach efforts in the South County to address food security along with other concerns in each community. Additionally, many key informants stressed the importance for extending efforts north to the Parajo Valley since a large community of farmworkers live and/or work in and around Watsonville and a number of organizations extend into this area.

Table 13: Benefits and Challenges of Different Garden Types

Type of Garden	Benefits	Challenges	Already being done	Possibilities
Community	Whole community involvement Year-round access	Start-up costs (irrigation system, fence, tools, etc) Start-up time Location convenience	Chinatown Unity Community Garden (near downtown Salinas)— OPERATIONAL	Salinas: Upper Carr Lake; vacant lots; 5 acres in E. Salinas Greenfield: behind library Gonzales: pocket parks throughout community King City: vacant lots around town
School	Interest in community outreach Extensive network already in place Children/student involvement	Access may be limited to summer Most are limited to school affiliates Location convenience	'Whole network' of school gardens in Salinas and South County (including 10 in East Salinas)— OPERATIONAL Center for Agroecology & Sustainable Food Systems— BEGINNING	Soledad & East Salinas: schools are likely the best option Farm-to-School program very interested in collaborating for community outreach
Apartment	Convenient location Year-round access Edible landscaping option	Start-up costs Limited to apartment residents who may be migratory Less space	1 site in Salinas, 2 sites in Gonzales, 2 sites in Soledad— BEGINNING	South County Housing CHISPA
Church	Interest in community outreach	Could be limited to congregation	Community Garden of North Salinas (open to everyone)— BEGINNING	Catholic Church in Greenfield might be interested

OTHER NECESSARY FACTORS FOR A SUCCESSFUL GARDEN

In order to establish a successful garden, one community garden expert responded:

You need to know that the farmworkers have an interest in community gardening (there is enough time left for them at the end of their workday, the location is close enough to their residence that they're able to easily get there, etc.). The intended population needs to be included in all planning so the garden has features that allow them to use it and make it fit into their daily routine easily.

The idea of community interest and buy-in was emphasized by several key informants. Thus, the first step is to assess interest among community members. As the farmworker survey results indicate, there is strong interest among the farmworker population in growing food for personal or family consumption.

Target Population

As multiple garden experts noted, it is difficult to exclude interested people from a 'community' garden, meaning that it is likely not feasible to limit the gardens to farmworkers. However, several key informants recommended targeting the older generation. Especially among Mexicans and Mexican-Americans, the older generation takes great pride in working the land. They also generally have more time to spend gardening as they work fewer hours (if at all). A community garden expert in Fresno further suggested focusing on the personal instead of monetary gain in order to make the garden more sustainable; this is particularly important among local health workers or other community members involved in overseeing the garden.

A few community gardening experts emphasized the opportunity for community gardens to serve as a venue for cultural exchange both between and among cultures through sharing traditions of food. In one garden community, members have all crops labeled in multiple languages to establish this cultural exchange. Additionally, community gardens can provide the opportunity for community members to grow specialty items from their sending countries that are unavailable in their local areas.

Access to Land

Public Land: In order to access land, several garden experts recommended using government land (as opposed to private land). The primary reason for this seems to be zoning restrictions; it is easier for the city government to change the restrictions of city-owned land to accommodate a garden. As explained by a community garden expert, non-incorporated land goes through the county while incorporated land goes through the city. Additional benefits to working with government land include ease of obtaining liability insurance and water availability and access.

To gain access to city land, one community garden organizer went to city council meetings with local health workers ('promotores') and shared results of a community survey identifying community needs and interests (i.e., in a town of approximately 10,000 residents there is one grocery store that sells practically "inedible tomatoes"). Incorporating feedback from city council members and city managers proved crucial to the garden's success. By gaining the support of city officials, the community garden was afforded fenced-off land, unlimited water use, and insurance for the affordable price of one dollar for three years coverage.

Apartment Land: In order to access land in apartment complexes, the best approach is to contact either the neighborhood developer or community services coordinator at one of the three main housing authorities in Monterey County: Monterey County Housing Authority, South County Housing, and CHISPA. These contacts can then approach individual property managers to assess interest and determine parameters for garden implementation. There appears to be strong potential for developing housing gardens as a strategy for increasing access to food. As previously mentioned, Monterey County Housing Authority is currently working with HELP, Inc. to set up housing gardens. Both South County Housing and CHISPA seemed amenable to the idea of starting gardens.

School Land: For school gardens, the best approach is most likely to work with the local Farm-to-School Partnership on community outreach. There is already strong interest within the organization to involve community members in established school gardens; supporting their efforts and coordinating with other stakeholders in the community is the logical next step.

Growers' Land: One aspect of this project was to assess interest on the behalf of growers to provide access to land. Because we were only able to speak to a few growers, we are unable indicate the feasibility of this approach. However, a few factors emerged in our interviews. One major issue is the limited amount of land that is not already in production; what may be available for a garden may not be the most optimal land to use for gardening (i.e. the land may be very rocky, the land may be in highly accessible locations and therefore susceptible to theft and vandalism, etc.). A few farmers mentioned concerns about the potential threat to organic certification or the impact of seeds and weed pressure on their land and adjacent crops. Additional factors mentioned include the potential expense to the farmer for additional liability insurance, water, tools, and equipment.

Additionally, we interviewed growers who already provide access to land to their employees. While this approach may only provide access to farmworkers who work on specific farms offering this benefit, this strategy does provide a potential avenue to increase access to food and increase employee satisfaction at the same time. The farmers who provided this benefit relayed the positive impacts that their employee gardens had on team building and their employees' job satisfaction.

Aside from whether growers are able or willing to provide access to land on which farmworkers can grow their own food, the grower community is an excellent resource to draw upon for input donations (seeds, compost, fertilizer, etc.) and technical expertise and assistance.

As previously mentioned, regardless of the type of the garden, the most critical factor for considering where to locate a garden is convenience for the gardeners. Gardeners need to be able to fit the garden into their routine and easily access the garden by walking or other mode of public transportation.

Garden Organization

Other issues that emerged from key informants included garden set-up and management, and plot fees. A successful garden needs to be structured with common rules in place and those rules need to be enforced. For detailed garden guidelines, including suggested rules and regulations see Appendix D. The American Community Gardening Association and the University of California Cooperative Extension have garden start-up guides available online (American Community Gardening Association; Surls, Braswell et al. 2001; Freeman, Rees et al.

2003). It is helpful to have a lead person or organization involved to manage the garden plots, communal tools, finances, water usage, and participants. Several key informants remarked that although garden contracts (among gardeners) are not legally binding, they are useful to establish gardener expectations. Additionally, setting a fee, even a very small one of twenty dollars, can have an impact of participant commitment. Finally, a few key informants noted that gardens need to be as self-sustaining as possible, and landowners are more likely to agree if it is easy for them (i.e., they provide the land and that is the extent of their involvement).

DISCUSSION

SUMMARY

Our survey results indicate high levels of low and very low food security among farmworkers in the Salinas Valley. Farmworkers expressed a strong interest in a wide range of nutrition education topics. There was also a substantial amount of interest in growing food for personal consumption as well as for sale; there was less interest in raising chickens or small animals for personal consumption. Additionally, farmworkers indicated some interest in preparing food for sale.

Key informants were overwhelmingly supportive of increasing access to food for farmworkers by setting up gardens (whether it be a community, school, or apartment garden). Several indicated interest in collaborating on the implementation of this idea. The extent to which growers would be willing to provide land for farmworkers to grow food for personal consumption is still not fully explored. Nevertheless, growers should be considered a valuable resource for potential donations, technical advice and assistance. Additionally, several input companies may be willing to provide some support in the form of expertise or inputs. Both growers and input companies should be approached once a gardening project is underway.

STRENGTHS AND LIMITATIONS

The strengths of this project included our community assessment and analysis of garden models through the collection of first-hand data. As previously mentioned, the first step in establishing a garden is to assess community interest and buy-in. This study did exactly that, surveying both farmworkers and key stakeholders in the communities of interest. Learning about diverse garden models may prove to be useful; it is helpful to know how different models operate in order to understand garden options. Additionally, gauging the need and level of interest of the farmworkers surveyed is an excellent first step in providing the context for future projects.

There are limitations to our study. Budget and logistical challenges dictated that the survey only be administered in the summertime; thus, we cannot say anything about seasonal variation of food security, diet/nutrition, and/or interest in gardening. However, our earlier farmworker study in Fresno County found that although the prevalence of hunger was lower in the summertime, food security status did not change between summer and winter (Wirth, Strohlic et al. 2007). It also proved difficult to reach growers in the busiest time of year (summer). By including the Six-item Short Form of the U.S. Household Food Security Survey Module we sacrificed precision for respect of survey participant's time.¹⁵

This community research provides a launch pad through its exploratory nature. We were able to define the issues and provide some measure of information on how to address these issues appropriately.

¹⁵ As discussed by (Blumberg, Bialostosky et al. 1999).

PUBLIC HEALTH CONTEXT

Gardens of each type provide individuals with the opportunity to grow their own food, thereby improving their diet and nutrition. As discussed in the introduction, food insecurity is associated with numerous negative health outcomes, including obesity, mental health problems, heart disease, and diabetes. By allowing families to supplement their diet with vegetables, food access levels improve (Alaimo, Packnett 2008) and negative health outcomes decrease. A better diet leads to better health.

In addition to health consequences, a few key informants described a garden's ability to re-define a neighborhood. Where previously there were run-down fields in 'bad' neighborhoods, there are now flourishing gardens that not only beautify the neighborhood but also bring the people in a community together. The Pisgah View Community Garden in Asheville, North Carolina, is an example of such a garden. The founder, Bob White, claimed he received a message from God to start a garden in his community—a neighborhood riddled with drug problems as well as violence. During garden construction, neighborhood children lingered by the fence and asked to help. Before long they were wrestling and playing in the safe haven of the garden (Our Next Thing 2009). Community gardens have important public health implications: they not only provide healthy food for community members who might not otherwise have access, but they also can transform a neighborhood and provide a safe place for children to play. In short, community gardens grow healthy food and communities.

IMPLICATIONS

Public health usually targets risk factors; it is easier to aim to change peoples' behaviors (e.g., exercise) than focus on neighborhood conditions that likely influence these behaviors (e.g., drive-by shootings or drug dealers). Community gardens offer the opportunity to change neighborhood dynamics. One key informant suggested marketing gardens as a way to clean up the neighborhood blight, whether it is a dump site or a vacant lot where drug dealers make sales. Another interviewee experienced in gardening observed that "the benefits to the community are overwhelming." Change does not happen overnight, but anecdotes do show a community-wide improvement. Gardens in Fresno County provide vegetables for participants (primarily farmworkers), extra money for gardeners (by selling excess produce), and space for social events such as a Halloween pumpkin carving contest. Community gardens can impact the environmental factors at the root of not exercising or eating properly. Although farmworkers are the focus of this current study, they will not be the sole benefactors of a community garden.

RECOMMENDATIONS

It quickly became apparent in the course of research that there is no blanket approach for the Salinas Valley to improve food security for farmworkers. Each community needs to be considered separately. Because there is not one single strategy that will fit every community, it would be best to focus on one community at a time. However, many of the organizations working in each of these communities are regionally based so it makes sense to build upon existing relationships and build a regionally based collaborative among a diverse array of stakeholders.

Following the development of a collaborative of stakeholders focused on increasing regional food security, the most realistic approach for the next step is to engage individual community

members in identifying goals and developing a strategy for addressing food security in their community. Connecting community members with the current garden infrastructure may be a great way to support and expand existing projects. Developing an outreach plan targeting students' families and school neighbors in, say, Salinas or Soledad is the logical next step in expanding the garden infrastructure. Similarly, apartment gardens in three communities are currently under consideration; future work may include providing support or expanding to other complexes.

KEY RECOMMENDATIONS

1. Develop a comprehensive vision for regional food security.

- Start by building on the existing regional food system collaborative of stakeholders.
- Consider developing a network of projects throughout the region to share resources and ideas.
- Engage additional stakeholders in the region who are not already involved with food system issues.

2. Build on existing regional and community assets.

- Connect existing food system organizations with clinics, government agencies, private businesses, and other organizations. Expand and improve inter-organizational collaborations.
- Support and expand the current garden infrastructure (school, housing complex, churches).
- Connect with formal and informal farmworker organizations and develop a plan to increase the capacity of the farmworker community through leadership development opportunities in community gardens.
- Capitalize on the strength of the natural social networks in the Latino community including family and home town clubs.

3. Engage community members at the outset and include in all stages of planning and implementation.

- Do not limit to farmworker population; try to bring in a diverse array of community members (farmworkers, youth, elderly, students, experts, etc.).
- Work with farmworker serving organizations and local 'promotores' (community based liaisons or outreach workers) to recruit community leaders for leadership and support. Collaborate with community leaders to engage the farmworker communities to help identify local interests, and lead efforts to address food insecurity. Be sure to engage the elderly and children.
- Be mindful of the timing for meetings and organizing efforts. Generally having two or three initial planning meetings set up at different times of day during the week and on the weekend is recommended.
- Ensure meaningful participation by addressing language barriers through meeting translation.
- Address additional barriers to participation including transportation, childcare, and fear of government buildings for meeting spaces.
- Approach policy makers to gain support and provide opportunity for them to get involved.

4. Each community needs to be considered individually.

- There is no blanket approach for the entire Salinas Valley to increase access to food for farmworkers.
- Because there is not one single strategy that will fit every community, it would be best to focus on one community at a time. Consider developing a pilot project and leveraging that project's success, lessons learned, and partnerships into future projects.
- Tailor each project to the needs of the participants in each community.
- Concentrate efforts to support projects in the South County to address the problem of rural "food deserts."

5. Engage a diverse array of community stakeholders.

Extend invitations to all potential collaborators including organizations and individuals working in a wide array of areas, for example: farmworker serving organizations, members from informal farmworker home town associations (HTAs) and Comites, Promotores programs, food banks, clinics, housing managers, nutrition educators, ESL programs, Migrant Head Start, churches, local businesses, policy makers, farmers, food system advocates, master gardeners, UC Cooperative Extension, school and university program leaders, departments, and student groups working on gardening or farming, youth groups, crime prevention efforts, neighborhood associations, etc.

6. Determine lead organization(s) to serve as consistent go-to organization.

- Who will be the primary contact for the project and manage the logistics?
- Who has connection to farmworkers population?
- Who has expertise in gardening or farming?
- Who has the capacity?
- Who has the interest?
- Who has the connections to policy makers and funders?

7. Develop a governing board.

- Include community members and expert stakeholders on the board.
- Identify a treasurer to maintain the financial aspects of the projects.
- Recruit a strong development specialist who can lead efforts to acquire funding.
- Set-up a plan for leadership development and succession.

8. Focus on the additional benefits provided by community gardens.¹⁶

- Some general community benefits include: crime reduction; functional use of vacant lots, public lands, and community eyesores; expanding green space; and improved attitude toward community.
- The opportunity for community building, the development of structural support networks, community empowerment, civic engagement.
- An opportunity for collaboration among personal and community development efforts such as courses in literacy, business skills development, ESL, nutrition education, leadership and youth engagement.

¹⁶ Armstrong (2000) provides a discussion of the additional benefits associated with community gardens.

- A venue for increasing multicultural awareness and bridging communities.

9. Be patient, persevere and plan on ongoing engagement.

- Count on holding several meetings to recruit and organize community members for each community project. Many people will wait to see if the project progress before getting involved.
- Seek funding and build in consistent positions for technical advisers, students, community liaisons or leaders to act as “navigators.”
- Provide stipends for meaningful involvement from organization representatives and farmworker and community leaders.
- Develop a schedule of events related to a project including classes on gardening, technical assistance workshops, celebrations, community tours or open houses, etc.
- Organize a newsletter or ongoing communication strategy among organizational partners and community members.

10. Develop a system of evaluation.

- Incorporate a plan for ongoing reflection and reassessment. Adjust project as necessary; people come and go and interests change.
- Solicit input from outside stakeholders and use this as an opportunity to increase support and community involvement.
- Use evaluation results to garner additional funding and community support.

NEXT STEPS

1. Hold regional visioning summits.

- Bring in an external organization(s) to act as a catalyst to help plan and organize a convening, facilitate meetings, provide technical assistance and fundraise.
- Develop a framework of clear and specific objectives for summits and expectations for partnering organizations.
- Convene potential stakeholder organizations for a series of meetings (1-3) in multiple locations throughout the Valley.
- Include presentations from experts (gardening, food security, community building) and inspirational success stories.
- Develop a menu of options for future participants to consider.
- Develop an outreach strategy to engage farmworkers.
- Identify lead organization/s & partnering organizations.

2. Decide on geographic starting point.

- Based on lead organizations and existing projects, identify first community or communities in which to start mobilizing or building support for a project.
- Plan a series of collaboration meetings with clear goals and action items that need to be accomplished at each meeting.

3. Engage communities (constituencies of organizations).

- Hold at least 3 meetings for each community selected.
- Provide examples of potential options to pursue (potentially take a “field trip” to see successful examples).
- Have community members conduct an asset-based assessment of community resources.
- Develop clear and concise goals, strategies and a practical plan of action.
- Identify action items for each participant & commit to responsibilities; everyone leaves with a task to increase sense of ownership and buy-in.

4. Continue building the food system collaborative and network of projects.

- Identify additional organizations for potential partnership and keep extending invitations on an ongoing basis.
- Based on community assessments, replicate efforts and expand projects.

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APPENDIX A: FARMWORKER SURVEY [ENGLISH-LANGUAGE VERSION]

INTRODUCTION

Good morning (good afternoon). My name is _____. I am a health promoter with **[insert name here]**. We are conducting a survey to learn more about nutrition among farmworkers here, in the Salinas Valley. This information will serve to improve nutrition among farmworkers and their families.

I have a survey that will take 15-20 minutes. We are offering a free DVD/ [\$5] and a few additional items to everyone who completes the survey. This survey is completely confidential. Furthermore, you do not need to respond to any questions that you do not wish to answer, and you may terminate the interview at any time.

Would you be interested in participating in this survey? Before we start, I have a few questions for you to confirm that you qualify for the survey.

A. Are you 18 years of age or older?

¹ Yes

² No → **ASK TO SPEAK TO SOMEONE THAT MEETS THESE REQUIREMENTS. IF THERE IS NOT A PERSON THAT QUALIFIES, FINISH HERE. Thank you very much; those are all the questions that we have for you. This survey requires that we speak to people who are 18 years old or older.**

B. Have you, or a family member that resides with you, worked in agriculture during the **past 12 months**, such as in the field, in a packing house, or a nursery?

¹ Yes

² No → **FINISH HERE. Thank you very much. These are all the questions we have for you. This survey requires that we speak to people who have worked in agriculture during the past 12 months.**

C. Do you live or work here, in the Salinas Valley?

¹ Yes → In what community do you live? _____

² No → **FINISH HERE. Thank you very much. These are all the questions we have for you. This survey requires that we speak to people who live or work in the Salinas Valley.**

³ If unsure, enter name of community

D. Are you married?

- ¹ Yes → Do you live with your husband/wife here? ¹ Yes ² No
² No

E. Do you have children under the age of 18 that live with you, either yours or your partner's children?

- ¹ Yes → How many? _____ (only children 18 years and younger)
² No

I. INTEREST IN NUTRITION EDUCATION

1. I will be mentioning to you some topics regarding nutrition. For example, how interested are you in learning more about the following information?

	Very Interested	Somewhat Interested	Not Really Interested	Not Sure
A. Nutrition in general	¹ <input type="checkbox"/>	² <input type="checkbox"/>	³ <input type="checkbox"/>	⁴ <input type="checkbox"/>
B. How to eat or prepare healthy meals	¹ <input type="checkbox"/>	² <input type="checkbox"/>	³ <input type="checkbox"/>	⁴ <input type="checkbox"/>
C. How to eat or prepare meals to control and prevent diabetes, high blood pressure, and cholesterol	¹ <input type="checkbox"/>	² <input type="checkbox"/>	³ <input type="checkbox"/>	⁴ <input type="checkbox"/>
D. How to eat or prepare meals to lose weight	¹ <input type="checkbox"/>	² <input type="checkbox"/>	³ <input type="checkbox"/>	⁴ <input type="checkbox"/>
E. How to prepare healthy foods without spending too much money	¹ <input type="checkbox"/>	² <input type="checkbox"/>	³ <input type="checkbox"/>	⁴ <input type="checkbox"/>
F. Is there any other information related to nutrition or food that you would be interested to learn about?				

2. Do you or your family cultivate fruits or vegetables here for your own consumption?

- ¹ Sí → **SKIP TO Q 4**
² No
³ Not sure/refuse

3. How interested are you in having a garden here to cultivate food for your own consumption? **[READ RESPONSES, CHECK ONLY ONE]**

- ¹ Very interested
- ² Somewhat interested
- ³ Not really interested
- ⁴ Not sure/refuse

4. Do you raise chickens or other animals here for your own consumption?

- ¹ Yes → **SKIP TO Q 6**
- ² No
- ³ Not Sure/refuse

5. How interested are you in raising chickens or other animals here for your own consumption? **[READ RESPONSES, CHECK ONLY ONE]**

- ¹ Very interested
- ² Somewhat interested
- ³ Not really interested
- ⁴ Not sure/refuse

6. Would you be interested in cultivating fruits or vegetables to sell?

- ¹ Yes
- ² No
- ³ Maybe
- ⁴ Not Sure/refuse

7. Would you be interested in preparing food to sell?

- ¹ Yes
- ² No
- ³ Maybe
- ⁴ Not Sure/refuse

8. Would you prefer to eat organic food (i.e. natural, without pesticides) if it was more accessible?

- ¹ Yes
- ² No
- ³ Maybe
- ⁴ Not Sure/refuse

II. DIET AND NUTRITION

9. Reflecting on your eating habits **within the past 30 days**, how often have you consumed the following foods? Include meals you ate at home or outside the home, and respond only for **yourself**. (READ ALL OPTIONS, CHECK ONE)

	Less than once a WEEK	Once a WEEK	2-3 times a WEEK	4-6 times a WEEK	Once per DAY	2 or more times a DAY
A. Fruit juice, such as orange, apple, or grape juice, whether natural, frozen, canned or in aguas frescas (except sodas or similar types of drinks)	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>
B. Fruits – whether natural, canned, frozen, or in fruit smoothie	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>
C. Tomatoes, fresh salsa, tomatillos, or green chilies	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>
D. Green salad (such as lettuce or spinach)	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>
E. Soups or broths with vegetables	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>
F. Potatoes, of any type—baked, mashed or fried	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>
G. Any other type of vegetable, such as green beans, cabbage, corn or broccoli.	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>

10. Would you like to consume more fruits and vegetables than you currently do?

- 1 Yes
 2 No
 3 Not Sure

11. Thinking about the farms where you have worked in the **Salinas Valley** within the last 12 months, how often were you permitted to take fruits and vegetables home with you?

- 1 Always
 2 Almost Always
 3 Sometimes
 4 Very little
 5 Never
 6 Not Sure/refuse

III. ACCESS TO FOOD ASSISTANCE PROGRAMS

Now I have some questions for you regarding food assistance programs. I would like to remind you that everything we have discussed is completely confidential, and you do not have to respond to any questions you do not wish to answer.

12. Have you heard about food stamps or EBT?

- Yes
- No → **SKIP TO Q 15**
- Not Sure → **SKIP TO Q 15**

13. Have you used food stamps or EBT in the past **12 months**?

- Sí → **SKIP TO Q 15**
- No
- Not Sure

14. Why haven't you used food stamps within the past 12 months? [**DO NOT READ RESPONSES, CHECK ALL THAT APPLY**]

- We do not qualify because we earn too much income
 - We do not qualify because we don't have papers (legal residency)
 - Because of problems with the paperwork
 - Because of fear of immigration (being deported)
 - Because it could intervene with the process of becoming a citizen
 - I have not tried to obtain food stamps/enroll in EBT
 - Other
-
-

15. Do you have children under the age of 5 who live here with you or (**IF THE INTERVIEWEE IS A WOMAN**) are you pregnant?

- Yes
- No → **SKIP TO Q19**

16. Have you heard of WIC?

- Yes
- No → **SKIP TO Q19**
- Not Sure → **SKIP TO Q19**

17. Have you used WIC in the past **12 months**?

- Yes → **SKIP TO Q19**
- No



18. Why haven't you used WIC in the past **12 months**?
[DO NOT READ RESPONSES, CHECK ALL THAT APPLY]

- ¹ We do not qualify because we earn too much income
 - ² We do not qualify because we don't have papers (legal residency)
 - ³ Because of problems with the paperwork
 - ⁴ Because of fear of immigration (being deported)
 - ⁵ Because it could intervene with the process of becoming a citizen
 - ⁶ I have not tried to obtain food stamps/enroll in EBT
 - ⁷ Other
-
-

IV. USDA HOUSEHOLD FOOD SECURITY MODULE

FOR THE FOLLOWING QUESTIONS, IF THERE IS ONLY ONE PERSON IN HOUSEHOLD, USE "I," "MY," AND "YOU", OTHERWISE, USE "US," "OURS," AND "YOUR FAMILY."

19. Now I'm going to read you two statements that people have made about their food situation. Please tell me whether the statement was **OFTEN**, **SOMETIMES**, or **NEVER** true for (you/you and the other members of your household) in the last 12 months.

	Frequently (often true)	Sometime s True	Never	Not Sure
A. "The food that (I/we) bought just didn't last, and (I/we) didn't have money to get more."	¹ <input type="checkbox"/>	² <input type="checkbox"/>	³ <input type="checkbox"/>	⁴ <input type="checkbox"/>
B. "(I/we) couldn't afford to eat balanced meals."	¹ <input type="checkbox"/>	² <input type="checkbox"/>	³ <input type="checkbox"/>	⁴ <input type="checkbox"/>

20. **In the last 12 months**, or since June 2008, did (you/you or other adults in your household) ever cut the size of your meals or skip meals because there wasn't enough money for food?

- ¹ Yes
- ² No
- ³ Not Sure

STOP. Screener: If any of the first 3 questions are answered affirmatively (i.e., if either Q19A or Q19B are "often true" or "sometimes true" or Q20 is "yes"),

proceed to the next question. Otherwise, skip to Section V DEMOGRAPHIC INFORMATION.

21. How often did this happen --almost every month, some months but not every month, or in only 1 or 2 months?

- ¹ Almost every month
- ² Some months, but not every month
- ³ Only one or two months
- ⁴ Not sure

22. **In the last 12 months**, did you ever eat less than you felt you should because there wasn't enough money to buy food?

- ¹ Yes
- ² No
- ³ Not Sure

23. **In the last 12 months**, were you ever hungry but didn't eat because you couldn't afford enough food?

- ¹ Yes
- ² No
- ³ Not Sure



V. DEMOGRAPHIC INFORMATION

Now I have some last questions.

24. How old are you? _____
1. Refuse to answer

25. Do you speak any other language, such as Mixteco, Triki, etc.?

¹ Yes → What do you speak?

-
- ² No
 - ³ Not Sure/refuse

26. These are all of the questions we have for you. Do you have any other comments or suggestions for improving nutrition among farmworkers in the Salinas Valley?

Thank you very much for participating in this survey. The information you have provided us with will help in efforts to improve the status of nutrition among farmworkers.

27. INTERVIEWER: INDICATE RESPONDENT'S GENDER

- Male
- Female

INTERVIEWER: SKIP TO THE NEXT PAGE



INTERVIEWER:

- HAND OUT EDUCATIONAL MATERIALS
- DISTRIBUTE THE INCENTIVE, AND ASK THE RESPONDENT TO SIGN TO CONFIRM RECEIPT OF THE INCENTIVE

28. **NAME OF INTERVIEWER:**

29. **DATE OF INTERVIEW:**

30. **LOCATION OF INTERVIEW:**

- ¹ Chualar
- ² East Salinas
- ³ Gonzales
- ⁴ Greenfield
- ⁵ King City
- ⁶ Soledad
- ⁷ San Ardo
- ⁸ Other: _____



31. Do you think the respondent answered the questions thoroughly and honestly?

- Yes
- No
- Not sure

32. **Other comments:** _____

APPENDIX B: FARMWORKER SURVEY [SPANISH-LANGUAGE VERSION]

INTRODUCCION

Buenos días (buenas tardes). Me llamo _____. Soy un/a promotor/a de salud con _____ **[nombre del la organización]**. Estamos llevando a cabo una encuesta para aprender sobre la nutrición entre los trabajadores agrícolas en el Valle de Salinas. Esta información servirá para mejorar la nutrición de los trabajadores agrícolas y sus familias.

Tengo una encuesta que tarda aproximadamente 15 minutos. Estamos ofreciendo un DVD, más otras cosas a las personas que completen la encuesta. La encuesta es completamente confidencial y no tiene que responder a ninguna pregunta que no prefiera contestar. En cualquier momento puede terminar la entrevista.

¿Le interesaría participar en esta encuesta? Antes que nada, le tengo unas preguntas para ver si califica.

F. ¿Tiene 18 años o más?

¹ Sí

² No → **PREGUNTE POR ALGUIEN MÁS. SI NO HAY OTRA PERSONA, TERMINE AQUÍ: Muchas gracias, estas son todas las preguntas que le tenemos. Esta encuesta está dirigida a personas con 18 años o más de edad.**

G. ¿Ud., o algún familiar que vive aquí con Ud., ha trabajado en la agricultura durante **los últimos 12 meses** – aun que sea de temporada - en el fil, en una empacadora o en una florería o nursería?

¹ Sí

² No → **TERMINE AQUI. Muchas gracias, estas son todas las preguntas que le tenemos. Esta encuesta está dirigida a personas que han trabajado en la agricultura durante los últimos 12 meses.**

H. ¿Vive o trabaja Ud. aquí en el Valle de Salinas?

¹ Sí → ¿En que comunidad vive o trabaja?

² No → **TERMINE AQUI. Muchas gracias, estas son todas las preguntas que tenemos. Esta encuesta está dirigida a personas que viven o trabajan en el Valle de Salinas.**

³ Si no está seguro, apunte el nombre de la comunidad

I. ¿Esta casado/a?

¹ Sí → ¿Vive su esposo/a aquí? ¹ Sí ² No

² No

- J. ¿Tiene hijos menores de 18 años que viven con Ud, suyos o de su pareja?
- ¹ Sí → ¿Cuántos? _____ (solo menores de 18 años)
- ² No

VI. INTERÉS EN EDUCACION NUTRICIONAL

2. Le voy a mencionar unos temas acerca de la nutrición. Por ejemplo, ¿qué tanto le interesa saber más sobre los siguientes temas?

	Muy Interesado/a	Algo Interesado/a	Poco Interesado/a	No sabe
G. La nutrición en general	¹ <input type="checkbox"/>	² <input type="checkbox"/>	³ <input type="checkbox"/>	⁴ <input type="checkbox"/>
H. Como comer o preparar comida saludable	¹ <input type="checkbox"/>	² <input type="checkbox"/>	³ <input type="checkbox"/>	⁴ <input type="checkbox"/>
I. Como comer o preparar comida para controlar y prevenir el diabetes, la alta presión, el colesterol	¹ <input type="checkbox"/>	² <input type="checkbox"/>	³ <input type="checkbox"/>	⁴ <input type="checkbox"/>
J. Como comer o preparar comida para bajar de peso	¹ <input type="checkbox"/>	² <input type="checkbox"/>	³ <input type="checkbox"/>	⁴ <input type="checkbox"/>
K. Como preparar comida saludable sin gastar demasiado dinero	¹ <input type="checkbox"/>	² <input type="checkbox"/>	³ <input type="checkbox"/>	⁴ <input type="checkbox"/>
L. ¿Hay alguna otra información relacionada con la nutrición o la comida que le interesaría saber?				

3. ¿Siembra Ud. o su familia frutas o verduras para su consumo familiar aquí?

- ¹ Sí → **PASE A LA PREGUNTA 4**
- ² No
- ³ No sabe o rehusa

4. ¿Qué tan interesado/a estaría en tener un huerto aquí para sembrar comida para su consumo familiar? [**LEA LAS RESPUESTAS, MARQUE SOLO UNA**]

- ¹ Muy interesado/a
- ² Algo interesado/a
- ³ Poco interesado/a
- ⁴ No sabe o rehusa

5. ¿Cria gallinas u otros animales para su consumo familiar aquí?
- ¹ Sí → **PASE A LA PREGUNTA 6**
 - ² No
 - ³ No sabe o rehusa
6. ¿Qué tan interesado/a estaría Ud. en criar gallinas u otros animales para su propio consumo? [**LEA LAS RESPUESTAS, MARQUE SOLO UNA**]
- ¹ Muy interesado/a
 - ² Algo interesado/a
 - ³ Poco interesado/a
 - ⁴ No sabe o rehusa
7. ¿Le interesaría sembrar frutas o verduras para vender?
- ¹ Sí
 - ² No
 - ³ Tal vez
 - ⁴ No sabe o rehusa
8. ¿Le interesaría preparar comida para vender?
- ¹ Sí
 - ² No
 - ³ Tal vez
 - ⁴ No sabe o rehusa
9. ¿Preferiría Ud. comer más comida orgánica, o sea, natural o sin pesticidas, si fuera más accesible?
- ¹ Sí
 - ² No
 - ³ Tal vez
 - ⁴ No sabe o rehusa

VII. DIETA Y NUTRICION

10. Pensando en sus hábitos de alimentación en **los últimos 30 días**, ¿con qué frecuencia ha comido los siguientes alimentos? Incluya alimentos que comió en casa o fuera de la casa, y conteste solo para **Ud. mismo/a**. (**LEER TODAS LAS OPCIONES, MARQUE UNA**)

	Menos de una vez a la SEMANA	1 vez a la SEMANA	2-3 veces a la SEMANA	4-6 veces a la SEMANA	1 vez al DÍA	2 o más veces al DÍA
H. Jugo de fruta como de naranja, manzana, o uva, sea natural, congelado, de lata o en aguas frescas (pero no refrescos u otro tipo de bebidas)	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>
I. Frutas – sea naturales, de lata, congeladas o en licuados	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>
J. Tomates, salsa fresca, tomatillos, o chiles verdes	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>
K. Ensalada verde (como de lechuga o espinacas)	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>
L. Sopas o caldos con verduras	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>
M. Papas, de cualquier tipo— horneadas, puré o fritas	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>
N. Cualquier otra verdura, como ejote, repollo, elote o broccoli	1 <input type="checkbox"/>	2 <input type="checkbox"/>	3 <input type="checkbox"/>	4 <input type="checkbox"/>	5 <input type="checkbox"/>	6 <input type="checkbox"/>

11. ¿Le gustaría comer más frutas y verduras de lo que come actualmente?

- 1 Sí
 2 No
 3 No sabe

12. Pensando en los ranchos donde ha trabajado **en el Valle de Salinas** durante los últimos 12 meses, ¿que tanto le han permitido llevar frutas o verduras para la casa?

- 1 Siempre
 2 Casi siempre
 3 A veces
 4 Muy poco
 5 Nunca
 6 No sabe o rehuse

VIII. ACCESO A PROGRAMAS DE ASISTENCIA ALIMENTARIA

Ahora le tengo unas preguntas sobre programas de asistencia de comida. Quiero recordarle que todo lo que hemos hablado hoy es completamente confidencial, y que no tiene que responder a ninguna pregunta que no desee.

13. ¿Ha oído de estampillas de comida?

- ¹ Sí
- ² No → **PASE A LA PREGUNTA 15**
- ³ No sabe → **PASE A LA PREGUNTA 15**

14. ¿Ha usado estampillas de comida en los últimos **12 meses**?

- ¹ Sí → **PASE A LA PREGUNTA 16**
- ² No
- ³ No sabe

15. ¿Por qué no ha usado estampillas de comida en los últimos 12 meses?

[NO LEER LAS RESPUESTAS, MARQUE TODAS LAS QUE APLIQUEN]

- ¹ No califican porque ganan demasiado
 - ² No califican porque no tienen papeles
 - ³ No ha aplicado por problemas con el papeleo
 - ⁴ No ha aplicado por miedo de la migra
 - ⁵ No ha aplicado por miedo de que pueda intervenir con su proceso de ciudadanía
 - ⁶ No ha tratado de conseguirlo
 - ⁷ Otro
-
-

16. ¿Tiene Ud. hijos menores de 5 años que viven aquí con usted o (SI ES MUJER) está embarazada?

- ¹ Sí
- ² No → **PASE A LA PREGUNTA 19**

17. ¿Ha oído de WIC?

- ¹ Sí
- ² No → **PASE A LA PREGUNTA 20**
- ³ No sabe → **PASE A LA PREGUNTA 19**

18. ¿Ha usado el WIC en los últimos **12 meses**?

- ¹ Sí → **PASE A LA PREGUNTA 19**
- ² No

19. ¿Por qué no ha usado el WIC en los últimos **12 meses**?

[NO LEA LAS RESPUESTAS, MARQUE TODAS LAS QUE APLIQUEN]

- ¹ No califican porque ganan demasiado
 - ² No califican porque no tienen papeles
 - ³ No ha aplicado por problemas con el papeleo
 - ⁴ No ha aplicado por miedo de la migra
 - ⁵ No ha aplicado por miedo de que pueda intervenir con su proceso de ciudadanía
 - ⁶ No ha tratado de conseguirlo
 - ⁷ Otro
-
-

**IX. MODULO DE “USDA” PARA LA SEGURIDAD ALIMENTARIA
PARA LAS SIGUIENTES PREGUNTAS, SI HAY SOLO UNA PERSONA EN EL
HOGAR, USE “YO,” “MI,” Y “USTED”. DE OTRA MANERA, USE “NOSOTROS,”
“NUESTROS,” Y “SU FAMILIA.”**

20. Ahora le voy a leer algunas respuestas de la gente sobre su situación de comida. Para cada repuesta, favor de indicarme si ha ocurrido para Ud. / su familia frecuentemente, a veces, o nunca en **los últimos 12 meses**.

	Frecuente- mente	A Veces	Nunca	No sabe o rehuse
C. “La comida que compré (compramos) no duró mucho y no había dinero para comprar más.”	¹ <input type="checkbox"/>	² <input type="checkbox"/>	³ <input type="checkbox"/>	⁴ <input type="checkbox"/>
D. “(Yo/Nosotros) no teníamos lo suficiente para comer una comida balanceada (nutritiva).”	¹ <input type="checkbox"/>	² <input type="checkbox"/>	³ <input type="checkbox"/>	⁴ <input type="checkbox"/>

21. **En los últimos 12 meses** ¿Usted o algún miembro de su familia comió menos o dejó de comer porque no había suficiente dinero para la comida?

- ¹ Sí
- ² No
- ³ No sabe o rehuse

ALTO: SI ALGUNA DE LAS PRIMERAS TRES PREGUNTAS FUERON RESPONDIDAS AFIRMATIVAMENTE (POR EJEMPLO: SI LAS RESPUESTA DE LAS PREGUNTA 19A o 19B FUERON “A VECES” O “FRECUENTEMENTE” O LA PREGUNTA 20 ES “SI”), PASE A LA PROXIMA PREGUNTA. DE OTRO MODO, PASE A LA SECCION V – INFORMACION DEMOGRAFICA.

22. ¿Con qué frecuencia sucedió esto—casi cada mes, algunos meses, o solo en uno o dos

meses?

- ¹ Casi cada mes
- ² Algunos meses
- ³ Solo en uno o dos meses
- ⁴ No sabe o rehusa

23. **En los últimos 12 meses**, ¿Comió usted menos de lo que pensaba que debía porque no hubo suficiente dinero para comida?

- ¹ Sí
- ² No
- ³ No sabe o rehusa

24. **En los últimos 12 meses**, ¿Alguna vez tuvo hambre no comió porque no tuvo suficiente dinero para comida?

- ¹ Sí
- ² No
- ³ No sabe o rehusa



X. INFORMACION DEMOGRAFICA

Ahora, le tengo unas últimas preguntas.

25. ¿Podría decirme qué edad tiene? _____
 Rehusa

26. ¿Habla ud. alguna otra lengua, como Mixteco, Triki, etc.?
 ¹ Sí → ¿Qué habla? _____
 ² No
 ³ No sabe o rehusa

27. Estas son todas las preguntas que tenemos. ¿Tiene Ud. algún otro comentario o sugerencia para mejorar la nutrición entre los trabajadores agrícolas en el Valle de Salinas?

¡Muchísimas gracias por participar en esta encuesta! La información que nos ha proporcionado nos va a servir mucho para mejorar el estado nutricional de los trabajadores agrícolas.

28. **ENTREVISTADOR/A: MARQUE EL SEXO DEL ENTREVISTADO/A:**

- ¹ Hombre
- ² Mujer

ENTREVISTADOR: PASE A LA SIGUIENTE PAGINA



ENTREVISTADOR:

- REPARTA LOS MATERIALES EDUCATIVOS
- DISTRIBUYA EL INCENTIVO, Y PIDA AL ENTREVISTADO/A FIRMAR UN RECIBO CONFIRMANDO QUE RECIBIO EL INCENTIVO.

29. **NOMBRE DEL ENTREVISTADOR/A:**

30. **FECHA DE LA ENTREVISTA:**

31. **LUGAR DE LA ENTREVISTA:**

- ¹ Chualar
- ² East Salinas
- ³ Gonzales
- ⁴ Greenfield
- ⁵ King City
- ⁶ Soledad
- ⁷ San Ardo
- ⁸ Otro: _____



32. ¿Piensa Ud. que el entrevistado contesto a las preguntas honestamente?

- Si
- No
- No se

33. ¿Tiene algún otro comentario?:

APPENDIX C: SELECTED KEY INFORMANT INTERVIEWEES

Maricruz Aguilar, Assistant Planner, King City
Bryan Bell, Founder and Executive Director, Design Corps
Daniel Chavez, Neighborhood Developer, South County Housing
Glen Dake, Secretary, Los Angeles Community Garden Council
Grace Dominguez, Manager, Greenfield Farmers' Market
Suzanne du Verrier, Executive Director, Healthy Eating Lifestyles & Principles, Inc. (HELP)
John Fisher, Assistant Director, Garden Classroom Coordinator, Life Lab Community Garden at University of California, Santa Cruz
Vicki Garrett, Projects Coordinator, American Community Gardening Association
Adela Gonzalez, City Manager, City of Soledad
Laxmi Haynes, Program Director, Student Action with Farmworkers
Julia Hernandez, Poder Popular-Fresno
Edie Jessup, Hunger & Nutrition Project Coordinator, Fresno Metro Ministry
Nisha Kapadia, Senior Program Associate, Sacramento Hunger Coalition
Erik Krengel, Resident Services Coordinator, Kennedy Estates/Mercy Housing
Laura Lee Lienk, Coordinator, Service Learning Institute, California State University, Monterey Bay
Jesus Lopez, Community Worker, California Rural Legal Assistance
Bill Maynard, Founder, Sacramento Area Community Garden Coalition; Vice President, American Community Gardening Association
Paul Mugan, Director, Economic Development and Housing Department, City of Greenfield
Kathleen Nolan, Program Manager, University of California Cooperative Extension
Iris Peppard, Executive Director, Everyone's Harvest, Marina and East Salinas Certified Farmers' Markets; Chinatown Unity Garden Coordinator, California State University-Monterey Bay Service Learning Institute
Jan Perez, Research Associate, Center for Agroecology & Sustainable Food Systems, Community Studies Academic Services Office, University of California, Santa Cruz
Don Reynolds, Redevelopment Project Manager, City of Salinas
Eduardo 'Ted' Rico, Director, Poder Popular-Monterey County
Izzy Rodriguez, Director of Economic Development, City of Soledad
Ruth Rodriguez, Community Services Coordinator, Community Housing Improvement Systems and Planning Association, Inc. (CHISPA)
Kai Siedenbug, Training & Technical Assistance Program Director, Community Food Security Coalition
Susan Smith, Project Coordinator, Community Garden of Salinas, Saint George's Episcopal Church
Kathryn Spencer, Farm-to-School Program Coordinator, Community Alliance with Family Farmers

APPENDIX D: GARDEN GUIDELINES

Starting a Garden

1. Create a task force
2. Meet with landowner/city manager and city council/housing authority
 - a. Incorporate feedback into gardening plan
 - b. Establish lease with terms of use, length and cost
 - i. Length is usually three to five years with yearly review
 - ii. Cost may be anywhere from \$1 to \$1,000+ per year (entirely dependent on landowner/city)
3. Visit other gardens to gather ideas about what might work
4. Post fliers around town with dates of meetings
 - a. Grocery stores, apartment complexes, churches, shelters
 - b. Work with the Cooperative Extension Service
5. Meet with community members: have three meetings in a two-week time frame at different times of day with one on the weekend
 - a. Give a presentation on what the garden can look like
 - b. Assess if anyone has special skills and/or access to gardening equipment
 - c. Meetings may determine level of interest, although there is usually more interest across the greater community
 - d. Determine if garden will be cultivated communally or with individual plots
 - e. Conduct soil testing

Start-up inputs/technical advice

1. Life Lab at the University of California, Santa Cruz – technical assistance
2. Sacramento Area Community Garden Coalition – technical assistance
3. Monterey Bay Master Gardeners – technical assistance
4. Cooperative Extension Service – inputs (seeds, etc.), organizational support
5. Power equipment companies – nonprofits are sometimes allowed to rent power equipment during the week for free or 50% off

Gardening Contract

1. Objectives and Purposes
 - a. Beautify city
 - b. Enhance education about gardening and nutrition
 - c. Encourage healthy behaviors, including healthy eating habits
2. Who is invited to join
3. Cost to join (usually \$20 to \$50 per year—water may or may not be on top of that)
 - a. Usually best if nonprofit controls communal money
 - b. Need to decide what to do with fees (can buy communal tools, seeds, irrigation system, etc)
4. Rules
 - a. What can and cannot be grown in garden (usually invasive plants, trees, sugar cane, bamboo, etc. are prohibited)
 - b. Organic practices (what chemicals and pesticides are prohibited)
 - c. Hours of operation

- d. Length of lease (usually one year for gardeners with quarterly inspections)
 - e. Remove crops at end of season (either plant next crop or a cover crop)
 - f. Whether gardeners may sell produce
5. Duties
- a. Election of board members (can be committee of stakeholders with a few interested gardeners)
 - b. Designate dates for general cleaning with mandatory participation
 - i. Garden must be visually acceptable
 - ii. Clean out weeds, peripheral maintenance
 - iii. Clear out anything that could be a fire hazard
 - c. Have a warning system
 - i. 1st violation: verbal warning
 - ii. 2nd violation: written warning
 - iii. 3rd violation: pay a fee
 - iv. 4th violation: no longer allowed to participate in garden
 - d. Place and time of meetings
 - i. Board members meet weekly
 - ii. Gardeners meet bi-weekly at same time and location as board
 - iii. Meetings located in garden (easier to schedule)
 - iv. In evenings in summer months, may switch to morning in fall/winter

Water Use

1. May either charge for it or take as needed (dependent on landowner)
2. May be able to get reduced rate for water use if not included in contract
3. Set watering schedule that gardeners must abide by
4. Drip irrigation system preferable (but expensive) – otherwise a hose with a trigger mechanism
5. May have to install water meter (~\$3,000 - \$5,000)

Security

1. Gardens need to be fenced with a gate and lock
2. School, apartment, and church gardens may offer more protection if behind the building(s)

Insurance

1. Gardeners may sign a waiver saying they won't sue
2. If the garden is affiliated with a nonprofit then they may be included in the insurance to help pay the costs (could go down from approximately \$1,500 a year to about \$600 per year)

APPENDIX E: EXAMPLES OF GARDEN PROJECTS

FARMWORKER, LOW-INCOME & IMMIGRANT COMMUNITY GARDENS

Nuevo Amanecer
Woodburn, Oregon

Episcopal Farmworker Ministry
Newton Grove, North Carolina

Cabrillo Economic Development
Corporation Farmworker Family
Apartments
Oxnard, California

Comité del Pueblo and Proteus, Inc.
Mendota, California

Firebaugh Poder Popular
Firebaugh, California

UCCE Common Ground Program
Los Angeles, California

Seattle P-Patch Community Gardens
Seattle, WA

Chinatown Unity Garden
Salinas, CA

RURAL COMMUNITY GARDENS

Woodlake PRIDE coalition
Woodlake, California

SCHOOL AND COMMUNITY GARDEN PARTNERSHIP

Verde Partnership Garden
Richmond, CA

COMMUNITY GARDEN & COMMUNITY FOOD SYSTEM NETWORKS

New Orleans Food & Farm Network
Vermont Community Garden Network

APPENDIX F: POTENTIAL COLLABORATORS¹⁷

Ag Against Hunger
Ag Futures Alliance
Agriculture and Land-Based Learning Association (ALBA)
American Community Gardening Association
Big Sur Land Trust
Binational Center for Oaxacan Indigenous Development (CBDIO)
Boys and Girls Club of Monterey County
California Certified Organic Farmers (CCOF)
California Coastal Rural Development Corporation
California Rural Legal Assistance
Catholic Charities
Center for Agroecology & Sustainable Food Systems program at University of California, Santa Cruz
Center for Community Advocacy (or CCA)
Central Coast Hunger Coalition
Central Coast Small Business Development Center
Chinatown Unity Garden
City Planners and Managers
Clinica de Salud
Community Alliance with Family Farmers
The Community Foundation for Monterey County
Community Garden of Salinas, Saint George's Episcopal Church
Community Housing Improvement Systems and Planning Association, Inc. (CHISPA)
CSU Monterey Bay community garden program
CSU Monterey Bay Watershed Institute
Ecological Farming Association
Everyone's Harvest
Farmers' Market managers
Farmworker comités & Hometown associations (HTAs)
Food Bank for Monterey County
Girls Inc.
Grower-Shipper Association of Central California
Healthy Eating Lifestyles & Principles, Inc. (HELP)
La Unión del Pueblo Entero (LUPE)
LandWatch Monterey County
Life Lab, Community Garden project at University of California, Santa Cruz
Local farmers
Local Redevelopment Economic Development and Housing Departments
La Union del Pueblo Entero (LUPE)
Migrant Education Program
Monterey County Agricultural and Historical Land Conservancy
Monterey County Agricultural Education, Inc.
Monterey County Farm Bureau
Monterey County Farm to School Partnership (MCFTSP)
Monterey County Health Consortium

¹⁷ This is a preliminary listing; additional organizations should be added as they are identified.

Monterey County Health Department
Nutrition and Fitness Collaborative of the Central Coast
Poder Popular-Monterey County
Resource Conservation District of Monterey County
Second Harvest Food Bank
Senior Centers
Service Learning Institute, California State University, Monterey Bay
Soledad Street Community Garden Project
South County Housing
South County Outreach Effort (SCORE)
Steps to a Healthier Salinas
The Monterey County Farm to School Partnership (MCFTSP)
United Farm Workers
University of California Cooperative Extension
VISTA volunteers
Volunteer Center of Monterey County
YMCA